

2003

Linguistic and Cultural Diversity

IN CYBERSPACE



Comission of the Russian Federation for UNESCO
Russian Committee of the UNESCO Information for All Programme
Interregional Library Cooperation Centre

Linguistic and Cultural Diversity in Cyberspace

Proceedings of the International Conference
(Yakutsk, Russian Federation, 2-4 July, 2008)

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The book includes communications by the participants of the International Conference Linguistic and Cultural Diversity in Cyberspace (Yakutsk, Russian Federation, 2-4 July, 2008), that turned out to be one of the most significant events of the International Year of Languages. The authors present linguistic situation in different countries, cover political, ethical, sociocultural, psychological and other aspects of multilingualism, and give examples of measures taken worldwide to promote linguistic and cultural diversity.

The authors are responsible for the choice and presentation of facts and for the opinions expressed, which are not necessarily those of the compilers

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Preface

The Russian Contribution to the International Year of Languages

The international conference Linguistic and Cultural Diversity in Cyberspace, jointly organized by Russia and UNESCO, gathered in Yakutsk on July 2–4, 2008, under the UNESCO aegis as a landmark event of 2008, which the United Nations proclaimed the International Year of Languages.

“Russia contributes to the Year of Languages by organizing the conference Linguistic and Cultural Diversity in Cyberspace,” said Alexander Avdeyev, Minister of Culture of the Russian Federation. He described the forum—Russia’s first on this essential and sublime theme—as a memorable initiative of the Russian Committee of the UNESCO Information for All Programme and the Government of the Republic of Sakha (Yakutia), promoting multilingualism worldwide.

The Government of the Republic of Sakha (Yakutia), the Federal Agency for Culture and Cinematography, the UNESCO Office in Moscow, the Commission of the Russian Federation for UNESCO, the Russian Committee of the UNESCO Information for All Programme, the Interregional Library Cooperation Centre, the National Library of the Republic of Sakha (Yakutia) and the Committee of the Republic of Sakha (Yakutia) for UNESCO were the main conference organizers.

The conference gathered more than a hundred participants from 15 countries in every part of the world. They included the leaders and employees of intergovernmental and other international organizations, and of the government administration and cultural, educational, research, information and communication agencies and institutions, representatives of businesses, civil society and the media, political and community activists, and foremost experts and researchers on the preservation of multilingualism from the world’s leading research centres – suffice to mention Adama Samassékou of Mali, Executive Secretary of the African Academy of Languages, who led preparations for the World Summit on the Information Society; and the authors of basic UNESCO documents on the preservation of multilingualism: Victor Montviloff, Daniel Prado, and Marcel Diki-Kidiri.

Yakutia was appointed conference venue as a unique place in the world from the point of language preservation. It not merely preserves and develops the language of its small titular ethnic group – this group, in its turn, works to preserve the languages of the Northern indigenous ethnic minorities. Every time I work with my

Yakut colleagues, I am not only glad to see their republic's achievements and admire the progress of its culture, which is of tremendous interest. I am also proud of Russia. I don't know another country which conscientiously supports such powerful cultural and linguistic diversity. True, there are many countries where even more languages are spoken than in Russia—but these are mostly the languages of immigrant communities while Russian citizens speak indigenous peoples' languages.

180 languages of the world are spoken in Russia. Over a hundred of them are the languages of its indigenous peoples. The Constitution qualifies all their languages as cultural patrimony of the Russian Federation. Education, at least primary, is accessible in almost all of them. They also have writing, television and radio broadcasting, Internet, books, newspapers and magazines. Almost 40 (!) languages have the official status.

People from many countries asked me during the 180th session of the UNESCO Executive Council in Paris in October 2008: "They say a very interesting conference on multilingualism was held in Yakutia. Have you heard anything about it?" And I replied with justified triumph that I had not only heard about it but was one of its organizers. Really, the conference resounded worldwide even louder than we could expect.

Chaired by Evgenia Mikhailova, Vice-President of the Republic of Sakha (Yakutia), the conference opened in a gala at the Republic Hall of the Government House, and continued on board a boat that went along the majestic Lena River to the Lena Pillars, a nature park of beauty untold.

The conference had five thematic sections: Political, Ethical and Legal Aspects of the Development of Multilingualism in Cyberspace; Internet and Other Media; The Role of Libraries in the Preservation of Linguistic and Cultural Diversity; Languages and Education; and The Preservation and Development of Cultural Diversity.

Conference discussions were of an extremely broad thematic range. What is the current state of linguistic and cultural diversity in the world? What is the presence and use of languages in cyberspace? Why do languages vanish? According to a forecast, a mere 10% of presently existent languages will survive to the end of the 21st century. What will become of the world if the prophecy is true? Should we try to preserve all languages surviving to this day – and do we need to, for that matter? Who needs all those languages, and what for? Do only ethnic minorities need them, or someone else, too? Who, then? The governments? Or dominant ethnic entities? Or scholars? Or, again, cultural activists? Why do we hardly care about the preservation of modern languages, while we are anxious to decode the languages of civilizations long dead and gone? What should international organizations, governments, civil society institutions

and private enterprise do to preserve multilingualism in and outside cyberspace? What can legislative control do for it? How to guarantee the preservation and development of languages in the Internet, and how can they be gauged? These are questions critical for Russia and the entire world.

Some communications reviewed the instructive experience of a particular country, community, agency or organization in the preservation of a certain language or multilingualism as a whole. Others concerned narrower topics of great practical importance, e.g., the circulation of local content in minority languages; the Internet television, radio and press in those languages; cultural heritage and diversity on the Internet; the role of libraries, museums and archives in the preservation of multilingualism; multilingualism and cultural dialogue; new ICTs and their use to preserve languages; electronic documentation of languages; and Internet websites, fonts, electronic dictionaries and translation systems, search engines in minority languages, etc.

The final document of the conference, known as the Lena Resolution, was one of its major achievements. This landmark document – an appeal of the conference to the host country and the world – emphasizes the importance of preserving languages, in particular, for the implementation of the Recommendations of the World Summit on the Information Society (Geneva, 2003 and Tunis, 2005), and for universal access to information and knowledge. The resolution advances initiatives for the development of linguistic and cultural diversity in cyberspace – particularly the organization of a world summit on linguistic diversity in cyberspace under the joint aegis of UNESCO and the World Network for Linguistic Diversity (MAAYA). The resolution proposes a set of measures to preserve minority languages and cultural heritage, and stresses the necessity of drawing relevant programmes, and of improving international, national and local policies in this sphere.

Yakutia's fruitful activities for the preservation of linguistic and cultural diversity earned enthusiastic appreciation by conference participants. They asked the Government of the Republic of Sakha (Yakutia) to consider the opportunity for establishing in Yakutia an expert centre for the study and development of multilingualism in cyberspace and global exchange of experience in that sphere.

Many universally renowned participants of the conference found it the most significant of international forums that gathered in the International Year of Languages at such a high level of organization and content. Following the conference, its organizers received messages of gratitude from many of its participants. John Mohi of New Zealand wrote: "Now, after visiting Yakutia, I see the world with new, wider open eyes."

The Government of Yakutia placed the conference among its three greatest achievements of 2008, on a par with the Year of Family and the Children of Asia international games. What is it if it is not breathtaking success?!

It takes active teamwork of government, public and private agencies to put the Internet and the other ICTs to the service of preserving, developing and popularizing languages—and to get such work going, it is necessary at least to provide conditions for taking stock of current problems and for exchanges of experience.

The Russian Committee of the UNESCO Information for All Programme and the Interregional Library Cooperation Centre are eager to offer this opportunity to all interested organizations through:

- a series of conferences, seminars and roundtables;
- publication of collections of information and analytical materials;
- advancement of crucial initiatives to the Russian and international political and administrative level; and
- maintenance of a permanent rubric on the website of the Russian IFAP Committee, www.ifapcom.ru.

The Russian Committee of the UNESCO Information for All Programme and the Interregional Library Cooperation Centre invite all to do this fascinating job together.

By way of conclusion, I want to express heartfelt gratitude to all those who supported our idea of the conference and did much to have it proceed at the highest level of content and organization: above all, Evgenia Mikhailova, Vice-President of the Republic of Sakha (Yakutia), and Nadezhda Zaikova, First Deputy Minister of Culture, Republic of Sakha (Yakutia); the leaders of the Commission of the Russian Federation for UNESCO—Sergei Lavrov, Chairman of the Commission and Minister of Foreign Affairs of the Russian Federation, and Grigory Orjonikidze, Executive Secretary of the Commission; the leaders of the Federal Agency for Culture and Cinematography—its head Mikhail Shvydkoi, Anna Kolupayeva, Head of the Department of Cultural Heritage, Art Education and Research, Tatyana Manilova, Head of the Department of Libraries, and her deputy Vera Nikolayeva; Marius Lukosiunas, Advisor to the UNESCO Office in Moscow; and other our Yakut colleagues—Vera Nikiforova, Head of the Research and Education Department of the Ministry of Culture, Yelizaveta Sidorova, Co-Chair of the National Committee of the Republic of Sakha (Yakutia) for UNESCO, Rimma Zhirkova, Executive Secretary of the Council for Linguistic Policy under the President of the Republic of Sakha (Yakutia), and the managers and employees of the National Library of Yakutia—Valentina Samsonova, Galina Leveryeva, Olga Afanasyeva, Tatyana Maximova, Sargylana Maximova and many others.

I would like to thank separately those who took the most active part in the drawing of the Lena Resolution: Victor Montviloff, one of the authors of basic UNESCO documents on the preservation of multilingualism, who led the work; Adama Samassékou, Executive Secretary of the African Academy of Languages; Henrikas

Yushkiavitshus, Advisor to the UNESCO Director General; Marius Lukosiunas, Advisor to the UNESCO Moscow Office; Tjeerd De Graaf, Senior Research Associate of the Mercator European Research Centre on Multilingualism and Language Learning; Woodard McLendon, Director for IT Technical Services of the Summer Institute of Linguistics; John Mohi, Director for Māori of the National Library of New Zealand; Daniel Prado, Director of the Terminology and Language Engineering Department of the Union Latine; Marcel Diki-Kidiri, Senior Expert of the National Centre for Scientific Research (France); and, last but not least, Nadezhda Brakker, Senior Specialist of the Centre of Informatization in the Sphere of Culture.

Staff members of the Interregional Library Cooperation Centre—above all, Sergei Bakeikin, its Managing Director; Ekaterina Plys, Maria Sergeyeva, Tatyana Murovana and Anna Ostrogskaya—also honourably contributed to conference preparations.

All conference participants retain the best possible impression of it, just as of its hospitable host—Yakutia, the land of the Olonkho, one of the precious masterpieces of the world intangible cultural heritage, and just as of the Lena, the majestic river on which a greater part of conference work was held.

I had visited Yakutia four times before the conference, and I would like to revisit it again and again because of its inimitable landscapes and unique culture, and even more because of its wonderful people—intelligent, frank and warm-hearted.

To preserve Russian as an international language—particularly an instrument of transnational communication—is one of Russia's essential duties. Russia is one of the most enthusiastic partisans of the concept of linguistic and cultural diversity. As it promotes the concept at the international level, Russia makes it a point to implement it in politics and everyday life—that despite the tremendous complication of the problem and the great costs of its solution, especially in the context of a tremendous number of other comprehensive and complicated problems my country is addressing.

We believe that this collection of conference materials will help to tackle the essential problems of preserving linguistic and cultural diversity, and its development in cyberspace at the contemporary level.

Evgeny Kuzmin,
Chair, Russian Committee of the UNESCO Information for All Programme,
President, International Library Cooperation Centre,
Chair, Conference Programme Committee,
Vice-Chair, Conference Organizing Committee

MESSAGES TO CONFERENCE PARTICIPANTS

Message from Mr Koïchiro Matsuura, UNESCO Director-General

The Universal Declaration on Cultural Diversity, proclaimed by the UNESCO General Conference in 2001, recognizes cultural diversity as part of the common heritage of humanity and an endless source of new ideas and creative development. Considered by UNESCO Member States as a vital part of human identity, and as essential to humanity as biological diversity is to nature, cultural diversity must be safeguarded for the sake of the present and future generations.

Indeed, there is a strong correlation between cultural diversity and linguistic diversity. Languages are an important element of a people's identity and the primary means of human communication, knowledge and experience sharing. They are also among the principal factors of progress towards sustainable development, playing a vital role in social integration and economic progress. A world devoid of linguistic diversity would not only be a world in which hundreds of thousands of people were denied the opportunity to engage fully in public life, it would also be culturally impoverished.

Yet, within the space of a few generations, more than 50 per cent of the 7,000 languages spoken in the world may disappear. As it is, fewer than a quarter of those languages are used in schools and most are used only sporadically. Thousands of languages—though mastered by those populations for whom they are the daily means of expression—are absent from education systems, the media, publishing and the public domain in general. Less than a hundred are represented in the digital world.

I cannot emphasize strongly enough the theme of my message for the International Year of Languages 2008: we must act now as a matter of urgency to encourage and develop language policies that enable each linguistic community to use its first language as widely and as often as possible, while also mastering a national or regional language and an international language. We should also encourage speakers of a dominant language to master another national or regional language and one or two international languages, because only if multilingualism is fully accepted can all languages find their place in our globalized world.

That is why, as part of its Medium Term Strategy 2008–2013, UNESCO is reinforcing its work to develop national and regional initiatives that promote and

safeguard both linguistic and cultural diversity. Given the increasingly dominant role that information and communication technologies play in the daily lives of people around the world, it is vital that these initiatives cover access to multilingual content in cyberspace, as advocated by the Organization's 2003 Recommendation concerning the Promotion of Multilingualism and Universal Access to Cyberspace.

This international conference is both timely and relevant. I am confident that it will offer ample opportunities to discuss all aspects of preserving and developing linguistic and cultural diversity in cyberspace, and in so doing help us to focus greater attention on the challenges facing the global community in this regard, as well as identifying possible solutions at local, national and regional level.

Please accept my best wishes for a stimulating and fruitful debate over the coming days.

Koïchiro Matsuura

Message from Mr Alexander Avdeev, Minister of Culture of the Russian Federation

Esteemed colleagues, dear friends!

I am pleased to greet all the participants, guests and organisers of the International Conference “Linguistic and Cultural Diversity in Cyberspace”, which is opening in Yakutsk today.

Languages represent humanity’s greatest wealth, they help to hand down historical experience and social and cultural traditions, they are a means of self-definition and self-expression, and they promote mutual understanding and tolerance. Preservation of linguistic and cultural diversity is a pressing problem for every polyethnic state including Russia, which is populated by more than 180 peoples speaking upward of 100 languages.

At present, many languages along with whole cultures are threatened with extinction. In order to demonstrate the importance of preserving linguistic and cultural diversity and to attract public attention worldwide to this challenge the United Nations proclaimed 2008 International Year of Languages. Russia is contributing to the conduct of this year, organising the conference “Linguistic and Cultural Diversity in Cyberspace”.

This is the first conference on such an important and lofty theme to be held in Russia. I am positive that it will offer the participants a wonderful opportunity for sharing experience and establishing collaboration and that it will contribute to the preservation of multilingualism in the world.

I am glad that this new striking initiative of the Russian Committee of the UNESCO Information for All Programme and the Government of the Republic of Sakha (Yakutia) has gained support not only inside Russia but also in an influential international organisation like UNESCO.

I wish all the conference participants successful work.

Alexander Avdeev

**Message from Dr Karol Jakubowicz,
Chairperson, Intergovernmental Council,
UNESCO Information for All Programme**

According to a recent forecast, the total number of people online will climb to 1.8 billion by 2012. So, within the next four years, one quarter of the world's population will be connected to the Internet. Russia will be among the countries showing the highest growth rate, alongside China, India and Brazil.

It is therefore fitting that the Russian National IFAP Committee is one of the strongest and most active ones in the IFAP family. Given the diversity of cultures and languages among the peoples of the Russian Federation, it is also very appropriate that it hosts the conference "Linguistic and Cultural Diversity in Cyberspace".

2008 has been proclaimed by the United Nations the International Year of Languages. "The first instrument of a people's genius is its language," said the French writer Stendhal, so it was most appropriate that the Year was launched by UNESCO on 21 February, International Mother Language Day. However, the whole point about linguistic and cultural diversity is that we should respect every language and culture and use genuine multilingualism to promote unity in diversity and international understanding, as well as communication with the peoples of the world.

The Information for All Programme (IFAP) was established by UNESCO to provide a framework for international cooperation and partnerships in "building an information society for all". IFAP's focus is on ensuring that all people have access to information they can use to enhance their lives. It is crucially important that information should be available in different languages, also in cyberspace, so that all individuals, peoples and nations can rely on sources of information in their own languages.

IFAP is now preparing to develop templates of national information policy frameworks. These templates will certainly need to highlight the need for policy to ensure access to information in different languages, and to develop and safeguard linguistic and cultural diversity. This will be further developed in contributions to those templates provided by working groups, including those dealing with information accessibility and information ethics. We hope that Russian experts will join those groups and that we will be able to draw in this work on the results of the Yakutsk conference. We would also welcome other forms of contribution by the Russian National IFAP Committee, as well as by Russian experts, to the work of IFAP.

As one of the experts who contributed to the drafting of the 2003 UNESCO Recommendation concerning the Promotion of Multilingualism and Universal Access to Cyberspace, enshrining precisely the values and ideas to which the Yakutsk conference will be devoted, it is my privilege to wish participants in this high-level conference—on behalf of the IFAP Council and Bureau—successful and fruitful debates. We look forward to the results of the conference and hope to learn from them.

Karol Jakubowicz

Welcoming Address by Evgenia Mikhailova, Vice-president of the Republic of Sakha (Yakutia)

Dear international conference participants, I am glad to salute you, ambassadors of foreign countries and Russian regions, on behalf of the polyethnic people of the Republic of Sakha (Yakutia), in whose capital you are guests of honour today. I wish you good luck and good health.

Our republic is home to people representing more than 120 nationalities. For 375 years now, we have worked all together, side by side as equals while retaining our national identity.

International educational teams, international subject Olympiads and talent competitions, international economic forums, Children of Asia International Sports Games, foreign scholarships for students and professionals—in the last 20 years all these notions of international cooperation have become a part of our life and a necessity for mutual enrichment and understanding of people, and respect for their ways of thinking and their emotions, beliefs, customs and traditions.

Today I am greeting all the conference participants on behalf of the President of the Republic Vyacheslav Anatolievich Shtyrov. I wish to thank UNESCO Director-General Koïchiro Matsuura for supporting Mr Evgeny Kuzmin's idea of holding this conference in the capital of the coldest republic of the Russian Federation.

The theme of the conference is very important to us given the growing role of information and communication technologies in our daily lives. We are facing the immediate task of expanding free access to cyberspace in the native languages of all the citizens of our republic. I have no doubt your work experience and your efforts to preserve the nation's linguistic and cultural diversity will be studied at the conference and creatively applied.

At the opening of this conference, I am reminded of the words of the great humanist Chinghiz Aitmatov, who said, "Each of us has a duty to the nation that begot us". I wish you fruitful work.

Evgenia Mikhailova

PLENARY MEETINGS

Mikhail NIKOLAYEV

Moscow, Russian Federation

Deputy Speaker, Federation Council of the Federal Assembly of the Russian Federation; first President of the Republic of Sakha (Yakutia)

Native Languages in Cyberspace

We are living at a time when information and communication technologies are turning into an independent industry, and information into a commodity.

Electronic information systems have become an integral part of our everyday life. Cyberspace encourages the advance of globalisation. Globalisation, on the other hand, inevitably leads to standardisation and to common patterns in all domains of life and the economy. It is a very opportune moment for holding this conference, “Linguistic and Cultural Diversity in Cyberspace”.

The ancients said: diversity is a man’s wealth.

Historically, Yakutia always featured multilingualism. Virtually every Yakut can speak both his/her native language and Russian equally well. It is quite natural, as Yakutia is an inseparable part of Russia and we are all Russian citizens. Good command of Russian is a prerequisite for good work and decent life, for Russian is the great language of our state.

Meanwhile our mother tongue, Sakha, has many merits as well. Some Russians were not above speaking the Yakut language. I. A. Goncharov writes in *The Frigate Pallada* that at the homes of Russian aristocrats in Yakutsk, including the governor’s family, the everyday language was Yakut, which sometimes nonplussed the famous author of *Oblomov*.

The Sakha language conveys all the subtlest shades of emotion, the whole range of feelings. Russian explorers had good reason to take Yakuts in their expeditions to use them as diplomats in negotiations with indigenous population in both Chukotka, Alaska, California and Sakhalin. Yakuts took part in every Polar voyage made by Toll, Wrangel and Kolchak, who explored the Arctic Ocean.

In fact, when you speak the Yakut language you become aware of its infinite potential and immeasurable richness. The Sakha language is like a limitless

ocean. It is a wonderful tool for learning all the riddles of mortal life. Until the 19th century, Yakut was only used as an everyday language by the peoples of Siberia and the Russian Far East, but it was made known to the educated world by Eduard Karlovich Pekarsky, who published the first big Yakut dictionary. Thanks to Eduard Pekarsky, whose 150th anniversary we celebrate in October 2008, the Yakut language—and along with it the Sakha nation—gained the recognition and respect of the world public.

If a well has no water, there is nothing to draw. However, the Yakut language had a rich source. The staple of the language was formed by 38,000 underlying words. Every language is a perfect generator of words and sentences. And this mechanism brings forth words and terms when the human brain creates something new and unfamiliar.

Some forty years ago, the American linguist Noam Chomsky developed a generative linguistics theory that he called “transformational linguistics”. The idea of language as a system of linguistic units transformations has since become firmly established in science. Yakut belongs to the languages that bear embryos of every possible transformation to enable its people to create new terms, phrases and phraseological units to learn the laws of nature and social development. The Yakut language is being constantly renewed and thus always meets the demands of the day.

We communicate virtually on the Internet. Professional-level language learning helps the Yakuts to communicate with the global world. Students at the Yakut State University learn European and Oriental languages as well as Russian and Yakut.

Thus, in this globalisation era, our Republic is making conscious and purposeful efforts to promote the diversity of languages and cultures. Yakutia’s ethnic communities use their mother tongues, Russian and foreign languages to acquire deeper knowledge of human civilization.

Linguistic and cultural diversity in cyberspace allows us to better familiarize ourselves with the challenges and concerns of the contemporary world. Being aware of the diversity of nations and their tongues, we treat the Sakha language and culture with care.

The time has come when the Sakha language, thanks to the Internet, can become a global communication language. It is important to produce a publicly accessible online library in the Yakut language. For the moment, we are lagging badly behind in this field.

The world has long changed over to electronic libraries. They, in turn, are linking up to form a global library network. Yakut literature should take a proper place in it.

My first concern as President of our republic was the adoption of the Constitution of the Republic of Sakha (Yakutia), based on the “Declaration of State Sovereignty of the Republic of Sakha”. A constitution is the primary attribute of statehood, a statutory ground for a state.

The policy of interethnic tolerance, which we consistently pursue, has allowed all the residents of Yakutia—Russians, Yakuts, and indigenous communities—to use their mother tongues without restraint. Our Constitution says: “The state languages of the Republic of Sakha (Yakutia) are the Sakha language and the Russian language. The languages of the indigenous minorities of the North are official languages in their compact settlement areas.” There are ABC books and primers for every minority language of Yakutia.

We succeeded in gaining UNESCO over to the cause of development of Yakutia’s languages, one result being a UNESCO-sponsored project, “Promoting the Preservation of the Yukaghir Language and Traditions by Strengthening the Resources of Educational Institutions in Their Compact Settlement Areas in the Republic of Sakha”.

2008 was proclaimed the International Year of Languages pursuant to the United Nations General Assembly resolution.

The activities of the Republic of Sakha (Yakutia) National Committee for UNESCO have been rated high both by the Commission of the Russian Federation for UNESCO and by the UNESCO Headquarters in Paris. It is significant that UNESCO Director-General Koïchiro Matsuura came to Yakutia on a working visit to make a presentation of international projects with the participation of our Republic.

In the early 1990s, the Yakut language was actively used in ministries and agencies of the Republic of Sakha (Yakutia). Its use in government departments and in office management will make Yakut relevant nowadays.

In 1996, I instituted by a presidential decree the Native Language Day, associated with the birthday of the first Yakut linguist, Semen Novgorodov.

We, representatives of the older generation, still remember our favourite children’s literature authors. Such writers of highest reputation as Suorun Omolloon and Nikolai Yakutsky created tales and stories that have been making happy generations of Sakha children. Government action is needed to promote and support children’s books in the Yakut language. This is not contrary to freedom of creativity. It is a fact that Nikolai Yakutsky wrote his best novel, *The Gold Brook*, to enter a contest. As well as winning a prize, he gave his readers an excellent book.

Reading the works of Sakha's early authors can be a real pleasure. Books by Andrei Kulakovsky, Anempodist Sofronov and Nikolai Neustroev are worth being published in due quality. Besides, it has been a long time since we saw mass publications of favourite books by Platon Oiyunsky and Erilik Eristiin.

The world has recognised the artistic and philosophical value of Olonkho, the Sakha epic arts; UNESCO put our Olonkho in the List of the Intangible Cultural Heritage of Humanity. Olonkho is an ever-living source of our language.

We have numerous expatriate communities in Russian cities. There are permanent missions of our republic in Moscow, St. Petersburg and Khabarovsk. Yakut communities are found in many cities. All of them can become points of support for establishing Yakut language learning centres, libraries, publishing self-teaching textbooks and disseminating audio and video materials about the Sakha language and literature.

The bearer of the spirit of this northern people and its Arctic civilization, the Yakut language has traversed a thousand-year journey with the Sakha people and served it faithfully in its development and historical formation. Today, the Yakut language is helping the Sakha people come into its own among the peoples of the Russian Federation, and not to get lost among the numerous nations of the world.

The Yakut language helps preserve our identity and prevents us from losing our true self in an age of dramatic changes and far-reaching developments.

Cyberspace is a new environment for the existence and development of all the languages of the peoples of Yakutia. Let the diversity of peoples and cultures of our republic continue to grow.

A people is alive as long as it speaks its language!

Aisen NIKOLAEV

Yakutsk, Russian Federation

Head, Republic of Sakha (Yakutia) Presidential
and Governmental Office

Language Policy of the Republic of Sakha (Yakutia)

The beginning of the 21st century in our republic marked a shift to a new and very important phase in its development, on the one hand, due to large-scale positive changes in the Russian Federation, and on the other, due to deep-rooted processes taking place the world over. Globalisation, integration, technological and information revolution call for a realistic appraisal and a pragmatic approach to any problem in the changed sociocultural environment. Globalisation processes, involving the whole world, are rather controversial. At the same time, it is quite obvious that further integration into the world community is inevitable, leading to the formation of an interlinked and interdependent society. Our task at this juncture is to keep our national identity and the diversity of our cultures and languages, while becoming an active partner in the global open society. Cultural diversity is a *sine qua non* for sustainable development of a society and a peaceful and regardful coexistence of nations.

The year 2008 marks the eighteenth anniversary of our cooperation with UNESCO. For eighteen years specific actions have been taken in the name of revival, development and promotion of Yakutia's cultural and scientific potential. In 2005 UNESCO recognized the Yakut heroic epos *olonkho*, which has been handed down from generation to generation, as a masterpiece of cultural heritage of humanity. It gave a new momentum to the republic's ties with this Organisation.

In July 2006, UNESCO Director-General Koïchiro Matsuura visited our republic at the invitation of its president, Vyacheslav Shtyrov. A Joint Communiqué was signed highlighting priority areas of Yakutia's cooperation with UNESCO. Today the Joint Communiqué is the main document underlying the interaction of the Republic of Sakha (Yakutia) with this reputable international body.

Yakutia is one of the multiethnic regions of the Russian Federation, its population being just over 981 200 according to the State Statistics Committee. It is home to members of 126 nations and ethnic groups. The indigenous peoples of Yakutia are Yakuts, Evenki, Evens, Yukaghirs and Chukchi. It is noteworthy that according to the 2002 all-Russia census the total population of small peoples of the North

increased by 32% on average. Among the regions of the Far Eastern Federal District, our republic is generally noted for its high birth rate and low death rate.

We are working for modern living standards based on universal values while abiding by the best traditions of our people. The accumulation of our spiritual capital and preservation of interethnic peace and harmony should become the basic lines of our social development.

The republic features bilingualism with two coexisting state languages. The Constitution of the Republic of Sakha (Yakutia) guarantees unlimited development of Yakut and Russian in the status of state languages and the languages of indigenous ethnic minorities of the Far North in the status of official ones.

Russian performs an integration function as a state language and as a medium of interethnic communication in the public administration, social, economic and cultural domains. It is a civic consolidation factor and a state symbol. The Russian language fosters the consolidation of the multilingual peoples of the republic, mutual enrichment and of vernacular languages and rapprochement of cultures, and the establishment of a climate of trust and harmony in Yakutia. The Russian language is a medium of communication not only between Russians and non-Russians, but also among members of different ethnic groups.

The Yakut language is recognised as the title nation language and a state language. The Even, Evenk, Yukaghir, Dolgan and Chukchi languages are official languages used in schooling, broadcasting, book and media publishing.

More than ten other languages having more limited social and communicative functions include Tatar, Bashkir, Kirghiz, Ukrainian, Tuvian, Buryat, Azerbaijani, Armenian and Chinese.

The Law on Languages in the Republic of Sakha (Yakutia) was passed on October 16, 1992, to become the basis of a new language policy. Being part of the state policy, language policy targets the development and interaction of languages in all spheres of life and the creation of conditions for harmonious interaction of Russian with the languages of other peoples of the republic.

The Presidential Language Policy Council was established with a view to optimising the development and interaction of the state and official languages of the Republic of Sakha (Yakutia) and safeguarding individuals' right to use their native language in the social, economic and legal spheres. The Council Statute defines its rather broad functions covering all the vital aspects regarding the preservation, support, development and use of the state languages of the Republic of Sakha (Yakutia) and the native languages of northern peoples. The work of the Council and the *State Target-Oriented Language*

Development Programme are seen as evidence of increased attention to language as the most striking aspect of culture, and they undoubtedly bolster the functioning of all the languages of Yakutia, thereby broadening and enriching the range of scientific, educational and creative activities in the language development framework.

In order to strengthen the position of the Russian language in the Republic of Sakha (Yakutia), November 19, the birthday of Mikhail Lomonosov, who wrote the first Russian grammar, was declared by a 2001 presidential edict the Russian Language Day in the republic. This edict and the federal target-oriented programme *Russian Language* for 2002–2005 were basic to creating *Russian Language*, a state programme of support of Russian in Yakutia, and the *Language Education of Schoolchildren in the Republic of Sakha (Yakutia)* programme for 2002–2006 as part of the State Programme of Educational Development of the Republic of Sakha (Yakutia) for 2001–2006.

The year 2007, which was celebrated as Russian Language Year in Russia, coincided with a significant date, the 375th anniversary of Yakutia's affiliation with the Russian State. The long road of companionship has seen the establishment of centuries-old traditions, common economic and social ties and cultural and intellectual values.

The overall focus of the Republic of Sakha (Yakutia) language policy is the recognition of the right of every ethnic community in the republic to use and preserve their native language as an inalienable asset of a nation.

The main thrusts of the government's language policy and its efforts to revive, preserve, develop and apply minority languages are:

- expanding the social base and the application area of the languages, which presupposes the creation of a proper environment for encouraging the younger generations to use their mother tongue and developing a functionally sound bilingualism/multilingualism, with the republic's vernacular languages as a major indispensable component;
- extending the scope of application of vernacular languages, particularly their social and cultural functions, in accordance with the needs of native speakers; and
- improving language and speech culture, which presupposes an essentially new level of literary forms, their perfection and orientation to nationwide rules, and the activation of the internal resources and potential of the languages.

Government support is reflected in particular language development actions. National holidays are established devoted to native languages, the Russian language and Slavic writing. Teaching aids and books are brought out by the national book publishers *Bichik*, and newspapers and periodicals in native languages are issued by the *Yakutia* media holding.

The Ministry of Education of the Republic of Sakha (Yakutia) together with the Institute of Northern Minorities Problems of the Siberian Division of the Russian Academy of Sciences, have produced electronic teaching materials on the language, arts and crafts, literature and folklore of the forest and tundra Yukaghirs as part of the UNESCO project *Promotion of the Preservation of the Yukaghir Language and Oral Tradition by Way of Strengthening the Educational Institutions' Resources in Their Compact Habitation Areas in the Republic of Sakha*. The National Library of the Republic of Sakha (Yakutia) has produced CDs on the literature of the peoples of the North, *A Talking Book*.

The Russian Federation grants every people the right to have its own system of national education and upbringing, thus being one of the more advanced states in the field of ethnic groups education. The constituent entities of the Russian Federation secure their citizens' right to education in their native language and the satisfaction of their national cultural needs.

Learning languages as a means of broad international communication is an important prerequisite for cultural exchanges and contacts between people, for their mutual understanding and collaboration. In other words, acquired knowledge of languages has an important role to play in implementing the dialogue of cultures in the present circumstances.

The introduction of innovative information technologies in institutions of general education is one of the most important goals of the informatization of education.

In the framework of the section *Introduction of Modern Education Techniques* of the priority national project *Education*, the republic's institutions of general education have been equipped with computers and hooked up to the Internet.

Webcasts on various aspects of the Yakut language, pedagogics, olonkho and Yakut literature are becoming a tradition and a necessary part of the daily lives of students and teachers. The republic's creative and scientific community takes a very active part in webcasts devoted to anniversaries of popular local writers. Schoolchildren's on-line talks in mother tongue with philologists and authors about imaginative literature, the meaning of life, human destinies, the universe, and patriotism not only broaden the scope of functioning of their native language, but also foster the intellectual and moral development of the young generation.

According to a federal-level IT penetration survey, our republic is among the top ten Russian regions with the most extensive regional computer network in the public administration area.

The republic is actively implementing the target-oriented programme *Electronic Yakutia 2007–2011*, which consists of five subprogrammes:

- Development of IT,
- Development of television, radio broadcasting and a satellite distribution net,
- Development of the production base of the republic's telecasting and radio broadcasting,
- Building of telecommunication facilities, and
- Development of a dedicated server public administration net for the Republic of Sakha (Yakutia).

In 2005, the republic's Ministry of Finance put up money, jointly with the federal Regional and Municipal Finance Reform Fund, for the construction and commissioning of a technological *VSAT satellite network*. Before the system was created, no operator in the remote areas of the republic presented their electronic accounts, which affected their speed and performance.

Under the *Electronic Yakutia* programme we have set about creating a web portal that will provide web-based public services to individuals and businesses. We are to change from departmental record keeping in two languages (based on the Delo system) to interdepartmental electronic information exchange using the digital signature.

Our abiding concern is the development of computer editing programmes, which need to accommodate every graphic symbol of the writings for the indigenous population of the republic. Together with the development of relevant Web resources this will lead eventually to a rise in the numbers of people using their native language in computer work. Jointly with Microsoft we developed a Yakut codepage for a new version of the Windows Vista system shell. It means that the native Yakut speaker will be enabled, like the native speakers of world languages (English, Russian etc.), to freely communicate on the Internet, create databases and exchange information, which will help to spread the Yakut language all over the world.

In order to normalise the use of the Yakut and minority languages of the North and to secure conditions for their further development in cyberspace, the Yakut government adopted a decree "On the Adoption of the International Character Coding Standard Unicode as Character Coding Standard for the Characters of the Yakut Language and the Minority Languages of the North". We are working together with the Unicode Consortium and the International Organization for Standardization in introducing a universal keyboard layout.

Observing all of the above conditions will contribute to the improvement of the language situation and the creation of an environment for supporting the full-fledged functioning of Yakutia's languages in the sphere of innovative information technologies.

Promoting linguistic and cultural diversity in cyberspace is our opportunity to preserve languages and cultures and to expand the application area of national languages still lacking sufficient communication and demographic power quickly and effectively. It is important that we, native speakers, discern the problem on time and build an accurate action algorithm: to study, develop, utilise and promote languages.

The Internet offers vast opportunities to users in terms of freedom of expression, education and information access. However, being able to get Web information in dominant languages only is a very big problem. Decisive actions must be taken to design a mechanism for preserving the very rich and diverse written and oral cultural heritage of the peoples of Russia, using ICTs.

It is also important to remember that the modern civilisation model is built on the coexistence principles; hence, we need to carry out effective joint international projects, which will open up fresh opportunities for implementing partnership programmes with specialists in different regions. Besides, a sine qua non condition for development is the training of professionals who can draw upon international experience to implement linguistic and culturological projects using innovative information technologies.

We should initiate international studies on the preservation and resurrection of the languages of our region and use the IT potential to study languages and create a common information space.

Adama SAMASSÉKOU

Bamako, Republic of Mali

Executive Secretary a.i, African Academy of Languages (ACALAN)

President, MAAVA World Network for Linguistic Diversity

Linguistic Diversity as a Basis of the Unity of Human Communication

All the greatest pleasure is mine, to be invited to give a talk on linguistic diversity in the Cyberspace, because throughout the two phases of the World Summit on Information Society (WSIS), I repeatedly focussed on this issue, which is for me one of the three big stakes of the WSIS process, the other two being, of course, the so-called issue of Digital Divide (which actually represents deeper, economic and social Divides, but also that of knowledge) and the achievement of the Millennium Development Goals.

But first of all, I would like to insist on what we all know, but sometimes forget: language is the most fundamental identity constituent. Our late Amadou Hampate Ba said that of all the characteristics of a human being, language is the most relevant! Indeed, bedrock of culture and matrix of creativity, language is the ideal tool for building knowledge and know-how. From this point of view, it is undeniable that it is in their language that the creative genius of people is better expressed! Languages are the living expression of cultural identities, both individual and collective.

Beyond the multilingualism inherent in almost all the societies of the World, historical events, namely colonialism, brought to the non-European continents other languages which coexist with the native national languages. These languages, the results of colonial domination, are the official languages of many countries in the world, especially in Africa, at the expense of native languages, which are used only as non-institutional languages of communication.

Because every society, every social group is called to live their culture, to preserve as much as possible their secular cultural values, cultural and linguistic diversity becomes a reality which is binding on all of us, at the individual, community, national and global levels. It is the acceptance of this reality, which gives every individual, every community, every society fundamental human rights, including:

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- the right to express themselves, to create and disseminate their work in the language of their choice;
 - the right to quality education and training that fully respect their cultural identity;
 - the right to participate in the cultural life of their choice;
 - the right to exercise their own cultural practices within the limits imposed by respect for human rights and fundamental freedoms.

So, how can we therefore deny the language the fundamental role it plays in development?

However, let us recall that this is unfortunately the situation in the most part of the countries which were colonised by Europe, specifically in Africa.

You will agree with me that no people, no country in the world has grown beyond its languages and cultures!

That is why, the African languages, to take an example closed to my daily life, are the most privileged and efficient means of the flow of information, knowledge acquisition, and therefore “empowerment” of citizens, in order to make them real players in their own development, i.e. the progressive harnessing of their environment, in the broadest sense. That is to say also that concrete actions and steps should be taken to promote them in cyberspace for more equity among people of the world.

And our late Professor Joseph Ki-Zerbo would say, with a particular humour, if European languages imported into Africa are bridges toward the globalized world, it remains that it is difficult to leave one’s house to live under a bridge!

Indeed, how couldn’t we promote linguistic diversity in cyberspace for everyone to take part in the information and shared knowledge society?

Development can be achieved only with respect for languages, cultures, arts, beliefs, ways of thinking, I mean, those idiosyncrasies that create harmony and make the beauty of a diversified, multifaceted, different, but united world. “The beauty of a carpet lies in the diversity of its colours”, said our Mawdo Amadou Hampate Ba.

In fact, languages are the receptacles and the vehicles par excellence of the Cosmo vision of human societies.

That is why, more than ever, our world needs its linguistic diversity to be preserved and developed, in order to use the societal values of solidarity and sharing, embedded in some cultures, as a leverage to better transcend the logic of interest. An end should therefore be put to the hegemony of these inherited languages from colonization as well as to this market driven world.

You will understand that making the choice to preserve linguistic diversity means accepting to substitute to the destructive logic of market competition, the logic of solidarity and complementarity, which is likely to restore harmony of beings and species. We know that the cultural and linguistic diversity is for the human society what biodiversity is for nature: the ferment, the bedrock of what I have called, a few years ago, our *“humanitude”* or *“humanness”* (for you to have an idea), our permanent opening to the Other, our relationship as human beings to be human, which requires a permanent relationship of solidarity, without calculation, a spontaneous impulse host of the Other... this *“humanitude”* that links man to man, according to the beautiful expression of our Dear Elder Aimé Césaire! It is through this concept of humanitude that I translate what we call in Africa *maaya*, *neddaaku*, *boroterey*, *nite*, *ubuntu*... People of Mande (a West African area inherited from the Mali Empire) say to us: “I am a human being not because I think I am, but it’s your eyes landed on me that make me a human being!”

This is why it is time to move from rhetoric on the defence of linguistic diversity to the implementation of concrete actions of synergy between languages, including partnership between languages in the world: partnership requires above all the recognition of others and respect for their identity and sincere desire on both sides to work together to build a common project, a mutually beneficial one, in a spirit of true Solidarity.

And what is common for all the languages of the world is that beyond their diversity, they all contribute, indeed, to the unity of human communication!

As our Dear Elder Joseph Ki-Zerbo, a well renowned historian wrote, “The languages enable us to have access to fabulous deposits of cultures and history that are unavoidable doors to enter the modern world. At the sole condition that we emerge from colonial status and that we are not obliged to leave our own languages at the door.”

Therefore, they can now also give us the means, at this time of information technology and communication, which is a tremendous potential, to save most of the cultural heritage worldwide.

From this point of view, let’s recall what the achievements from the WSIS are.

The international community has agreed on a common perception of this problematic, which is reflected in the eighth of the eleven guiding principles that underlie the new society under construction, “a society with a human dimension, inclusive and giving priority to development, a society of information in which everyone can freely create, access, use and share information and knowledge ...”

In the Declaration of Principles adopted in Geneva, the 8th principle, entitled “Cultural diversity and identity, linguistic diversity and local content”, contains the following three paragraphs:

“52. Cultural diversity is the common heritage of humankind. The Information Society should be founded on and stimulate respect for cultural identity, cultural and linguistic diversity, traditions and religions, and foster dialogue among cultures and civilizations. The promotion, affirmation and preservation of diverse cultural identities and languages as reflected in relevant agreed United Nations documents including UNESCO’s Universal Declaration on Cultural Diversity, will further enrich the information society.

53. The creation, dissemination and preservation of content in diverse languages and formats must be accorded high priority in building an inclusive Information Society, paying particular attention to the diversity of supply of creative work and due recognition of the rights of authors and artists. It is essential to promote the production of and accessibility to all content—educational, scientific, cultural or recreational—in diverse languages and formats. The development of local content suited to domestic or regional needs will encourage social and economic development and will stimulate participation of all stakeholders, including people living in rural, remote and marginal areas

54. The preservation of cultural heritage is a crucial component of identity and self-understanding that links a community to its past. The Information Society should harness and preserve cultural heritage for the future by all appropriate methods, including digitisation.”

So here are the achievements from Geneva to Tunis, I was going to say pledges from the international community on the promotion of cultural and linguistic diversity in the Information Society, i.e. mainly in the cyberspace.

Reported to the African reality, how is this problematic? What is the situation today, of the Continent-Cradle of Humanity, which has moved into the digital era completely destitute?

Pointing out the present situation is dramatic. Continent of paradoxes, Africa presents this rare singularity making it, in the words of Edem Kodjo, the continent which “produces what it does not consume and consumes what it does not produce.”

Continent of paradoxes, Africa is usually called “English-speaking”, “francophone”, “Hispanic” or “Portuguese-speaking”, referring to countries where, in the vast majority of cases, the official language (that of the administration, the school, justice, media etc.) remains inherited from

colonization, mastered only by 2 to 5 per cent people on average, who feel more comfortable with African languages, the most of which remain depreciated by the States, little or not instrumented and seeking legal status and legitimacy.

To better speak the language of others, we must first master our own language. In most of our countries, the national languages are still confined to the areas of oral communication and traditional literacy. There are not yet many States where they are used as mediums of instruction in primary education, a fortiori secondary and higher education. We have the strong conviction that they should play a fundamental role in all development sectors.

First at school level, the weakening which the various education systems in Africa continue to face largely finds its explanation in the forced learning of languages inherited from colonization. Everyone knows that *all knowledge transmitted in the mother tongue is better understood and much better mastered than if it is conveyed to the learner in a foreign language.*

Land of paradoxes, Africa remains the only continent in the world where in the vast majority of States, besides almost all the states in sub-Saharan Africa, the child, when he goes to school, is forced to access knowledge, especially basic knowledge structuring his/her intelligence and personality, in a language in which he/she even doesn't think!

In terms of social and cultural development, as we know, every language reflects a vision of the world and a form of social and cultural life, which always end up imposing a certain structure and mental reasoning to those who practice it in their daily activities. This simply means that *the way of life of our people is manifested in their languages which are for them essential tools of understanding the outside world.*

This is what we need to change in Africa and around the world, wherever cultural and linguistic diversity is not respected.

Indeed, how to help all citizens of the world, particularly in Africa, specifically to exercise their right to communicate in the language of their choice? How can we ensure, for example, that the use of the Internet reflects the cultural and linguistic diversity of peoples? More specifically: How to better exploit the information and communication technologies to empower, in their languages, the millions of illiterates in our African continent and other parts of the world, so that they can be creative and conscious actors of the information and shared knowledge society?

In sum, the marginalization of national languages, one of the consequences of colonization, led to the internalization, within populations, of a feeling of inferiority towards the languages inherited from colonization which need to be mastered to avoid marginalization from decision-making process and the exercise of power.

This is to ensure that national languages become real training, information and communication tools for citizens at all levels, in order to ensure a wider participation of masses in the development process. In other words, languages should be empowered for them to be used again in all spheres of life.

The situation is so serious at the extent that I would sincerely like to thank the organizers of this conference for updating the issue of promoting linguistic diversity in the cyberspace, after the international community's commitment through, among other things, the various UNESCO conventions, the Universal Declaration on Cultural Diversity and the outcomes of the Geneva Phase of the World Summit on the Information Society (WSIS) and the "Round Table For a Multilingual Cyberspace with the Participation of All in the Information and Shared Knowledge Society" in Tunis during the second Phase of the WSIS, from 16 to 18 November 2005. It is during this second Phase that the MAAYA Network—the World Network for Linguistic Diversity, an initiative of the African Academy of Languages, was born and officially launched later, on February 21, 2006, on the occasion of the International Mother Language Day, at UNESCO, in presence of the Director-General of this institution.

Cyberspace being a vast place of freedom where any person as well as any community, if equipped with computer and Internet access, may develop his/its own cultural and linguistic data and share them with the world by placing them, it is necessary for this person or that community to do this, to be provided with means of information technology: a computer, Internet software access and training in the use of these means. To enable this, international and national organizations can help for equipment and training.

Prof. Marcel Diki-Kidiri's book on linguistic and cultural diversity in cyberspace is very edifying and goes in the same line.

According to Microsoft, there is throughout the world hundreds of thousands of computers that the company no longer uses. Why isn't the retrieval of these computers organized for redistribution to poorer communities in the Third World with an accompanying programme including the necessary training, and the retrieval of wrecks for destruction when these computers are becoming completely obsolete? An alternative to this proposal would be the installation of computers at low prices by light structures located directly in the communities in question. These structures can be set up by NGOs or international organizations.

The MAAYA Network, which brings together many international organizations like UNESCO, the Francophonie and the Latin Union, the International Telecommunication Union, the Global Knowledge Partnership, etc., is particularly attentive to support and encourage all initiatives to promote, facilitate and ensure the development of linguistic diversity in the world, and obviously the preservation and revitalization of the world languages.

At present, MAAYA serves as a platform of exchange and sharing in the area of shared knowledge, where technology offers a great potential for languages, but is also risk to them, as to date only a very small number of languages of the 7,000 spoken in the world are available.

MAAYA also serves as the moderator of the sub-theme on Linguistic Diversity of the action line C8 of the WSIS Plan of Action and has initiated the Dynamic Coalition for “Linguistic Diversity” of the Internet Governance Forum.

MAAYA Network has also been involved by UNESCO in monitoring the activities of the International Year of Languages. To this end, an International Advisory Committee, composed mainly of international organizations concerned with linguistic diversity, and chaired by the Interim Executive Secretary of ACALAN, President of MAAYA Network, is being established.

At the level of the African continent, the African Academy of languages I have the honour to lead, organized a series of conferences in four regions (West Africa, Central Africa, Southern Africa and Eastern Africa) and is intending to organize the Northern African Conference in October 2008, to sensitize decision makers and administrators, as well as scientists and intellectuals from each region on the role of cross-border vehicular languages which could contribute to regional integration of Africa, and the place of less diffused languages in the national language policies. This increases awareness and paves the way for more cooperation between states in promoting languages and linguistic diversity in many working spheres of people and states.

Our world is more and more marked by an unprecedented violence leading progressively to a dehumanization of relationships between individuals and peoples. This is why, we need more humanness worldwide. Our world needs to reinforce a solidarity based on the dialogue between cultures and civilisations in order to resist to the process of cultural standardization.

That is why it is essential to guarantee the rooting of each community, each individual in his language and culture, with an opening to the Other and that is why we have created the MAAYA Network.

While wishing every success to the working sessions, I salute this International Conference which gives once more the opportunity to strengthen the perspectives, particularly in this International Year of Languages, of promoting human communication in the world, for better solidarity among human beings!

Evgeny KUZMIN

Moscow, Russian Federation

Chair, Russian Committee of the UNESCO
Information for All Programme

President, Interregional Library Cooperation Centre

Preservation of Linguistic and Cultural Diversity in Russia: Problems and Prospects

It is not by chance that the problems of preserving linguistic and cultural diversity are widely discussed in the whole world. They are all the more topical with the stormy development of the global information society. On the one hand, the developmental processes enhance cultural unification and reduce cultural diversity. On the other hand, they give the chance to preserve and even develop it in cyberspace.

These new opportunities should not be missed. They must be used to the utmost as the levelling-off of cultural diversity impoverishes our life, and this is not merely unpleasant—it is downright dangerous. It is essential to realize that linguistic diversity is one of the principal bases of cultural diversity. The extinction of any language is an irreparable loss because language reflects the mentality of a nation, and every nation is unique. Language is a means of self-expression, self-identification, socialization, and transmission of cultural experience, knowledge and traditions. Languages promote the accumulation of human knowledge. They are intellectual products of an amazing richness and versatility. Last but not least, they are precious to their users.

Why is it so important to develop multilingualism and cultural diversity in cyberspace? Internet and digital technologies are able to enrich our life. To their active users, the idea of doing without them is preposterous, with the vast opportunities they offer for extending communication, broader access to information and knowledge, self-expression, education, leisure, and expanding the ideas of the world. The problem is that the Internet offers information and services only in the dominant languages. This is often an insurmountable obstacle to ethnic minorities with an inadequate command of their country's state language or one of the major world languages.

Many of these problems are topical for Russia, which is one of the most multilingual countries of the world. According to the 2002 census, its population is 142.4 million. Ethnic Russians make close on 80% of it. Apart from them, more than 180 other ethnic entities live in Russia since long ago. They speak more than a hundred languages and dialects of the Indo-European, Altai and Ural language families, and the Caucasian and Paleo-Asian language groups.

It is pivotally important for contemporary Russia to promote multilingualism not only in order to preserve and develop languages as the basis of many peoples' cultural heritage, and not merely to preserve the amazingly rich cultural diversity of our land. It also remains topical from the point of Russia's political, economic, social and cultural problems, dominated by the problem of interethnic communication in multiethnic society.

Russian, which is Russia's state language, is used everywhere for interethnic contacts. Practically all adult Russian citizens have its fluent command. More than 127 million people, including 120 million ethnic Russians, consider it their native language, and more than 16 million have it for their second language—which means that only slightly over a million people (less than 1% of the Russian population) have no adequate command of the Russian language.

A majority of other ethnic entities—more than 70% of Bashkirs, Tatars and Buryats, 85% of Kalmyks, etc.—speak Russian on a par with their native language or even better. That is why there are practically no language barriers in Russia, unlike many other multiethnic countries.

The preservation and development of ethnic languages, and the elaboration of writing in the languages of indigenous ethnic minorities was among the principal goals and challenges of the Russian state throughout the 20th century—whether under monarchy or socialism. This is so today, too. We have every reason to say that it is one of Russia's greatest achievements. In the years when the Iron Curtain divided Russia and the West, there were intensive cultural exchanges between the peoples of the Soviet Union and Russia. The state promoted and encouraged such exchanges. It was one of the priorities of Soviet nationalities policy.

The collapse of the Soviet Union reduced these exchanges, though their revival has lately become a notable trend.

More than a million speak each of Russia's six most widespread languages: Russian (an overwhelming majority of the population), Tatar (5.35 million), Bashkir (1.38 million), Chechen and Chuvash (1.33 million each).

Vast immigration of the preceding years from CIS and other countries enhances the presence of their languages in Russia. These are Armenian, Azerbaijani, Kyrgyz, Tajik and Uzbek alongside Chinese and Vietnamese.

Sweeping social, economic and political changes came to Russia in the second half of the 1980s with the development of democratic processes. They are putting ethnic cultural factors ever further into the foreground. Here, language is one of the principal features and carriers of ethnic identity. It consolidates ethnic entities in the

multiethnic social environment. The development of Russia's ethnic languages and extension of the sphere of their use are becoming ever more topical.

Russia is a vast multiethnic country, where a majority possesses a working command of the Russian language. Clearly, for many objective reasons, university education is available only in Russian, with token exceptions. Russian dominates paperwork as well. Television and radio broadcasts in minority languages take only several hours a week. Book and press publication in such languages has a relatively small scale in terms of the number of titles.

In this situation, people of many ethnic entities regard their native language as of small prestige. They pay much greater attention to the studies of Russian and English.

All this reduces the number of ethnic language speakers, so their languages are threatened with extinction. Minority languages account roughly for 30% of languages spoken in the former Soviet area. Almost all of them are running the danger of extinction, to varying extents. The problem is at its worst with the languages of entities less than 50,000 people.

The 1990s saw active efforts to develop language-related legislation at the federal and regional levels. The Constitution of the Russian Federation stipulates its basic premises:

1. Russian is the state language throughout the Russian Federation.
2. Constituent republics of the Russian Federation have the right of establishing their own state languages. Their central and municipal ruling bodies and official institutions use these languages on a par with Russian.
3. The Russian Federation guarantees all its peoples the right to preserve their native language, study and develop it.

The status of Russian as state language implies its mandatory use throughout the Russian Federation in all central and municipal ruling bodies, in elections, referendums, official publication of laws and other regulatory documents, legal proceedings, paperwork, etc. Russian language classes are mandatory in general education and vocational training. However, all languages of the peoples of the Russian Federation are regarded as Russia's national patrimony, on a par with Russian, and enjoy protection of the state, which promotes the development of ethnic languages, bilingualism and multilingualism throughout the country.

The constituent republics of the Russian Federation (Russia possesses 88 constituent entities, 20 of which have the republican status) have the right to appoint their own state languages, as their own constitutions stipulate.

The Law on the Languages of the Russian Federation obliges supreme ruling bodies of the Russian Federation to promote the development of state languages of the constituent republics; these languages can be used in the activities of republican ruling bodies and local self-government alongside Russian; republics may publish federal and republican legal acts in these languages; they can be used on a par with Russian in elections, referendums and their preparations, in corporate and office work, legal proceedings, etc.

Russian citizens with no working command of the Russian language have the right to speak at meetings and sessions of government agencies, industrial and other companies, and offices in the language which they speak fluently. Interpreters are provided when necessary.

According to the general rule, Russian and the language of the titular ethnic group, to which the republic owes its name, are qualified as state languages of the republic even when its titular ethnic group makes a minority of its population. Several republics have more than two state languages.

For instance, the Republic of Sakha (Yakutia) has two state languages—Russian and Yakut, Kabarda-Balkaria has Kabardian and Balkar, and Dagestan 15 languages of its peoples.

The Law on the Languages of the Russian Federation guarantees their equal rights and social, economic and legal means of their protection and stipulates:

- the funding of relevant government programmes;
- the opportunity of creating the written form of native languages and of linguistic research of all languages of ethnic entities populating Russia;
- the opportunity of education in ethnic languages irrespective of the number of ethnic entities and in compliance with their demands;
- the use of ethnic languages alongside Russian in official communication (paperwork in central and municipal ruling bodies, companies and offices, and toponymy) in the areas of compact settlement of non-Russian entities.

As the law stipulates, tuition of language/languages in general educational establishments is determined by their founder(s) and/or statute. The state is obliged to promote teacher training in the languages of Russia's ethnic entities having no statehood of their own.

The Fundamentals of the Legislation of the Russian Federation on Culture stipulate the rights of ethnic cultural centres, societies and fellow countrymen's associations to establish libraries, circles and classes for ethnic language study.

Many primary, secondary and higher schools of all republics study titular ethnic groups' languages and use them for the tuition of disciplines pertaining to the history and culture of Russia's peoples.

The Development of Russian Peoples' Languages in Cyberspace

At the end of 2006, the Russian Commission for UNESCO instructed the Russian Committee of the UNESCO Information for All Programme to draft the Russian report on measures taken to implement the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace.

We had never before tackled the matter any seriously—it appeared remote from our range of problems, we did not know it enough and did not find it topical, for that matter. To be honest, its complexity baffled us. Still, the Russian Commission's order had to be fulfilled. Why did it fall on us? The reason was that the UNESCO Recommendation had a great many aspects—not only the promotion and development of multilingualism in cyberspace and elsewhere but also access to socially important information, nets and services, development of open-code software, promotion of information literacy, and balance between right-holders and public interests. Someone was to act as the integrator of this multisided national report. So the Russian Commission for UNESCO chose us.

As we were drafting the report, it not merely opened our eyes to the scope and content of problems related to linguistic and cultural diversity in cyberspace—we also realized what an interesting country Russia is in terms of linguistic and cultural diversity. We saw that this diversity is one of Russia's most spectacular and attractive traits and that it is our duty to preserve it as long as we have necessary stamina and funds.

When the national report was ready, we also saw that no one except the Russian IFAP Committee was practically appraising the problems of linguistic and cultural diversity in cyberspace in their entire scope—at the macro-level, so to say. Though many brilliant experts are tackling each of these problems, they are dispersed and seldom keep in touch with each other. All too often, they have no idea how important the development of languages in cyberspace is for the preservation of languages in general. More than that, no one organizes interdisciplinary research and related events.

We are going on with this work. We—that is, the Russian IFAP Committee and the Interregional Library Cooperation Centre—have started activities in a new field, the development of multilingualism on the Internet.

We did monitoring research in 2007 for more profound assessment of multilingualism in and outside cyberspace in Russia, with the following central goals:

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- stock-taking, with the greatest possible fullness and precision, of the measures taken in Russia to develop multilingualism on the Internet at two levels—of the regional administration and the research and educational community;
 - monitoring the scope of representing Russia's ethnic languages on the Internet; and
 - identification of the agencies, organizations and experts able to tackle the problem, and establishment of contacts with them.

The administrations of more than a half of constituent entities of the Russian Federation—46 out of total 88—answered our questionnaire. As the result, we collected ample empirical data on:

- the initiators and authors of electronic information resources (IR) in Russia's ethnic languages,
- the sources of funds to create and maintain IR,
- the role of municipal and regional authorities in creating and maintaining IR,
- the goals and basic content of IR, and the principal problems encountered by their developers,
- languages used in designing IR and the amount of their materials translated into other languages,
- the quality of ethnic language fonts used in IR,
- the availability of electronic interpreters and dictionaries for translation into and from Russia's ethnic languages,
- the availability of search engines adapted for Internet information retrieval in Russia's ethnic languages, and
- activities in electronic linguistic documenting of minority languages.

The answers allowed us also, first, to learn the opinions of regional public servants, researchers and educationalists on the topicality for Russia of developing multilingualism in cyberspace and, second, to receive a more comprehensive picture of the representation of languages spoken in Russia on the Internet.

I will not dwell in detail on the results of our study. They are published in the book *Linguistic Diversity in Cyberspace: Russian and Foreign Experience* (Russian edition: Interregional Library Cooperation Centre, Moscow, 2007). I only want to say that, believe it or not, regional authorities highlighted solely their own activities, claiming to be most often the initiators of developing multilingualism in cyberspace, and shrugging off municipal contribution. Universities and

research institutions, on the contrary, complained of deplorably small interest of regional and municipal authorities in the problem, and said that this lack of interest was among the greatest obstacles to developing electronic information resources in Russia's ethnic languages.

Some of our respondents pointed at:

- the absence of a federal policy in this sphere,
- the dispersion of and lack of coordination between relevant R&D,
- the embryonic state of the regulatory framework, and
- users' inadequate demand for IR in ethnic languages.

An overwhelming majority of our respondents find the development of multilingualism in cyberspace necessary and highly important because an ethnic entity and its linguistic environment cannot survive in the information society, let alone develop, without a virtual written form.

However profoundly we were analyzing the Russian legislation concerning the preservation, promotion and development of multilingualism as we drew the report, we did not find whatever references to the **necessity of developing linguistic diversity on the Internet**. This means that the problem is not properly assessed yet at the state level in Russia, as in a majority of the world's countries.

In this new field of our activity to promote multilingualism on the Internet in 2007–2008, we made reports and arranged special seminars and roundtables at all major national and international conferences of library information experts from Russia and other CIS countries: the 14th and 15th international conferences Crimea 2007 and Crimea 2008, the 7th international conference Through Libraries to the Future! (Anapa, September 9–15, 2007), the international conference Electronic Culture Age 2007 (Sochi, October 1–5), the Eurasian Library Information Congress, LIBCOM 2007, and EVA 2007 Moscow.

This work spectacularly expanded and deepened our understanding of the developmental problems of multilingualism in cyberspace. We found new partners and, with their assistance, put out many books and brochures making the basis of policy and practical activity in this sphere, which is so important to Russia.

We have translated into Russian and published the UNESCO books *Cultural and Linguistic Diversity in the Information Society*, *How to Guarantee the Presence of Language in Cyberspace*, and *Measuring Linguistic Diversity on the Internet*, and the European Union book *Translation Technologies for Europe*. We have also published our own collections of analytical materials *Языковое разнообразие в киберпространстве: российский и зарубежный опыт* (Linguistic Diversity in Cyberspace: Russian and

Foreign Experience) and *Представление языков народов России и стран СНГ в российском сегменте Интернета* (Presentation of Languages of the Peoples of Russia and Other CIS Countries in the Russian Segment of the Internet).

All these books have been distributed to all major libraries of Russia and other CIS countries. Their online versions are available on the Russian Committee website (www.ifarcom.ru/ru/365). The collection *Многоязычие в России: региональные аспекты* (Multilingualism in Russia: Regional Aspects) is currently in print.

We prepared and published in English the book *Preservation of Linguistic Diversity: Russian Experience* for the international conference “Linguistic and Cultural Diversity in Cyberspace”.

Its first part concerns the language policy of the Russian Federation as a whole and on the example of particular constituent republics—Buryatia, Yakutia, Dagestan, Karelia, Tatarstan and Chuvashia. The second part tells about our own activity to promote multilingualism in cyberspace, about library experience of preserving linguistic diversity, about Moscow State University work in documenting minority languages, and about the history of creating fonts for Russia’s ethnic languages that have only recently acquired a written form.

We hope this book will not only supply information about Russian efforts to preserve and promote the linguistic heritage of our peoples but will also help to build bridges between interested Russian and foreign experts and organizations, and promote their exchange of experience.

Proceeding from all our achievements, we can make the following conclusions.

The development of multilingualism in cyberspace, i.e., the development of digital content in Russia’s ethnic languages, of relevant services and software aims in Russia primarily to preserve, study and popularize the cultural heritage and languages of the peoples of Russia—not to reduce barriers obstructing Russian speakers’ access to Russian-language content because there are almost no such obstacles in Russia, as shown above. In this, Russia spectacularly differs from many other multiethnic countries using many languages.

Basic Russian government efforts to preserve languages are made at the regional not federal level. The regions draw programmes to preserve cultural and linguistic heritage and diversity, and develop them in cyberspace. As the result, the following work is done in the languages of the peoples of Russia:

- television and radio broadcasting;
- demonstration of children’s documentaries and cartoons;
- Internet broadcasts of television and radio programmes;

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- publication of newspapers and magazines;
 - numerical increase of media outlets' Internet portals;
 - release of information CDs on the history and culture of ethnic entities represented in Russia;
 - establishment of websites on those entities' culture and history;
 - establishment of websites of universities, national libraries and other organizations and agencies;
 - establishment of Internet pages of many university departments and chairs, and institutes teaching and studying ethnic languages spoken in Russia;
 - creation of teaching aids for language studies, in particular, electronic study books, dictionaries, libraries and databases containing information about languages, history and culture of ethnic entities represented in Russia;
 - establishment of communication forums;
 - documentation of minority languages by many universities and research institutes;
 - localization of software in languages spoken in Russia;
 - R&D on fonts and other technical support.

For instance, 25 ethnic fonts for Windows platforms are offered on the Internet for circulation and modifying.

The number of websites in languages spoken in Russia, including minority languages, is steadily growing. The Internet offers even catalogues of resources represented in cyberspace in those languages. The quality of such websites is constantly improving and their role increasing in a persistent trend. The pace at which these resources are built up and new ones appear is determined by the pace of the Internet advancing to outlying regions and of the acquisition of computer competence by the public, mainly by humanitarian intellectuals. However, even despite all these indisputable achievements, we do not think that languages spoken in Russia are sufficiently represented on the Internet.

Such insufficiency is mainly due to lack of attention to the problem and subsequent underfunding which, in its turn, results in a lack of attention to expert training for coordinated work in all relevant fields.

The Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, endorsed by UNESCO in 2003, calls to promote the development of multilingual content; build up information of the public domain

reflecting local contexts; enhance public access to the Internet and its services; and promote a just balance between the interests of right-holders and the public, especially minority language speakers.

The governments of all countries, including the government of the Russian Federation and the administrations of the Russian regions, especially constituent republics, should realize how serious the problem of the development of multilingualism in cyberspace is, and elaborate relevant national and regional policies. To make these policies effective and provide access to information in many languages for the greatest possible number of people, joint R&D is necessary on the creation of:

- operating systems,
- search engines and browsers with considerable potential from the point of multilingualism,
- online dictionaries and terminological reference books,
- computer interpreters,
- smart linguistic systems for multilingual information search, and
- tools of speech summarizing, abstracting and identification.

It is necessary to arrange the monitoring of international and national policies (and regional policies for Russia), of regulations, technical recommendations and applied R&D in multilingualism and multilingual resources; and to identify and circulate pioneer knowhow.

The development of linguistic diversity on the Internet has major significance—not only cultural but also political. The circulation of multilingual information about ethnic history, languages and culture promotes mutual tolerance and understanding—one of the pivotal factors of peaceful sustainable development of all contemporary civilizations, including Russian civilization.

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Ethical, Legal and Social Aspects of the Development of New Information and Communication Technologies

Information highways, according to their protagonists, will provide universal access to services hitherto accessible to very few. They will open new sources of information, make citizens take a greater part in community life, and promote communication, understanding and tolerance between nations.

Many think that universal use of new technologies promotes convergence and leads to the development of the global information society, proving their point, for instance, by the obliteration of traditional borders between telecommunication, television and radio broadcasting, and information systems, while companies involved merge in new strategic alliances often crossing departmental and even geopolitical borders.

Such statements come from all sides today and are often made as the only possible logical conclusion from the course events have taken. However, as ancient Indian philosophers remarked, logical thinking is but one of the modes of thinking—and no one has proved yet that it is the most correct. I dare doubt certain known logical conjectures. Let us start with convergence.

We can hardly say that *political convergence* is an accomplished fact. Global regulation mechanisms are comparatively weak and not always effective. It is hard to coordinate policies toward the various, often mutually contradictory, manifestations of the information revolution. It is occasionally hard to implement agreements made, let say, by the United Nations.

Ethical convergence is also far ahead, to all appearances. What some nations find ethical or admissible may evoke strong disapproval of others. What should we regard as universal human values? Even this remains an open question. Certain countries and religious authorities put to doubt the Universal Declaration of Human Rights on the pretext that it reflects solely Western values.

The situation is no better with *legal convergence*. Take the intellectual property right. Its spread to cyberspace, especially with no account for users' rights, evokes harsh differences. Thus, the World Intellectual Property Organization (WIPO) has expressed disagreement with the European Union Directive of 1996 on database protection by special legal norms as it is apprehensive that such norms might limit free access to information of the public domain.

Even talkings on *technical convergence* do not look very convincing from the user's point. It would be absurd to speak of the convergence of the broadband Internet bringing together U.S. supercomputers with old telephone nets still preponderant in many developing countries.

“Globalization” is another catchword today. But we should specify whom globalization is for. Present-day information technologies allow to transfer huge money, including drug and arms trafficking returns, across all borders and bypassing all governments, within a split second. At the same time, people live as before in the reality of borders, customs, passports and visas. It took a week to get from Moscow to Western Europe in the 19th century—and never mind visas. Now, the journey takes three hours by air—but you have to apply for a visa at least three weeks before.

It is thus too early to take the unified global information environment for granted. What we have is rather several parallel worlds. One uses ICT, let us say, for instant banking transactions worth millions of dollars while the people of another world have never seen a telephone or electric light.

It is pointless to speak about developing countries' participation in the development of the global information society before the gap is bridged. More than that, the very idea of such society appears absurd with this gap.

History repeats itself on information highways now: old victims of gender, racial or language discrimination are in a plight again. Thus, according to statistics, men account for 68% of Internet users (consequently, with a mere 32% for women); whites make 88%, Asians 3%, Africans 1% and Latin Americans 1%.

We largely owe this situation to the uneven distribution of global wealth. As we know, the richest 20% of the world population presently appropriate 84% of the world GNP, while the poorest 20% make do with 1.4% of the GNP, 0.9% of the global trade, 0.7% of global savings and 0.9% of domestic investments. The last thirty years changed the income ratio between these richest and poorest population groups from 30:1 to 70:1.

More than that, the developed countries have not fulfilled their promise to allocate 0.7% of their GNP to aid to the developing countries. They allocated a mere 0.2% of the GNP in 1994. Two years later, even this scanty aid shrank to 0.14%.

The priority of communication is essential both in programmes of economic assistance to developing countries and in those countries' own national development programmes.

As a study of the University of Toronto has shown, a mere increase by 10 mobile telephones per hundred population in the developing countries leads to an annual increase of their GNP by 0.6%.

A similar study made in Latin America shows that a 10% increase of the number of mobile telephones in the middle-income countries increases their national product by 0.3%—a considerable growth for a GNP increasing by a mere 1.5% a year.

As it appears, this is the most appropriate time to help the poorer countries to bridge the economic and communication gap.

Where is money going, meanwhile? The statistics of the previous ten years show that, for instance, African countries steadily increase their arms expenditures while educational allocations shrink.

Arms expenditures exceeded a trillion dollars last year. A mere \$11 billion—three days' military budget—suffices for every child in the world to go to school. Yet the world has not found the money to this day.

The situation in the field of new ICTs is changing despite all—largely through ever more rapid ICT improvement and permanently shrinking costs.

The world has presently more than a billion Internet users. China has 111 million. The number grew by 17 million last year alone. The Chinese possessed 820 million telephones by the end of 2006, as against 748 million in 2005, and Chinese operators presently expect \$86 billion profit.

Russia presently has over 26 million Internet users, with 150 million mobile telephones in private possession.

The Internet gradually finds its way even to the most backward countries to open new vistas for economic, entrepreneurial, cultural, educational, research and social progress, and creates new jobs.

Many developing countries have already realized the potential benefits of information and communication technologies as they promise to help them find alternative solutions for their developmental problems and so sooner become full-fledged members of the global community.

Ever more countries thus see ICTs as a powerful factor of economic development. But can we count on the harmonious development of those technologies with no account for their ethical, legal and socio-cultural aspects? Certainly we cannot.

History testifies that whatever policy that ignores the social and cultural life of the community is doomed. We would not have to repeat it on and on if technology were not regarded as the backbone of the economy and economic growth as the only way to settle global problems in making crucial developmental decisions at the international and national levels alike.

As things really are, technology should be the serving-maid not the sovereign of development.

Contemporary Russia offers a spectacular example of what happens when development is regarded only as economic growth. The market economy was transformed to an end in itself from a means. Russian research, culture and education were ousted into oblivion for a long time—but when moral values are shrugged off, nepotism may elbow out administration and the mafia seize market mechanisms.

Now, it appears, the Russian government has grasped the situation before it is too late—but not before thousands of researchers fled to the West.

As we know, neo-liberal macroeconomic makeup has turned out not to suit the Russian face. Jeffrey Sachs, once U.S. adviser to the Russian government, is outspoken in his reminiscences: *“We felt like doctors invited to the patient’s bed site. But when we put the patient on the operating table and cut him open, we suddenly discovered that he has a completely different anatomical structure and inner organs, which we did not study in our medical college.”*

Economic growth cannot be the only goal of the human race. What is it for? To make all wiser and better-off? Or to help very few grab even bigger money?

Nobel Peace Prize winner Aung San Suu Kyi said in a statement for the World Commission on Culture and Development in 1994, *“The true development of human beings involves much more than mere economic growth. At its heart there must be a sense of empowerment and inner fulfillment.”*

Privacy of information and protection of private life are important among the ethical and legal issues of the information society.

Article 12 of the Universal Declaration of Human Rights reads:

“No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honor and reputation. Everyone has the right to the protection of the law against such interference or attacks.”

The information revolution makes these words especially relevant. Private information is often circulated by electronic means without the privacy or

authorization of interested persons. Industrial and commercial companies create detailed databases on their present and potential clients so as to study their way of life, habits and interests. The trend can be expected to get stronger.

Terrorism sweeps the world. To prevent terrorist attacks, secret services of all countries recur ever more often to electronic means of information collection, which allow follow literally every step of each of us. True, we want safety—but we also want privacy and respect for it. What more sacrifices shall we humbly make?

UNESCO does not think that reasons of safety and combat on crime and terrorism should justify the danger to freedom of opinion and mass information. Likewise, they should not justify censorship. Censorship ousts unvoiced opinions underground, where they spread with no reasoned refutation.

Crime uses the Internet ever more often. We all know virus epidemics, electronic vandalism and extortion when hackers demand million dollar ransoms from companies and banks under the threat of destroying their computer systems.

Cultural globalization is another dominant problem. Some say that free information undermines national culture. True, a particular culture permeates every form of communication, and almost all forms of information. Information flows have a tremendous cultural impact. All this is not new. Information has formed cultures for centuries. Now, however, many are apprehensive of this process, fabulously sped up by ICT, leading to the domination of one culture and the emergence of a global monoculture. Do new technologies always level out cultures and derogate languages? They hardly do.

Characteristically, Latin and Greek had monopolized art and science before Guttenberg, while the development of book printing strengthened national languages and promoted national cultures.

Many languages, such as Gaelic or Welsh, have survived to this day due to radio broadcasts in those languages, just as many languages of the Russian Federation. Many immigrant communities listen to the radio in their native languages thanks to the Internet. This is of essential importance as a language perishes in the world every two weeks.

Alongside globalization, technologies might be used for social and cultural isolation or self-isolation when religious, ethnic and other communities come together in a virtual group—and never mind strangers. I know some people in Paris who watch only the Russian- or Arabic-language satellite television, while certain people in the United States watch only Spanish-language broadcasts.

The global domination of Western-oriented cultural products makes many sick—which is not surprising as an overwhelming part of Internet information was available only in English until recently. Everyone knows how Hollywood lords it in the world film and television markets.

Now, it appears, the impregnable walls of the world markets show signs of strain, giving the most progressive of the developing countries the chance to emerge in the market sooner or later.

Such countries will fairly soon transform from importers into exporters. Asia is regarded even now as a market demanding products based on its own cultural wealth. Production habits and the creative drive are amply present in every part of the world, so when they produce the impression of deficient, it might be due to inadequate technical development but never to lack of creativity.

India releases more than 900 films a year—three new movies a day! If they are destined ever to find mass audiences outside Hindustan, they will closely rival the Western cinema.

The situation is similar in Latin America. The annual volume of its audiovisual produce makes half a million hours—four times more than in the Romance countries of Europe.

The language situation on the Internet is also changing. The use of Spanish and the Scandinavian languages is growing apace. The use of Japanese and Chinese grows exponentially. Russian, too, is in a beneficial situation, though world statistics sometimes overlook it.

The man-machine relation has a tremendous impact on personal development and social conduct. The latest research in certain developed countries shows a consolidated group of people spending more than 10 hours a day on the Internet to develop computer addiction. I don't think the entire humanity will ever degenerate into solitary computer addicts—but this is surely a danger for many. Indicatively, China already has hospitals treating computer game addiction.

The distortion of human perceptions belongs to the same cluster of problems. We ever more often observe reality by electronic means, so our link with the real world threatens to become very loose and virtual, with a warped idea of the way things really are.

American journalist John Connell thus described the Gulf War of 1991 in his essay *The Problems of Virtual Reality*:

“The whole world perceived computerized pictures of laser-homing bombs howling down through Iraqi house chimneys as a kind of computer game, even more striking with pilots’ jubilant ululation and applause at every direct hit. Television audiences did not see deaths in bomb blasts and did not hear the moans of the dying.”

Something similar was the case in the Balkans, I think. NATO pilots, who flew too high for Serbian anti-aircraft missiles to reach and saw land only through optical electronic sights, could hardly imagine the gory results of their pinpoint bombing.

The information revolution thoroughly redistributes employment to bring far-reaching social consequences in its wake. The share of material production shrinks in the developed countries as economic sectors based on information technologies and services make sweeping progress. The demand for manual labor declines while ever more employees with information technological work habits are wanted. European employment is expected to grow mainly in the information and service sectors in the years to come.

Some countries now offer preferential conditions to foreign specialists while limiting entry to other potential immigrants.

The most far-sighted politicians and entrepreneurs pay great attention to personnel retraining and re-orientation of vocational training. Countries which do not take such measures suffer increasing unemployment, especially in senior age groups, which exacerbates social tensions.

Other alarming trends are emerging, e.g., the “virtual geographic” redistribution of the educated workforce. Thus, African and Eastern European researchers often work for Western companies through the Internet. They are contented though earning less than their Western colleagues. Will they stay content tomorrow? Or will this redistribution start social problems in the employer countries? America, in its time, received manacled slaves as cheap workforce from Africa. Now, it does not need such journeys across the ocean anymore—the world web smoothly brings it cheap brains.

One sometimes gets the impression that the Internet was developing so smoothly and effectively merely because governments did not see what was on, and grasped the situation when it was too late.

The true power of humankind lies in its collective intellect. A harmonious information society is impossible unless all nations and social groups take part in its blueprinting and building.

That is why UNESCO as an intellectual cooperation organization sees its primary mission in serving as a global forum to discuss the entire range of cultural, educational, ethical, legal and social problems connected with the emergence of the new information society, and to elaborate common approaches to the settlement of those problems.

UNESCO has 191 Member States. It would be dangerous to spread the laws and codes of conduct of any country or group of countries to the entire cyberspace. That would bring formidable counteraction. All are equal in cyberspace.

I want to say, by way of summing up, that UNESCO has no ready prescriptions for tackling problems of the emergent information society—but it wants all voices heard and all viewpoints considered in the global discussion of such problems. Information highways should be a team project that takes into account not only economic interests but also the interests of education, research, culture, communication and social development. The new information society will be truly global only when it is information society for all, resting on solidarity and respect for human dignity.

Today, we no longer need powerful radio and television stations to carry information worldwide—a computer tapped to the Internet suffices. To have something to say matters most. When Alexander Graham Bell was told that a first-ever transatlantic telephone line had opened between New York and Berlin, the phone inventor asked: “Do they have anything to say to each other?”

We have much to say to each other, and our children and grandchildren will have even more. We must do everything so that they would never refer Albert Camus’ phrase to us: *“They could do so much but dared do so little.”*

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Promoting the Development of Indigenous Languages in General Education of the Republic of Sakha (Yakutia)

This is not the first time a UNESCO conference discusses various aspects of promoting the development of indigenous languages.

UNESCO conferences hosted by our republic gave us a unique opportunity to compare our approaches to education with the practice and experience of other countries. They set standards for future work to guarantee universal quality education accessible to all. Universal education demands an account for the many cultural and linguistic conditions of contemporary communities. That is why political decision-makers must, on the one hand, provide unified norms for the entire population and, on the other hand, protect the right of every ethnic and linguistic community to be unique.

The linguistic educational strategy within the general educational system of the Republic of Sakha (Yakutia) has been elaborated with due account for the cultural, sociological and legal factors of state language policy, which is reflected in international documents, and the federal and regional legislation on the protection of citizens' rights to freely choose their language of communication, upbringing, education and creativity.

The Republic of Sakha (Yakutia) has two adopted concepts to set the bearings for linguistic and culturological education in a multicultural community. *The Concept of Updating and Development of Ethnic Schools in the Republic of Sakha (Yakutia)* was introduced in 1991 to guarantee the attainment of a triune goal of intercultural education in the schools of Yakutia—passing the entire treasury of native language and culture, practical experience, traditions and moral values to the young generation, enriching it with the culture of coexisting peoples, and acquainting it with world cultural values, which are a synthesis of the best achievements of a multitude of national and ethnic cultures of the world.

2001, the European Year of Languages, saw the adoption of the *Concept of Linguistic School Education in the Republic of Sakha (Yakutia)*. It proclaimed the ideas of forming and developing the linguistic personality capable of self-fulfillment through

language and in language. The concept was very topical due to the specifics of the language situation in Yakutia, with great linguistic diversity and contemporary social demand for the formation and development of personalities capable of creativity in the cultural polylogue.

Linguistic education at school rests on the principles of personal linguistic sovereignty; of the dialectic unity of the ethnic, the national and the international, which makes school students feel themselves citizens of the Russian Federation and part of the global civilization at once; integration of the various levels of linguistic education, variety of the didactic content and tuition methods corresponding to students' personality and demands; consideration for the legal status and linguistic body of languages under study, and many other principles.

Tuition in the native language is possible only in a written language. General education in an ethnic language demands sufficient development of the language status, i.e., practical education is attainable only in national languages.

The linguistic body of indigenous minority languages does not yet allow primary education in those languages, so their study in secondary school is the only way to preserve and develop them.

Native languages—Russian, Yakut, Even, Evenk, Yukaghir, Chukchi, Dolgan and others, Russian as the national language, and foreign languages are taught in conformity with the *Basic Curriculum of the Republic of Sakha (Yakutia)*. It envisages classes on ethnic cultures of Yakutia and native language and literature from the 1st grade into the 11th, and Yakut as the national language in the 1st-9th grades. The curriculum allows parallel study of several languages in one grade. The regional basic curriculum aims to fulfill international pledges of the Russian Federation and the Republic of Sakha (Yakutia) to preserve and develop linguistic and cultural diversity, and implement children's linguistic, cultural and educational rights and freedoms.

The republic has legislated the mechanism of elaborating and publishing Yakut, Even, Evenk and Yukaghir language learning packages. The same concerns Yakut and other Northern literatures, and ethnic cultures of the Republic of Sakha (Yakutia). Especial attention belongs to courseware for the five official minority languages of Yakutia in the Atlas of the World's Languages in Danger of Disappearing. To preserve and develop them, the republic publishes teaching aids on minority cultures and languages and software on intercultural dialogues, integration and project work. All these aids take into consideration the ethnic psychology of the thinking and perceptions of children from Northern ethnic minorities.

I am glad to say that World Around learning packages for nomad schools have been elaborated in the Even and Evenk languages on a joint project of the UNESCO

Moscow Office and the Republic of Sakha (Yakutia). They follow the patterns of discovery learning with consideration for the specifics of reindeer breeders' life. UNESCO experts approve the packages.

The republic owes to UNESCO support a first-ever digital electronic library, established in 2007, which samples material and nonmaterial Yukaghir cultural and linguistic heritage from private collections and state archives. Resource centers were established in the Yukaghir village schools of Nelemnoye, Upper Kolyma Ulus, and Andryushkino, Lower Kolyma Ulus.

At present, it is our duty to provide conditions for all who so wish to study their native language irrespective of its official status in the republic. Democratic changes and partnership with other constituent entities of the Russian Federation allow us to cope with this task in teamwork by starting weekend schools, ethnic cultural clubs and associations, and other nongovernment organizations.

Preschool and general educational establishments of various types—kindergartens, secondary schools, gymnasiums, lyceums, educational centers, nomad schools, schools with preschool grades attached, and others—provide tuition in Yakut as native language, and teach native languages of indigenous ethnic minorities.

30,994 children are brought up in Russian as the native language in 292 preschool institutions, and 22,258 in Yakut as the native language in 486. Spoken Even is taught in 15 grades with a total 502 children, Evenk in one grade (35 children), Chukchi in one (11 children) and Yukaghir in two (29 children). Yakut is taught to 3,329 children in 76 grades, and English to 3,171 in 98. 588 preschool institutions provide extracurricular linguistic education to develop children's communication skills.

Half the pupils (total 89,380) study Yakut in 88% of general educational schools. The number of pupils studying spoken Yakut as an official language grew by 10,458 in the 2007/08 academic year. At present, 20% of pupils (total 29,451) are studying Yakut.

67 general educational and 9 nomad schools are working in the compact settlement areas of indigenous Northern ethnic minorities. 6,123 children study their native languages, of these 2,275 Even, 3,283 Evenk, 168 Yukaghir, 145 Chukchi, and 252 Dolgan—179 more than in 2006. The state supports summer language schools and ethnic cultural immersion camps in nomad-populated areas to promote the succession of generations and preserve ethnic languages.

A network of UNESCO associated schools, grammar schools and multiethnic and multicultural schools promotes the UNESCO goals of preserving linguistic and cultural diversity in Yakutia.

We educationists face an essential goal posed by the state—to instill in schoolchildren civil responsibility, legal self-awareness, culture, initiative, independence, tolerance, and abilities to socialize and adapt to the labor market. Close *contacts of schools with extramural educational institutions* are essential in solving those problems as extramural education remains one of the most effective forms of developing children’s and young people’s abilities, preferences and interests, and their social and vocational self-fulfillment.

Republican literary festivals timed to jubilees of Yakut, Even, Yukaghir and Evenki writers, language and literary competitions, ethnic cultural festivals, online conferences in the official languages, and contests of the command of Northern minority languages are effective in the discovery of ethnic literary heritage by children, and promotion of their exploratory creativity. These events also teach children to disseminate native literature.

Present-day general education in Yakutia promotes the development of ethnic languages, bilingualism and multilingualism. It provides linguistic and cultural succession of generations, and instills in the youth love for the mother tongue and respect of other peoples’ culture, language and traditions.

Russian education is undergoing all-round changes as sustainable development mechanisms emerge for true up-to-date education. The current transition period demands legal, organizational and economic mechanisms that would promote a balanced approach to basic problems of linguistic education in a multiethnic country.

Our frequent meetings with the public often pose the following questions of preserving linguistic and cultural diversity in the integrated educational environment of the Russian Federation:

- Will tuition in the native language be taken into account as normative funding per student is introduced in small and bilingual classes?
- Should the concept of up-to-date quality of preschool and general education and vocational training include ethnic cultural education?
- Does the development of education as an open state-and-public system envisage participation of ethnic public organizations interested in developing their native languages in the formation of educational policy?
- Do all involved in education—students, their parents and teachers—realize their responsibility for cultural and linguistic succession of generations, and for instilling in the youth love of the mother tongue and respect for other peoples’ culture, language and traditions?

Hand in hand with federal, regional and municipal authorities, we effectively tackle those essential tasks as general education modernizes. Today's general schooling is called upon to form an integral system of comprehensive knowledge and skills, as well as students' experience of independent work and personal responsibility—i.e. basic competences determining the present-day educational content. Upbringing as number one priority of education becomes part and parcel of teaching integrated into the overall process of tuition and development.

The draft federal state educational standard gives new definitions to basic disciplines that form the intellect and communication skills on which studies of other disciplines rest. The Russian, native and foreign languages, mathematics, fundamentals of information technology, and other disciplines that train the intellect and independent thinking, enhance communicability, and improve in-depth understanding make the cycle of basic school disciplines. Humanities, which are the principal value-setting disciplines, include literature, art, geography, history and the ABC of social studies. Natural sciences at school, dominated by rational knowledge, comprise physics, chemistry and biology.

Methods set by the federal standard allow a new look at educational achievements and the function of the native language in tuition. The tuition language as an instrument of thinking and cognition becomes the basic means of multi-purpose didactic activities.

The accessibility of quality education presupposes state guarantees of tuition using latter-day equipment and courseware, and students' free access to state, municipal and school libraries. The new generation standard also includes demands on the principal curricula.

With this goal in view, the Ministry of Education intends to equip general educational institutions with armamentaria for teaching native languages and literatures. The State Target Programme for the Development of Education in the Republic of Sakha (Yakutia) envisages supplying 100 schools with standard Yakut language and literature armamentaria in 2007–2011, the armamentaria for Northern indigenous minority language studies to follow later.

Information and communication technologies are among the most effective contemporary tools of universally accessible quality education. As educational establishments of Yakutia have broken through to the global Internet, the republic is pursuing a well-defined strategy of introducing ICT to education, with consistent and coordinated practical action in that sphere. Schools receive the latest technical equipment on national project Education. Schools, teachers and pupils start their own websites. Virtual museums are opening one after another. The republic is actively implementing distance learning and electronic document management.

We can say with full assurance today that Yakutia's general education network possesses an infrastructure allowing access to the Internet. Teachers have had postgraduate ICT classes, and regional educational resources are being established, such as tutorial systems and electronic and multimedia study books and teaching aids.

We shall go on extending databases in indigenous minority languages. What we need today is a virtual information and educational environment in such languages, and the transfer of the educational content into electronic media. It is time to design virtual educational kits for experiments, exercisers for drilling academic skills, testing systems for assessing student progress, and other didactic forms using native languages in cyberspace.

Yakutia is dynamically joining cyberspace. Its next steps envisage the development and extension of projects at interregional and international levels, and the elaboration and implementation of intercultural dialogue programmes for children and the youth.

There is no way to attain strategic didactic goals without permanent interaction of the education system with all involved agencies and public organizations, parents and employers.

The UNESCO idea of universal lifelong education is extremely topical to Russian educationists. We are not yet using to the full the opportunities of postgraduate and other forms of extended adult education and vocational training to preserve cultural and linguistic diversity, study native languages and improve speech standards. These goals would be brought closer if ethnology, sociolinguistics and elocution classes were introduced in professional education in all fields.

The preservation and revival of endangered languages is of tremendous importance to the world, and the scholarly and educational community of Yakutia is no exception. Our general educational system is taking necessary steps to organize the study of Northern indigenous minority languages. There is a formidable obstacle to it, however. That is the absence of effective techniques for language studies by children and adults, and of optimum models for the revival of endangered languages in the education community.

We have yet to arrive at the best possible patterns and variable techniques of teaching endangered languages on the basis of integrating established pedagogical systems of the indigenous peoples and the latest educational, information and communication technologies.

New variable models and teaching techniques for endangered languages, and materials for websites are called upon to launch the implementation of

international pledges of the Russian Federation to revive, preserve and develop indigenous languages of the world, and protect children's rights and freedoms in the domain of language, culture and education, as guaranteed by regulatory legal acts of the Russian Federation.

We propose to convene the international conference Endangered Languages in the Educational System under the UNESCO aegis in Yakutsk in 2009, which should involve United Nations experts on indigenous languages. We also propose to implement a medium-term UNESCO project for the establishment of the educational environment on the basis of schools for ethnic minorities in areas of their compact settlement. Such a project would help to streamline the technology of attaining sustained results.

The involvement of children of different linguistic and cultural backgrounds, representing diverse modes of life, and with varying health statuses in education is among top priorities of many countries' state educational policy. The Republic of Sakha (Yakutia) has long experience of educating children out of the ordinary— young nomads, children growing in a multilingual milieu or limited-abilities children. Cyberspace opens new vistas for inclusive education in native languages, indigenous minority languages among them.

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Internet and Language Diversity: Is It Possible?

It is believed that the absence until now of many languages on the electronic networks is one of the major obstacles to the provision of equal access to information, and sometimes the reason for their extinction. An ever-rising amount of research is addressing the problem of the expansion of language diversity in cyberspace and of information exchanges among different language communities. With the application of new information and communication technologies this objective seems to become achievable.

Nevertheless certain questions could be asked. Is further development in this field possible in view of the current trend toward globalization? Is it really necessary? The paper is examining these questions.

How Is Language Diversity Developing in Cyberspace?

In 2007, UNESCO published the manual “*Comment assurer la présence d’une langue dans le Cyberspace?*”, which was translated into Russian¹ by the Russian IFAP Committee² under Evgeny Kuzmin’s supervision. The book provides ample information, helpful for finding the answer to this question. Unfortunately, this work covers only one aspect which will guarantee the presence of a language in the electronic environment, i.e., the normative technical measures.

The existence of technologies and norms is certainly a prerequisite for languages to find their place in cyberspace. How can we do without them? This is the reason why the interest in this field is steadily growing.

¹ <http://unesdoc.unesco.org/images/0014/001497/149786R.pdf>.

² The UNESCO Information for All Programme is the only intergovernmental programme entirely dedicated to universal access to information and knowledge (<http://www.unesco.org/web-world/ifap>).

Provision of Technologies and Software

All industrially developed countries started about 30 years ago to elaborate *technologies and software* for the use of various languages in the electronic environment. This effort in research has achieved important results—in particular:

1. in the creation of computer programmes for automated translation. A great number of sufficiently reliable systems for electronic translation and shifts from one language to another are available today—from various electronic dictionaries and glossaries³ to online translators, such as Multitran, InterTran, Systran, etc.⁴;

2. in setting up different computer fonts (not only for the mostly used languages but for the minority, functionally limited languages as well). Programmes are available now even for:

- universally accessible free Internet websites enabling the creation of such fonts for rare languages⁵, some of which are circulated free of charge;
- virtual keyboards, such as Keyman by Tavultesoft⁶;
- BPI application programmes for computerized data processing: Alibi, Concorde, Recode, Ventlie and Vocab11, which are presently the basic resources for working with texts in functionally limited languages and their further use in cyberspace⁷. Organizations like SIL International do good work in this field;

3. in the development of document systems and language preservation systems allowing:

- to place all kinds of written, audio and iconographic documents on the Internet for the infinite dissemination of a language in it;
- or to create a website, from a personal web page to a multimedia portal;

4. in the development of multilingual search systems on the Internet. Many systems are available today with algorithmic data procession and user-specific interfaces allowing multilingual searches. Only a few programmes, however, are at present adapted for the use of functionally limited languages: Google, Altavista, Яндекс, Rambler, MavicaNet, Wikipedia and others;

³ <http://www.lai.com/glmain.html>; One Look Dictionary.

⁴ <http://www.lai.com/temain.html>.

⁵ E.g.: <http://scripts.sil.org/> or <http://www.freelang.com>.

⁶ <http://scripts.sil.org/>.

⁷ http://www.progiciels_bpi.ca/tcao/apercu.html.

5. in assessing the advancement of linguistic diversity in cyberspace, e.g.:

- the international project "Language Observatory" (LOP), launched in 2007 and elaborated by the Nagaoka University of Technology (Japan) under the UNESCO aegis "*to explore all Internet sites at least once a year, to identify the languages and to publish annual registries of languages in cyberspace*";
- the project of the World Network for Linguistic Diversity MAAYA;
- the reference book Ethnologue (SIL).

From the above one can make a first conclusion that even today the use of such computer programmes allows us to enhance linguistic diversity in cyberspace. Furthermore, the research work, the preparation of various manuals and guidelines for learning and the elaboration of recommendations on the use of ICTs for the promotion of language diversity keep on developing actively and are constantly offering new ways and means for the creation, enrichment and circulation of multilingual information in cyberspace. The use of such programmes certainly raises the status of a language in its users' opinion.

Provision of Technical Normative Tools

Moreover, all computer programmes facilitating the use of languages in cyberspace depend on the permanent elaboration and provision of *technical normative tools*. For this reason the industrialized countries made also great efforts in this field. They are intensely developing general and specific linguistic terminologies, various information and communication protocols and international standards (ISO, Unicode and others) to regulate the application of technologies and to give the users an access to them.

For example, the advent of the Universal Characters Set (UCS) allows now the placement of symbols of all written systems in the world, and Internet protocols and programmes such as Skype, Google Talk or Messenger allow an online transmission of vocal information through the Internet in real time.

All these R&D have already facilitated a great deal the international flow of information in different languages, hence contributing, to a certain extent, to the promotion of cultural exchanges and commercial transactions.

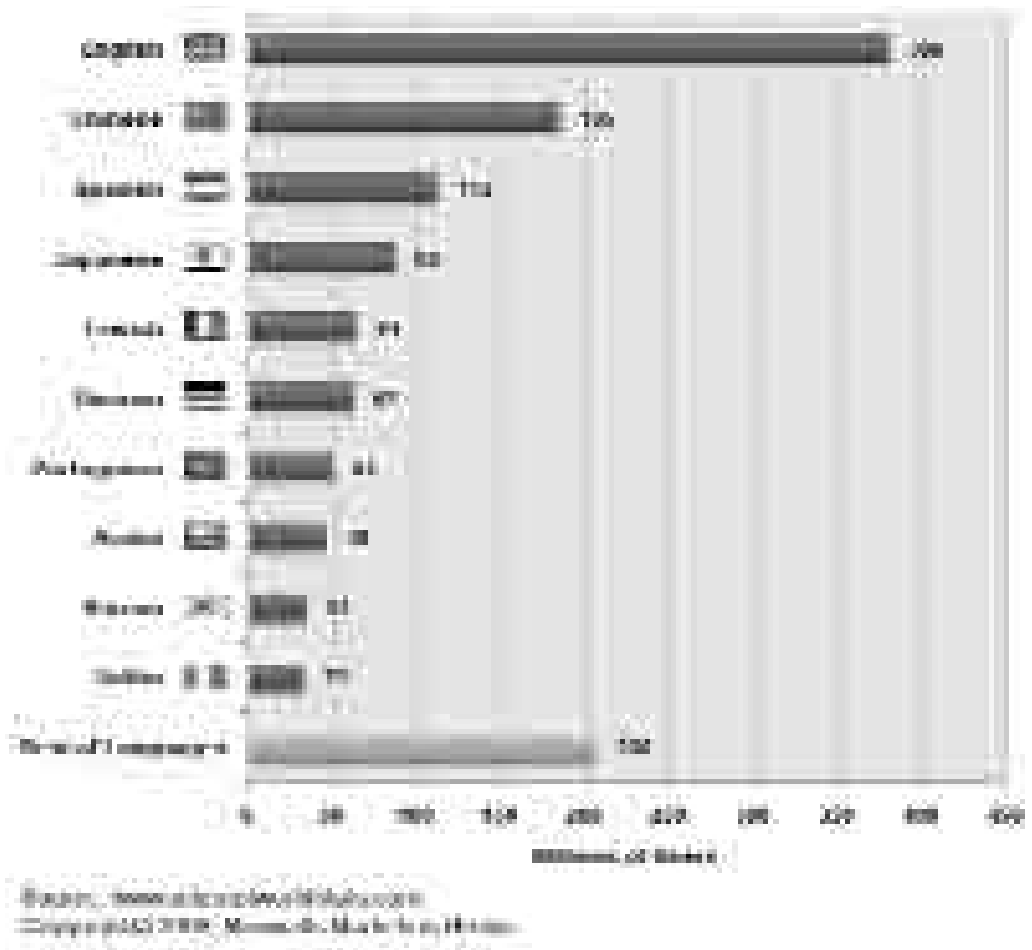
Nevertheless, it is still essential to produce in the electronic networks the critical mass of information in a given language.

Provision of Multilingual Contents

One needs to provide "*contents*" which offer different services in their own language. It remains the best way of ensuring the presence and use of a language in cyberspace. Here, however, all indicators show that progress in developing contents is made at different pace, from country to country.

Thus, the abovementioned UNESCO publication notes that only 16 languages out of almost 7,000 were used in 2003 to produce 98% of web pages. Of these 72% are in English.

It is true, that the situation, according to the statistics from many sources, such as *The Global Language Monitor*⁸, *Global Reach*⁹, and *Internet World Stats*¹⁰, is evolving rather rapidly. Although the use of the English language remains dominant (30–35% of users), this use diminishes to the benefit of other languages. However, this evolution concerns only a few languages of large industrialized countries, whose number can be counted easily on fingers (Chinese, Spanish, Japanese, French, German, Portuguese, Arabic and some others)—in short, the other 15–20 languages.



⁸ http://www.language-monitor.com/Language_Stats.html.

⁹ <http://global-reach.biz/globstats/index.php3>.

¹⁰ <http://www.internetworldstats.com/stats7.htm>.

By way of comparison: in Russia, according to *Internet World Stats* for November 2007, 20.8% of the population uses the Internet. The Russian language on the Internet is not among the world top ten, although it ranks 5th in Europe.

We shall note that among the languages present on the websites the part of thousands of minority languages is not very significant—much less, let us say, then for the most used languages. Attempts to introduce them on the websites remain, in most cases, at the experimental level. “Content” in those languages, and their cultural component (textual, sound or graphic) do not develop or are developing very slowly.

For instance, 105 languages are spoken in Russia—45 of these in Asian Russia (3 are extinct by now: Kamas, Mator and Sirenik in the Chukchi Peninsula). How many of these languages can be found on the Internet? And what is the situation of the local Yakut language in cyberspace?

Another example—out of the 238 languages in the United States, 76 are extinct and 67 on the edge of extinction¹¹.

Statistics also show that there is a steady increase in the number of Internet users in the world. Nonetheless, the great majority of the population, in any country, any region, remains cut off from the “content” in its own native tongue, even if it is the official language of the country. In Russia, for instance, only 21% of the population has access to Russian-language resources.

The rest of the population has no chance to use the large amount of information available in cyberspace for the enrichment of its knowledge and its social and economic growth. Why is it happening?

Provision of Political Means

The reason is that access to information largely depends on political and financial support.

Of course, we cannot deny that there is no *provision of political means* whatsoever. Linguistic issues are discussed at the international, national and even local levels for a long time now. Even decisions are taken for the promotion or protection of the main official language in cyberspace, especially in the prosperous industrialized countries.

Nevertheless, up to now, in most cases they are limited to the examination of strictly technical aspects, especially in the Third World—they concern the delivery of the necessary up-dated equipment or the application of foreign linguistic normative instruments to their own native languages.

¹¹ http://www.ethnologue.com/show_country.asp?name=US.

It took UNESCO several years to elaborate its international Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003). The Organization involved from the start of the preparatory work for the World Summit on the Information Society (WSIS), contributed a great deal to the elaboration of the WSIS Declaration of Principles and Action Plan. We hope that these efforts have somehow enabled convincing nations to take a decisive step towards developing their countries' native languages.

At the same time, authorities of industrialized countries are giving without doubt an increased attention to the various additional economic, political, legal, ethical and social aspects needed for the enrichment of cyberspace with "content". Many started, as far back as the 1980s, under the influence of international organizations such as UNESCO, to formulate information policies, which always included *the preservation of the national language heritage* and the creation of a system of *public access to official information*. The Third World countries or regions where minority languages are present take up these issues only in exceptional cases.

I personally organized seminars in many different countries throughout the 1980s and 90s to assist the state authorities in the formulation of their national information policy (it was well before the creation of national IFAP committees). As I see it today, despite the fact that some countries took this matter seriously, others, especially the poorer ones, were much less successful.

As my long experience tells me, that is where the main problem lays in the reinforcement of linguistic diversity in cyberspace. How can we convince the political administrations that for the development of language diversity in cyberspace there is a need to formulate information and language policies, elaborate legal norms and standards, develop infrastructures and education, and all of this within the national constitution framework?

Let us examine what are the obstacles to this aspiration? Why is it so hard to implement measures for the preservation of language diversity in cyberspace?

What Slows down Further Development of Language Diversity in Cyberspace?

Language Limitations

The first problems arise from the languages themselves and their speakers. In brief, there are *language limitations*. Thousands of languages emerged, evolved and vanished throughout human history. Languages die for a number of reasons—the causes may be natural or man-caused disasters, political or administrative measures. Or simply, when the languages have no written form, they disappear with the death of their last speakers. These are not new phenomena.

In one of my earlier reports, I referred to the extinction of a Caucasian language that had a world record for the number of consonants it contained (81). The Ubykh language vanished with the death of its last speaker, a Turkish peasant. Several hundred languages are under the same threat of disappearance. According to some studies, several hundred minority languages with a small number of speakers or with no written form will cease to exist before 2050. The *Ethnologue* reference book of SIL International Organisation, mentions that 516 languages of the world are on the verge of extinction. 11 of them¹² are languages of Russian minorities.

Yakutia, our host, should also give some thoughts about the fate of its own *Yakut* language. After all, its indigenous population is not so great—a mere 400,000 persons? The Yukaghir language is vanishing—it has no more than a hundred speakers. Am I right? Yenets, spoken on the Yenisei, Karagas near Irkutsk, Kerek in the Chukchi Peninsula and other languages are under the same threat.

Many believe, and I share their opinion, that the most tragic result of the extinction of any language is not so much the loss of means of communication for their speakers, as the loss of a distinctive culture. Every language out of the 6,912¹³ existing today, whatever it might be, reflects unique traditions, mentality and culture. The loss of any language destroys a huge store of information, impoverishes the cultural heritage we all share, and diminishes our potential for research.

Likewise, the extinction of a language means the extinction of an ethnic population. In reality, a language without a community, which practices it regularly, degenerates into a mere decoration in cyberspace.

From this we can conclude that it is essential to preserve not only the *language* but also the *cultural heritage* and, even more importantly, the *community* to which it belongs. This is equally valid for the emerging languages, the endangered languages and occasionally even for the major national languages. Working on the preservation of a language is of tremendous importance for the development and even for the emergence of a sense of solidarity among the community that uses it, especially when this community is small.

Many think that it is now a reachable goal with the application of new technologies and technological systems I referred to briefly earlier. But ICTs, too, have limits of their own and are not always conducive to the desirable results.

¹² http://www.ethnologue.com/nearly_extinct.asp.

¹³ http://www.languagemonitor.com/Language_Stats.html.

Technical and Normative Limitations

What are the *technical and normative limitations*?

True, with the advancement of ICTs, we have more possibilities for the “safeguarding” of many minority languages and for the development of the language diversity in cyberspace. To achieve this we need to enrich the vocabulary of the given language with technical terms (*e-mail address, net, website, web page, navigation, etc.*) so that the community speaking this language be able to use it for communicating in cyberspace.

As far as the domain names are concerned up to now we could use only 37 Roman-based fonts, but in June, 2008, in Paris, the ICANN (Internet Corporation for Assigned Names and Numbers) decided to introduce scripts of other languages, thus opening larger possibilities for their use in cyberspace.

Nonetheless, as I see it, we encounter a number of difficulties in the use of technologies. I wish to remind here three basic facts.

1. An overwhelming majority of Internet users speak only one language, while many speakers of functionally limited languages (languages which have no written form, no recorded grammar, no literature, and are not taught at school) are illiterate. In these situations technologies are of no help. We all know, that the use of computer programmes requires a minimal cultural level.

2. Moreover most people do not have the necessary training in the use of ICTs. This is the main reason for the *digital divide* between the information rich and the information poor. The lack of possibility to express yourself and to communicate in your own language only increases this divide.

3. Don't think that it concerns only those poor countries or regions, which cannot afford to develop information networks in their own language. It also affects directly the richest country in the world—the United States. An overwhelming majority of websites is in English, despite the fact that the U.S. Department of Health and Human Services estimates that 37 million Americans do not speak English at home. This is obviously not a question of absence of users. Even less a question of technological possibilities, or a question of lack of funding. Beyond this there is a political decision.

Furthermore, many are convinced that with the introduction of multimedia technologies and the emergence of the information society a new danger appears for partial or even total extinction of many minority languages. Why?

Statistics shown earlier indicate to us that, up to now, the globalization of the information society through cyberspace is developing mainly in English, and that

several thousands of languages are totally absent in the “contents” of the electronic networks. The software for their introduction on the networks or their translation is, to this date, also lacking. These languages exist on every continent—from Europe, the Americas and Asia (e.g., Myanmar), to Oceania and especially Africa, with its 2,000 languages. Many of them are spoken by indigenous populations.

I think that the danger of the language extinction in the process of globalization is a real one. Moreover, I am convinced that this danger is growing exponentially with the introduction of new technologies. This trend leads inevitably to the widening of the economic gap between those who have access to information in their own language and those who don't. In the final instance, it leads to the extinction of cultures of the minority language speakers.

Last but not least, the use of languages on new technologies requires considerable *preparatory work by linguists, which is complicated and time consuming*. This work is carried out now only on an experimental basis. It cannot be expanded to all languages of the world. Hence, it is being carried out case by case. Will we have enough financial resources for this type of research work? It is not obvious.

Here is a concrete example: dominant languages of industrially developed countries have keyboards especially designed for them, while none of the major African languages (Kiswahili, Zulu, Hausa, Fulfulde and others) have such keyboards. There are also difficulties with the coding formats (such as UTF 8) of the 2000 basic Chinese written symbols. The same problems exist with Japanese and Korean writing. So the users of functionally limited languages should not hope to get in the foreseeable future their own “physical” keyboards.

All these limitations are at the origin of drastic changes in the use of languages in the society as a whole. I don't know whether it is good or bad. This is a controversial issue.

But behind this issue stands the question of political decisions, and their enforcement. This should be borne in mind.

Political Obstacles

The real difficulties begin when there are *political obstacles* in the given country. When the governmental and administrative authorities *have no political desire or even any interest* in the users of functionally limited languages and in the creation of information contents in minority languages. When there are no legal instruments that would allow these languages to reach a status of working languages in cyberspace.

I mentioned already the need to have a common national information and language policy. It may consist of many relevant policies. However, in formulating such a policy one should not limit it to matters concerning the main official language of the country. It is also essential to take measures for the preservation of minority languages, which are also part of the national heritage. The authorities of most countries of the world do not do so, although this is an indispensable step for the inclusion of functionally limited languages, often indigenous ones, into cyberspace.

Moreover, in most cases, the attempts to implement such policies are *not carried through*, either because of insufficient governmental funding or because of changes of Cabinet or simply for lack of will to work with minority languages, especially with their ethical, legal and social aspects. The most frequent reason, however, as I see it, is the *absence of a unique national organization* that would take on itself the coordination work. The creation of IFAP National Committees was in this sense very helpful, I think. But not enough.

Five years have past since the World Summit in Geneva reached a consensus on these matters. Many states and organizations pledged to work in this direction. And what?

But this is not all. Many political leaders not only do nothing to ensure a place for minority languages but, on the contrary, actively and sometimes even aggressively promote their extinction. They see in such languages a barrier for national unity. That is why the presence of languages in local and national networks is not only a technical but also a political and moral issue.

We can also regret that languages are all too often used as *tools of domination* or division of people. Their future often depends on their ability to withstand the pressure of the more aggressive languages or the languages used in dominating countries—especially in economics and in cyberspace. That is another reason of global changes in the use of languages and another danger for the disappearance of several thousands of languages.

In this lays also the essence of the phenomenon of *globalization*, especially American-led globalization, through the use of English in cyberspace. The United States contribute huge financial and human resources to the application of computer technologies for the dissemination of English in cyberspace. Few, however, know that there are another 161 languages spoken in the United States.

The use of cyberspace demands *financial* support. Even the United States, if it wanted so, would not be able to make digital recordings of all the languages. Such recordings require expensive expert work and equipment, much too expensive for the great majority of developing countries or regions speaking functionally limited languages to afford. Government aid is indispensable here. But then, governments also cannot be milked indefinitely.

This is why having clear *information and language policies* is the best way for ensuring the presence of a language in cyberspace. The formulation and implementation of such policies are necessary not only for supporting the official language of a country but also for supporting all languages used by native populations of this country. Otherwise, these languages will either degenerate into curious complements to cyberspace or in the worst case vanish altogether.

Is Full-Scale Development of Language Diversity in Cyberspace Possible? Is It Necessary?

With these perspectives in view, two questions seem to be coming naturally to mind: is the full-scale development of language diversity in cyberspace possible and is it necessary?

Is it possible?

An almost categorical “Yes” is the answer to the first question. The current state of computer industry can accept the majority of languages spoken throughout the world. Computer systems are being developed for the use of functionally limited languages with no alphabets, only phonetics. Today’s technologies allow the introduction of language diversity into cyberspace, and the process is well underway.

The main obstacle to this, as I see it, is the relative indifference to these matters of the governments, the private sector and even the civil society. This is what slows down a more active action in this field of cultural development.

We have to emphasize, however, that the language diversity, the way it now exists on the Internet, concerns only an extremely limited number of languages of the world: only 15–20 most widely used languages. Among them English is still far ahead of the others. On the one hand, it is an advantage as English becomes a truly international language for communication. On the other hand, it is a disadvantage, because it becomes the main reason for changes taking place in the use of languages, and the risk of extinction for many other languages. In this sense, technologies may even play a negative role.

The presence of minority languages in cyberspace is minimal. Those already present in it are, one might say, only on an experimental basis. It is almost impossible to place thousands of such languages in cyberspace. There is an even smaller chance to make them important means of communication through ICT. This will require tremendous linguistic work on the languages, training efforts for their speakers, and painstaking efforts for their automation. It is very unlikely that in the near future we will find the political will ready to study and to fund such programmes. No countries have these issues on their priority lists now, as far as I know.

Is it necessary?

This is where the next question comes in: *Is linguistic diversity in cyberspace necessary after all?*

I doubt it is. We can perfectly limit ourselves to languages that have a very substantial number of speakers—Chinese, English, French, Spanish, Portuguese, Russian, Arabic, etc. If the presence of these languages can be regarded as language diversity in cyberspace, we can say we have accomplished the task.

The minority languages in view of the fact that for many of them their speakers do not read or write them, will not enrich the multilingual communication, even with the use of new technologies.

I don't mean to say that we should give up digital recording of functionally limited languages. On the contrary, these recordings with the help of the latest technologies remain not only relevant but also urgent for:

- the preservation of minority languages to prevent their extinction along with the cultures they represent;
- educational goals, that could increase the number of speakers of a particular language;
- guaranteeing that the languages are not used for further marginalization of many population groups living in adverse conditions, i.e. people who do not speak languages existing already on the Internet (some 400 of them);
- research and historical goals.

Last but not least, one should not forget that “the language and the human dignity are closely interlinked”.

Recommendation: Recommend to the IFAP National Committees to elaborate in cooperation with the regional authorities, the national language strategies and programmes promoting linguistic diversity in cyberspace.

I think that such organizations as SIL International are good examples of the effective development of linguistic diversity in cyberspace at the national and regional level.

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Languages and Cyberspace: Analysis of the General Context and the Importance of Multilingualism in Cyberspace

In a context in which almost half of the world's languages are in danger of disappearing by the end of the century, and in which the Internet has become not only the main vehicle of communication but also a showcase and medium of choice for some forms of the intangible heritage, the time has come to analyse how cyberspace and ICTs can contribute to the development of multilingualism.

Context

Are there 4, 6, 7, 10,000 languages in the world we live in? Will half of them have disappeared by the end of the twenty-first century? Two a week, as Hagege claims? Ten a year, according to Calvet? Estimates of the actual number of languages and the speed at which they are disappearing vary from one source to the next, but we do know that they are disappearing.

Number of Speakers

Languages often disappear because not many people speak them. In fact, 50% of the world's languages are spoken by fewer than 10,000 people and 25% of languages are spoken by fewer than 1,000 people, according to Crystal.

We cannot say though that a fall in the number of speakers is in and of itself a sign of inevitability, because it can happen that languages with few speakers are revitalized, as has been the case for Hebrew, which was considered to be a dead language for hundreds

of years but is now bearing up well, and for Ainu, which was several times announced to be disappeared and is still taught. Nevertheless, for most languages with few speakers, their fate seems uncertain. The reality is that the world's linguistic diversity is far from homogenous, 96% of languages being spoken by only 4% of humanity, according to Leclerc, and what is more, 70% of the world's languages are concentrated in 20 nations, most of them far from rich and so less likely to be able to support them.

At one extreme of this *heterogeneity* in linguistic diversity, there are some 80 languages with more than 10 million speakers, that is barely 1.2% of the world's languages and just six of those languages are the official languages of 60% of the countries in the world.

The number of speakers is not however the only indicator of a language's vitality. Other indicators testify to it as well.

Political Will

Languages such as Catalan, Galician, French in Quebec, and so on, have been able to recover a position in society and evolve in terms of both quantity and quality of use. They have, for the most part, sponsoring bodies (public or private). According to CIRAL, only some 130 languages in 2003 were protected by a public body.

Writing

The eradication of illiteracy is among the Millennium Development Goals and Education for All goals.

Indeed, even though the statistics vary considerably (between 5% according to Leclerc and 10% according to other sources), we can say that only a few hundred languages have a writing system.

How can we educate the children (and adults) who speak one of the 95% of remaining languages when most educational material is based on writing?

Vector of Knowledge

The phenomenon of language disappearing, caused by several factors in the recent past (colonization, genocide, epidemics, war, population displacement, bans on the use of languages, etc.), is getting worse now as globalisation (economic, technological, social, political, etc.) gains ground. Communication plays an extremely important role in the balance of power between two competing languages and in the information age the phenomenon is intensifying, favouring the best equipped or more "prestigious" languages to the detriment of the rest.

According to Carlos Leñez, “the less valuable a language is [in the eyes of its speakers], the less it is used, and the less it is used, the more it loses value”. And in our *knowledge society*, a language is devalued in the eyes of its speakers if they cannot manage to find knowledge through it. In other words, if it is absent from cyberspace, its speakers might very well resort to using other languages.

It is precisely the professional, administrative, educational and legal use of a language that enables its preservation, because speakers who have to change language according to context tend gradually to use the language that gives them the broadest range of expressions. However, it would seem that 98% of the world’s languages are only used in a family and local context.

Languages on the Internet

Despite some progress in multilingualism on the Internet since the 1990s, only a small handful of the world’s languages are notably present on the Web. English is still the language most used on the Internet, even though its relative presence on the Web (in relation to other languages) is falling, having dropped from 75% in 1998 to 45% in 2007, according to studies carried out by the Latin Union and Funredes. Other languages have seen their presence increase considerably, in particular German, Japanese, Chinese, Russian, French, Spanish, Portuguese, Italian, Swedish and Korean. The following table shows the evolution of the main Romance languages and German in relation to English.

Web pages in:	1998	2000	2001	2003	2005	2007
English	75%	60%	52%	49%	45%	45%
Spanish	2.53%	4.79%	5.50%	5.31%	4.60%	3.80%
French	2.81%	4.18%	4.45%	4.32%	4.95%	4.41%
Portuguese	0.82%	2.25%	2.55%	2.23%	1.87%	1.39%
Italian	1.50%	2.62%	3.08%	2.59%	3.05%	2.66%
Romanian	0.15%	0.21%	0.18%	0.11%	0.17%	0.28%
German	3.75%	2.85%	6.75%	6.80%	6.94%	5.90%
Catalan	-	-	-	-	-	0.14%
Other languages	13.44%	22.20%	23.68%	29.65%	33.43%	36.54%

We should point out that the major communication languages have a satisfactory presence on the Web but most are represented in a highly symbolic way with a few pages dedicated to them.

The search engine Google only offers linguistic recognition of 43 languages, even though its interface is available, as of June 2008, in about 120 languages (including some of the artificial!). It is worth noting while Icelandic (240,000 speakers) is recognized, languages as widespread as Kiswahili (30 million primary and secondary speakers in Africa) and Hindi (300 million primary and secondary speakers in Asia) are not. In truth, the famous search engine can recognize¹⁴ about 30 languages of European origin, one artificial language and six Asian languages, but not a single language of African, American or Oceanic origin.

Languages of Internet Users

Studies carried out on some major languages show that there is a certain correlation (with a few notable exceptions, such as Hindi) between the number of speakers of a language and the statistics relating to its presence on the Web. Indeed, the data concerning the language of Internet users in the *Global Internet Statistics* only takes into account about 30 languages, a mere none of which are Asian and none of which are of African, American or Oceanic origin. The number of Internet users-speakers of most of the other languages is so insignificant that they are not even included in these statistics.

We should note that we are referring to language of use not mother language, as many Internet users turn to their second language for a variety of reasons: their own language might not be represented on the Internet, it might not be sufficiently equipped to convey a message, it might have little “value” in the eyes of its speakers, and so on.

For information, in early 2006, the speakers of the ten following languages were, in order, the most numerous to use the Internet: English, Chinese, Spanish, Japanese, French, German, Arabic, Portuguese, Korean and Italian, English speakers alone accounting for 30% of the total.

We know well that the written representation of a language on the Internet is not a straightforward cultural or quantitative fact. It is above all technical. The Internet is primarily a tool designed for the English language. By extension, languages with Latin characters and western cultures have been more rapid than others to find a

¹⁴ It is to be noted that we refer to “recognition” when the search engine can carry out a search for that language and find results. Google can propose an interface in a particular language but that does not necessarily mean that the engine recognizes the language.

comfortable place of expression even if, we must not forget, the diacritical marks of European languages other than English do not always have a place everywhere (domain names, electronic addresses, even the body of messages which suffer from the unpredictability of message handling and servers, and so on) and that English remains the language of programming, mark-up, coding, communication between servers and the language of information technology.

How many languages find far greater constraints linked as much to technical problems of representation as cultural in terms of using the media that are specific to cyberspace?

Similarities between the Web and Traditional Publishing

There is a certain similarity between the world of publishing and the world of the Web. Leclerc shows us that only 30 languages publish more than 1,000 volumes a year, six of which apparently produce two thirds of world literature (English, Russian, German, French, Spanish and Japanese). English is in by far the predominant position, accounting for 28% of global literary production.

The first 30 languages recognized by Google are on the whole the main producers of traditional literature. The Web then seems to copy exactly the situation of traditional publishing.

Does that mean that we should conclude that the Web can only be added to when publishing precedes it?

Recent public and private initiatives to digitize library holdings might only serve to confirm the *status quo* of linguistic diversity on the Web. However, we know that the Web allows precisely for the door to be opened to forms of expression that are outside traditional publishing circuits. After all, scientific publication in languages other than English has experienced a revival thanks to the ease and low publication cost of the Web, as traditional publishers do not want to run the risk of publishing articles that would be of interest to only a small number of readers.

We cannot help but note however that even though the Web does allow minorities absent from traditional publishing to express themselves, it does not reflect the prism of cultural diversity in an accurate way, if only as regards the number of speakers.

The “Informal” Internet

What is the situation concerning “informal” written information: email, chat, forums, distribution lists, blogs, etc.? As far as we know, there is no study, other than

a few very specialized ones, that gives us an idea of the place of languages on a global level in these areas. We know intuitively though that the written production through these channels is far higher than the production of Web pages, even though it is often ephemeral.

With regard to blogs, a new phenomenon from the sociological point of view, but relatively close to the Web from the technical point of view, Funredes notes that the logic of productivity differs from that of the traditional Web according to communities: Spanish speakers, for example, appear to produce in proportional terms as many blogs and Web pages as English speakers, whilst the proportion falls to a third for French and Portuguese speakers and a tenth for German speakers.

Until use of this new medium stabilizes, all we can do is to put forward sociological theories about its ownership. It is a cultural phenomenon par excellence, and we can imagine that some people will be reluctant to take ownership of it as is the case for chatrooms, forums and groups, and that others, on the contrary, will find it to be a far more flexible means of expression than other media.

It is apparent that the informal Internet remains a haven for rarely used languages. Nevertheless, as soon as a speaker does not understand the language spoken within a community, the languages that enjoy greater “prestige” become unavoidable (in particular but not only in scientific forums where English predominates).

Behaviour does seem to change though according to the medium used. For Paolillo, certain communities (Punjabi, Gulf Arab) use their mother language more readily to chat than to write emails, particularly bilingual communities (those speaking their mother language and the official language of their country).

It is very clear today though that the informal media have made it possible to counter a phenomenon that was lamented by emerging countries in the past, namely the “brain drain”. Nowadays, diasporas can keep up contact with their country of origin and contribute to their development “online”.

The new message of those countries facing a brain drain which have understood the advantages of using ICTs is not so much “come back”, as “stay there, but communicate your knowledge to us”.

Cultural Considerations

We will not go into detail on this subject as many other sources have already done so. It should nevertheless be mentioned that the Internet is not neutral and that Anglo-Saxon culture rules there...

Non-Textual Cyberspace

Here is another thought concerning non-written languages. Are they absent from cyberspace? Marcel Diki-Kidiri has shown us how a language without a writing system can, with goodwill, take the paths of cyberspace.

The non-textual Internet (Voice-over-Internet protocol, streaming, VoD, etc.) can be a valid alternative for communities without written languages or with languages that are badly or little recognized by computerized systems (problems with encoding, fonts, keyboards, software, etc.).

And the communities would have to have access. According to Ambrosi, global mapping of access to cyberspace shows the extent to which the digital divide is linked to the social divide. The Internet has indeed become a tool in everyday life for urban populations in industrialized countries, but it is still unknown to four fifths of humanity, scarcely 5.3% of Africans are connected (bearing in mind that the vast majority of African users are concentrated in South Africa and North Africa), and 14% of Asians, as against 73% for North America and 48% for the countries of the European Union.

The solutions that can be envisaged to reduce the inequality are therefore more financial and political than technical. The obstacle that prevents 95% of the world's languages from being present in cyberspace, namely the absence of writing or the non-adaptation of a language to ICTs, could be overcome. For that to happen, we first of all need adapted computers and preferably high bandwidth connections, and then for the target communities to take ownership of the technology so as to make it a useful tool for their development.

No one doubts that if the WSIS agenda was followed, the danger of languages disappearing would recede, as by becoming instruments of communication, they would become more valuable. However, access to ICTs is not everything, as Pimienta reiterates tirelessly, the technology must then be owned and we must face up to a path strewn with technical, cultural and financial obstacles.

Recommendations:

There is a unique solution for every language, but it is possible to draw up models for action according to a typology based on groups of languages sharing certain features, so that each of them can have a place in cyberspace.

The study carried out by the Latin Union at the request of UNESCO of the 300 institutions responsible for language planning in the world gives us an overview of the activities carried out by these bodies, and of what they expect from international cooperation, and informs us about certain solutions so as to promote the equitable presence of languages in cyberspace.

The findings of the study have yet to be published, with the exception of a chapter by Marcel Diki-Kidiri entitled *How can the presence of a language in cyberspace be ensured?* which is mainly intended to guide the linguistic planners of languages without representation in cyberspace, so as to find an equitable place in the society of shared knowledge.

This study aims to suggest ways forward and respond to questions on the path to be followed according to the different typologies of languages. We should point out that it would not be realistic to seek to obtain an equal presence of all the world's languages, each of them is in a different situation (social, demographic, educational, economic, political, in terms of resources, etc.). The objective is not to find as many pages in English as in Mapudungun on the Web, but the speakers of Mapudungun are entitled to demand that, eventually, they may have access to universal knowledge and share their own knowledge in their own language. And, right now, cyberspace is one of the only ways of achieving that.

Until the publication, one day, of the study in full, it is important to note that it lists various legal and political instruments, in particular those emanating from United Nations agencies (including UNESCO), the most significant of which must be mentioned, namely the *Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace*, the *Vienna Declaration* adopted at the World Conference on Human Rights (1993), resolution 56/262 (Part II) of the United Nations General Assembly, stressing the protection and conservation of all languages, the *UNESCO Universal Declaration on Cultural Diversity* and subsequent *Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005)*, the *Convention for the Safeguarding of the Intangible Cultural Heritage* and the *Tunis Commitment and Agenda* which stipulates in its Action Line C8 the importance of “cultural diversity and identity, linguistic diversity and local content”.

Many other documents from regional institutions (European Union, Council of Europe, Organization of American States, Organization of Ibero-American States for Education, Science and Culture, Mercosur, African Union, African Academy of Languages), linguistic institutions (*Comunidade dos Países de Língua Portuguesa*, International Organization of the Francophonie, *Trois espaces linguistiques—3EL*, *Secretaría General Iberoamericana*, Latin Union) and other international bodies (Linguapax, Linguamón, Pen Club, etc.) reflect this institutional concern for respect for linguistic commitments within these organizations, as well as for the conservation of the linguistic heritage, the maintenance of linguistic diversity, and even the flourishing of the most disadvantaged languages.

The first task that would be incumbent on those with the highest responsibility would be to produce a synthesis of the different instruments (declarations,

recommendations, conventions, etc.), so as to obtain a clear panorama of the many activities that States, IGOs, NGOs, business and civil society could put in place and to prepare a single action plan that could involve all those institutions.

And what about the proposal of holding a Summit on linguistic diversity and drafting a convention for the linguistic diversity ?

To conclude, I am inclined to think that the World Network for Linguistic Diversity, MAAYA, could take on the role of federating initiatives, in association with UNESCO, as it is already responsible for monitoring a series of actions in favour of linguistic diversity, and in particular the establishment of an international committee for monitoring this International Year of Languages.

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The Memory of Yakutia Portal: Early Results

The Universal Declaration on Cultural Diversity, adopted by the 31st Session of UNESCO's General Conference in 2001, defines "encouraging the production, safeguarding and dissemination of diversified contents in the media and global information networks" as one of its most important objectives.

In the Republic of Sakha (Yakutia), preserving cultural heritage and making it accessible is also a pressing problem. On March 2, 2001, its government approved the Memory of Yakutia—republican targeted programme, which matches, in both objective and form, the UNESCO Memory of the World programme (1992), the Memory of Russia federal programme (1994) and a number of similar national programmes; in fact, it is their component.

What makes the Memory of Yakutia unique is its cross-sectoral approach, presupposing concerted actions to fill historical gaps in collections and to preserve and make available all kinds of documents. It seeks to transfer to electronic media not only manuscripts, books and other print materials, but also cine- and photographic documents and audio recordings and to create a corpus of national bibliography of the Republic of Sakha (Yakutia).

The Programme is being implemented along three lines:

1. the accumulation and preservation of documentary spiritual and cultural heritage of the peoples of Yakutia;
2. the digitisation of the holdings of archives, museums, libraries, film libraries—manuscripts, rare books, audio, video and photographic materials and other types of documents—all that defines the culture of Yakutia's ethnic groups; and
3. the provision of free access to this information—primarily through the Internet—for the residents of the Republic of Sakha (Yakutia), the Russian Federation and the world at large.

The Programme is made up of six projects, three of which are being implemented at the National Library of the Republic of Sakha (Yakutia): "Book Monuments of Yakutia",

“The National Bibliography of the Republic of Sakha (Yakutia)”; and “Voices of the Century: Music and Sound Heritage of the Peoples of the Republic of Sakha (Yakutia)”.

The next project, “Unique and especially valuable documents of the archive fund of the Republic of Sakha (Yakutia)”, is being implemented by the National Archives; the “Film Chronicle of Yakutia”, by the State National Repository of Cinedocuments on the Republic of Sakha (Yakutia); and the “Photo chronicle of Yakutia”, State United Museum of History and Culture of the Peoples of the North after E. Yaroslavsky.

The final output of the programme is a corporate information portal, Memory of Yakutia (www.sakhamemory.ru), which provides access to the documentary heritage of the peoples of Yakutia.

The aim of the portal is to preserve the documentary heritage of the ethnic communities of Yakutia through digitising and providing access to outstanding documents of various kinds.

As of today, the portal is arranged in six sections:

Section One, “*Book Monuments of Yakutia*”, presents books that are a part of the heritage of the peoples of Yakutia and a part of the world culture: early books in Yakut (1812–1858), books published by the Yakutsk Regional Printing House (1861–1917). It relies on studies conducted by the National Library and the Department of Library Science and Bibliography of the Arctic State Institute of Culture and Art.

The section is arranged in four parts. “Preconditions to the Book Origin in Yakutia” gives scholarly commentaries on the works of famous travellers, geographers and explorers of the 17th-19th centuries: N. Witsen, P. J. von Strahlenberg, P. S. Pallas, G. A. Sarychev, L. Erman, A. F. Middendorf, O. N. Betlingk, and others.

The second part, “The Publishing Activity of the Russian Orthodox Mission (1812–1916)”, provides scientific summaries of early book publishing in Irkutsk and St. Petersburg, information about the work of Innokentii Veniaminov and Dmitriian Khitrov, who published translations of religious books in Moscow, about Yakut translations publishing and reprinting in Kazan, about publishing worship books in the Yakutsk Regional Printing House and the *Yakutsk Diocesan Journal*.

Book publishing in Yakutsk (1861–1916) is the subject of the third part; it outlines the history and development of the Yakutsk Regional Printing House and its book output, as well as the work of private publishers and print shops.

The fourth part, “The Repertoire of the Yakut Book (1812–1916)”, includes 345 titles and consists of four subsections: books in Yakut published by the Russian

orthodox mission in Russian cities; secular books with Yakut texts published in and outside Russia; books in the Tungus and Chukchi languages published in Russian cities; and details of the Yakutsk Regional Printing House book output.

Section Two of the portal, “*National Bibliography of the Republic of Sakha (Yakutia)*”, addresses the issue of access to the bibliographic details of documents in indigenous languages and documents about Yakutia since first publication. The implementation of this project proved to be useful: it has served as a bibliographic base for all projects. Bibliographic publications are collected in two distinct parts: “Retrospective National Bibliography”, represented mainly by unique bibliographic editions of the originators of Yakutia-related bibliographic activities: N. N. Gribovsky, V. A. Priklonsky, P. A. Khoroshikh, G. A. Popov and others, and “Current National Bibliography” represented by *Annals of the Press* (1972 to 1991), as it was in that period that they began to include journal and newspaper articles.

Section Three, “*Unique and especially valuable documents of the archive fund of the Republic of Sakha (Yakutia)*”, aims to preserve and make available unique documents of the Yakutsk Voivode Office (1701–1823), the Yakutsk Provincial Office (1778–1892), the Yakutsk Office Commissar (1766), Yakutsk Steppe Duma (1827–1860), Yakutsk Governor (1862–1919), Yakutsk Regional Administration (1805–1909), the Yakutsk Regional Scrivener (1815–1851), the Yakutsk Regional on Town’s Affairs Office, as well as documentary monuments of socio-political thought of Yakutia from the 18th to the early 20th century.

The portal includes archival documents covering the history of the city of Yakutsk, the history of development and study of the Russian North, as well as unique materials and documents dating from 1701. Some of the most interesting documents come from the Yakutsk Voivode Office, in particular, 1701 documents on the campaign of the Cossack commander V. Atlasov and the service of Cossack commander V. Kolesov.

Section Four, “*Photo chronicle of Yakutia*”, aims to preserve and make available photographic materials depicting the most important events and facts in the history and culture of Yakutia. The work is proceeding in several subject areas: the socio-political life of the land, cultural life in Yakutia, industry and trade in Yakutia, traditional economic activities of the peoples of Yakutia, farming agriculture in Yakutia, education and health care in Yakutia, the history of exile, scientific expeditions, the Orthodox Church in Yakutia and others.

Museum collections are presented in the following subsections of the portal: “From the Holdings of Chita Museum of Local History”, “The City of Yakutsk: Late 19th to Early 20th Century”, “Photographs from the Irkutsk Regional Local History

Museum Holdings”, “20th Century: an Era of Change”, “Let Us Be Forward with the Five-year Plan”, “Arise, Ye Great Land!”, “The World of Yakut Holidays”.

Section Five, “*Voices of the Century: Music and Sound Heritage of the Peoples of the Republic of Sakha (Yakutia)*”, seeks to protect valuable and rare sound records against deterioration and neglect and to make them publicly accessible. The subprogramme covers the following: folklore performances by folk and professional artistes (Olonkho singers, Toyuk singers, khomus players, elocutionists and others); songs of Yakut ethnic groups played by performers, melodists, groups etc.; literary readings by elocutionists, voices of authors, workers of culture and celebrities of Yakutia.

Section Six, “*Film Chronicle of Yakutia*”, aims to build, preserve and make available Yakutia-related film documents of historical, cultural, scientific and educational importance.

The section is divided into several parts. The earliest and thus most important materials include “Motor Rally 1934” and “The First Turkologist Convention in Red Baku 1926”, which captured Yakut literature classics Aleksei Kulakovskiy, Anenpodist Sofronov and Aleksei Ivanov-Kunde. The subsection “The Diamond Industry of Yakutia» tells about the discoverers of the “Mir” and “Udachnaya” diamond pipes, the building of the Vilyui hydroelectric power station, heroes of labour and simple folk who laboured for the sake of development of the North. Also of interest is a section devoted to the great river Lena, whose banks are populated by members of different ethnic groups. They are all brought together by a full-flowing river, which springs in the Baikal ridges and flows down to the Arctic Ocean. There is a video sequence demonstrating the work of the Lena river fleet, the towns and settlements located along the river, the everyday life of people inhabiting these areas; the chronology starts in the 1950s.

In connection with the declaration of the olonkho year one chapter is dedicated to Yakut folklore; it is not large yet, being limited to only 20 documents. They are mostly materials of a folklore expedition mounted by the Research Institute of Humanities of the Sakha Republic Academy of Sciences in 2002 and a video recording of the opening of Olonkho Days, dedicated to the centennial of Sergei Zverev, a narrator of folk tales, and a 1997 recording of an olonkho performed by Gavril Kolesov.

The future development of the Memory of Yakutia portal will involve both the addition of new information and the expansion of its search facilities. There are plans to create separate collections devoted to the history of Yakutia and its eminent personalities. For example, work is in progress on a collection, within the “Voices of the Century” section, devoted to the founder of Yakut professional music M. Zhirkov; later on, a collection devoted to G. Grigoryan will be established.

The Memory of Yakutia portal comprises components of different purposes:

- a server operating system, which provides for dependable operation, parallel tasking, and support of transactional processing; and
- a Web server adapted to peak traffic, a software server that delivers http pages with a personalisation facility.

Most of the portal documents are kept in a database which is controlled by an SQL Server database management system, making for ease of storage and modification as well as search and presentation of materials.

Besides, a content management system was developed. It allows to publish good-quality documents quickly and to update them. Document contents and a presentation form (“templates”) are kept separately, linked by means of XML-based descriptions.

The Memory of Yakutia database is administered in the server environment of dynamic Web applications called Active Server Pages (ASP). ASP is a server environment for the design and execution of interactive Web applications. ASP tools allow to combine the capabilities of HTML pages, script commands and COM components in interactive Web pages and powerful Web applications and facilitate their creation and modification.

Server scripting with the help of ASP is a fast and easy way of going over to the design of complex Web applications. ASP also offers a general solution to the problem of database storage of data represented by the HTML form, the customisation of websites to visitor characteristics, and the utilisation of diverse Internet explorer capabilities in working with HTML pages. Making use of ASP facilities one can get data of HTML forms and transfer them to the database using simple server scripts, which can be included directly in HTML documents.

ASP is not language oriented; therefore, a knowledge of any script language is sufficient for working with it. Furthermore, ASP pages allow for use of any script language for which a COM compatible script handler has been established.

Portal design outcomes:

- small files: the optimisation of entities resulted in small files and fast load;
- good image quality: real-time smoothing makes the edges of graphics and text smooth irrespective of image size. Users can vary graphics scale without losing in image quality;
- data flow technology: file playing starts quickly and continues during the loading, which does not require specialised server support; and
- embedded audio allows to synchronise animation with high-speed streaming sound.

The portal's technological solutions are based on the following philosophy:

- open-endedness: the future growth of the portal depends on the integration of heterogeneous computer components and various applications;
- scalability: the architecture of the portal allows the build-up of the system capacity and of the amounts of information stored and processed without lengthy holdup;
- personalisation: the portal provides easy, personalised access for all potential user groups with a functionality matching the problems addressed by each group;
- controllability: flexible, full-featured mechanisms for control of the portal at all levels of its architecture; and
- consistency: the architecture of the portal is such that all the interconnected subsystems are built by the same method and conform to the same principles of interaction, reliability and control.

The resource base of the portal comprises more than 10 GB of information and grows steadily.

The future development of this project also involves the continuing optimisation of the portal, the development of reference and search tools, the digitisation and scientific and technical processing of material selected, continued searching in repositories in Russia and other countries, as well as in private collections, the acquisition of originals or digital copies of documents absent from the Republic's repositories, and ongoing restoration and conservation of rare documents.

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Multilingualism in Finnish Librarianship

The National Library of Finland (former Helsinki University Library) was founded in Turku (Abo) simultaneously with the university in 1640, and in 1707 was granted the right of legal deposit of all printed matter put out in the Kingdom of Sweden. In 1828, the university and its library were transferred to Helsinki following a fire in Turku, in 1828, on an ukase of Tsar Nicholas I, the library was granted the right of legal deposit of all printed matter put out in the Russian Empire:

- Slavonic Library (legal deposits for 1828-1917),
- Ethnic Minority Collections of the Russian Era: ethnic minorities' languages and cultures (1828-1917).

Digitisation, microfilming and conservation are made in Mikkeli, in a branch established in 1990. The library possesses a digital collection of the Finnish press (newspapers published in Finnish, Swedish and German in 1771-1890), microfilms of the local press, digitised industrial catalogues and price tags (in various languages, several in Russian), music recordings (Raita database), Doria lentolehtiset (wartime leaflets in Russian, Ukrainian, Finnish, Swedish, German and Estonian). Within the Preserve a Book campaign every participant has an opportunity to offer a rare book for digitization and become a project sponsor. The results can be seen on the Internet.

The Slavonic Library

The situation of Russian materials in Finland differs greatly from that in the other Scandinavian countries due to its history, shared with Russia for 110 years.

As far as library services go, of the greatest importance to our library was the Royal ukase stipulating a legal deposit provided to the Helsinki University from every printing press. The ukase was closely complied with thanks to Professor Jacob Grot. As the result, a book collection of extreme value was made, which is of major interest to experts on Russian history and culture. The collection was permanently replenished from 1827 to 1917.

We recently had an opportunity to fill in the gaps in the collection as Russia consented to pay former Soviet debts to Finland. The Slavonic Library received many journals and magazines, children's literature and provincial materials in several thousand microfilms, 2,500 books of the perestroika years, and large-scale online services used in twenty Finnish cities.

The Slavonic Library possesses approximately 500,000 volumes, 600 rare books, books by avant-garde artists, old and new maps, and émigré literature—particularly, all the issues of the *Rul* newspaper and a large collection of the Shanghai-Harbin literature.

We use Cyrillic writing for our catalogues. Slavonic Library materials are to be found on the Internet in the HELKA database in the Roman or Cyrillic alphabet.

Acquisitions are made primarily with literature on humanities.

Collections of the Russian Empire's Ethnic Minorities

These are materials in many languages: Arabic (600), Hebrew (5,000), the Baltic languages (e.g., Lettonica has 10,000 books and Lithuanica 500), Turkic (2,800) and Caucasian languages (Georgica 2,000, Armeniaca 3,000 and Caucasia 40) of the prerevolutionary time. The overall number is 50,000 titles.

In particular, the unique Turkic collection includes the Quran and theological and edifying literature, fiction, biographies, travelogues, study books, periodicals and calendars.

The *Shura*, one of the Tatar-language magazines, has been digitized with the help of the Russian National Library. A search engine was made for it with assistance from the St. Petersburg-based InfoComm Company. A similar search engine was made by the Finnish Via Media for the Persica collection of Persian-language editions. Yiddish-language newspapers *Der Friend*, *Leben und Wissenschaft* and *Unser Leben* were also digitized.

We implemented even a larger project around these minority collections. Its interest is in the studies of languages and cultures, dispersion and cultural technology. Simultaneously with languages one can find there a confusingly broad spectrum of various religiously based cultural circuits, such as the Muslims and Shias in Arabica, Caucasia, Persica and Turkica; Jews and the Caraites in Hebraica; the Non-Orthodox in Armeniaca, Georgica, Russica, Estonica, Lettonica and Lithuanica. An immense number of systems of writing are represented, such as Roman with attention to its complex diacritics in Estonica, Lettonica and Lithuanica; the Armenian; and the Georgian.

The above mentioned systems of writing run from left to right. But there are systems of writing running from right to left: the Hebrew, also in the form of Yiddish, and the Arabic. Arabic can be found in its ordinary form, as well as in its supplemented form, with diacritics adjusted to many Caucasian languages, in Persian and Turkic languages.

These minority materials are of great value to the international research community in many countries.

However, the ambitious project lacks financial support.

The Sami Library

The Regional Library of Lapland at Rovaniemi is responsible for the information service and network library service for Sami (language) material. Besides that the library also holds publications on the North Calotte and Arctic regions, for instance Greenland and Inuit collection.

Materials on the Sami people and language, and related publications are in the Sami collection, one of the most comprehensive in the Scandinavian countries. It contains belles letters, and research books and articles. Special attention belongs to publications about the Finnish, Inari, Skolt and Northern Sami. Information about the collection is registered in the Lapponica database.

Registration of Finnish Sami-language publications in the Fennica database of the National Library of Finland is one of the duties of the Sami special library.

Portals of Interest

The Barents portal. The Barents Sea region is Europe's largest area of interregional partnership, comprising Sweden, Finland, Norway and Northwestern Russia. Barents cooperation envisages infrastructural strengthening of the countries in the region, the establishment of personal contacts and, consequently, major contribution to regional economic, cultural and social development. Information servicing of the portal is among the duties of the Arctic Centre of the University of Lapland.

Karelia Info is the Internet guide for the Republic of Karelia. The online service is supported by the North Karelian Polytechnic Institute in Joensuu.

Of the greatest interest is the RUSSIAinfo portal, a search engine for information covering online resources on Russia. Its content bases on research by Finnish experts on Russia. It is presented as communications, articles and reviews, used also by Russian and foreign websites with stringent quality standards of information selection for publication.

The RUSSIAinfo search engine is a project launched by Finland's Ministry of Education in 2003 to generalize on information about Russia obtained from various organisations. Servicing, started in September 2005, is done by the Aleksanteri Institute of the Helsinki University.

The Republic of Karelia has elaborated the Finno-Ugric Libraries of Russia portal, whose idea arose in November 2003 in Helsinki, which was the venue of a conference of Finno-Ugric libraries of Russia and Finland. Among the portal services in the greatest demand is access to the electronic collection of editions in the Finno-Ugric languages, compiled since 2005. It comprises digitized materials in Karelian and Veps. More than 23,500 visits to the website by users from 55 countries have been registered since May 2006.

The project has a new partner – the Finno-Ugric Cultural Centre of the Russian Federation, based in Syktyvkar. It has by now established a first branch of the virtual Finno-Ugric library with materials in ten languages.

Multilingual Dictionaries, Thesauruses and Ontologies

We launched the Uralica project in 1987. It lasted seven years and aimed to prepare bibliographies on the various fields of Finno-Ugric research in the Soviet Union and Finland.

The Russian and Finnish Academies of Sciences (and of independent Estonia, at the final stage) compiled general lists of keywords in such fields as archaeology, ethnology, folklore, linguistics and literary criticism for the common project. The dictionaries were made in Russian, Finnish and English. Thus, we had three working languages in the project, which concerned twenty ethnic entities, each with its language and culture.

The bibliographies covered all research materials on Finno-Ugric themes, published in Finland and the Soviet Union between 1917 and 1987.

In the introduction to printed bibliographies, their chief editors—researchers—say that the dictionaries were arranged in parallels whenever it was possible, though differences in research traditions and the number of described cultures lead to differences in the number of verbal entries. Thus, the Russian-English archaeological dictionary is longer than the Finnish-English one because Russian research concerns a greater number of cultures. On the other hand, the Finnish-English dictionary on folklore and ethnology exceeds the Russian-English dictionary in volume.

The compilation of such dictionaries required a long time and many discussions as certain words aroused extremely detailed debates by many hours' general meetings. The work was of gripping interest. The project taught us a critical approach to customary work methods and paradigms.

Every term was explained in another language even when it lacked the relevant category. Evidently, all partners unanimously chose contextual indexation.

The work on using terms for indexation earned great appreciation as largely facilitating research work. For instance, the search for a particular time and genre in the field of literary criticism has become very simple.

The work was also of tremendous significance for a small number of disciplines in Finland. We had no Finnish-language dictionary of principal linguistic terms before. Now, we possess a list comprising several thousand such terms.

Project achievements are in the ARTO database of Russia's INION bases.

Some Elements That Needed Special Consideration

Added spice was brought to this broth by phonetic transcription used in some of the titles of linguistic articles, for instance, such in which several diacritics should be placed above or below a character. The Finnish database on Uralistics is very laconic in this respect. The most complicated titles were totally replaced with xxx and the contents of the article was explained in the notes. This solution was arrived at because it was observed that transcription is in most cases too difficult to be used in retrieval.

The alphabetical order is no problem in the database. However, if someone would like to produce a part of this kind of multilingual material in print, the alphabetical order will have to be agreed on. Even Finnish, Hungarian and Estonian, which all use the Roman alphabet, have some slight differences.

Name Authorities: Cultural Differences

In Finland and Hungary there are several historical or literary names which have been adapted to the national name and sound systems, for instance Charles is Kaarle in Finland and Karoly in Hungary, and the Hungarian author Jokai Mor is known as Mauri Jokai in Finland.

In Russian, which is the official language in the regions inhabited by most Uralic peoples, adaptation is phonetic.

The most common way to present a name in publications in Finno-Ugric languages is "given name plus surname": Lasse Koskela, Anu-Reet Hausenberg. Hungarian names use the reverse order: Lavotha Ödön, Nagy Marika and a comma is not used to separate the surname and given name.

An older type of names is represented by a structure in which the first component is a patronym, matronym, toponym or ethnonym plus the name of the individual:

Patronym: Tumaen' Virjas (Tumaj's Virjas; Mordvin), Ez'es Mikol Mikol Volod' (Ez'es' Mikol's Mikol's Volodja; Komi patronym with four generations).

Matronym: Elle-Ovlla (Elle's Ovlla; Sami).

Toponym: Nebdinsa Vittor (Vittor from N.; Komi).

Ethnonym: Olyk Ipaj (Meadow Mari Ipaj; Mari).

Some of these examples are the actual names of authors. With the rise of national cultures, this type of name is becoming more common. The few Nenets authors mainly use Russian names, because their original names are taboos. An exception is the author Tyko Vylka, his surname Tyko means "little reindeer".

This Finnish-Estonian-Russian project has produced some elements which we develop further. UNESCO has started up a research programme on the threatened languages and cultures of the globe. The northernmost Uralic languages are included and their situation is being monitored and reported on.

Finland supports the cultures of the Uralic nations living in Russia. Cooperation between libraries plays a significant role in this work.

Finland: Two Languages, One Culture

Finland serves as an example of bilingual monoculturalism.

We use for indexation the YSA general Finnish thesaurus, which either unites the above special dictionaries or uses them separately. A thesaurus is a structured dictionary which designates connections between words in various codes.

Finnish is the native language of a majority of Finland's population, though Swedish is our second national language. The general Finnish thesaurus was compiled in Finnish and subsequently translated into Swedish.

Finland is reputed as a monocultural country. However, the situation is not so simple with regard to problems that arose in translating the thesaurus. Many Finnish words have no Swedish equivalents, for instance such words related to religion as *herättäjähylät*. Similarly, the Finnish language has no analogues for certain Swedish words. The difference would be all the greater if we were using Swedish the way it is spoken in Sweden.

Finnish Ontologies of the Semantic Web

It is a large-scale Finnish project studying and developing the infrastructure of the Finnish semantic Web for the presentation and search of information on the basis of ontology. Project FinnONTO aims at transition from the present-day thesaurus technique of indexation to the semantically richer ontology.

The consortium supporting the project comprises more than thirty public organizations and companies funding the research. It represents a wide range of cultural and public organizations including museums, libraries, healthcare institutions, the government, media outlets, education, businesses and universities.

The National Library of Finland was actively involved in the development of the YSO general Finnish ontology

Why Are Thesauruses Insufficient?

Web services should become much more intellectual than they are now—which means that they must acquire semantics. When keywords are added to a bibliographic entry or to metadata with the help of human intellect, the actual context is preserved at any rate. The structure of machinable ontologies was made with the help of human intellect.

It is hard to model ontologies for the semantic Web. Still, Web services are acquiring ever more semantic features.

The Problems of Ontology Modelling

Concrete nouns are fairly simple to represent as ontologies, while abstract ones cause difficulties.

They easily create individual solutions. For the contextual definition everything must be checked, because the contexts can vary according to the language in question. The computer cannot discern the semantic relations of a word. Let us use the word “child—children” as an example. We all are somebody’s children in spite of the fact that we are of different age. In our families we have children who belong maybe to a group called “schoolchildren” etc.

Language also changes permanently. The meanings of words can become broader or narrower or they can change entirely. One example of these changes is the word “virus”, which nowadays is so familiar to us from information sciences.

The question arises: whose responsibility is it to follow semantic changes or generally the development of a language or languages? In the ontology work in Finland the aim has been to show distinctive cultural features. The pursuit of perfection has not been the goal.

FinnONTO includes about 20,000 concepts. Each concept has an URI. The languages are Finnish, Swedish and English, but the Swedish and English equivalents have not been checked to match the ontological structure. The English version is made by the Helsinki City Library.

Intercultural Ontology Amalgamation

Though ontologies are made and developed in many parts of the world now, intercultural ontology amalgamation has come under discussion only on rare occasions. However, ontologies should be mutually compatible, in some way or other, not to be useless in each other's respect.

An ontology represents concepts in the terms of the natural language. Intercultural information search works when the documents in a collection are in one language while querying is made in another because it is easier for a user to formulate a request in his native language. The search results in such instances in a huge number of documents appear in languages the user does not know. Occasionally, he does not know even their alphabets. Machine translation systems are of help in such instances.

There are words whose meaning coincides in different languages, for instance, "sun", and there are words whose meaning depends on the respective culture as, for instance, colour names. There are also concepts absent in the culture of a particular language while words designating them are present in this language, for instance, "pair verbs" for a phenomenon widespread in the Finno-Ugric and many Oriental languages.

Programmers acknowledge that their hardest task is to teach a computer human thinking. Psychologists, anthropologists and cognitologists have made attempts to create a theory of common sense.

Programmers are going on with the job. There is a promising field of research presently—the creation of multilingual ontologies with translation at the conceptual not verbal level.

Users are eager for quicker and more precise servicing.

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SIL Technology for Multilingualism in Cyberspace

Introduction

SIL International is a faith-based, non-profit organization dedicated to the task of identifying, documenting and bringing value to all the languages of the world—in particular to those spoken by ethnic and cultural minorities. From its beginnings in 1934, SIL has had the privilege of working with over 1,800 language communities representing more than 1.2 billion people in 70 countries. SIL's staff see their work as an outgrowth of their Christian commitment, valuing service, academic excellence, sharing of knowledge and partnership as we engage in linguistics, literacy, translation and other language-based development activities. SIL seeks to serve all, without regard to religious belief, political ideology, gender, race or ethnic background.

In addition to language development activities undertaken with individual language communities, SIL takes an active role in advocacy for minority languages at the local, national and international level. SIL has special consultative status with the Economic and Social Council (ECOSOC) of the United Nations and with UNESCO. Through these and other partnerships, SIL is actively involved in promoting multilingual education, literacy, training and other people-centered development activities. See <http://www.sil.org/sil/> for more information.

One key aspect of SIL's work involves developing and coordinating technologies and technical resources that allow all languages to be represented and utilized in the rapidly changing world of information technology and cyberspace.

The purpose of this report is to highlight many of these technologies and technical activities. The author acknowledges that this report reflects the work of many SIL colleagues worldwide. Most of the content comes from SIL websites and other published reports. Rather than footnote each reference, the author has chosen to provide web links to the original reports. The links also contain additional information about the topics.

Foundational Technologies

To provide capacity for a given language to be represented on a computer or in cyberspace, three key problems must be solved: input methods, encoding methods and rendering methods.

Input methods handle how data in a specific language is entered into the computer. Most commonly, an individual uses a keyboard to type in the characters. Each character in the language must be mapped to an individual key or key combination. Typical computers were designed to support English and contain 70-90 keys. An individual language may have fewer or many more characters.

Encoding methods manage how an individual character maps to a specific numeric value that the computer uses for its internal data processing. For widest applicability, the encoding methods must be standardized, or otherwise the numeric codes used on one computer become gibberish if used on another computer with a different encoding method. The worldwide standard for language encoding is Unicode, and SIL continues to have an active involvement in Unicode technical committees.

Thirdly, rendering methods provide the user a visual representation of the written language on the screen or printout. Early rendering methods facilitated English and other Roman-based writing systems. Many languages have writing systems that are complex. Without specific technologies to support them, these languages could not be used on computers or in cyberspace. A key element of rendering is font technology. Fonts provide a specific glyph, or character shape for a specific character. Some languages require many different glyphs for the same character based on its context. Smart font technology is required to support these languages.

Another important element of representing a language in cyberspace is the metadata defining the language itself. The language name and a standard code representing it are critical to assuring that the correct input, encoding and rendering methods are applied by all users of the language data.

SIL continues an active involvement in each of these areas. Our non-profit status allows us to share the results of our work widely, either using open source models or other open mechanisms. The following paragraphs outline specific examples in each area.

Input Methods

Through a partnership with Tavultesoft Pty, Ltd. (<http://www.tavultesoft.com/>), SIL has developed keyboard input technologies and methods for any language using the Keyman software. Keyman is a Microsoft Windows application that provides Unicode-

based input for Windows applications. We have prepared training materials for keyboard design and published working papers and other information on designing input methods. We have also published software keyboards for many individual languages. In addition, we have developed Ukelele, a Unicode keyboard editor for Mac OS X. Another utility is Keyman for Linux (KMFL, <http://kmfl.sourceforge.net/>), an input method for Linux that supports the Keyman layouts for Windows. Further information about input methods and links for downloading these resources are available at <http://scripts.sil.org/Input>.

Encoding

Initially SIL developed individual encoding solutions for the languages where we worked. These solutions were not part of a broader standard, but were only utilized by SIL staff and the specific language community. With the advent of Unicode, SIL embraced the standard and sought to support all language communities and their writing systems in Unicode. Unicode is an international standard that “provides a unique number for every character, no matter what the platform, no matter what the programme, no matter what the language.” Further information about Unicode is available at <http://www.unicode.org/standard/WhatIsUnicode.html>.

SIL has contributed to and submitted many proposals to extend the Unicode Standard to include special characters needed to write minority languages. Inclusion in the standard is necessary in order to provide adequate commercial and open source software and operating system support; without such support minority language speakers remain on the far side of the “digital divide.” Scripts that SIL has worked with in the past several years include, in alphabetical order:

- Arabic
- Cham
- Cyrillic
- Dai Banna (New Tai Lue)
- Devanagari
- Lanna (Tai Tham)
- Latin
- Lisu
- Myanmar
- Tai Viet
- Vai.

Partners in Unicode projects include: Tai Viet—Tai Viet Working Group, UNESCO, Script Encoding Initiative; Vai—Lutheran Bible Translators, Liberia Bible Translation and Literacy Organization; Latin—Lutheran Bible Translators, Pioneer Bible Translators; Cyrillic—Institute for Bible Translation (Институт перевода Библии); Dai Banna—Payap University, Yunnan Minority Language Commission; Lanna—Payap University, Michael Everson (Evertime), Chiang Mai University; Lisu—Yunnan Minority Language Commission, et al. (See acknowledgements at <http://std.dkuug.dk/jtc1/sc2/wg2/docs/n3424.pdf>); Myanmar—Payap University, Michael Everson (Evertime).

Further information on SIL's Unicode work is available at <http://scripts.sil.org/PCUnicodeDocs>.

Rendering

In rendering technology, SIL's key contributions include Unicode-compatible fonts and a generalized, open source rendering engine called Graphite.

SIL has been involved in developing fonts that handle the special needs of the lesser-known languages of the world, as well as high-quality fonts for major world languages. Over the past three years, we have developed, improved, or collaborated on Unicode fonts for the following scripts:

Fonts released:

- Arabic: Scheherazade and Lateef;
- Roman/Cyrillic/Greek: Doulos, Charis (for typesetting), Andika (for literacy), Gentium;
- Tai Viet: Tai Heritage.

Updated fonts:

- Dai Banna: Dai Banna SIL;
- Ethiopic: Abyssinica;
- Limbu: Namdhinggo SIL;
- Myanmar: Padauk.

Contributed to:

- N'Ko: Conakry.

Work in progress:

- Devanagari;
- Tifinagh.

Partners in font development include: Conakry font—Michael Everson of Evertype, Script Encoding Initiative; Padauk font—Payap University.

Further information and downloads of these fonts are available at <http://scripts.sil.org/FontDownloads>.

SIL has also developed and published the “SIL Open Font License.” It is a validated FLOSS (Free/Libre and Open Source Software) licensing framework that enables open and collaborative development, sharing and distribution of fonts. The license is usable by anyone wishing to collaborate on font development.

Complex writing systems require specialized font knowledge and skills, but in most parts of the world resources are limited. A collaborative approach involving many different partners based on a FLOSS license and shared methodology allows high-quality, unencumbered components for writing systems to be available to many language communities. More than fifty fonts are now available under the Open Font License.

Further information is available at <http://scripts.sil.org/OFL>.

Graphite is an open-source package for developing “smart fonts” that are capable of handling complex writing systems. Graphite was specifically developed to support the needs of minority language groups whose forms of writing are not handled by commercial software and which may not be incorporated into standards such as Unicode. In the past several years, SIL has continued to develop Graphite and to make strides in seeing Graphite supported on both the Windows and Linux platforms.

Further information is available at <http://graphite.sil.org>.

From January to October of 2003, SIL engaged in a cooperative project with UNESCO as part of UNESCO’s Initiative B@bel effort. The goal was to enable the development of complex script support in information and communication technologies (ICTs). This was done through preparation of documents to guide development, technical tools for complex script support, and two example script implementations.

Further information is available at <http://scripts.sil.org/babel>.

ISO 639-3 Standard Language Codes

SIL has over fifty years of involvement in identifying and cataloguing the languages of the world. The primary representation of this information is through the Ethnologue, a published book and a web-based resource available at <http://www.ethnologue.com/>.

Based on the Ethnologue, the ISO 639 family of standards was expanded in February 2007 with the formal adoption of ISO 639-3. This new part of the standard attempts

to provide a comprehensive enumeration of languages, including living, extinct, ancient, and constructed languages, whether major or minor, written or unwritten.

ISO 639-3 is a code that aims to define three-letter identifiers for all known human languages. At the core of ISO 639-3 are the nearly 400 individual languages already accounted for in ISO 639-2. ISO 639-3 adds over 6,500 living languages beyond these; they were derived primarily from the Ethnologue (15th edition). Additional extinct, ancient, historic, and constructed languages have been obtained from Linguist List.

SIL International has been designated as the ISO 639-3 Registration Authority (RA) for the purpose of processing requests for updates to the set of alpha-3 language codes. The ISO 639-3/RA receives and reviews applications for requesting new language codes and for changing existing ones according to criteria defined in the standard. All update requests undergo a period of public review before being acted upon by the RA.

Further information is available at the ISO 639-3 official website, <http://www.sil.org/iso639-3/>.

Language Software

SIL has developed over 60 different software applications to support the work of its field staff. Most are available by free download from the SIL website at <http://www.sil.org/computing/catalog/>. Included are applications that support the acoustic analysis of speech sounds (Speech Analyzer), analysis of the phonology (Phonology Assistant), lexical data gathering and analysis (FieldWorks Language Explorer). The FieldWorks Language Explorer is a powerful tool for recording lexical items, producing interlinear texts, and for producing dictionaries.

Another free SIL software application that impacts multilingualism in cyberspace is Lexique Pro <http://www.lexiquepro.com/>. This application allows a linguist to publish an online dictionary of a language, complete with hyperlinks between entries, category tools and dictionary reversals. At the site lexicons are published made using this application. See <http://www.lexiquepro.com/library.htm> for examples.

Signed Languages

One new area of focus for SIL is facilitating technical solutions in support of signed languages worldwide. With technological advances in animation and video, it is now possible to process signed languages using computers. The same technical issues with written languages apply to signed languages, namely input methods, encoding and

rendering methods. More information about our work with Mexican signed languages is available at <http://www.sil.org/mexico/lenguajes-de-signos/00i-signed-languages.htm>.

Language Documentation and Documentary Linguistics

A grave concern for many in the world is the large number of undocumented languages that are at risk or endangered. SIL shares this concern and is partnering with many organizations to determine ways to document and share information about these languages before they become extinct. We believe that every language has inherent value, and that speakers of minority languages and other interested parties should have the tools and techniques available to protect and enhance their cultural and linguistic heritage.

SIL is working diligently to make available on the world wide web information we have concerning the languages in which we have worked. A good example is the Papua New Guinea Language Resource site available at <http://www.sil.org/pacific/png/index.asp>. Another example is the SIL Mexico website available at <http://www.sil.org/mexico/00i-index.htm>. The SIL country-specific sites are accessible from the main SIL website at <http://www.sil.org/> under the “Who We Are” menu.

SIL also partners with others to facilitate sharing of information about languages and enhance the use of all languages in cyberspace. One such example is the “MAAYA World Network for Linguistic Diversity” website available at <http://www.maayajo.org/>.

Open Language Archives Community

SIL has taken a leading role in the founding and ongoing development of the Open Language Archives Community. OLAC is an international partnership of institutions and individuals who are creating a worldwide virtual library of language resources.

There are currently 37 institutions who participate by contributing catalogue records in a standard format describing all the language resources they hold. These may range from materials archived in a physical archive, to conventional publications, to pages on web sites. The ISO 639-3 language codes are the glue that ties the individual catalogs together, since participants use those codes to identify the languages a resource is in or about. Since all the archives are using the same language codes, a user interested in a particular language finds everything in all participating archives that relates to it. The current combined

catalog has records for over 35,000 resources, but that is only a start. Membership is free and any institution that has resources in or about the minority languages of the world is invited to participate.

Further information is available at the OLAC website, <http://www.language-archives.org/>.

Conclusion

SIL's long history in language-based development for minority languages around the world has given us the unique opportunity to develop and contribute technical expertise from the local to the international level. We are grateful for the privilege and are at the same time aware of the responsibility to share what we know and to facilitate others working in these areas.

We recognize that we cannot by ourselves have a lasting impact on the needs of language communities worldwide who wish to enhance the value of their language and to benefit from its ongoing use. SIL seeks to be a good partner in the overall language-based development process. We are pleased to be able to share the results of our work in all areas in hopes that it benefits others, especially the speakers of minority languages themselves.

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The Māori Language Strategy 2003–2028; Cyberspace Developments

In New Zealand the indigenous Māori language is a minority language, recognised in law and supported by the government through several legislative acts and by the Māori Language Strategy (MLS). This strategy demonstrates the practice of joined up government as it involves several core Government Departments and key Crown agencies none able to deliver on the outcomes of the strategy in isolation. This government strategy for 25 years upholds the linguistic and cultural aspirations of Māori and others to support the Māori language as an everyday language in homes, community and business and all aspects of daily life. It complements and supplements the commitments of families to use Māori.

The Māori language is a treasure (taonga) guaranteed to Māori by the Treaty of Waitangi. The MLS draws together the different strands of language revitalisation to create an overarching framework for the activities and endeavours of extended and immediate family (whānau, hapū, iwi), Māori and Government. The strategy is vitally concerned with the intergenerational transmission of Māori language and builds on the passion, commitment, energy and determination of young grandmothers from the 1970s through to the 1990s. Their work, and the support of government in many various forms has transformed the prospects of the language surviving from being doomed over a generation ago to now being in a new dawning.

The Survey on the Health of the Māori Language in 2006 shows good progress towards the first three goals of the MLS. There are significant increases in the number of Māori adults who can speak, read, write and understand Māori. More Māori adults are speaking Māori to children in their homes and in community domains. More than 150,000 people in New Zealand speak Māori.

This strategy advocates for, mandates and monitors the demonstration of the practice of joined up government. Furthermore it incorporates strategic reach into other areas of central and local government and into civil society including Māori tribal and community groups.

The strategy has grown the quantum of Māori digitised materials held in dispersed locations to be publicly accessible through being brought together in virtual, standards compliant environments. Although the strategy provides for no additional government funding it is premised on the nation's commitment to the Treaty of Waitangi as the bicultural foundation of New Zealand. As such Māori language is seen as a national treasure, a cultural foundation and a linguistic right. Resourcing is thus seen as a core part of what government does and not an optional extra.

Key initiatives have been taken to date in radio, television, the Galleries, Libraries, Archives and Museums (GLAMs), ICT and education. In the area of ICT proactive government activity has been the allocation of some frequencies in the broadcasting spectrum for the delivery of Māori radio and television. In 1991 Government agreed to the allocation of spectrum licences for AM and FM sound broadcasting, for the promotion of Māori language and culture. Licences were issued, initially on a short-term basis, at no charge. After a review of Māori radio was undertaken in 1998, Government agreed to revised criteria for the allocation of reserved frequencies. The Māori Television Service Act 2003 was enacted on 8 May 2003 for the purpose of protecting and promoting Māori language and culture. It allocates a 10-year management right, expiring on 30 November 2013, to the UHF-TV band for the Māori Television Service. The Review of these allocations takes into account uptake, operation and effectiveness of this Act.

Within the GLAMs sector the catalyst for collaboration has been client expectations to have joined up services. The GLAMs responded with a series of National Digital Forum (NDF) events, initially driven by National institutions and more recently by a board with wider representation. The NDF has facilitated national developments including a register of digitisation initiatives, a tool kit, news, etc. Its flagship demonstrator is MATAPIHI, a bilingual (English and Māori) digitised, distributed, searchable, standards based website with over 100,000 heritage items on New Zealand. Several institutions, private companies and universities have also developed niche Māori interests online. Many items supporting Māori language now are discoverable from home pages and through big international search engines.

The MLS has five integrated goals and is set out in six sections. One of those sections concerns archiving of Māori language materials. In the National Library of New Zealand Te Puna Mātauranga o Aotearoa. The library has a New Generation National Library strategy and responsiveness to Māori-Te Kaupapa Mahi Tahī policy, which is the

foundation for the Library's role in leading the Archives sector plan piece of the MLS. The other five sections are variously led by Māori Radio (Te Mangai Paho), the Māori Language Commission (Te Taura Whiri I Te Reo Māori), The Ministry of Education and The Ministry of Māori Development (Te Puni Kokiri).

Within education the Internet is used by the Ministry of Education and its contractors to make resources more available and relevant in the Māori and English languages. Te Kete Ipurangi (TKI)—The Online Learning Centre is one of such examples. TKI is a bilingual portal and web community, which provides quality-assured educational material for New Zealand teachers, school managers, and the wider education community.

The MLS parallels the development of a Digital Strategy bringing together government and civil society interests, as a whole of country initiative, with opportunities to advance Māori language at every level. The Digital Strategy underpins the MLS and offers a whole of country approach. Māori have placed high value on the renaissance of their language, on retention and restitution of land on economic participation in society as a whole, while being able to live their lives as Māori. The Digital strategy is for all New Zealanders and is a fundamental building block in New Zealand's need to keep pace with community aspirations, international trends and economically sustainable growth. The Digital Strategy identifies three enablers: content, confidence, and connection. The strategy's content goal is "to unlock New Zealand's stock of content and provide all New Zealanders with seamless, easy access to the information that is important to their lives, businesses, and cultural identity".

Confidence, in the Digital Strategy, has two dimensions: capability and security. Capability is about ensuring all New Zealanders have the digital literacy and confidence to access the information they need, whilst also addressing skill shortages in the ICT industry. Security is multi-dimensional and includes knowledge of safe computing practices, especially for home users and small businesses, and freedom from spam. All this is highly relevant to the Māori communities too.

The strategy identified two connection challenges. New Zealand has high Internet usage, but low broadband uptake, while its small market inhibits investment. Yet affordable, high-speed Internet access drives productivity and economic growth and is a prerequisite for a growing 21st century economy. Fast, affordable access to the Internet underpins all the goals of the strategy.

The Digital Strategy recognised three agents of change: communities, business and the government. All have a part to play in creating New Zealand's digital future and realising the strategic vision of New Zealand as a world leader in using ICT to achieve its goals.

Overall, there were more than 70 initiatives identified in the Digital Strategy Action Plan. Implementation was a whole-of-government responsibility, with individual actions being led by the Ministry of Economic Development, New Zealand Trade and Enterprise, the Ministry of Education, the National Library, the Ministry for Culture and Heritage, Archives New Zealand, the Department of Internal Affairs, the Ministry of Justice, the Ministry of Social Development, the State Services Commission, Land Information New Zealand and the Ministry of Research, Science, and Technology. Every one of these has a Māori dimension.

Two new national funds were set up, providing contestable seed funding for connection and community initiatives. The first, the Broadband Challenge made available \$24 million over four years to stimulate investment in open-access fibre networks by public-private partnerships. The second, the Community Partnership Fund was set up in 2005, with \$17.4 million to invest over four years in regional and community initiatives. The total government investment in the Digital Strategy has been considerable. In addition to the \$44 million for the two contestable funds, the government made a \$47 million investment in the Advanced Network (now known as KAREN—Kiwi Advanced Research and Education Network), which enables data to be transferred at 10 Gbps, about 10,000 times as fast as a broadband connection. Significant investment was also made in the various e-education components of the Ministry of Education's Digital Horizons strategy, in the National Library's National Digital Heritage Archive (\$24m), in Te Ara: The Encyclopaedia of New Zealand online published by the Ministry for Culture and Heritage—and in the various components of the e-government strategy. Total expenditure committed to Digital Strategy initiatives from 2005, including baseline funding, was approximately \$400 million over four years.

The Māori Language Strategy was the government's response to taking advantage of these developments in infrastructure, capability and capacity. The MLS acknowledged the health of Māori, as a living language, to be primarily in the homes of peoples. It recognised that all government departments have a responsibility to support Māori language. It leveraged off these premises to support key central agencies to implement and promote best practice for communities using Māori language, by ensuring agencies cooperated, collaborated and communicated their plans and actions. The MLS has been audited and improvements are being implemented. It is reviewed every five years.

In summary the Government acknowledges that it has critical responsibilities, under the Treaty of Waitangi, for helping to revitalise the Māori language. It also recognises that the Māori language underpins Māori cultural development, which supports Māori social and economic development and contributes to a unique New

Zealand identity. The Government has committed to providing Māori language-related services through a wide range of Crown agencies.

The MLS also outlines some important areas where Māori take the lead role in working to revitalise the Māori language. On this note I will conclude this discussion by paying tribute to those elders, and communities, with the vision, passion and drive to begin the renaissance for the Māori language. Their efforts, combined with current government support, have shifted the survival prospects for Māori language from being utterly endangered, to being as secure as a child adored by all in its community. The future for the language is full of promise and good will. It is increasingly a unique identifier for the country and will always remain a language intimately connected to peoples and land in New Zealand Aotearoa.

Toitu te whenua	Uphold the land
Toitu te mana	Uphold the people
Toitu te kupu	Uphold the language

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Single Language vs. Language Translation

Throughout written history, every nation was aware of its unique identity and at the same time felt itself, in the person of its thinking members, a part of the single humanity, which for some reason had been split into different languages. (I use *languages* in the sense of “nations”, for language is the primary attribute of a nation. It stands to reason that the self-designations of many nations coincide with the name of their language, e.g., Russian, italiano, français, Deutsch.)

In a broader sense, language is perhaps the single most important property of man. For human beings, according to Aristotle, are political animals who naturally want to live together; but there is no human community without communication, that is a language. (Dolphins have been shown to communicate, calling each other by name. Some apes can learn a few hundred words. Yet, the “languages” in which animals communicate have neither grammar nor syntax, which are essential characteristics of a true language.)

The origin of language and linguistic diversity is one of the deepest mysteries. Myths and religions usually attribute the origin of speech and language to gods or to God. Says the Bible: “Now the Lord God had formed out of the ground all the beasts of the field and all the birds of the air. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name” (Gen. 2:19). In the Judeo-Christian tradition, the original, single language was the one spoken by Noah and his sons: “Now the whole world had one language and a common speech” (Gen. 11:1). The multiplicity of languages is the consequence of the arrogance of peoples, who conceived the idea of building the Tower of Babel. God “confused the language of the whole world”, upsetting people’s communication function and rendering their joint work impossible. As a result, they scattered “over the face of the whole earth”.

Informed and inquisitive minds have long since tried to solve the mystery of language origin. Herodotus tells us about the Egyptian pharaoh Psamtik (7th c. BC), who wanted to find out which of the human languages was the oldest and who ordered two new-born children to be brought up in absolute isolation, no one

allowed to speak to them. One day, one of them was observed crying *bekos*, which turned out to be the Phrygian for “bread”. From this fact, the king jumped to the conclusion that Phrygian was the original language of men. In a similar experiment set up by James V of Scotland (16th c.), children reportedly started to speak Hebrew. Personally, I consider more trustworthy the results obtained by Holy Roman Emperor Frederick II (13th c.) and the Indian Mughal Akbar the Great (16th c.): in their cases children never learned to speak. Indeed, now we know that no human being can acquire a language without communicating with other humans; indirect evidence is provided by the stories of real “mowglies”, infants who found themselves and grew up in the wilderness, outside of human society.

In modern times, in 1866, the Paris Linguistic Society decreed to close the discussion of language origin, having considered this problem insoluble. Interest in this area rekindled in the post-World War II period, which saw the rapid development of different schools of anthropology, neurolinguistics, psycholinguistics and some related trends. The questions that today’s science is trying to answer are why (wherefrom) language originated; whether it was a gradual or relatively single-step process; whether language appeared at an early stage in man’s evolution (some 150,000 – 200,000 years ago) or relatively late (some 40,000 – 50,000 years ago). Lastly, current debate centres on the question of whether modern languages originated on different continents independently of one another or whether at first one protolanguage appeared, which afterwards spread across the globe.

The first proposition seems to be supported by the so-called “universal grammar” theory, which says that people are born with a special mechanism in their brain that embraces all grammatical systems, enabling a child to master any language. If this hypothesis is true then representative of the human race who lived on different continents could conceivably develop their own languages independently.

However, more scholars support the language monogenesis hypothesis, which says that all of humanity is descended from the so-called “mitochondrial Eve”, who supposedly lived in East Africa approximately 150 000 years ago. It is assumed that a protolanguage appeared at the same time, subsequently splitting into two or more branches. One argument in favour of the monogenesis theory: any language has roots and grammatical markers that have parallels in very different languages of the world. Languages as apparently different as Russian and Irish were found to have about 30 per cent of nonrandom matches. Some Russian linguists are developing a theory that the Russian language is a direct descendant of the protolanguage, which is why Egyptian inscriptions are best read in Russian.

Counting the number of living languages in the world is not easy because it is not always possible to differentiate between a language and a dialect. With regard to

English the notion of a “standard” language has long since disappeared and people commonly refer to British English, American English, New Zealand English, etc. A new name has appeared, *Ebonics*, to denote a language spoken by the black population of the United States. Here are other examples. In the times of the Socialist Federal Republic of Yugoslavia the Serbian, Croatian and Bosnian languages were considered one language, but now that their native speakers live in different states, they are separate languages. In the young republic of Moldova, on the contrary, the Moldovan language was declared to be identical to Romanian and its writing was Romanized. Corsican nationalists are seeking to prove that their language is distinct from Italian on the grounds of its having two soft vowels not found in the Italian language. It is small wonder that there are great disparities in numeric evaluations of living languages, ranging from three thousand to nearly seven thousand.

What is multilingualism in reality: a curse or a blessing? Should we regard it as punishment for humankind’s self-will or as a mainstream development of all being—as a fundamental rule of diversity?

Progressive minds at all times were aware of the profound unity of the human race and dreamed about “non-nationality”, that is, about overcoming national and linguistic disunity. Plato is reputed to have said that the gods would have done much good to humanity by giving it a common language. Voltaire once said, “Language difference is one of the greatest afflictions of social life.”

Many thinkers were preoccupied with a universal or philosophical language, an ideal language devoid of the imperfections of human languages. They saw it as an instrument of straight thinking and classification of notions, and also as a framework for building a just society. In many utopian projects a common language acts as one of the principal components of social harmony and happiness.

The first known attempt of this kind was a city called Ouranopolis (“City of the Heavens”), which was founded in the 4th century BC by the Greek Utopian Alexarchos. The residents were required to speak an artificial language invented by Alexarchos himself. We do not know how and when this project ended, but a village of this name still exists near Mount Athos in Greece.

Later Utopians, including Thomas More and Tommaso Campanella, also took an interest in the subjects of a common language and language translation. Michel Nostradamus in his “Centuries” discourses on some new language, serving as an intermediary between Latin and Oriental languages. Thinkers like Komensky, Newton, Descartes and Leibniz concerned themselves with the development of a universal language. Our enlightened empress Catherine II ordered a special committee of scholars to make a comparative study of the languages of different peoples with a

view to developing a universal language. This attempt failed, of course, but a comparative lexicon of 200 languages, Oriental as well as Occidental, was created.

While academics were engaged in a search for an ideal language, life dictated the need for some intermediary language. (To be more exact, intermediary languages, because different forms of interlanguage communication and business and intellectual intercourse tended towards the unification of writing systems, counting systems, nomenclatures, musical notations and, today, programming languages among other things.) In the 5th to 18th centuries, Middle Latin was the professional language of Europe. Incidentally, Russia's Lomonosov wrote most of his works in this language. In the 19th century all educated Europeans spoke French. In commerce and cross-cultural communication languages like pidgin or lingua franca, which are mixtures of three or more languages with simplified vocabulary and grammar, were in wide use.

The idea of replacing ethnic languages by some universal language was gradually giving way to the notion of an auxiliary language to be used in international communication only. The breeding ground was Europe in a period commonly known as the *Belle époque* (late 19th century to World War I). Today we would describe this time as the first wave of globalisation or the beginnings of a global market: on the one hand, there was advance of science and technological expansion, world's fairs, the rise of the British Empire and the development of other colonial empires; on the other, people were aspiring to step over the bounds of narrow national interests and to join forces with their "class brothers" in order to create a new and more just society. According to estimates, 17th century saw 41 artificial language projects, the 18th century, 50, and the 19th century, as many as 246 projects.

The best-known among the artificial languages of international communication are Volapuc, Esperanto, Interlingua and Ido. Each of them is formed by words and elements of human (national) languages and has a more or less simplified grammar. Each is an attempt, as it were, to reunite the scattered "post-Babylonian" language. However, they are generally built on the vocabularies of European languages: English, German, French, Italian, Spanish and Russian. Meanwhile, more international language projects are endeavouring to overcome Europocentrism. A recent attempt is *Lingwa de Planeta*, being developed by a team of scientists in St. Petersburg; its vocabulary includes along with European roots words from Oriental languages, Chinese and Hindi.

Yet today's reality is that almost one-third of the world population speaks English, though it is the mother tongue for only 380 million people. The better part of the Internet is in English, though 44 per cent of its users speak a different language. No other language in human history was so widespread and popular. What is the reason for the prevalence of the English language?

First, English is the communication language of the greatest empire ever, the British Empire, and the succeeding (after World War II) quasi-empire, the United States. No wonder that the post-war period has been referred to as *Pax Americana* by analogy with *Pax Romana* (literally “Roman peace”). While the expansion of the Roman Empire led to the spread of Latin in Europe, the Anglo-Saxon economic and cultural expansion made English the predominant language of communication, commerce, science and (mass) culture. Among the merits of English is the fact that, though it is a Germanic language, it comprises a considerable number of Latin roots, which places it in close quarters with the Romance languages, also spoken by a great many people. Furthermore, simplified versions of English were designed, among them BASIC (*British, American, Scientific, International, Commercial*) with a vocabulary of 850 words, and the most recent addition, Globish, whose vocabulary consists of 1500 words. These are, of course, not fully-fledged languages but merely means of cross-border communication.

What next? Considering that China is about to become the world’s economic leader during this century, may not Chinese, for all its complexity, become a leader in international communication?

So far, my point has been that multilingualism was traditionally considered as a misfortune, as a curse for humanity, and that thinkers and scholars at all times sought a means of lifting this curse. One of the first to profess different views was the great philosopher and linguist Wilhelm von Humboldt. His brother, Alexander, an equally famous natural philosopher and geographer, wrote that it was given to him “to penetrate into the structure of the greater number of languages than one human mind could ever grasp”. To Wilhelm von Humboldt multilingualism is the driving force in the development of human spirit. For all the diversity of languages, each thanks to its structure and fabric can represent a certain world view. One of the tenets of modern linguistics—which is not shared by everyone—is that all known languages, from those of Australian aborigines to modern English, are equally “advanced” and, in principle, intertranslatable.

These days, the problem of interlanguage communication is no less urgent; if anything, it is more so. Of course, it would be a good thing if everyone spoke several languages, but polyglots were always a rarity. Today almost half the European Union citizens can speak a non-native language and about a quarter of all Europeans can communicate in two foreign languages; which is only natural. In Britain, on the other hand, only one-third of the population knows a foreign language in addition to their native English; which is natural, too.

At all times, interpreters and translators performed the necessary function of mediation in communication and in understanding other cultures. Saint Paul in his

First Epistle to Corinthians instructs: “If any man speak in an unknown tongue, let it be by two, or at the most by three, and that by course; and let one interpret” (1Cor. 14: 27). If it were not for translators most of humanity would not have known the Bible and other sacred writings, there would have been no exchange of scientific information and no notion of “the world literature”. It must be said, however, that translation—like any other human activity—gives us examples of both brilliant and middling work. It is not for nothing that the Italians have a half-serious adage, *traduttore traditore* («translator [is] a traitor»).

The 20th century felt a critical need for rationalising translation, primarily written translation. In the new industrial, then post-industrial, society translators, those “post-horses of enlightenment” (Pushkin) were clearly becoming a brake to development. Life demanded that they be replaced by an “iron horse” or, better still, by an intelligent electronic machine. These hopes seemed to be coming true since the mid-20th century, when a computer revolution occurred. It brought to life, among other things, a range of cybernetic, information and cognitive sciences and gave an impetus to the development of applied linguistics. Intensive research studies into human brain modeling, the semantic and syntactic analysis of language and speech synthesis were initiated. The aim was to create the so-called Artificial Intelligence and, eventually, humanoid robots.

After the early decades of “Sturm und Drang” it looked as if we were near to building automatic (or machine) translation systems. However, around the 1980s, general excitement boiled away and studies almost stopped. Why? It emerged that building a robot that executed instructions was far easier than giving it “brains”. Besides, early computers lacked sufficient power and speed, which impeded research and development. However, the last two decades saw an activation of this work in different countries, engaging thousands of scientists and specialists. Accordingly, considerable funds were channelled there. All of it is due to several factors, some of which are closely interrelated.

The first is globalisation developments in economics, politics and culture, namely, the expansion of the areas of free trade and labour and capital movement. It is accompanied by the growth of transnational corporations, generating a need for the localisation of commodities. The point is that the world is consuming increasing numbers of identical products, and their descriptions and technical manuals have to be translated into local languages. It spells great material inputs and stimulates investment in machine translation.

Simultaneously we are witnessing the contraction of the powers of national states and the strengthening of international organisations. The appearances of the United Nations, followed by the European Union, with their principle of support of

multilingualism, promoted the development of simultaneous translation. Currently the European Union uses just short of 30 official languages, which form about 350 language pairs, representing an enormous translation effort. The global figure for the whole linguistic service for the European Union is €1.1 billion a year or about one per cent of the whole EU budget. The European Parliament spends 30 per cent of its budget on the translation of parliamentary debates and EU documents.

Another major factor is rapid growth in information and communication technologies. From the early vacuum tube computers to the present-day digital optical computers, i.e. in a time span of just over half a century, computer power doubled every 18 months. And in the years to come we are likely to see the switchover to biocomputers, which will work on the cellular level and feature powers thousands of times greater than today's computers'. For illustration, once the syntactic analysis of a sentence took hours to perform, and today it is done in a fraction of a second. Moreover, the advent and spread of the World Wide Web is effectively turning the whole civilised world into one "global village" Marshall MacLuhan wrote about. People around the world speaking different languages, once unaware of each other's existence, are being enabled to communicate almost directly and in near real-time!

Finally, for some time past a new player appeared on this field, the United States. Until recently, this virtually monolingual country paid relatively little attention to computer-aided translation. Now, however, in the context of its "war on terror", the US Department of Defense is laying out enormous amounts for relevant R&D; the appropriations for 2008 amounted to \$75 million. The task is to create an automatic system for oral translation from English into different foreign languages, which could function in a combat environment. A one-way translation version has been designed, which has been applied in Iraq and Afghanistan. In the long term, it is planned to create more sophisticated two-way oral translation systems.

Translation is said to be the fastest growing industry today. There are about 5000 translation companies (with a staff of at least five) around the world. In 2005, the translation industry created revenues variously estimated at \$8 billion dollars to €30 billion. This large spread in figures is due to the translation industry's common practice of subcontracting (up to four levels!), which often makes it difficult to establish the actual expenditure on a translation down the contracting chain.

Still and all, traditional "manual" translation is expensive and slow. Let us look at what science and engineering are offering, today and in prospect, in human language processing, including language translation. (We are leaving out literary translation, which defies computerisation in principle. Nor do we touch on so-called "pocket translators", which to all intents and purposes are phrase-books with a display screen, though less handy than the original print variety.)

Automatic speech recognition. This is a very complex scientific task, far more complex than, for example, chess playing. To date, systems have been developed that can recognise continuous speech (of different people at that) and convert it into printed text. Currently, work is in progress on a system that can recognise not just dictation but natural, free speech.

Text-to-speech conversion, also known as speech synthesis. Fairly efficient systems of this kind are already available, and more naturally sounding systems have been created. Systems that can generate different voices are in progress.

Spoken language translation, which translates speech from one language into a text in another. Such systems consist of two components: speech recognition and machine translation. The basic difficulty in creating these systems is that they are expected to work in environments where speakers do not consider the need for being recognised, e.g., on television or in meetings.

Speech-to-speech translation. This kind of system combines all of the above approaches. The idea is to allow people to talk to each other using the computer as an interpreter. Preserving speaker identity is a challenging task here. An EU-funded project called TC-STAR (*Technology and Corpora for Speech-to-Speech Translation*) is an ambitious undertaking exemplifying this technique. Pilot systems are already available, which ensure fairly high translation quality, and they have been used successfully to convey the gist of European Parliament debates.

Machine translation, or translation of a text in one language into a text in another. Early MT efforts relied heavily on linguistic methods and the detailed coding of human knowledge. It proved to be a very difficult task, and the current practice is more geared to the use of statistical techniques, which have been quite successful in speech recognition systems. The idea is to load into the system a very large vocabulary of words and phrases and to have source texts matched against it. The error rate is rather high in both approaches, however. In fact, what the computer produces is a raw text requiring “manual” post-editing. Still, the main advantage of these systems is speed and cheapness compared with human translation. These systems are in wide use on the Internet, translating Web-sites and chats.

With regard to quality translation of texts the most practical approach seems to be “machine-like” translation, which uses the so-called *translation memory*. In contrast to machine translation systems proper, here the basic vocabulary of words and phrases is not loaded into the computer beforehand, but is developed by translators throughout their careers, the computer merely saving this information. In the course of a translation project the computer acts as a “translation memory” suggesting variant translations for words and phrases based on earlier translated texts. The

translator, rather than the machine, decides whether a suggested variant is appropriate or not. Naturally, the system is improving as its memory grows. Most often, such systems are used in large translation projects engaging several translators who work in parallel, their texts being brought together in a common database. They are particularly convenient for work with large legal texts or technical descriptions, where consistency in terminology is at a premium. Wordfast, DejaVu and SDL Trados are some of the better known brand names in this field.

We are still at the very beginning of the road and nobody can discern the future. However, there is already some hope that in a new, globalising world we will manage to preserve the majority of living languages by building electronic translation bridges between them.

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Latin—a Dead Language?

Minority languages are endangered. We are told that one of them disappears daily. A language is a living thing; if it dies, this is irreversible and it will never come to life again. Human history knows of but one exception, when a language dead for two thousand years got a new lease of life—it is Hebrew. It was because the people who wanted it revived, the Jewish nation, regained their land and their statehood, today's Israel, in 1947.

The existence of a land, a mother country, a state, *where a language is practiced and accepted as official is fundamental to its preservation*. A language without a country is an endangered language. This explains why an artificial language like *Esperanto* has not met with great success; it numbers only tens of thousands of occasional users and it is not considered official in any other country except Hungary.

From this perspective, the situation of the *Latin language* is clear: the official language of the Roman Empire, it lost its status and its territory in the 5th century A.D. with the breakdown of the western part of that empire, and its usage gradually changed.

A dead language, then? No. To declare Latin dead is not just a *mistake*, but also a *lie*, a historical lie, to which the French willfully gave voice in the 18th century. Because theretofore Latin had remained the main language of European diplomacy and because it was the everyday language of all intellectuals in Europe.

France wished to replace Latin with its own language and it succeeded in it. It was at that time that French became the language predominantly used in European palaces: in Vienna, in St. Petersburg under Catherine II, in Berlin under Friedrich of Prussia and in other cities. To a large degree, it was thanks to the prestige that French philosophers enjoyed in that age, with Voltaire and Diderot mingling with royalty and princes of the blood.

That prestige received a serious blow in 1789 from the actions of the French revolutionaries, the assassins of the king and nobility, and afterwards from Napoleon's bloody campaigns. It was then that the decline of French as a universal language began.

As for *Latin*, this dead language is doing quite well. In many countries, it is still being learned in colleges and universities as a language of culture for its educational and intellectual value; it remains the liturgical language of the Roman Catholic Church; it is the official language of the world's smallest state, the Vatican, Romance philologists and linguists need it as the mother tongue.

This language formed the basis of a numerous family of languages: some 800 million people, or 18 per cent of all the users of Indo-European languages, speak Romance languages.

Only half of Europe—Spain, Italy, France, Portugal, southern Belgium, French Switzerland, Romania and Moldavia—now use the Latin languages that were once spoken throughout the Roman Empire. These languages embrace Central and South Americas as well as Mexico and Quebec. They are official languages in the former French, Spanish, Portuguese and Belgian colonies, in half of Africa and the Philippine Islands.

They are present in countries whose dominant language is not Latin but which have a Latin minority, such as the United States and the Maghreb States.

Latin is being studied so eagerly that it is safe to say that it is an easy language, a *transparent* one like Spanish, Italian, where the match between graphemes and phonemes is quite simple: as often as not one phoneme corresponds to one letter form and one letter form, to one phoneme. If all the languages were written in the International Phonetic Alphabet (IPA) they would all be transparent and orthography would be no more.

Words in nontransparent languages like English or French are, on the contrary, written differently than they are pronounced, which is why people spend so much time learning spelling.

How can informatics help Latin? Quite simply, by preserving as in libraries the integrity of classical works in this language.

We should also touch on the efforts of instructors at the University of Avignon who are trying to enforce “modern Latin,” a simplified language competing with Basic English among the users of Romance languages. A simplified vocabulary of 5000 words would permit one billion people whose native tongues have roots in Latin to communicate with each other. The Internet, an information dissemination tool, could assist with this vast scheme. Yet, however much this “modern Latin” were propagated it is still a Utopia just like Esperanto or Volapuk.

Whatever the case, in spite of its aggressive enemies, Latin remains very much alive. They want to kill it; there can be no mistake about it. But rest assured: it will outlive us all.

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Voices from Tundra and Taiga: the Use of Sound Archives for the Study and Teaching of Endangered Languages

Introduction

The work of the Fryske Akademy (Frisian Academy) and the Mercator European Research Centre on Multilingualism and Language Learning is devoted to the study of minority languages in Europe. The primary involvement of the Fryske Akademy lies in the domain of history, literature and culture related to the West-Frisian language. The users of its nearest relatives, the East- and North-Frisian languages in Germany are less numerous and these languages are included into the list of endangered languages of Europe. This list increased significantly after the extension of the European Union with new member states in Central and Eastern Europe. Further eastwards, in the Russian Federation a large number of endangered languages can also be found. This report presents existing and potential projects related to some of these endangered languages, in particular those based on the use of material from sound archives and fieldwork data. In most of these projects the use of the Internet plays a very important role.

Minority Languages in Europe

The Mercator European Research Centre on Multilingualism and Language Learning has been established in 2007 with the principal goal of acquiring, storing and disseminating information on minority language education in the European region (Van der Meer 2006). This centre successfully implemented a computerised database of bibliographic data and information about people and organisations involved in this subject. The series of Regional Dossiers published by the Mercator Centre provides descriptive information about minority languages in a specific region of the European Union, such as characteristics of the educational system and recent educational policies. These dossiers can be ordered in print and can also be downloaded from the following website, where additional information can be found:

www.mercator-research.eu. This information can serve various purposes and it is widely used by policy makers, researchers, teachers, students and journalists to assess the ongoing developments in European minority.

For the preparation of teaching materials, such as grammars, text books, collections of stories in the language, use can be made of archive material, such as sound recordings. The historical data are particularly useful when a language is endangered and few present-days speakers are available. In the following pages we shall present some case studies related to the use of these materials, which form the background of our project activities.

Historical Data in Sound Archives

In the last half of the 19th century a great invention was made by Thomas Edison which changed the possibility of doing linguistic research drastically (De Graaf 1997, 2002c). This was the phonograph which since 1880 was used for recording sounds. For the first time in human history people were able to store and rehear acoustic data, in particular speech, and to reproduce it to other sound carriers. It was not long after this invention that ethnologists, folklorists, linguists, composers, and amateurs began to use the new machine to collect information on the oral data and music of cultural groups at home and abroad.

Using the phonograph over the years from 1902 to 1905, the Polish anthropologist Bronisław Piłsidski recorded the speech and songs of the Ainu people on Sakhalin and Hokkaido on wax cylinders in order to study their culture. These wax cylinders were discovered in Poland and taken to Japan, where the research group of Prof. Toshimitsu Asakura contributed to the reconstruction of this valuable material (Asakura et al. 1986). For best results in the reproduction of sound from the old wax cylinders, several modern cylinder players have been built which employ light weight pick-up cartridges for mechanical extraction of the signal. In order to minimise further degradation of cylinders by replay, and also to make contents retrievable from broken cylinders, several optical methods for contactless, non-destructive replay have been developed. The first was introduced by the Japanese research group of Asakura. In 1988 I was invited to work a few months with this group in Sapporo (Japan) and there I could apply this method to some of the wax cylinders and learn from the experience of my Japanese colleagues.

During my stay in Japan Prof. Kyoko Murasaki introduced me to the last speakers of Sakhalin Ainu, who were living on Hokkaido (Murasaki 2001) and suggested that we might go together to Sakhalin in order to do fieldwork there. In 1988 Sakhalin was completely isolated from the outside world, but Gorbachov's

perestrojka made it possible to organise the first international ethnolinguistic expedition to the island, which I could join in 1990 (De Graaf 1992). There we did not find any remnants of the Ainu population, but we could visit various parts of Sakhalin where the Nivkh people are living.

The Languages of Sakhalin

The island of Sakhalin belongs to the Sakhalin area (Sakhalinsk Region), one of the most eastern territorial units of the Russian Federation with a size of 87,100 sq.km and a distance from North to South of 980 km. The Kurile Islands are also part of this territory: a chain of 1200 km length with 36 islands. A long-time dispute exists between Japan and the Russian Federation about the ownership of the most southern of these islands. At the moment, they are Russian territory, but before 1945 they belonged to Japan, and were inhabited by Japanese people (in earlier times also by Ainu, who were the original population). In the past the situation of disputed ownership has had important demographic consequences for the island as a whole.

From 1905 to 1945, after the Russian-Japanese war, the southern part of the island (Karafuto) was a Japanese colony and during this period many Japanese immigrants (about half a million) settled there. The original population of Sakhalin consisted of some Paleo-Siberian and Tungusic tribes, in particular the Nivkh (Gilyak) and Uilta (Orok) in the North and Center, and the Ainu in the South. Their numbers were rather small and during the colonisation process by the Russians from the North and by the Japanese from the South, they became soon numerically dominated by these stronger nationalities. Due to their isolated life far from the political center, they could keep their native language and culture for a long time, but since the beginning of the 20th century the assimilation process has gradually become stronger.

In the summer of 1990, I took part in the first international field work expedition to Sakhalin, with the aim to investigate the linguistic and ethnographic situation of the smaller nationalities on the island. The idea was to look for the remnants of the Ainu population and for the other small minority groups, in particular Nivkh (Gilyak), Uilta (Orok). Unfortunately, during our expedition no more Ainu people could be found and the only person representing the Sakhalin Ainu language and culture was probably the informant we met on Hokkaido, Asai Take san (De Graaf 1992, Murasaki 2001).

The dramatic events in 1945, after the Soviet occupation of the whole island, had enormous consequences for the ethnographic and linguistic situation: practically all Japanese inhabitants left Sakhalin for Japan and together with them many of the Sakhalin Ainu. From all parts of the Soviet Union new immigrants arrived. These were not only Russian people, but also many members

of other ethnic groups. Some of them still speak their native language; others have shifted to Russian. Due to these developments, the Sakhalin Ainu population disappeared from Sakhalin and the only Ainu people left are now living in Japan. In Japan the Ainu culture is stimulated in many ways, but there is only a very small number of speakers left after the earlier repression. This makes it very difficult to obtain a real revival of the Ainu language and culture.

Ainu is the only small endangered indigenous language of Japan, whereas Nivkh is one representative of the many minority languages of Russia. From the available demographic data we could conclude, that in 1989 the aboriginal peoples of the North formed a very small minority within the total population of Sakhalin: for the Nivkh ethnic group, which is the largest group, the percentage is only 0.3% (De Graaf 1992). Among the small nationalities in the Russian Federation, the minority peoples of the North play a special role. There are nearly thirty different groups, all living in the northern parts of the country bordering the Arctic Ocean from Scandinavia to the Bering Sea and the Pacific. The peoples of the North were the last ones to be put under effective Soviet rule. The Soviet regime tried to extend its grip on these peoples and to encourage Russian culture and literacy among them. With this aim a «Committee for the Assistance and Protection of the Small Peoples of the North» was founded in 1923 and a writing system was developed for many of the minority languages.

Schools in the northern regions brought education to the native population. Most subjects were taught in Russian and therefore the schools became media of russification. The northern nationalities are so small, that even a very moderate introduction of (mainly Russian) manpower from outside into their territories could adversely affect their national survival. In the case of Sakhalin, we saw earlier that the number of people belonging to the original population has diminished considerably. This leads to further russification: Russian civilisation is pushing forward into the remote corners of the Russian Federation and more and more non-Russian natives are forced to adopt the Russian language and culture.

The Nivkh Language

The Nivkh language is classified as Paleo-Siberian and spoken by people inhabiting the lower reaches of the Amur river in the Far East of the Asian continent and the northern and central parts of Sakhalin island (Gruzdeva 1998). One of the linguistic complications is the fact that the language has two (or maybe more) rather different dialects: the Amur dialect and the Sakhalin dialect. Both groups are rather small: all together about 4400 people have the Nivkh nationality, and less than 15% of them

are speakers of the Nivkh language. A very small group speaks the southern Poronaisk dialect and for this dialect it is very difficult to find speakers. After the war, several of them went from their homeland in Southern-Sakhalin to Japan, where Japanese and other non-Soviet linguists studied their language.

The first all-Russian census was organized during the czarist regime in 1897. In that year, the total number of people on Sakhalin, belonging to the Nivkh ethnic group, was counted as 1969. They all gave Nivkh as their mother tongue and probably most of them were monolingual. In the second census mentioned, the one of 1926, which was organized for the first time in the Soviet Union, the total number of Nivkh people was lower, due to the fact that the inhabitants of the Japanese southern part of Sakhalin were not counted. Practically all of them still had Nivkh as their mother tongue. Since that year, however, a decrease in the percentage of Nivkh speakers has set in, whereas the total number of Nivkh on Sakhalin stayed more or less stable (about 2000). In 1989, most Nivkh people (more than 80%) who were not speaking Nivkh any more, mentioned Russian as their first language.

The transition from the Sakhalin Nivkh to the Russian language can be explained in a number of ways. One of the most important factors was the growing contact of the Nivkh population with the other inhabitants on the island. Many of them were Russian-speaking people from the motherland, who came to the island to exploit the many natural resources (oil, coal, wood, fish, caviar). Before that time, the Nivkh people were living as fishermen and hunters in their isolated villages, but they increasingly came into contact with the immigrants, who also started an active policy of educating and influencing the aboriginal inhabitants of the eastern parts of the Russian Federation.

From the early sixties of the 20th century, the Nivkh on Sakhalin, like other small minority people, were (in many cases compulsorily) resettled from their small villages to larger settlements (Chir-Unvd and Nekrasovka), and towns (Poronaisk, Nogliki). These developments intensified the contact between minorities and the Russian speaking population. Important changes took place in the life of the Nivkh: they had to give up many of their national customs, and to adapt to Russian habits and life style. In particular, the arrival of Russian radio and television in their homes had a great influence. The traditional professions of the Nivkh (fisherman or hunter) were also more and more replaced by other occupations, where the possibility to keep the native language and culture was very limited.

After the Russian revolution, in order to abolish the illiteracy of the native peoples writing systems were introduced. For the Nivkh language, this was initially based on the Latin alphabet, and was created in 1932. According to some linguists, this might have been most suited to the sound structure of the language. In 1953,

however, the Cyrillic alphabet replaced this system, which also increased the influence of Russian. Furthermore, the creation of boarding schools for the peoples of the North played a special role. In the fifties, their children were taken to such schools in places far away from their home village. They could rarely see their family and lost contact with their language background. In most cases, instruction in these schools was only provided in Russian.

In recent times a development is taking place in favour of the native language and culture of the small minorities in the Russian Federation, in particular the Nivkh (De Graaf and Shiraishi 2004). Attempts are being made to revive the Nivkh language, for example by introducing language classes in Nivkh in several schools. In 1980, the Ministry of Education of the Russian Federation initiated a programme for primary and secondary schools, for which text books and dictionaries were edited. Special instruction was given to teachers of Nivkh descent about the education of Nivkh children in their own language. This teaching programme was introduced in the special boarding schools for children from the ethnic minorities in Nogliki, Chir-Unvd and in Nekrasovka. We were able to visit these schools and to learn about the teaching methods for Nivkh used in the primary education.

During our fieldwork expeditions on Sakhalin, important linguistic material was collected on the languages of the minority groups. Most of the subjects for our research project were elderly people with a strong motivation to use their language, for example as members of a folkloristic group. Practically all young people we met had no active knowledge of the language, and they only communicated in Russian with their parents. During the interviews we made with Nivkh informants, they were very positive about the value of keeping and cultivating their own culture in this way. They want to combine this with a future life as members of the group of nations in the Russian Federation. They agree that Russian language and culture play a very important role in their lives, but they would like to see the survival of their native language and culture stimulated by all possible means. The edition of a special newspaper (Nivkh Dif), the writing of more books and journals in Nivkh, and the organisation of special language courses will make this possible. Here the use of information technology and cyberspace plays an important role.

European Projects Related to Endangered Languages and Sound Archives in Russia

From 2007 onwards, work of the Mercator European Research Centre will not only be restricted to members of the European Union and in the future also contacts with other countries will be established, such as across the Eastern border of the EU in

parts of the Russian Federation, where Uralic languages, related to Finnish and Hungarian, are spoken. It can be shown that in this sense European culture has many links with Russia and Siberia. The study of these languages is essential in order to preserve their unique cultural heritage for future generations.

Our research group pays attention to various aspects of the languages spoken in the Russian Federation. In this report we shall describe a few projects, which have been undertaken by the research group and elsewhere for the study of the minority peoples of Russia and for the description of the endangered languages involved. For this purpose data from archives have been used and combined with results of modern fieldwork in several parts of the Russian North, Siberia, the Russian Far East and the border areas of Russia and Japan. Since 1992 these projects have been financially supported by the Netherlands Organization for Scientific Research (NWO), the Organization INTAS of the European Union and the Sakhalin Energy Investment Company Ltd. We have collaborated with colleagues in Russia and Japan and part of our work is simultaneously related to Japanese research projects.

When recordings were made, it became obvious that a central facility was needed for the preservation of the valuable data which had been collected. At the beginning of the 20th century this led to the establishment of sound archives, the earliest of which in Europe were located in Vienna, Berlin and St.Petersburg. The sound archives of the Russian Academy of Sciences in the Museum of Russian Literature (Pushkinsky Dom) in St.Petersburg contain about 10,000 wax cylinders of the Edison phonograph and more than 500 old wax discs. In addition, an extensive fund of gramophone records and one of the largest collections of tape-recordings of Russian folklore represent the history of Russian ethnography and contain a wide range of materials (De Graaf 2001, 2002a). Many of these recordings form one of the basic collections used in our joint projects with St.Petersburg.

The first of these projects on the *Use of Acoustic Data Bases and the Study of Language Change* (1995-1998) has been financially supported by the organization INTAS of the European Union in Brussels. We were able to reconstruct some of the many recordings in the Pushkinsky Dom and to make them available for further research, which is not only important for historical and cultural reasons, but also for language description and for the study of possible direct evidence of language change. In a second INTAS project, *St.Petersburg Sound Archives on the World Wide Web (1998-2001)* some of the sound recordings were placed on the Internet and are now available at a special web site for further study (De Graaf 2004a). In both projects, the Phonogrammarchiv of the Austrian Academy of Sciences was both partner and responsible for the technical aspects. For these projects we first completed the reconstruction of the sound archive material of the Zhirmunsky

collection. Zhirmunsky was a famous linguist who worked in St.Petersburg/Leningrad in the early years of the 20th century. One of his main interests was the study of German dialects spoken in Russia. In the period between 1927 and 1930 he recorded many utterances, in particular songs by German settlers in Russia, on waxed cardboard discs, which were transferred to the Vienna Phonogrammarchiv. Within the framework of the INTAS project, this collection has been copied onto tape and part of the material is now stored in a special database. A special study covered the language of the Siberian Mennonites (De Graaf 2005).

For our third INTAS Project on *The construction of a full-text database on Balto-Finnic languages and Russian dialects in Northwest Russia* (2000-2003) we prepared an inventory of the Finno-Ugric minority languages in the vicinity of St.Petersburg and the southern and middle parts of Karelia. They represent a specific linguistic picture of an area where endangered languages such as Vepsian, Ingrian, Votic, Ingrian-Finnish and Karelian and various types of Russian archaic dialects are spoken in close proximity to this day.

The St.Petersburg sound archives also contain important data on Yiddish, the language of the Jews in Eastern Europe, which at the beginning of this century was spoken by millions of speakers in the Russian empire. In the archives we found an unpublished manuscript *The Ballad in Jewish Folklore*, together with material on corresponding wax cylinders. Together with specialists in St.Petersburg, we further explored the acoustic data in the sound archives and prepared the edition of the book. This took place in the framework of a project with the title *Voices from the Shtetl, the Past and Present of the Yiddish Language in Russia* (1998-2001), for which we have obtained financial support from the Netherlands Foundation for Scientific Research NWO (De Graaf, Kleiner and Svetozarova 2004).

Modern fieldwork and reconstructed data from sound archives provide important information for the preparation of language descriptions, grammars, dictionaries and edited collections of oral and written literature. During fieldwork expeditions to Northern Yakutia, the Altai Region and Sakhalin we have studied the processes of language shift and language death of the aboriginal populations of Russia, providing us with a lot of interesting data. Part of it is now available on the Internet.

Voices from Tundra and Taiga

Important activities related to linguistic databases in St.Petersburg concern the recordings of Russian dialects and minority languages in the Russian Federation, such as Nivkh, Tungus, Yakut, Yukaghir and other ones (De Graaf 2004a). One of our aims is to use these recordings for the construction of a phonetic database of the

languages of Russia, which will have many scientific, cultural and technical applications. Within the framework of the research programme *Voices from Tundra and Taiga* which started in 2002, we combine the data from old sound recordings with the results of modern fieldwork, in order to give a full description of the languages and cultures of ethnic groups in Russia. The endangered Arctic languages and cultures of the Russian Federation must be described rapidly before they become extinct. Our earlier work on the reconstruction technology for old sound recordings found in archives in St.Petersburg has made it possible to compare languages still spoken in the proposed research area with the same languages as they were spoken more than half a century ago, which provided a fortunate start of these projects. The sound recordings in the St.Petersburg archives consist of spoken language, folksongs, fairy tales etc., among others in Siberian languages (Burykin et al. 2005, De Graaf 2004a).

In these projects the techniques developed earlier are applied to some of the disappearing minority languages and cultures of Russia, such as Nivkh (Gilyak) and Uilta (Orok) on Sakhalin and Yukaghir and Tungusic languages in Yakutia. Our goal is to set up a phono- and video-library of recorded stories, folklore, singing and oral traditions of the peoples of Sakhalin and Yakutia. Thus the existing sound recordings in the archives of Sakhalin and Yakutia will be complemented by new fieldwork results. The data obtained will be added to the existing archive material in St.Petersburg and partly available on the internet and CD-ROM.

This research project and related documentation is carried out in close cooperation with scholars in local centers such as Yuzhno-Sakhalinsk who participate in the archiving of sound recordings and fieldwork expeditions. They are trained at the St.Petersburg State University. Specialists from St.Petersburg and the Netherlands also visit them setting up new centres for the study and teaching of local languages and related subjects. For this purpose we organised a special seminar for Nivkh teachers in Yuzhno-Sakhalinsk in October 2003. In the future elsewhere—e.g. in Yakutia—similar seminars can be organised.

Spontaneous speech and the reading of prepared texts is collected for (ethno)linguistic as well as for anthropological, folkloristic and ethno-musicological analysis. These data are (video)recorded and analysed and they will thus illustrate the art of story telling and language use. The above described texts will be published in scientific journals and books with audiovisual illustrations on CD-ROM and/or on the Internet. The materials will thus become available for further analysis to scholars working in the field of phonetics, linguistics, anthropology, history, ethno-musicology and folklore.

Using a phrase book for school children of Nivkh (Taksami et al. 1982) we recorded a native speaker during our fieldwork trip in 1990. The texts with the illustrations

of the book are now shown on the Internet together with the acoustic data. The separate phonemes are also supplied on a special table and by selecting one of them the student can listen to various speech sounds. This has as the advantage that students will be able to learn the distinction between various separate phonemes (e.g. four k-sounds) of Nivkh, which are variants (allophones) of one phoneme in Russian. One of our research students and his Nivkh colleague published a series of books with Nivkh stories, songs and conversation in which for the first time the corresponding texts are recorded on a CD. The series, *Sound Materials of the Nivkh Language I-III* (Shiraishi and Lok 2002, 2003, 2004) appeared as a result of the Japanese programme on Endangered Languages of the Pacific Rim (ELPR) and the research programme *Voices from Tundra and Taiga*. This unique material—which is available on the Internet—is not only used by linguists, but also by the language community itself, where it can be applied for teaching purposes. In 2006 Hidetoshi Shiraishi finished a dissertation on this topic with the title *Aspects of Nivkh Phonology*, which he defended in September 2006 at Groningen University (Shiraishi 2006).

Endangered Archives

In the summer of 2005, we reported on the NWO research project *Voices from Tundra and Taiga*, and we published a catalogue of existing recordings of stories, folklore, singing and oral traditions of the peoples of Siberia (Burykin et al. 2005). This material has thus become available for further analysis by researchers working in the field of phonetics, linguistics, anthropology, history, ethno-musicology and folklore. The information is also highly important for the development of teaching methods for representatives of the related ethnic groups and for the conservation and revitalization of their languages and cultures.

At present, many old recordings still remain hidden in private archives and places where the quality of preservation is not guaranteed. In a new project, which from September 2006 has been financially supported by a special Programme on Endangered Languages at the British Library, we propose to make part of these recordings available and to add them to the database developed in St.Petersburg. The St.Petersburg Institute for Linguistic Studies (ILS) is one of the most important Russian centres for the investigation of minority and regional languages in the Russian Federation. Many researchers in this institute have collected sound material and many of these recordings (primary data) are not stored in safe places, whereas the related field notes, manuscripts, card files (secondary data) can be found in the institute or also in private archives.

Partner in this new project on Endangered Archives is again the Phonogrammarchiv of the Austrian Academy of Sciences. The aim is to re-record the material on sound carriers according to present-day technology (Schüller 2005) and store them in a safe place together with the metadata, which will be obtained from the related secondary data. The storage facility provided by the project will modernise the possible archiving activities in the Russian Federation and bring them up-to-date according to present world standards. It will be important to co-ordinate this with the staff of the Pushkinsky Dom, where a collection of great historical value (selected by UNESCO in its Memory of the World Programme) can be enriched with the new data. In the project we are concentrating on a selection of recordings, especially those of some Siberian languages, such as Nivkh, Even, Evenki, Aleut, Nenets, Udege and other ones. Thus far we have produced a list of the available recordings in private possession. Most scholars who have collected these data, have approved the use of their recordings and are going to contribute to the project with the preparation of the required metadata. Some of them also have good links with the Pushkinsky Dom and were members of the project group for the *Voices from Tundra and Taiga* programme.

In other parts of Russia similar important collections can be found, not only in established institutions, but many of them in private hands and often endangered, for example the private collections on Nivkh, which are available in Yuzhno-Sakhalinsk, in Vladivostok, in London and elsewhere. For most of these, it can be said that the quality of preservation is below standard. Following our long-standing collaboration with scholars from Sakhalin, we are also planning to create facilities in Yuzhno-Sakhalinsk for the storage of sound material related to the aboriginal languages of the island. Most important are the above mentioned Nivkh collections, but we should also like to add material on Sakhalin Ainu and Uilta. Of some of these private collections the size is approximately known, but in other cases this first has to be estimated. Within the framework of our project and future new projects, we would like to obtain access to these collections, copy them on modern sound carriers, make a catalogue available and publish part of the material together with the related recordings in St.Petersburg. On Sakhalin and in other parts of Russia—e.g. Yakutia—the local scholars will be involved in the preparation of these projects with the support of colleagues in St.Petersburg, Austria, the Netherlands and Japan.

The technical challenge of the project lies in the transfer of the (historical) sound documents into a safe, professionally organised digital repository. The main objectives are to retrieve signals in the best possible quality from their original, transfer them into a true file format (wave) and store them onto computer back-up tapes. It must be mentioned in this context that recordable optical discs (CD-R, DVD-R), though

widely used, are not safe digital target carriers. Logistically, such work can only successfully be organised in a central place where some kind of technical infrastructure is available. The St. Petersburg Phonogrammarchiv (Pushkinsky Dom) will serve for this purpose. From co-operations within earlier projects this institute is already equipped with basic audiovisual machines. The various collections to be safeguarded will be brought to St. Petersburg, where they will be transferred along with relevant linguistic materials from the collection of the Archive itself. Copies will be provided to the British Library and the Vienna Phonogrammarchiv.

Concluding Remarks

As we have described in the foregoing parts of this review, in a joint effort researchers from Russia and the Netherlands analyze data from audio archives and at the same time apply modern fieldwork techniques in studying endangered languages such as Nivkh, Nenets and Yukaghir. The results are language descriptions, grammars, dictionaries and edited collections of oral and written literature on and in these languages. In seminars, the use of these learning and teaching materials within the modern facilities of information technology is passed on to local teachers. Formal language teaching of former mother tongues is directed to those younger members of the communities who have not learned their native language informally at home. Special methods for teaching the former mother tongue as a foreign language have to be applied. Selected parts of the acoustic databases used for these projects are available on the Internet and provide an opportunity for the exchange of information on these languages with institutions in other parts of the world.

At the local community level and over the past several decades many people have been working to develop language education programmes, usually with extremely limited technical resources. Unlike teachers of major languages of the world, they lack not only formal training in language teaching, now often required by local governments, but also language curricula and, even more crucially, usable basic language descriptions. The Mercator European Research Centre has the intention to be instrumental in co-ordinating these activities. It will be important to exchange ideas with similar institutes in other parts of the world, such as in the Russian Federation. Together we shall be able to develop an effective and viable strategy for sustaining the world's endangered languages.

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Measuring Linguistic Diversity on the Internet

Introduction

On behalf of Language Observatory project and on behalf of the MAAYA, a global multi-stakeholder network for linguistic diversity, we would like to share our experience of measuring linguistic diversity in cyberspace.

What is Language Observatory? I coined the word on the analogy of an astronomical observatory. Astronomical observatory observes stars in the sky, and Language Observatory observes languages in cyberspace. There are more than five thousand stars which can be viewed by naked eyes in the sky. Likewise, there are more than six thousand languages spoken on the globe. But only a few of them are enjoying the benefits of information technology. Search engines can handle only limited number of languages and major computer platforms support also limited number of them even still now. This recognition motivated us to set up a virtual observatory to reveal a real picture of the situation. The Language Observatory consists of two major technical components. One is a crawler robot for collecting web pages. The other is a language identifier for automatic identification of language properties of the collected pages. When we say “language identification”, not just languages, but also scripts and encodings of the page are included. Currently our observatory has a capability of identifying more than three hundred languages. The Language Observatory project was kicked off four years ago. The launch of the project coincides with the adoption of the UNESCO “cyberspace recommendation”¹⁵ (the recommendation was adopted

¹⁵ Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, adopted by 32th session of the UNESCO’s General Conference.

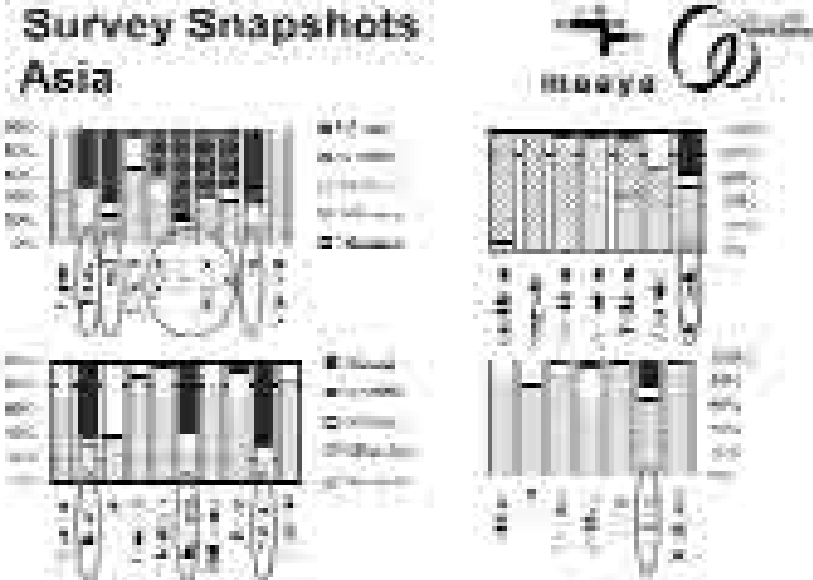
just a few months before the launch of Language Observatory project). Measurement of linguistic diversity in cyberspace is one of the key issues addressed in the recommendation. On the International Mother Language Day of the year 2004, we organized the first workshop and invited a UNESCO official to witness the launching event. The event was reported through UNESCO's web news site.

The funding given by Japan Science and Technology Agency (JST) helped us to equip a fleet of server computers. Also various technical supports given by our international collaborators helped us to implement the project successfully. UbiCrawler, a powerful crawler software developed by a team of Milan University in Italy helped us a lot.

Survey Snapshots

Because of the tremendously huge size of the cyberspace, it is impossible for us to survey entire web space. It is estimated to be in the order of tens of billions of pages. So we decided to focus our efforts on only country domains in Asia and Africa. Image 1 shows language compositions of web pages of 34 Asian countries. Note that China, Korea and Japan are not included because of its huge size. Local languages have a majority share only in a limited number of country domains, namely Turkey, Israel, Iran, Thailand, Indonesia and Vietnam and a few Arabic speaking countries in the Middle East. Light-blue color represents an English portion, and not-surprisingly it occupies majority or even more than 90 per cent of pages in several country domains.

Image 1



The Table 1 lists up top ten Asian local languages with their respective speaking population and number of pages we found on the web. Hebrew comes on top and is followed by Thai, Turkish, Vietnamese, Arabic, etc.

Table 1

Estimated number of pages
Top 10 Asian languages



Language	Script	Speaking population	Pages
Hebrew	Hebrew	6,912,000	11,857,314
Thai	Thai	70,000,000	2,497,179
Turkish	Latin	80,000,000	3,093,028
South Korean	Hangul	114,000,000	2,028,000
Arabic	Arabic	300,000,000	1,871,162
Indonesian	Latin	214,000,000	1,706,442
French	Latin	242,000,000	1,198,000
Vietnamese	Latin	75,000,000	1,067,969
Malay	Latin	166,000,000	884,708
Malay	Latin	17,000,000	432,701

Note: Chinese, Korean & Japanese domains are excluded. As of October 2005
as of June 2005

In the African continent, the situation seems far worse. More than sixty country domains in Africa are grouped into three language groups, the English speaking (Commonwealth), Francophone and Arabic speaking countries. Not-surprisingly again, English and French occupy majority share in each of them. But the presence of African local languages is almost negligible in all groups.

Top ten African local languages are shown in the Table 2 together with their speaking region and the number of pages we found on the web. Malagasy, an official language of Madagascar, comes on top and is followed by Swahili, Afrikaans, Krio, Kinyarwanda, etc. But the presence of those African local languages is far smaller than that of Asian languages. They are merely in the order of thousands at best.

Estimated number of pages Top 10 African languages



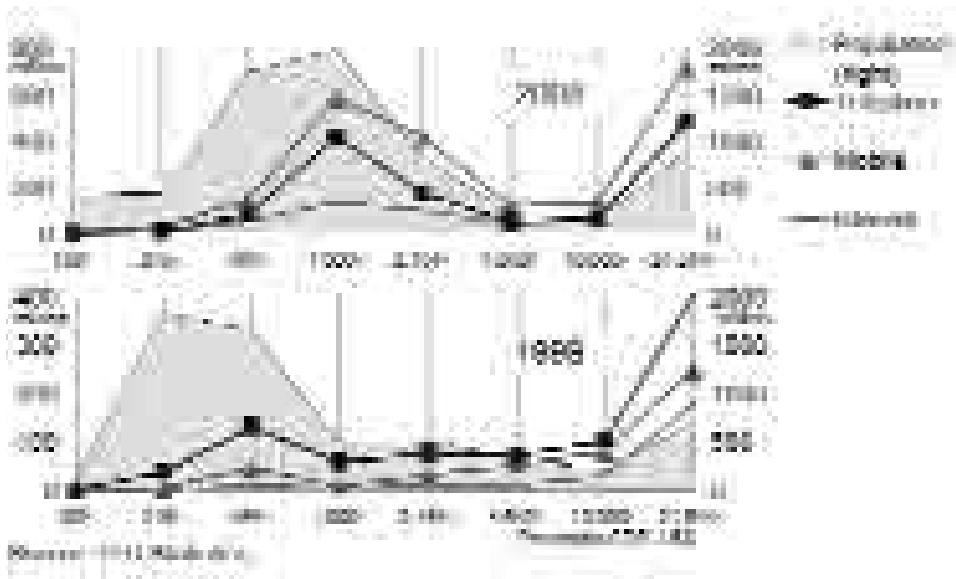
Language	Code	Speaking region	Pages
Malagasy	Mal	Madagascar	3,369
Swahili	Swi	Tanzania	5,170
Afrikaans	Fre	South Africa, Namibia	4,777
Rwa	Rwa	Rwanda, Burundi, Congo	1,579
Kinyarwanda	Rwa	Rwanda	1,058
Shona	Sho	Zimbabwe, Mozambique	939
Sotho	Soth	South Africa	787
Shesha	Shes	Yemen	779
Comorian	Com	Namibia, Angola	764
Hausa	Hau	Nigeria	252

Source: South Africa is projected, As of October 2008

How to Interpret the Results?

The data gathered told us of the existence of serious gap between languages. We may call this “Digital Language Divide”. In the following section the result should be interpreted. First, let us present a few data in economic context. Image 2 shows distribution of population and level of communication access of countries with different income categories. High income countries are on the right and low income countries on the left, and two graphs correspond to 1999 and 2004. Clearly telephony, mobile phone access in particular, shows big improvement during these five years.

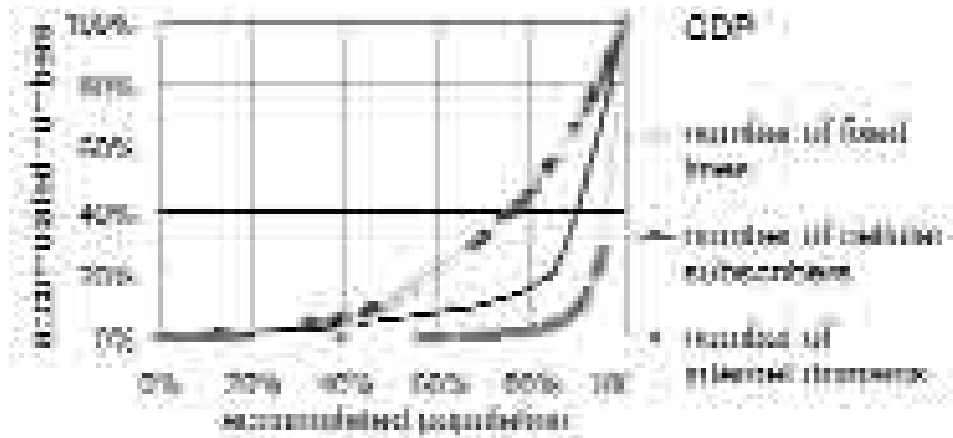
How to Interpret it? Economic Context



Economists always refer to GINI coefficient when they talk about income inequality. If we plot accumulated population on the horizontal axis and accumulated income on the vertical axis, it results a curve called *Lorenz curve*. The greater bending of the curve means the bigger inequality of income. I borrowed this concept to measure the gap in cyberspace.

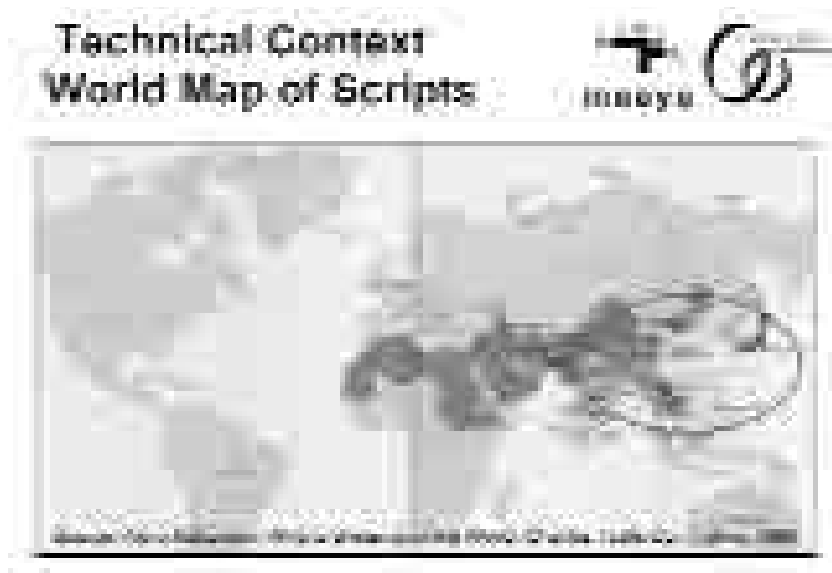
Image 3 shows the Lorenz curves of four indicators, GDP, the number of fixed line telephones, the number of mobile subscribers and the number of host computers connected to the Internet. GINI coefficient of telephony is 0.73. It is below that of GDP. Namely inequality found in telephone access is now less than income inequality. But the inequality of host computers is still bigger than that of income. This analysis clearly addresses that telephony has been improved but internet access is still not.

Image 3



Secondly we would like to introduce a factor from technical point of view. This is a map of the world colored by scripts used to represent mother languages of the region (Image 4). Most part of the world is marked with two slightly different colors, which corresponds to Latin and Cyrillic alphabet. Another color for Arabic is used in northern Africa and Middle East. But the Asian continent looks like a patch work of many different color kilts, and this has created a special technical difficulty in the region.

Image 4



One old day record exemplifies this difficulty. A letter written by a Jesuit friar four hundred years ago says that the difficulty to cast more than six hundred moulds of type was an obstacle to print a book in local language with local script there at that time.

Another case of early days printing, a case of “Doctrina Christiana” printed in Manila gives us an idea of what would happen in the worst case. The book was printed in three versions, Tagalog in Tagalog script, Tagalog in Latin script and Spanish in Latin script. During the first hundred years after the first printing, Tagalog script was completely lost.


We have a typewriter collection localized to different languages. There are Tamil, Bengali, Sinhalese, English, Hindi, Korean, Myanmar and Thai. It was surprising for me to find that all typewriters have similar shape and almost same number of keys while set of letters of those languages are quite different in size. Why? Typewriters had been localized with big degree of compromising omission of letters and of complicated superimposition glyphs, all of which were not always happy for local users.

As explained in three cases difficulties in language localization had been the key obstacle to the spread of new information technologies since type printing age. I assumed that the central factor in localization efforts in the computer age is character encoding issues.

This assumption is confirmed by Table 3. Top five languages are those languages which have substantial presence in cyberspace, and they all have a well established encoding standard for their scripts encoding. On the contrary, bottom four languages are suffering encoding chaos and quite less presence on the web.

Table 3

Encoding Chaos leads to delay of localization



Language	Number of available and in use	Number of available and in use
Tamil	ISO 6392 (ISO 596)	
Portuguese	ISO 6392 (ISO 596)	
Vietnamese	UTF-8 (ISO 10646)	TCVN 6920:1993
Thai	TCVN 6920 (ISO 10646)	
Malayalam	ISO 6392 (ISO 596)	
Sinhala	UTF-8 (ISO 10646)	SRSL, NAPSOL, etc.
Telugu	UTF-8 (ISO 10646)	SRSL, TIL, etc.
Urdu	ISO 6392 (ISO 596)	Arabic-based, Sinhala-based, etc.
Gujarati	UTF-8 (ISO 10646)	SRSL, NAPSOL, etc.

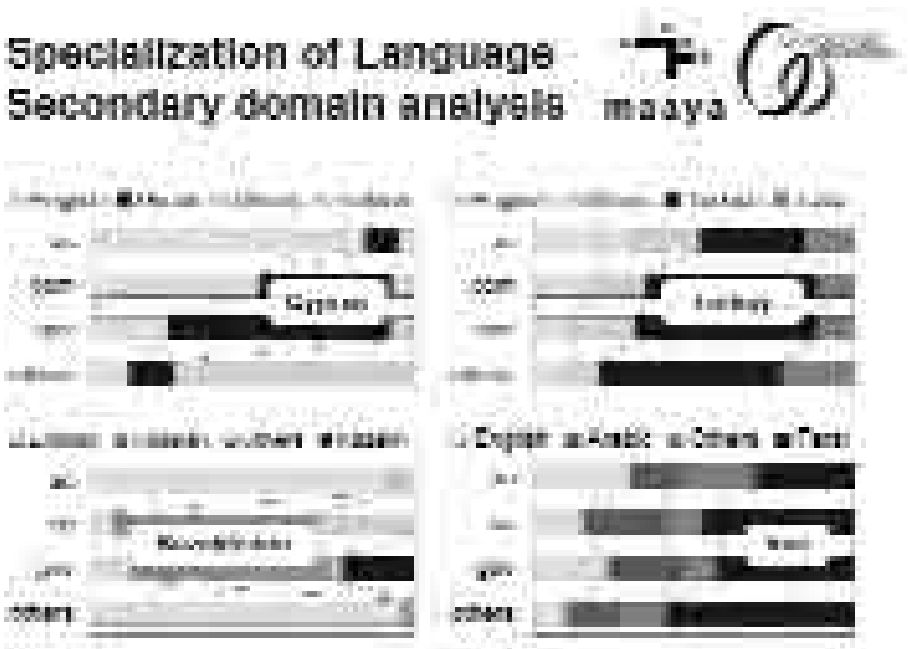
Source: ISO 6392 (ISO 596) and ISO 10646 (ISO 15924) standards for character sets and encodings.

Thirdly we would like to introduce socio-cultural context. Language activities of the people have various domains. Here we took a framework for analysis from European Union document. The document defines four domains, personal, public or governmental, occupational or business, and educational domains.

In a monolingual society like Japan, four domains are filled with the same single language. But in multilingual societies different language works in a different domain. For example, a global language like English or French works in educational domain and occupational domain, but local, even minority dialect works in personal life. If we can analyze language composition found in the secondary level domains of each country, the result would illustrate a picture of specialization of each language.

Image 5 shows a few sample survey results of four countries, Cyprus, Turkey, Kazakhstan and Iran. We can see higher percentage of English in educational domains in all four countries and higher percentage of official or local languages in personal communications in most of countries.

Image 5



Conclusion

Digital Language Divide is observed in Asian and African country domains. Behind this divide, we assumed three factors, which correspond to economic, technical and socio-cultural context respectively. From economic context, less access opportunity in less income countries would be one factor behind. From technical context, we mentioned the special difficulty in localization. It is particularly serious for non-Latin users. From socio-cultural context, we have drawn attention to less presence of local languages in educational and occupational domains. It means that empowerment of local language is really needed.

Regarding the future of Language Observatory, we have a vision looking forward two directions. One is to develop a language specific search engines on the basis of our technical infrastructure. Language identification and crawler robot are the key element for language specific search engines, too. Another one is to develop a network of language observatories in a global scale. We hope some audience agrees to join to this direction and work together in the future.

SECTION 1

Political, Ethical and Legal Aspects of Multilingualism Promotion in Cyberspace

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UNESCO Office in Moscow: Multilingualism Promotion Activities

UNESCO emphasises the importance of protecting and developing all languages in every aspect of social life. The Organisation deals with multilingualism issues in quite a few of its regulatory documents, among them the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, which was adopted at the 32nd session of the UNESCO General Conference in October 2003. The Recommendation calls on UNESCO Member States to develop multilingual content and systems, facilitate access to networks and services and develop public domain content. It reaffirms the equitable balance between the interests of right-holders and the public interest.

The UNESCO Office in Moscow conducts extensive activities to encourage open and multilingual access to information, also by promoting a respective regulatory framework. In Bashkortostan in 2006, the UNESCO Office initiated, and took an active part in, a round table on “Creating a System of Open, Universal and General Access to Public Information in the Republic of Bashkortostan.” Information access issues proved to be particularly relevant to citizens of towns and regions geographically remote from information centres. The round table participants considered the creation of an integrated information access system one of the most important tasks. This meeting’s practical outcome was recommendations to the Republic of Bashkortostan public authorities and local governments, which formed the basis of its final resolution.

The globalisation process is putting at increasing risk the cultural resources of indigenous peoples. Hence, special importance is being attached to improving access to innovative information and communication technologies (ICT) for indigenous communities and to their participation in the knowledge society. Along this line of action, the UNESCO Office in Moscow supports initiatives to create regional multimedia centres for family clans. In 2007, two community multimedia centres were established and training sessions held for Forest Nenets and Agan Khanty in the Yaun-Yakh and Tyui-Tyakh clans (Khanty-Mansi Autonomous District) as the basis for identity preservation and the development and management of innovative information technologies. The project has the following objectives:

- to provide access to the Internet for the indigenous minorities of the North leading a traditional way of life;
- to develop cultural heritage archives and to mobilise the community;
- to create a technical literacy training web-site for clan members;
- to produce media publications (DVDs about the Bear Games tradition, the Khanty and Forest Nentsy folklore, etc.); and
- to create an Internet portal around the two communities' web-sites in Russian, English, German, Hungarian and Finnish.

An expedition to the Taimyr Peninsula was launched in 2006 under the auspices of the UNESCO Office in Moscow. Its purpose was dual: to make a documentary ethnographic film about the indigenous ethnic groups of Nganasans and Entsy and to provide self-documentation training to members of these communities in the town of Dudinka and the township of Volochanka. During the expedition, more than 30 Dudinka residents took part in a seminar on "Development of the Communication Capacity of Indigenous and Minority Groups". The trainees learned some basics of documentary filming and shot short-length films depicting their daily life.

Encouraging multilingualism is an important component of cultural heritage preservation activities. The UNESCO Office in Moscow assisted in the production of a CD, *The Cultural Heritage of the Shor People*. The CD contains recorded versions of two Shor sagas: *Altyn-Kylysh* ("Golden Sabre") performed by narrator Dmitri Turushpanov and *Altyn-Tolay* ("Golden Full Moon") performed by Afanasi Ryzhkin. These recordings were restored and converted to modern electronic media.

The UNESCO Office in Moscow in close cooperation with the Ministry of Education of the Republic of Sakha (Yakutia) is implementing a project on literacy promotion among schoolchildren of indigenous peoples by strengthening the community education potential of the nomadic peoples in the north of the Republic of Sakha (Yakutia).

The project focuses on the preservation of the culture, language and traditions of indigenous peoples and the use of ICT to provide access to quality education in nomadic schools. In 2006, a training seminar on distance learning and the use of the Internet in education was held for nomadic school teachers in the *ulus* (settlement) of Olenek in Yakutia. In addition, consultations on the use of ICT in Evenki language teaching were given. Similar seminars were conducted in several other pilot nomadic schools.

The promotion of linguistic diversity is a major focus of interest of UNESCO Specialised Programmes. For instance, under the International Programme for the Development of Communication (IPDC) the UNESCO Office in Moscow in partnership with the Ford Foundation is carrying out a project to digitise minority archives and rare publications held at the National Library of the Republic of Buryatia. The UNESCO Information for All Programme helps to preserve information, to develop information ethics and to work out legal and social issues connected with ICT application. The greatest challenges in this field are still to bridge the ICT accessibility gap between different population groups and to provide free and multilingual access to information.

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Multilingualism in European Commission Projects

Introduction

The cultures of the ethnic communities of the Russian Federation are an integral part of European and world culture. Information and communication technologies offer the global community a new and unique opportunity to gain wide access to Russian culture; likewise Russian citizens can better familiarize themselves with European and world culture. There is the language barrier, however. To make sure that Russia is fully included in the global information space and to bridge the language barrier it is essential that Russia take part in international efforts to digitize cultural and scientific heritage and to give open, multilingual access to it.

Russia's participation in the Minerva PLUS project is an example of its effective international cooperation.

The Minerva project¹⁶ was initiated by the European Commission as a forum for European Ministries to discuss, correlate and harmonise activities carried out in the digitisation of cultural and scientific content for creating an agreed European common platform, promoting recommendations and guidelines about digitisation, metadata, long-term accessibility and preservation. These activities were continued in the framework of Minerva PLUS and Minerva EC and will go on under a new project called ATHENA.

¹⁶ <http://www.minervaeurope.org/>.

For the first time in the history of Russia's relations with the EU, the Russian Ministry of Culture partnered up with Minerva PLUS. It was an important step in including Russia in the common European actions to digitise cultural and scientific heritage and to create high quality information resources for scientific research, education, recreation, and tourist travel.

On the Russian side the job of coordination of Minerva PLUS was entrusted by the Ministry of Culture to the Centre on the Problems of Informatisation in the Sphere of Culture (PIK Centre)¹⁷. The Centre has monitored EU programmes and projects to digitise cultural and scientific heritage, participated in project working groups, kept the Russian professional community informed about European initiatives, and maintained a Russian website¹⁸. The Russian Committee for the UNESCO Information for All Programme (IFAP) supported the Russian translation and publication of the brochure *Quality Principles for Cultural Websites: A Handbook*¹⁹, prepared by a Minerva PLUS working group²⁰.

The National Representatives Group was formed in the European Union framework to develop and promote political decisions in the digitization of cultural and scientific heritage²¹. The National Representatives Group had a Russian observer, E. Kuzmin, who is the chair of the Russian IFAP Committee. He initiated contacts between the Minerva project and the Intergovernmental Council for IFAP, which have largely overlapping objectives and goals, in particular, general access to digital cultural and scientific heritage, the monitoring of international, national and local policies and strategies in the digitization of cultural and scientific heritage, and multilingual information access.

This report will give an overview of European Union initiatives, programmes and projects concerned with multilingual access to information on culture and science, including those involving Russian organisations. We feel that it will be relevant both to cultural professionals in Russia and to decision makers in defining Russia's strategy and policies and initiating projects to digitise cultural and scientific heritage and to make it accessible in multiple languages.

¹⁷ PIK Centre has conducted an annual international conference, EVA Moscow since 1998 and has taken part in a number of European projects (EVAN, eCultureNet, CULTIVATE, Minerva PLUS etc.).

¹⁸ www.minervaplus.ru [in Russian].

¹⁹ http://www.minervaplus.ru/docums/principles_of_quality.pdf.

²⁰ Multilingualism is one of the quality criteria of cultural websites.

²¹ <http://www.minervaplus.ru/nrgroup/nrgroup.htm>.

The Multilingualism Strategy of the European Commission

The European Commission has concerned itself some way or other with multilingualism issues and backed translation technologies research and development since 1990²². The European Language Resource Association was established in 1995 to evaluate and promote language technologies²³.

The problems of multilingual access to information became particularly pressing after the extension of the European Union, which is founded on “unity in diversity” – diversity of cultures, customs, beliefs and languages. In Europe, in addition to the 23 official languages of the EU Member States, there are approximately 60 indigenous languages plus a number of languages spoken by migrants.

In 2005 the European Commission sent to the European Parliament a communication entitled *A New Framework Strategy for Multilingualism*²⁴. For the first time, issues of multilingualism were explicitly declared a strategic priority for the European Union.

Multilingualism, as interpreted by the European Commission, is both a person’s ability to use several languages and the coexistence of different language communities in one geographical area.

The Commission’s multilingualism policy has three aims:

- to encourage language learning and promote linguistic diversity in society;
- to promote a healthy multilingual economy; and
- to give EU citizens access to legislation, procedures and information in their own language.

The ability to communicate in more than one language is a desirable life-skill for all European citizens. In March 2002, the heads of the European Union Member States at a meeting in Barcelona called for at least two foreign languages to be taught from a very early age (“English is not enough”). Both national governments and the European Commission are making considerable investments in support of events and projects aimed at language learning, the development of multilingual communities, and the creation of publicly available information resources in multiple languages.

²² E.g., the NESPOLE!, TransType2, MATCHPAD TQPRO projects; see: www.cordis.lu/ist/projects/projects.htm.

²³ <http://www.elra.info/>.

²⁴ <http://europa.eu/languages/servlets/Doc?id=913>.

Research and development is one aspect of these efforts. The Information Society Technologies programme includes research to overcome language barriers through new information and communication technologies, such as:

- productivity tools for translators (translation memories²⁵, online dictionaries and thesauri);
- interactive semi-automatic translation systems for fast, high-quality translation of texts in specific fields and fully automatic systems for translations of low-to-medium quality; and
- artificial speech recognition and synthesis, dialogue and translation.

The social sciences and humanities research programmes support research on language issues in relation to social inclusion and exclusion, identity, political participation, cultural diversity and cross-cultural understanding. This includes questions of linguistic diversity, minority and regional languages, and language issues for migrants and ethnic minorities.

The development of a multilingual economy is becoming a European Union priority. It also applies to the provision of information and after-sale service in the customer's own language.

In Europe's information society, linguistic diversity is a fact of life. Therefore, the European Commission defined multilingualism as one of the strategic directions of the *i2010* initiative. Its first task is to create a single European Information Space, offering rich and diverse content and digital services.

Several EU targeted programmes (eContent, eContentPlus, Media, eLearning) support the creation of multilingual information resources and knowledge bases and the provision of public access to them.

A multilingual information society requires the deployment of standardised and interoperable language resources (dictionaries, thesauri, terminology, text corpora, etc.) and applications for all languages, including the less widely used ones. The European Commission has encouraged coordination and standardisation efforts in this area by supporting professional networks and platforms.

²⁵ Translation memory (TM) helps the translator to be consistent by using the same equivalent for similar terms and phrases. The programme saves pairs of words or lines of text and produces them each time an identical term or line occurs in any other part of the source document. Translation is thus made more rational and its quality is improved.

The European Commission is developing the Languages and Europe portal²⁶, currently accessible in the 23 official languages of the European Union. It is intended both for the broad public and for specialists. It provides information in several broad areas:

- linguistic diversity;
- language learning;
- language teaching;
- translation;
- interpretation;
- language technology.

The year 2008 was declared the European Year of Intercultural Dialogue²⁷, providing a framework for a few flagship projects on a European level plus national projects in each Member State, a Partner programme aimed at mobilising civil society and a number of other actions and discussions. Well-known ambassadors have also been appointed to raise awareness of the importance and benefits of intercultural dialogue.

A high-level group of experts on multilingualism was set up inside the European Union to collect, analyse, and summarise ideas and proposals from EU Member States and all stakeholders. The group's outputs will form the basis of the *Communication on a New Multilingualism Strategy*. Early in 2009 a ministerial conference on multilingualism will be held.

The following sections will give an overview of projects supported by the European Commission under its programmes: Information Society Technologies (the Sixth and Seventh Framework R&D programmes), eContent and eContentPlus²⁸, targeted at the support of multilingualism in the information society.

Study of Multilingualism of Cultural Websites (Minerva PLUS Project)

One of the thrusts of Minerva PLUS was multilingual access to cultural and scientific information, for which a Working Group was formed. In 2004–2005 the Group conducted a survey of the multilingual aspects of cultural websites and the use of multilingual information retrieval tools. It represented 25 EU Member States plus Israel and Russia and prepared a report²⁹ in 2006.

²⁶ <http://europa.eu.int/languages/>.

²⁷ <http://www.interculturaldialogue2008.eu/333.html?L=0>.

²⁸ http://ec.europa.eu/information_society/activities/econtentplus/index_en.htm.

²⁹ <http://www.minervaeurope.org/structure/workinggroups/inventor/multilingua/documents/Multilingualism0602.pdf>.

The survey covered the websites of cultural institutions (265 museums, 128 libraries, 98 archives, and 129 other cultural sites); 26% of them were monolingual, 47% bilingual and 27% multilingual; 73% were available in English. Even leaving out the countries where English is the original language like the United Kingdom, Ireland and Malta, it will still be 68% of them, which were available in English.

Regarding the use of controlled vocabularies and thesauri, a mere half of the sites surveyed had any relevant information available. Only 16% of all websites used controlled vocabularies for searching collection information.

The report of the working group on multilingualism included findings from a 2004 survey of Russian museums' websites. A total of 64 museum websites were surveyed: all Federal museums and regional museums more advanced in ICT application. Of these 32 (50%) were only in Russian and 30 (47%) in Russian and English, the rest representing more than two languages. As for the languages of ethnic communities of Russia, we could find only one museum portal, "Museums in Tatarstan", to provide information in the Tatar language³⁰. Controlled vocabularies were used for information retrieval by only three websites (5%) of Russian museums, and ten sites (16%) used free indexing.

An important component of the Minerva report was a list of 106 controlled vocabularies and thesauri used by cultural institutions in Europe, 34% of them monolingual, 31% bilingual and 23% multilingual. This list is a valuable resource for Russian cultural institutions planning the use of vocabularies and thesauri that have been worldwide.

The study revealed that the most "multilingual" cultural information space was that of Israel, which uses thesauri in more than five languages and several controlled vocabularies in 10 languages; the Ben-Gurion Research Institute uses a controlled vocabulary in 19 languages.

The report draws several important conclusions. There is growing recognition of the need for thesauri to be used for information searching in complex systems along with other search techniques. While multilingual cultural websites multiply, supporting high quality multilingual resources still need to be enhanced; work on high-quality compatible vocabularies is sluggish.

³⁰ <http://www.tatar.museum.ru>; for more details, see G. R. Nazipova's report at the seminar on "Presentation of the Languages of the Peoples of Russia and CIS Countries in the Russian Segment of the Internet", (http://www.ifapcom.ru/files/publications/multiling_regions.pdf), held in the framework of the EVA 2007 Moscow international conference by the Russian Committee of the UNESCO Information for All Programme.

The report suggests that instead of supporting the creation of brand new thesauri, it would be more useful to support the translations of well-tried thesauri like UNESCO, HEREIN, ICONCLASS, Library of Congress Subject Heading List on the European Commission level.

European Digital Library

One of the central tasks of the European Union's *i2010. Digital Libraries* initiative is to create the European Digital Library, or Europeana³¹.

The movement towards the European Digital Library began with the Gabriel and TEL projects to create The European Library³², which would provide access to the catalogues of national libraries in Europe.

According to the European Commission plan, Europeana, based on The European Library, would facilitate access to European information resources and increase their attractiveness in the online environment. By 2008, two million books, film material, pictures, photographs, manuscripts and other cultural content became available through the European Digital Library. This figure is expected to grow to six million by 2010, when every library, archive or museum in Europe will be potentially capable of joining its digital resources to Europeana.

Currently The European Library has an interface in 26 languages including Russian and provides access to the catalogues of national libraries, digital collections, images, audio and printed music, manuscripts, maps, journals, children's literature, theses and dissertations. In September 2007 the Russian State Library joined The European Library and, indirectly, the European Digital Library as a full member. Beginning in January 2008 the RSL's OPAC catalogue became accessible for searching from The European Library portal³³.

The eContentPlus programme funds content preparation projects for the European Digital Library as well as projects geared to improved use of digital collections and expanded access to European research results (EDL, TEL Plus³⁴, EDLnet, CACAO).

*EDL (European Digital Library, September 2007 to February 2008)*³⁵. By the termination of this project The European Library portal presented 60 new collections, 52 of which were open for OAI (Open Archive Initiative) searching and 38 included full-text digital resources. The addition of new collections increased the holdings by 24%.

³¹ <http://www.europeana.eu/>.

³² <http://www.theeuropeanlibrary.org/portal/index.html>.

³³ <http://www.rsl.ru/index.php?doc=2092> [in Russian].

³⁴ www.theeuropeanlibrary.org/telplus.

³⁵ <http://www.edlproject.eu>.

Besides enlarging information resources the EDL project upgraded standard search techniques and the multilingual capacity of The European Library portal, as well as created a prototype for a European metadata register, designed to discover relevant materials for searching in the catalogues of not only libraries but also other institutions.

Interoperability between memory institutions is the main goal of *EDLnet*³⁶, the *European Digital Library network project* financed under the *eContentplus* programme. This network is meant to bring together representatives of libraries, archives (including audiovisual material archives) and museums for analysis and discussion of the possibility of working out a coordinated multilingual approach to the online access to every kind of material kept in memory institutions. This cooperation between the domains of archives, libraries, audiovisual collections and museums is a big step forward. In fact, EDLnet is the first project of this scope to devise a multilingual interface for access to digital artefacts, texts, and media across the whole of European heritage. There are also plans for the *EDL-local* project to include in the European Digital Library cultural information resources created by local communities.

*CACAO*³⁷ (*Cross-language Access to Catalogues And On-line libraries*) is another project funded under the *eContentplus* programme. Coupling natural language processing techniques with existing information retrieval systems and multilingual resource processing technologies, CACAO will design an infrastructure to be integrated with current digital library and catalogue systems. As a result, end users will be able to type queries in their own language and retrieve documents in any language available. CACAO technologies will be integrated into The European Library. Besides, five partner libraries (in Hungary, Germany, Italy, France and Poland) will set up a single multilingual access point integrating their catalogues; also, three thematic portals aggregating several European collections (Mathematics, Medieval literature, Geography) will be made available to the public.

The *MICHAEL* project³⁸, which was conceived in the course of the Minerva project, sought to define common approaches and design model digital cultural heritage services, which would operate all over Europe, and bring together and amalgamate national initiatives in the field. A multilingual register of digital collections held in European archives, libraries, and museums was created. The project was presented and approved in the framework of the EU eTen programme and accepted for implementation in June 2004. Together with its extension, MICHAEL PLUS, it will become one of the pillars of the evolving European Digital Library.

³⁶ <http://www.europeandigitallibrary.eu/edlnet/>.

³⁷ www.cacaoproject.eu/home.

³⁸ <http://www.michael-culture.org>.

In 2006 the MICHAEL project established national services in France, Italy and Britain and is planning to establish similar services in other participating countries. In December 2006 a transnational service started working. In practice every country has its national website representing its holdings and all of them taken together are a sort of “launching pads” for the future operation of the MICHAEL European service; searches in national websites are run by the OAI-PMH protocol.

MICHAEL is developing multilingual services required for a European portal. This work involves the harmonisation of multilingual normalised vocabularies and the evaluation of multilingual search and machine translation tools, as well as other functions connected with multilingualism.

Technology Research and Development

The European Commission funds research and technological development projects through its Framework Programmes.

The Information Society Technologies programme of the Sixth Framework Programme of research and technological development, which was concluded in 2006, supported a number of machine translation projects: LC-STAR³⁹, METIS⁴⁰, TC-STAR⁴¹.

In the “Digital heritage” section, the MultiMATCH (Multilingual/Multimedia Access to Cultural Heritage) project⁴² was implemented, which aims to develop a multilingual search engine specifically designed for access, organisation and personalised presentation of cultural heritage information. Multilingual retrieval of multimedia information is based on Semantic Web technologies.

Funding was provided to a number of other research and technological development projects, which included multilingual access problems.

The Seventh Framework Programme of research and development, the next step towards the creation of a common European research area, draws on preceding framework programmes and is designed to increase the impact of knowledge on economy and society in Europe.

The thematic area “Digital libraries and content” was declared one of the priorities of the Seventh Framework Programme, being part of “Information society technologies”, which is in turn a part of the “Cooperation” subprogramme.

The first call for proposals under the Seventh Framework Programme took place in the first half of 2007; in the “Digital libraries” area six projects were selected for

³⁹ www.lc-star.com.

⁴⁰ <http://www.ilsp.gr/metis/>.

⁴¹ <http://www.tc-star.org/>.

⁴² www.multimatch.eu.

implementation, of which at least one is multilingualism-oriented. The project is called *Treble-CLEF* (Evaluation, Best Practice and Collaboration for Multilingual Information Access)⁴³. Its goal is to examine and consolidate MLIA (multilingual information access) research and to disseminate research results and technologies among the communities engaged in the creation of digital libraries.

Another project directly concerned with multilingualism problems is *IMPACT* (Improving Access to Text)⁴⁴. The aim of the project is to significantly improve access to historical texts and to remove the barriers that stand in the way of the mass digitisation of European cultural heritage. The project will propose an innovative optical character recognition (OCR) technology, which will ensure high-quality recognition of historical documents, newspapers, bound books, microfilms and machine-readable texts, and will improve the recognition of non-English texts.

The technological partner of the project was the Russian company ABBYY⁴⁵, one of the world leaders in the development of software for optical character recognition (OCR), intelligent character recognition (ICR) and applied linguistics. It is extremely important because thanks to ABBYY advanced digitisation and character recognition technologies developed in the framework of this project will become available to Russian users.

In the thematic area “Cognitive systems, interaction, robots” *EMIME* (Effective Multilingual Interaction in Mobile Environments) project⁴⁶ was selected, which will help to overcome the language barrier by developing a mobile device that performs personalised speech-to-speech translation, such that a user’s spoken input in one language is used to produce spoken output in another language, while continuing to sound like the user’s voice.

In the thematic area “International cooperation” a project called *MEDAR* (Mediterranean Arabic Language and speech technology)⁴⁷ will have machine translation and multilingual information retrieval among its goals.

In the thematic area “Intelligent content and semantics” the *SMARTMUSEUM* project⁴⁸ will develop innovative multilingual IT services for increasing the interaction between visitors and cultural heritage objects in the future smart museum environment.

⁴³ http://ftp.cordis.europa.eu/pub/ist/docs/digicult/trebleclef_en.pdf.

⁴⁴ <http://www.impact-project.eu/>.

⁴⁵ <http://www.abbyy.ru/>.

⁴⁶ http://cordis.europa.eu/fetch?CALLER=PROJ_ICT&ACTION=D&DOC=2&CAT=PROJ&QUERY=011b02e1369f7230:682f8cd7&RCN=85525.

⁴⁷ http://cordis.europa.eu/fetch?CALLER=PROJ_ICT&ACTION=D&DOC=4&CAT=PROJ&QUERY=011b02e1369f7230:682f8cd7&RCN=85530.

⁴⁸ http://cordis.europa.eu/fetch?CALLER=PROJ_ICT&ACTION=D&DOC=3&CAT=PROJ&QUERY=011b02f1abf0:628a:4eba8784&RCN=85482.

EROS

In conclusion, we want to describe a long-standing project to organise multilingual access to French art information, with which experts of the State Historical Museum in Moscow have been successfully cooperating.

The EROS system was developed at the Centre for Research and Restoration of Museums of France, which accumulated a great amount of scientific documentation on works of art and has directed the restoration and research activities of French museums since 1999.

The system has very broad and unique technical features: automatic pattern recognition, cartographic search, panoramic scanning of objects, handling superresolution multispectral images and 3D models, as well as a variety of search tools and output formats. Special mention should be made of the multilingual access to a document termed “synthesis”, whose content is build on diverse research reports, papers and photographs pertaining to a work of art. By merging text and photo documents electronic synthesis gives an idea of the author of the work, its history, its original components, materials and technique, alterations and blemishes, restoration and conservation interventions.

Today the EROS database works in 18 languages. Thanks to Unicode (UTF-8) a multilingual thesaurus makes it possible to employ the full character sets of different alphabets, including Russian, Japanese and Arabic.

The participation of the State Historical Museum in the European projects N.A.R.C.I.S.S.E.⁴⁹ (since 1994 r.) and EROS⁵⁰ offered an opportunity to use a standard description language, F. Garnier’s *Iconographic Thesaurus*⁵¹, which was studied and translated into Russian to be used for the description of museum objects. The Russian language could thus be included in the EROS multilingual database. Russian dictionaries and thesauri, originally compiled for N.A.R.C.I.S.S.E., were complemented by new dictionaries and included in the EROS system⁵².

The inclusion of the Russian language in standard international thesauri and their wide use in cultural institutions in Russia is the only opportunity for the Russian-speaking user to discover the wealth of digitised cultural heritage of Europe and to make Russia’s digitised cultural heritage accessible to users speaking languages other than Russian.

⁴⁹NARCISSE. Système documentaire des peintures et enluminures. Lisboa, 1993.

⁵⁰European Research Open System. (Centre de Recherches et Restauration des Musées de France – C2RMF www.c2rmf.fr).

⁵¹Garnier F. Thésaurus iconographique. Système descriptif des représentations. Paris, 1984.

⁵²Кузьмина Е. С., Эткен Ж., EROS-2006 и изучение русского наследия произведений живописи. Материалы конференции EVA-2006, Москва (http://conf.cpic.ru/eva2006/rus/reports/content_917.html).

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Language Preservation and Development in the Republic of Tatarstan

At the present stage of social evolution, when active globalisation processes are penetrating into every domain of people's life and influencing the life priorities of the younger generation, the preservation of native languages is a truly burning issue. It is highly relevant to a multicultural state like the Russian Federation. In the past few decades, in the context of political, socioeconomic and cultural change, Russia's ethnic subjects increasingly focussed their policies on the revival, preservation and development of a component comprised of customs, art, language, etc. These processes are being regulated by the language policies of both the federal centre and the national republics within the Russian Federation.

The preservation of vernacular languages and the existence and coexistence of languages in society are complicated and multifaceted matters. A state cannot rely entirely on the natural course of life of languages. Active intervention in the process of spontaneous language development and functioning is also predetermined by the degree of polyethnicity of society as demonstrated by the language situation. This is a momentous problem. It must be addressed, and addressed in a positive way, for the future of nations and, eventually, the political and economic stability of society depend on it.

The past period, in terms of setting a fully-fledged language policy both for Tatarstan and for the Russian Federation as a whole, was a time of hopes and disappointments and also a time of crucial decisions bearing on the development of ethnic languages of Russia. Due to many reasons, developments in this area were not equally active and there were different approaches to and perceptions of problems. If we go back to the early 1990s, when the Russian Federation passed perfectly democratic—but never realised—documents such as the Concept for the State Programme for the Preservation and Development of the Languages of Peoples of the Russian Federation, the Enactment of the Supreme Soviet of the Russian Federation on putting into effect of the languages law, as well as continuous debate on language

regulatory documents of the Republic of Tatarstan, it is easy to picture the current situation around this issue. On the other hand, it should be mentioned that these fifteen years or so in Tatarstan were a period of an integrated approach to the problem of preservation and development of languages, the support of Tatar as an official language and purposeful efforts to develop multilingualism in the Republic.

The Republic of Tatarstan, one of the largest ethnic regions of the Russian Federation, has been making, from the start of language reform, active, multifaceted efforts to preserve and develop both the titular and other languages spoken in the Republic. It was in the late 1980s that the need for a new language policy in the Republic of Tatarstan was placed on the agenda. As Tatar was losing its functions in the social and production spheres, in education and home communication, it gave rise to the idea that it must be granted the official language status. It was also prompted by fact that back in the 1920s–1930s, when the Tatar Republic was in the making, language policy issues were given very much attention. Major statutory instruments in support of a policy of Tatar language and writing development were adopted at that time. Since the late 1930s, however, the Soviet Union visibly changed the direction of its language policy, with increasing attention given to the use of Russian in the Union Republics.

The Republic of Tatarstan Law On the Languages of the Nations of the Republic of Tatarstan, enacted in July 1992, took into account primarily federal law provisions: the right to preserve one's native language and the freedom of choice and use of a language of communication, the assignment to Russian of the official language status across the Russian Federation with state guarantees of protection for all the ethnic languages of the Russian Federation and civil rights irrespective of one's knowledge of languages. The legalisation of these principles and the authorisation in 1994 of the Republic of Tatarstan State Programme for the Preservation, Study and Development of the Languages of the Nations of the Republic of Tatarstan were of great psychological importance not only for Tatars and Russians, but also for members of other ethnicities living in the Republic. These instruments laid the foundation for the Republic's emerging language legislation and were indicative of its move to an essentially new level of addressing national language problems. Their enactment included some practical steps towards the functional development of the Tatar language and the establishment of real multilingualism. Here are some of the more important ones:

- the Republic's language legislation began to take shape;
- the Tatar language expanded its spheres of application, including public authorities;
- Tatar printed and electronic media have increased;

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- schools and institutions of basic vocational education were provided with skilled personnel and educational materials and learning aids;
 - the Tatar language was introduced in secondary and higher professional education;
 - the study of the languages of other ethnicities inhabiting the Republic of Tatarstan was stepped up;
 - the Republic was made a part of the global integration trend in the IT field; facilities were provided for basic national localisation of computer systems, solution of computational linguistic problems and Tatar localisation of computer technologies.

In sum, during the 15 years that the language law was in force, substantial changes occurred in many aspects of life.

The media and book printing are among the more mobile trends in language policy implementation. As of today there are 110 Tatar-language newspapers (52 government ones) and 28 journals (11 government ones) published in the Republic. For comparison, in 1991 there were 60 newspapers and 12 journals in Tatar. Some publications appear simultaneously in Russian and Tatar. Regarding other vernacular languages, five newspapers are published in Chuvash and one in Udmurt.

Inside the Republic, there are 50 television broadcasters, 30 of them airing programmes in Russian and Tatar; 25 of them are government-owned. Out of 86 radio stations 22 broadcast in Tatar and Russia, six in Tatar, and 58 in Russian. By the beginning of the 1990s, the Republic's television broadcast for only three hours a day and half of that time in Tatar. As of today the satellite television and radio broadcaster Tatarstan—New Age airs its programmes to many regions in and outside the Russian Federation. Broadcasting is about 20 hours a day, with more than half of that time in Tatar. The company's news offices are attached to the Republic's legations in Moscow, St. Petersburg, Yekaterinburg, Astana and some other cities.

Ten information agencies operate in Tatarstan, including two republican ones. Tatar-inform (<http://www.tatar-inform.ru/>) works in Russian, Tatar (in Cyrillic and Roman alphabets) and English. Information in Tatar is provided by the Republic of Tatarstan official server (<http://www.tatar.ru>), the Government portal (<http://prav.tatar.ru/>) and the Internet portal for all the media of the Republic (www.tatmedia.com).

The Republic of Tatarstan's policy of multilingualism in cyberspace is founded on the Integrated Programme of Informatisation of the Republic of Tatarstan (Electronic Tatarstan) for 2005–2010. One of its objectives is to provide conditions

for balanced development of information resources in the official languages of the republic. The Programme envisages the establishment of a system of base institutions and resource centres to provide guidance and instruction to learning in the official languages of the republic; the development of a computer-held collection of computer standards for the Tatar language; the development of Tatar drivers and founts and Tatar information resources on the Web; a computer model of the Tatar language; a system of machine translation from and into Tatar, etc.

In 2006, Microsoft Corporation released the Windows XP operating system with an interface localized for the Tatar language. In 2007, Microsoft released localised Tatar versions of Windows Vista and Microsoft Office 2007. It signalled the Tatar language's joining the ranks of the leading languages in the global information space.

According to the population census of 2002, the population of Tatarstan is 3.8 million people, 52.9% of them Tatars and 39.5% Russians. These figures mean that 35.3% of the total number of Tatars in the Russian Federation and 31.2% of the entire Tatar nation live in Tatarstan. The Republic of Tatarstan performs the function of satisfying cultural and language requirements of Tatars residing in Russian Federation regions and abroad. These activities are part of the Russian government's policy of supporting compatriots and they are conducted pursuant to Article 14 of the Republic of Tatarstan Constitution and Article 2.4. of the Treaty Delimiting the Terms of Reference and Authority between RF Bodies of State Power and RT Bodies of State Power.

Tatarstan gives methodological support to regional Tatar societies in the first place through interregional cooperation agreements, which provide for assistance to the cultural development of fellow countrymen.

The Executive Committee of the World Tatar Congress coordinates the activities of national-cultural organizations and Tatar communities in the Russian Federation and in near- and far-abroad countries. Today it unites 358 Tatar national-cultural organizations, 68 of them in far-abroad countries, 81 in near-abroad countries, 164 in the Russian Federation, and 46 in the Republic of Tatarstan.

At present 22 constituent entities of the Russian Federation have 67 Tatar media, including 39 newspapers and supplements to local publications. In CIS and far-abroad countries, there are 12 such media. Meanwhile the Tatar national information space is shrinking year after year. For example, in 2006 alone broadcasters in Omsk, Chelyabinsk, Tyumen, Orenburg and Ulyanovsk closed Tatar-language broadcasts. National media still faces difficulties such as the distribution of Tatar printed media in areas densely inhabited by Tatars; the need for a federal-level Tatar newspaper and a federal Tatar TV channel; the need to support Tatar publications appearing in and outside Russia; small circulation of Tatar periodicals in areas densely inhabited by Tatars, which do not meet the public's needs.

With respect to book printing in the Republic, mention should be made of two state publishing houses. They are Magarif, one of the largest national publishers of textbooks and educational books, and Tatar Book Publishers. These two institutions publish every year some 300 titles of books with a combined print run of more than 1,400,000, about 80% of it in Tatar.

Given that the school and the whole education system are among the most important factors of language policy, we take special note of several aspects of this sphere. Currently there are a total of 2261 schools in Tatarstan, among them 1147 Tatar schools and gymnasia, and the Tatar language is taught as a subject in all schools in the Republic. About 200 new vernacular education schools have opened since the early 1990s, all of them in cities and district centres, where Tatar schools were all but nonexistent in the past. Urban schools now make up 26.5% of the total number of Tatar schools. Over the years, the total number of Tatar language teachers increased almost five-fold. The coverage of Tatar children with vernacular education is 52.7%—41% in cities and 68.5% in rural areas—and it tends to grow; the figure was approximately 20% in the early 1990s. However, the effectiveness of Tatar language learning is out of proportion to the amount of effort made. There is an ongoing complex search for ways of improving teacher training, textbooks, teaching aids and teaching methodology.

The Russian language remains in the centre of attention of the education system. All school children without exception are expected to learn Russian. It is taught by about six thousand teachers. In the school year 2007-2008 there were 987 schools teaching in Russian, including 47 schools and gymnasia (e.g., nine in Kazan) with a Russian ethnocultural component. The Republic is implementing the Russian Language in Tatarstan target-oriented programme for 2006–2010, which is evidence of its priority status in language policy.

The ethnocultural educational needs of the nations of the Republic of Tatarstan are supplied by 119 Chuvash schools (81 in 1991), 44 Udmurt schools (30 in 1991), 20 Mari schools (15 in 1991), four Mordovian schools (two in 1991), one Jewish and one Bashkir school. In the Republic's 34 summer schools children learn 22 vernacular languages—Ukrainian, Azerbaijani, Armenian, Polish, German, Georgian, Uzbek and others. In 2005, Kazan's educational centre called Multinational Summer School celebrated its tenth anniversary.

Despite an untoward demographic situation, the share of ethnic educational institutions is generally unchanged and educational institutions with an ethnocultural component are growing. Great emphasis is placed on arranging conditions that allow parents to exercise in practice their constitutional right to raise children in their mother tongue. Of the 1953 kindergartens operating in the Republic 955 are ethnic. In the pre-school educational institutions, 877 use Tatar as their language of upbringing and instruction (692 in 1988), 53 use Chuvash, 15 use Udmurt and 10 use Mari.

A paramount strategic task of the language policy of the Republic is to adopt official bilingualism in professional education. In the early 1990s, a number of leading colleges started training highly skilled specialists who could work in bilingual and multilingual environments. It must be admitted, however, that at the Russian Federation level this problem is still beyond serious discussion. It is well known that the establishment of a national professional education policy and its implementation features within different national state entities depend both on legal norms and on a set of demographic, ethnic and sociocultural factors. This problem calls for serious discussion and conceptualisation taking account of present-day Russian realities. An approach to its solution must, undoubtedly, be developed with due regard for unique characteristics of Russian regions and republics. Also, it is no secret that a number of titular languages in the Russian Federation feature a mismatch between their status and their functionality.

From this perspective, many titular languages in the Russian Federation do not meet some of the criteria for a language in which sound higher education can be provided. These cases possibly underlie the dominant view in Russia that regional national languages cannot be used in vocational education. This view has been voiced particularly aggressively in discussing the European Charter for Regional or Minority Languages, which stipulates that vocational education must be provided in native languages. For instance, a department head at the Russian Ministry of Nationalities speaking at the UNESCO-sponsored international seminar on “The Languages of the Nations of Russia: Development Prospects” in 1999, took up the position that “the Russian Federation could not commit itself to make vocational technical training available in respective regional or minority languages. Russia had no government-supported higher educational institutions to provide instruction in non-Russian languages. To establish colleges teaching in vernacular languages education materials and textbooks must be published in these languages, which is impracticable because most of them lack terminological vocabularies and some functional styles.”

However, the situation in Tatarstan is quite different. Its vast intellectual potential and rich historical traditions have created premises for building a full-fledged system of vocational education in the official languages of the Republic. The majority of educational institutions are prepared to examine applicants in either of the two official languages, teach the Tatar language and Tatar literature as a separate subject and also teach other subjects and courses in Tatar. They have Tatar methods departments and they produce textbooks, study guides, dictionaries, manuals, and other materials.

In the meantime, the penetration of the Tatar language in professional education remains limited. The practice of conducting academic activities in Tatar has not yet evolved on a large scale. A certain swing-back can be observed in some colleges,

which shows in the work of admission offices and the lack of conditions for passing exams in the vernacular. Educational institutions' statutes are silent on the linguistic aspects of education. There are signs of a gap appearing between general and professional education in Tatar, which impedes the development of national education in the Republic, narrows down its future, and what is more, shakes the faith of students, parents, and the public at large.

It would thus be of interest at this time to develop a Concept for the Building and Development of a Single National Education System for all learning components on the principles of succession, integrity and continuity.

Furthermore, last year the Russian State Duma passed Federal Law On Amendments to Some Statutory Instruments of the Russian Federation as Related to the Concept and Structure of the State Educational Standard, which entails the abolition of the regional component in the educational standard. The national-regional component of the educational standard, in turn, grants Russian Federation members the right to develop and approve national-regional state educational standards, in other words, the right to teach national languages and in national languages. These innovations in the regulatory framework were preceded by alterations in the content-related part of national schools. Formerly a national school was a school where children received instruction in their mother tongue. The concept has broadened to include schools offering an ethnocultural component. At the same time, the very essence of what has traditionally been considered a national school is distorted; additional contributing factors are the USE (Unified State Examination), general secondary education financing standards, etc. The Ministry of Education of the Republic of Tatarstan and its government consider it necessary to keep the state three-component (federal, regional and school) educational standard and made an appeal to the State Duma of the Russian Federation to consider this proposal.

The introduction of the Unified State Examination combined with matriculation examinations at specialised secondary and higher educational establishments in Russian education created difficulties in Tatar-language education. The USE mechanisms and verification procedure provide only for Russian-language control and measurement packages. In view of the educational rights and interests of schoolchildren in national schools and in keeping with the educational and language legislation of the Russian Federation and the Republic of Tatarstan, the Cabinet of Ministers of the Republic of Tatarstan adopted a resolution "On the Conduct of the Unified State Examination and the Unified Republican Examination", which defines the conditions of holding the USE in Tatar (using forms and counterparts of all-Russian materials). But the results of a Tatar-language USE are only valid for entry to institutions of higher, secondary and vocational education in the Republic of Tatarstan.

Therefore, in the last decade Tatarstan completed a complex phase, which aimed to revive a threatened language and to awake the dying self-awareness of the nation. The Republic entered the new, 21st century with a wealth of experience and new opportunities. Today it holds a leading position in this sphere in the Russian Federation, acting as a powerhouse in the study, elaboration, and practical application of language development standards.

At the same time, despite the declaration of the equal status of Tatar and Russian as official languages, in practice the scope and scale of functioning of the Tatar language remains limited. The real practice of application of Tatar in law making has not evolved; nor have the principles of workflow management in bilingual government offices and authorities been defined. The implementation experience with the Republic of Tatarstan state programme for the preservation, study and development of official and other languages in the Republic of Tatarstan has made it possible to determine factors checking the accomplishment of stated objectives. Some of the more important limiting factors are:

- lack of a well-developed infrastructure to support the implementation of the State Programme;
- lack of additional regulatory legal instruments governing the procedure of use of official languages and other languages in different fields of social life;
- lack of a single centre responsible for adherence to writing standards of parallel use of two official languages, the holding of minimum professional language proficiency certification and the management of document translation;
- lack of a conceptualised system of continuing vernacular education according to the Preschool–Elementary–Secondary–Higher education pattern.

In keeping with the basic principles of the Tatar government's language policy, the State Council of the Republic of Tatarstan adopted in July 2004 the Law On the State Languages of the RT and Other Languages of the RT; and in September 2004 the RT State Programme of Preservation, Study and Development of RT State Languages and Other RT Languages for 2004–2013 was approved. The State Programme is designed for the next stage of language development in the Republic. It provides in the first place for the growth and harmonious interaction of languages, the maintenance of a stable balance of the national-language interests of the ethnic groups in the Republic of Tatarstan and all citizens regardless of their ethnic or linguistic identity. The Programme was put together with careful consideration of

defects in the implementation mechanism of the previous State Programme. This Programme to some extent makes up for the absence of a general Federal programme of development of native languages in the Russian Federation, given that some two-thirds of Tatars in Russia reside beyond Tatarstan.

The document sets forth priority trends in future actions subject to language policy, which require not only material and financial but also intangible investment and the overcoming of psychological barriers, meeting these calls for the development and application of new regulatory and legal instruments as well as subprogrammes at the next level of complexity. All of it is to bring the Republic to a new stage in solving national-language problems.

Language is the symbol of a nation and the very basis of its existence. A nation's history, literature, traditions, identity and uniqueness are handed down from generation to generation through its language. A language cannot be preserved unless it is actively and fully utilised. Consistent and continuous efforts to optimise languages processes and to expand the functionality of Russia's national languages on regional as well as federal levels should promote the development and support of linguistic diversity and the revival of traditions and should be a guarantee of social stability in Russian society.

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Vernacular Language Policy in the Context of Linguistic and Cultural Diversity: the Legal Framework and Implementation Arrangements

Language legislation is a part of government language policy, which in turn is a part of national policy, and it has a special ideological significance in that it shapes people's ideals, conceptions and expectations. The uniqueness of language lawmaking stems from the nature of language, which encompasses all human activities. The breadth of its functions predetermines the complexity of language legislation.

In the Republic of Sakha (Yakutia), the basic legal platform for the development of the state languages and official languages is in place.

By virtue of the *Declaration on the Languages of the Peoples of Russia* and the Law on the Languages of Peoples of the Russian Federation, dated October 16, 1992, the Law on Languages in the Republic of Sakha (Yakutia) was passed. Its Articles 4 and 5 declare Russian and Sakha, the language of the main indigenous people, which gave its name to the republic, state languages. The Republic of Sakha government protects the Sakha language and takes care to extend its social and cultural functions. Evenki, Even, Yukaghir, Dolgan and Chukot are declared official languages in the compact habitation areas of the indigenous peoples, to be used on a par with the state languages.

Let us look at the pattern of functioning of the state languages, Sakha and Russian, in their main fields of application.

Language application in government, enterprises, institutions, and organisations. Meetings and conferences are conducted in Sakha and Russian (Art. 12). By way of implementing this provision the republic's government issued a decree "On the Introduction of the State Languages of the Republic of Sakha (Yakutia) into the Proceedings of Government Agencies, Enterprises, Institutions and Organisations". In reality, it can be said that Russian alone is used in public administration and sociopolitical life. Clerical work is done in Sakha and Russian, the latter used more widely. Business correspondence at the republic and *ulus* levels is maintained mainly in Russian. It is only in rural *uluses* that sociopolitical functions and events are conducted in Sakha.

Record management in Yakut is in the making: a Yakut dictionary of municipal governance terms has been developed. In times to come this area will be in need of special support and control because the public at large and large institutions and organisations demand that records be kept in both state languages and that the relevant Yakut terms be standardised.

To instruct the republic's civil servants in record keeping in the two state languages, the Institute of Management under the President of the Republic of Sakha (Yakutia) compiled and published several teaching aids: *Business Rhetoric* (300 copies), *The Russian Language and Speech Culture* (300 copies), *A Russian-Yakut Defining Dictionary of Psychology of Management* (500 copies), *Dictionary of Local Government Terms* in Russian (2000 copies), *Dictionary of Local Government Terms* in Yakut (1500 copies). *A Concise Yakut-Russian Dictionary* (300 copies) is in press. The Institute continues work in this area.

The languages law guarantees that laws and other government acts are passed and published in the two state languages. This article of the law is enshrined in the decree "On the Preparation and Adoption of Laws and Decrees by the State Assembly (Il Tumen) in the State Languages of the Republic of Sakha (Yakutia)", dated July 7, 1999. This provision has been largely adhered to, although some government acts (orders, statements etc.) are still being published in Russian only.

2. *Education, science and culture.* The law guarantees the freedom of choice of the language of education and instruction (Art. 27). Schooling in general education schools in the city of Yakutsk, industrial regions and the whole vocational education system is done in Russian, which is the most powerful factor in promoting Yakut-Russian bilingualism. Sakha is the language of instruction and education in preschool institutions and general education schools in *uluses*. In 2005, the federal Institute of Ethnic Schools of the Republic of Sakha (Yakutia) started six methodological periodicals for teachers, tutors and parents: *Chemchuuk Saas* (Preschool Age), *Bastaky Uktel* (First Grade), *Tereebut Tyl Yonna Literatura* (Mother Tongue and Literature), *Russian Language and Literature in Yakut Schools*, *Iitin Kyyata* (The School of Upbringing), *Tatkachiruk* (for schools for ethnic minorities of the North). The journals were registered with the Far Eastern Office of the Federal Media and Cultural Heritage Law Enforcement Service and are circulated via the Post of Russia catalogue four times a year. Besides, in school year 2007–2008, scientists at the Research Institute for Ethnic Schools of the Republic of Sakha (Yakutia) wrote experimental study guides for preschool educational institutions as well as manuals on school subjects—*The Yakut Language*, *The Even Language*, *The Literature of the Peoples of the North*, *Yakut Literature*, *The Cultures of the Peoples of the Republic of Sakha (Yakutia)*—by way of implementing the

national/regional component of the state education standard in the Republic of Sakha (Yakutia), which include didactic, methodological, information and reference materials on school subjects.

The entire course of native language and literature subjects is taught at Vilyuisk normal school and the Department of Yakut Philology of the Ammosov Yakut State University.

Russian is one of the main subjects in ethnic schools, which is taught from first form. It is the language of instruction in all Russian schools, in forms nine to eleven of ethnic schools and in respective bilingual instruction classes. Teaching is also conducted in Russian in specialised secondary and higher education schools in the Republic of Sakha (Yakutia).

As Yakut changed its status and was made a state language by law, with the resulting expansion of its functionality, Russian did not change its position as the main language of instruction at least at the secondary and higher stages of education. In Yakut-language schools instruction in the mother tongue concentrates mainly on training material explanation, while information fixation tends to be done in Russian.

3. *Judicial procedure.* In the Republic of Sakha (Yakutia), there are 35 regional (municipal) courts and 51 justice of the peace districts. According to Article 18 of the Russian Code of Criminal Procedure and Article 9 of the Russian Code of Civil Procedure, criminal and civil procedure can be conducted at parties' pleasure in either of the two state languages, Russian or Yakut. The extent of practical realisation of these provisions in this bilingual republic has not been researched.

In Book 1 of the sociolinguistic encyclopaedia *Written Languages of the World: Russian Federation Languages* (2000) the functioning of Sakha in judicial procedure is described in Article 15, "Use of the Sakha language in court". It cites 1996 data, supplied by the Republic of Sakha (Yakutia) Supreme Court secretariat and the Statistical Department of the Yakut Ministry of Justice, which show that Sakha is employed quite extensively in judicial procedure: in written and oral court rulings, in testimony, in legal defence, in proceedings (depositions, court claims, and correspondence prior to court appearance) and in court clerks' work.

Indeed, in *ulus* courts (e.g., in Churapchinsky, Ust-Aldansky, Tattinsky, Vilyuisky, Verkhnevilyuisky districts among others) where trial participants, including the judge, are native speakers, the Sakha language functions in full measure. But when it comes to the individual citizen, it becomes clear that the use of the state and official languages of the Republic of Sakha (Yakutia) and the languages of peoples living in the Russian Federation, as well as foreign languages, in courts calls for a serious approach, and it is somehow or other interwoven with the issue of translation.

According to law, parties to a trial who lack a knowledge of the language in which the trial is conducted are entitled to a free translation service (a translator's services are paid for by the Judicial Department Office at the expense of the federal budget). Despite this entitlement granted by law to the multinational population of the Russian Federation, the Yakutsk city court is the only one in the whole of the republic to have a staff interpreter speaking Russian and Yakut (data supplied by the Judicial Department of the Republic of Sakha (Yakutia) under the Russian Federation Supreme Court of September 30, 2004).

Given the lack of positions of court interpreters speaking both state languages, there is a tacit personnel policy favouring bilingual workers who are adept at handling bilingual documents and can guarantee good performance in working with Sakha-speaking and Russian-speaking clients.

4. *Translation.* Translation quality in some fields has long given rise to serious complaints.

Currently, the availability of personnel in the field of translation, apart from literary translation, is limited to specialists translating from foreign languages into Russian and from Russian into foreign languages. In the city of Yakutsk, with its high latent demand for the services of translators from Russian into Yakut and from Yakut into Russian, trained people are scarce. Meanwhile, the Yakut State University Faculty of Yakut Philology trains specialists with an additional qualification of Russian-to-Yakut translators. In the media, particularly in the production of newspaper supplements, the functions of a translator are performed by workers with other skills. The translators' association unites translators from foreign languages into Russian and from Russian into foreign languages.

5. *Postal and telegraph services* inside the Republic of Sakha (Yakutia), according to the Republic of Sakha (Yakutia) Administration of the Federal Postal Service, as per the Postal Service Rules approved by Russian Federation Government decree No. 725:

Art. 65: "Addresses on mailing units and postal order forms sent within the Russian Federation territory shall be written in Russian. Addresses on mailing units and postal order forms sent within a republic affiliated to the Russian Federation can be written in the state language of the respective republic provided that they are replicated in Russian".

Art. 66: "Addresses on international mail shall be written in Roman letters and Arabic numerals. Writing an address in the language of the country of destination is allowable provided that the name of the country is replicated in Russian".

Postal and telegraph services in the Republic of Sakha (Yakutia) mainly use Russian.

Modern social evolution attests that the functioning of several languages inside a state poses a major sociolinguistic problem in addition to being a challenge to sustained harmonious development of society at large.

While the law allows the use of both state languages in court procedure and records (Art. 19) as well as in notarial record management and in other government bodies (Art. 20), Sakha is seldom if ever used there.

6. *The media.* The law guarantees the use of the two state languages in this sphere. Out of 174 print media, 44 (or 25.3%) report to the Republic of Sakha (Yakutia) Department for the Press and Broadcasting: six national newspapers, four magazines, and 34 *ulus*/town newspapers. Of all the print media founded by government agencies, 45% are published in Yakut, 26% appear simultaneously in Yakut and Russian and 2.4% are published in the vernacular languages of the North.

Following the establishment of the Sakha National Broadcasting Company (NBC) service in vernaculars considerably increased. 34 *ulus*/town TV studios were opened, whose programmes are regularly beamed by Sakha NBC across the republic. Between 1985 and 2006, the amount of service increased 2.5 times in Yakut and 2.7 times in Russian. Yakut-language radio broadcasts account for 40% of the total; Russian-language broadcasts, for 55%, and broadcasts in the languages of minority peoples of the North, for 5% of the total service. Telecasts: Russian 62%; Yakut 38%; indigenous peoples' languages 1%. According to the Television and Radio Broadcasting Technical Centre, the total number of satellite TV stations was 1044 in 2006. The coverage of Channel 1 was 86.2%, Russian Channel, 82.5%, Sakha NBC, 99.5%, NTV, 50.0 %, Culture, 43.9%, and others, 27.5%.

Sakha NBC, noted for its linguistic diversity, is the only channel broadcasting in the two state languages, the vernacular languages of the North, and English (a children's educational programme called "Jumandji") [8, pp.8-9].

The republic's Department for the Press and Television and Radio Broadcasting, the Presidential Language Policy Council, instructors at the Department of Stylistics and Translation at the Yakut State University Faculty of Yakut Philology, and research fellows at the Institute of Humanitarian Studies, Academy of Sciences of the Republic of Sakha (Yakutia), have conducted workshops for journalists on the observance of common orthographic rules of the Yakut language in periodicals, on the Yakut speech culture in the media and on the role of the media in shaping the public mind and the native language. Scientific and practical manuals have been published: *The Businessman's Speech Culture* and *The Russian Speech Culture of TV and Radio Broadcasts under the Yakut-Russian Bilingualism*. The Republic of Sakha (Yakutia) Ministry of Culture and Spiritual Development and the Extended

Education Centre at the Arctic State Institute of Culture and Art ran a “Speaking Mastery” course for media, culture and archives professionals. Editors of the Gevan TV and radio programmes at Sakha NBC went to densely populated areas of small indigenous peoples of the North: Ust-Yanski, Nizhnekolymski, Srednekolymski, Bulunski, Eveno-Bytantaiski, Zhiganski and Olekminski *uluses*.

7. *Production*. Interpersonal communication in industry, agriculture, public services, commerce, transport and communication depends on the ethnic affiliation of the parties and on whether their milieu is mono- or multilingual. In a monolingual milieu, particularly in the countryside, they communicate, as a rule, in Yakut. In a multilingual milieu, Russian is used. Documentation in the production sphere is kept in Russian.

8. *Family and domestic life*. Here the choice of the language of communication depends on people’s ethnic affiliation, the mixed/unmixed nature of their family ties, the standard of education, urban/rural living conditions and age-specific characteristics. As already mentioned, the great mass of the Sakha people live in the countryside, where Sakha is generally the language of communication. For some time past, however, Yakut-Russian bilingualism was rapidly gaining ground among the Yakuts. Possible reasons are educational background, the increasing heterogeneity of the ethnic milieu, or the media’s use of Russian.

This leads us to conclude that Sakha, a state language, in the context of Yakut-Russian bilingualism, functions fractionally or not at all in the principal domains of public administration, judicature and place names. Russian is used on a broader scale in education, science and the media. This situation in fact makes Sakha the second most commonly used language after Russian.

For the great majority of the Yakut population the main sphere of application of the Yakut language is the family and a monolingual milieu, which uses the spoken, oral form of the language. However, Russian is penetrating into this sphere too, primarily in urban communities, as bilingualism and linguistic competence gain ground.

The enforcement of the languages law faces objective difficulties, which impede the solution of very complex problems. Objective reasons stem from the very nature of language, whose primary function is communication. In language relations, in the functioning of languages, it is often the case that the overriding factors are not the “scientific considerations” of scholars or the aspirations of language patriots, but the earthbound considerations of the masses of populace—“it is easier”, “it is comfier”, “it is more common”. Besides, language status and preferences, linguistic competence and social attitudes of these masses may also be at odds with the policies and ambitions of those who would like to put in force particular provisions and

articles of the law. Therefore, the law should be perceived primarily as a twofold objective for a long term: first, as government support to the preservation, revival and development of languages, and second, as a means of optimisation of the interaction of languages and their native speakers. All the practical work of enforcement of the languages law and language development should be carried out gradually, step by step and thoughtfully. Everything should occur by itself, naturally, as real and favourable conditions appear. Attempts at some simulated, far less forceful, speeding-up may cause harm. In this respect the law wants refining and correcting.

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The Language Situation in the Chuvash Republic

Chuvashia, situated in the centre of the European part of Russia, is a region of active interethnic communication and a zone of advanced economic and cultural relations. The republic ranks fourth among the densely populated regions at 74.3 people per square kilometer. Its relatively small territory of 18,300 square kilometers is home to nearly 1.3 million people; some 40% of this number live in the countryside, where ethnic identity is better maintained than in urban environments.

Chuvashia is a multinational republic populated by members of 97 nations. The core ethnic groups are Chuvashs (67.7%), Russians (26.5%), Tatars (2.8%) and Mordvins (1.2%). Chuvashs make up the absolute majority of the republic's population, which is in stark contrast to the other Russian regions. The other nationalities come up to 23,600 people, or 1.8%. Ethnic diversity is a central strategic resource, which allows not only creative cross-fertilisation but also the development of broad socioeconomic and cultural ties. Therefore, the Government of Chuvashia is making efforts to implement an all-inclusive national policy.

Russian President Vladimir Putin thought highly of these efforts during his visit to the Chuvash Republic in 2004. He stressed, in particular, that Chuvashia had done right in creating the Ministry of Culture and for the Affairs of Nationalities and that the issue of nationalities was depoliticized: where conflicts could grow, all energy and all potential were channelled into support of social initiatives. This aspect is very important today, when there is a global tendency to try to resolve ethnic conflicts instead of establishing national policies.

We were among the first in Russia (1990) to pass a language law, which has underlain our efforts to create conditions for mother tongue preservation and learning and the development of national institutions of general education. Since Chuvashia is a mononational republic, its Constitution says that there are two state languages, Russian and Chuvash. A set of programme activities in the

framework of the Chuvash Republic National Policy Concept have been carried out since 1998, which not only address the build-up of interethnic and civic unity, but also foster the progress of the ethnic cultures and languages of the Chuvash people and other groups inhabiting Chuvashia. They also promote the establishment of NGOs and growth of the national media space and help expat Chuvashes to keep and develop their culture and language. The *Culture of Chuvashia* republic-wide target-oriented programme also deals with these issues.

Knowledge of one's mother tongue is a key question in national self-identification. Language learning and application is a recurring and central subject in discussions about the destiny of ethnic groups. Language is not merely a unifying element of an ethnos, it is a key ethnic marker, a link between the past, present and future of the people. The loss of its native language will spell the doom of an ethnos. What causes concern is not only people's knowledge of the language but their treatment of it as their mother tongue.

According to the 1989 population census, 85% of Chuvashes considered their national language their mother tongue. This figure was higher in the case of Russians (99.8%) and Tatars (90.3%) and lower in the case of Mordvins (71.8%) and Maris (64.2%). In all likelihood, the heady ethnopolitical events of the late 1980s and early 1990s, the development of laws that established Chuvash as a state language and the awakening of interest in the history and culture of their land fostered the Chuvash people's striving toward ethnic self-identification, and the lowering of this index slowed down. According to a 1994 microcensus, 86% of Chuvashes considered Chuvash their mother tongue; in 2002, this figure remained almost unchanged (85.8%). Taking into account the steady growth of the proportion of urban population, the keeping of this trend is a positive fact, because urbanisation has a very negative effect on the preservation of vernaculars.

It is well to bear in mind that rural communities in Chuvashia are almost homogeneous in ethnic terms: Chuvashes, Tatars, Mordvins and Russians live in compact groups, though there are, of course, mixed population settlements. This ethno-territorial distribution of the population inspires optimism regarding the creation of natural conditions for the preservation of the languages of local ethnicities.

In view of the above, a central mission of the state is to create conditions for the development and public functioning of the language. It means, primarily, language teaching in schools and preschool institutions, the support of national art, literature, media, book publishing and social projects of national-cultural associations (NCOs).

The study of Chuvash as a state language was introduced in all educational institutions of the republic in the early 1990s. Today, the native language is taught

by 1,040 teachers (98% of them college trained). For gifted children aspiring to become experts in Chuvash philology, culture or history there are specialised Chuvash language and literature classes. In 2007–2008 school year, there were 344 Chuvash, 177 Russian, 17 Tatar and 4 Mordvinian schools. The existing school network meets children’s need for quality education in a multicultural environment. All preschool institutions (146 Chuvash, 5 Tatar, 2 Mordvinian and 277 Russian) have facilities for conducting educational work in the respective native languages.

Teaching materials were developed for the study of Chuvash in Russian-language schools, which was not the case in the early 1990s; electronic textbooks are being actively used. School libraries’ book stock is made up of Chuvash-language textbooks (97.3% complete) and children’s literature. It is now a tradition to hold an interregional Chuvash language and literature Olympiad and various games and contests for Russian-language schoolchildren. An annual Chuvash language competition, “The Chuvash Swallow—Linguistics for All”, has been held since 2003, in which schoolchildren from Russian regions take part. In 2008, their number grew fourfold to 20 000. Chuvash expat communities in 14 constituent entities of the Russian Federation have about 400 schools, which work hard to preserve the Chuvash language inside these communities.

IT application in schools was instrumental in promoting the study of native languages. The first ever teleconference of Chuvash and literature teachers was held in 2007; a specialised website was created, which has since been maintained: www.pedkanash.chuvash.org. In 2008, this site was the medium of the first Internet Olympiad in the Chuvash language and literature dedicated to the 160th anniversary of I. Yakovlev, the creator of the Chuvash alphabet, who made an inestimable contribution to the development of school education for non-Russians in tsarist Russia. The site describes the life and work of the great patriarch. More than 300 schoolchildren took part in the virtual competition.

It should be emphasised that IT applications in education have been in the centre of attention in Chuvashia in the last decade. Even before the launching of the national project, the computerisation of schools had made good progress, and there is now one computer per 17.5 schoolchildren (the figure for Russia is 25). Today, 100% of comprehensive schools have a website of their own and an email address, which enables both teachers and pupils to be present in Russian and global cyberspace. This work received a new momentum in the framework of the Russian national education project; a year ago, the republic connected all schools to the broadband Internet with free traffic.

At present, Chuvashia is pushing ahead with the development of a distance-learning infrastructure, which allows every schoolchild to receive quality educational

services irrespective of place of residence and family income. A republic-wide distance-learning centre set up at the Chuvash Republican Institute of Education and 26 municipal resource centres are busy upgrading teachers' skills with the use of IT-based distance learning facilities. By the end of 2008, a large educational Web portal will be started in Chuvashia, providing a single access point for all users, both teachers and pupils and parents, which undoubtedly will have a major impact on the development of linguistics both inside and outside Chuvashia.

The growth of national morale can be seen as a significant factor at the turn of the twentieth century. I will give two examples illustrating this process: in the last decade the number of national-cultural associations of ethnic groups in Chuvashia and Chuvash NCOs outside the republic almost tripled. Today, 22 organisations in the republic represent 12 nationalities: Chuvashes, Russians, Tatars, Mordvins, Maris, Jews, Germans, Bashkirs, Belarusians, Armenians, Azeris and Uzbeks. They conduct extensive activities to meet ethnocultural needs such as Sunday schools and various study groups; tens of thousands of people participate annually in Russia-wide and international events.

Increasingly notable events on the republic's cultural scene are the All-Chuvashia Festival-Competition of Pop Songs, *Kemel sasa* ("Silver Voice"), the All-Russia Festival of Russian Folk Art, *Resound, Russian Back Country!*, an international festival of Tatar pop songs *Urmai mony* ("Songs from the Village of Urmaevo"), interregional festivals of the Mordovian people, *Arta* ("Life"), and the Mari people, *Peledysh* ("Flower"), the Republic-wide Contest *Chavash piki* ("Chuvash Beauty") and Tatar interregional Shygyrdan readings.

By the way, Chuvashia hosted the 16th All-Russia Folk Art Festival, *Springs of Russia*, in 2008. Over the years, folklore groups from more than half of the Russian Federation members and many foreign countries took part in the festival. It became a symbol of the national diversity of the country, a shining example affirming the need for preserving distinctive languages as a great wealth not only of culture, but also of the socioeconomic life of the country.

The Chuvashes are the fifth largest people in Russia (by the 1998 census, the fourth), which makes them a large nation. At the same time, the Chuvashes are one of the most dispersed nations, 45.7% of them residing outside the republic in rather large communities. Therefore, the Chuvash Republic is a spiritual centre for Chuvashes all over Russia. The support of expatriates is one of the priority directions of the national policy.

There are 76 Chuvash national cultural associations operating in 29 regions of Russia and 6 other countries: Belarus, Kazakhstan, Latvia, Moldova, Ukraine and

Estonia. They have concluded 52 agreements with Chuvash communities and 13 agreements with foreign countries. The Chuvash diaspora receives support in holding Chuvash culture and literature festivals, professional development and the acquisition of library books in Chuvash and about the Chuvash Republic. Chuvash media are also given assistance. Professional and amateur theatrical companies and concert parties tour the country.

The religious component of social life exerts considerable influence on the preservation and development of a national language. The Chuvashes are a Turkic people who embraced Christianity when they became part of Russia. An important event in early 2008 was the conclusion of the translation of all the Bible books into Chuvash, which had been started by I. Yakovlev in the 19th century following his creation of a Cyrillic-based Chuvash alphabet. In 2009 the full text of the Bible will be published and the Chuvashes will become Russia's second nation, after the Russians, to be able to read the Holy Scripture in their mother tongue.

The growth of the public language environment fostered national self-awareness. Libraries play a special role in this process. The National Library (NL) of the Chuvash Republic is an important guidance centre not only for the republic's library network but also for the entire Volga region and Chuvash expat communities. In pursuance of a Presidential Decree of 2003, the NL acted as coordinator of a project, unique for Russia, to create 500 model libraries providing services approximating the international standards adopted by the International Federation of Library Associations and Institutions (IFLA). Their modernisation led to a 30–40 per cent increase in user demand. What is more, IT application led to a rapid destruction of the information gap between urban and rural populations in the republic.

Since 2000, the Chuvash NL (www.lib.cap.ru) has actively contributed to the development of federal and regional projects focussed on national cultural matters and has developed target-oriented programmes aimed at the revival and free growth of indigenous cultures. The building of literature collections of ethnic groups of Russia and making them accessible is one of the most important long-run functions of the NL. Its two-million-volume book stock includes the country's largest collection of books in Chuvash and about Chuvashes—some 40,000 volumes. Library users can read books in 50 languages of the world. Electronic resources such as an electronic library, an electronic catalogue, a Chuvashica database and other multimedia publications created by the NL are in Russian and Chuvash. In 2008, the Chuvash Ministry of Culture Council for the Affairs of Nationalities set the task of active build-up of the electronic catalogue of books in the languages of the larger ethnic groups residing in the Chuvash republic.

In every region of Chuvashia where the ethnic factor exerts a significant influence on the sociocultural scene, libraries adjust their services to ethnocultural, linguistic and other features of users belonging to different ethnic groups. There are 11 libraries in regions densely populated by Mordvins, and Tatars are served by 20 libraries. Sociological studies of the reading patterns of rural population revealed a marked growth in demand for national literature in almost every library.

Socioeconomic conditions, which changed in the last decade, and a cardinal reconstruction of the book publishing and book trade scene dictated the need for a study called "The Reading Diaspora". A poll of about 4,000 respondents revealed not only reader interests but also the extent of knowledge of native languages.

The survey bore out the great need for reading Chuvash literature, but also displayed a rather varied picture in the provision of national and local literature. In Kemerovo, Samara, Tyumen and Penza regions, 4% to 20% of village libraries' holdings are books about Chuvashia or in Chuvash. In Tatarstan and Bashkortostan, the proportion is up to 40 %, in Krasnoyarsk territory, up to 78 %. In the other regions, it is below 4%.

Periodicals are used to satisfy linguistic needs, too. Over 14% of the respondents residing in Bashkortostan, 12% in Tatarstan and 11% in Ulyanovsk region prefer to read newspapers and journals in the Chuvash language; more than 50% of the respondents in Bashkiria and Tatarstan and 45% in Ulyanovsk region read in equal measure in their native language and Russian. Russian is the preferred language for reading periodicals with 95% of respondents in Saratov region, 79% in Penza region and 71% in Perm region. It can be an indirect indicator of negative trends in language learning and of the quality of the media product in native languages.

The difficulties to be surmounted before the national book is made a real tool for the preservation of languages and the development of nations are many, the greatest of them being collection building. Nearly a million of Chuvashes residing in compact ethnic communities in 50 Russian regions still face lingering barriers to information access. With a view to meeting citizens' cultural needs the NL website features an electronic catalogue, which lists all the Chuvash language and local literature acquisitions; a special section is reserved for current accessions. The library digitises the most valuable historical and cultural documents and collections, builds the National Electronic Library of Chuvashia and maintains union catalogues and legal databases accessible 24 hours a day. More than 200 Russian head librarians have received training at our interregional IT training centre. Training in Internet technologies is provided to the republic's librarians and free training is given to local population, which is based on the "Be Trained to Become a Trainer" philosophy; more than 7,000 users have been trained in this way.

These active efforts resulted in a 15-fold rise in the issue of electronic publications. Chuvashia's public libraries use more than 800 computers and have over 15,000 registered Internet users. In excess of 104,000 copies of electronic publications are in heavy use. For comparison, according to the Russian Ministry of Culture Main Information and Computer Centre, at the beginning of 2007, all the other regions of the Volga Federal District taken together held less than 14,000 copies of electronic publications. In 2007, in Chuvashia the proportion of libraries connected to the Internet was 78%; the respective figure is 6% for the Russian Federation and 14% for the Volga Federal District.

In view of all these achievements, a project was developed to build upon the Chuvash NL a regional office of the Boris Yeltsin Presidential Library in the Volga Federal District, which is to be the main repository of electronic information in Russia.

This rapid progress in librarianship was predetermined by the dynamic computerisation of the republic. Starting with the Chuvash Presidential administration website in 1995, followed by their own system, *Intranet-Chuvashia*, within ten years, specialists built a common regional architecture, which laid the foundation for common information space for government and society and enabled the government to communicate online with municipalities. Information flows began to group together around the Presidential Administration site. The www.cap.ru portal, based on a dynamic programme technology, hosts more than 400 government sites; one in five organisations has a website today.

No wonder that Chuvashia is among the leaders in computerisation. It has implemented a number of large-scale programmes in the framework of the *Electronic Russia* Federal Target-Oriented Programme. The most noteworthy and instructive is Chuvashia's experience in developing a regional e-government facility. We were the first to go beyond the task of computerising individual agencies and to tackle the development of a comprehensive IT-based system supporting total regional governance. Chuvashia operates a unified Republic-wide Information Analysis System, which supports decision making at government and municipal levels. Institutions in education, health care and culture have created their own networks. By my estimate, no other region in Russia has a similar—structured and systemic—electronic infrastructure. Moreover, it is unequalled in terms of richness of content.

The key tool supporting the interaction with the public and businesses is the Chuvash Republic web portal, designed as a single point of access to all the branches and levels of governance represented in cyberspace, from municipal to federal. By all Internet ratings, the portal is in the top ten favourite government websites in Russia. Its reach is enormous: from schoolchildren and library users in Chuvash villages to

business and official structures in Russian regions and near- and far-abroad countries. The portal became a kind of bridge linking all members of the Chuvash nation irrespective of their domicile. The efficient application of new information capabilities has been highly instrumental in promoting the use of the Chuvash language. Among the first projects launched by what was then the Chuvash Presidential Administration website was a project to place on the Internet electronic versions of a Chuvash encyclopaedia, Chuvash literature, photo galleries, books about Chuvashia and information about famous personalities. With the appearance of this portal Chuvashes in every region inside and outside Russia can have access to information about the life of the republic and be in touch with the current situation. The portal is the focal point of the virtual life of Chuvashia and the entire Chuvash nation.

As IT experience and content grew, major cultural services were conceived. Some of the important outcomes of this systemic approach was not only the creation of a model library network, but also the development of large archives and media portals, which in turn gave a great impetus to the development and strengthening of the Chuvash language and ethnic culture.

In 2005, the *Cultural Provider of Chuvashia* portal (www.culture21.ru) was started, which brought city dwellers and villagers closer to cultural institutions; today they can see the repertoire of the republic's theatres and concert organisations and new exhibitions without leaving their home or lodgings. The Chuvash Art Museum is one of only two or three in Russia that offer its users the opportunity to watch its expositions on the web.

In 2006, combined efforts led to the creation of a web portal called *Chuvashia's Media* (www.smi21.ru), on which users inside and outside Russia can read Chuvash national, district and city newspapers in either Russian or Chuvash. Content for the portal is supplied by more than 40 print media in the republic. In 2007 alone, more than 23,000 publications were put on the portal. To date, the number of visitors has grown to 10,000 a month, 20% of them residing outside Russia. In the long turn, we plan to represent all the newspapers published by Chuvash expatriates on this portal.

Mention should be made of the important work being done, since 2002, by Chuvashia's archives, which have issued electronic publications and put up virtual exhibitions devoted to distinguished personalities, the ethnic diversity of the Chuvash Republic and the region's memorable dates and events. Content is presented in both Russian and Chuvash. The information resources of 4 government and 25 municipal institutions are concentrated on the *Archives of Chuvashia* web portal (www.archives21.ru). Currently, it is among the leading archival sites in Russia.

The *Internet Broadcasting of the Chuvash Republic* portal (www.chuvashia-tv.ru) has been performing, since October 2006, an invaluable mission preserving, promoting and developing the Chuvash language. For the first time ever any Internet user in whatever place on the globe can hear and view online Chuvash radio and television broadcasts. Free access is offered not only to recent news, but also to Chuvashia State Television and Radio Broadcasting Company audio and video archives, also in the Chuvash language. Yet, when I was a public officer I met with a total lack of understanding on the part of the All-Russia State Television and Radio Broadcasting Company (VGTRK) leadership regarding the need for this project, though its financial support came from a republic government order.

Media presence in the Russian segment of the Internet is a separate big story. In my opinion, this space has been fully domesticated by the larger federal-level media and, with rare exception, by larger regional Russian-language publications; Russia's ethnic media are underrepresented. Major dailies are published in many former autonomies, but few have websites of their own, among them Tatarstan, Bashkortostan, Chuvashia, Mari El.

At present, approximately 80% of newspapers come out in Chuvash, but only the national newspaper *Khypar* has anything like a fully-fledged website (since 2002). Because the publishing house issues some other Chuvash-language publications, the website features some content from a youth newspaper and a women's one. The site was in neglect for a time, but received a new impetus. According to the editor-in-chief, it is visited by as many as 300 users daily, more than 20% of them from near-and far-abroad countries. Given the above-mentioned aspects and the falling subscriptions for print media—and not only in Russia but throughout the world—the popularity of the electronic version of the newspaper is bound to grow. When I was Chuvashia's Press minister my mission was, among other things, to have all regional newspapers not just place information on the *Chuvashia's Media* portal, but to create their own sites; this has finally been done. A search on the Russian Internet brought out two Chuvash-language newspapers published by expats in Tatarstan (*Suvar*) and Samara (*Atalanu*).

The existence in cyberspace of so-called “people's sites” in vernaculars, which subsist without public money, is an interesting topic for researchers. The Chuvash-language sites I could discover are few, but they are there.

Chavash khalakh saiche (www.chuvash.org) is a Chuvash people's site initiated by an “obsessed” (in a good sense) young man in 2005. The site is in four versions: Chuvash, Russian, English and Esperanto. It familiarises visitors with the literature, history, culture and traditions of the Chuvash people and includes dictionaries and forums. Its originator, Nikolai Plotnikov, publishes two-three news items daily about

life in Chuvashia and its diaspora and also comments on world events. According to him, the site is visited by as many as 300 people daily, for the most part passive users, but some contribute news items and leave two-three comments a day. Ten enthusiasts, mostly college students, mainly maintain the site. The author himself is a Web master who has designed sites not connected with Chuvash culture. A native of Chuvashia he resides and works in Nizhni Novgorod. As someone keen on the Internet and a designer of computer games, he once turned onto the development of a Chuvash version of Wikipedia and fell in love with the language and everything connected with it. His first site, *Yumakh* (“Fairy Tale”, www.yumah.ru) aimed at promoting folk art: fairy tales, legends, songs and rhymes. Then, creative and patriotic ambitions moved him to create a portal of the Chuvash people, where users could communicate in their mother tongue and members of other nations could get information about the Chuvashes and their ways. Since young people are reluctant to learn their native language, the originator of the project is convinced that one needs to place them in a familiar environment and to awake their interest by choosing the right tonality and involving them in content generation and participation in forums, thereby promoting their mother tongue.

Firmly convinced that ethnic culture is a powerful growth resource the author is busy developing websites for schools and population centres. He is a co-author of the *Pedkanash* project I have mentioned before. Asked about problems faced by designers of ethnic sites, N. Plotnikov confidently answered that they are three:

1. lack of time, because most of such resources are supported by enthusiasts in their free time;
2. lack of information on ethnic subjects, particularly in electronic form, because book scanning of and text checking seriously keep back resource growth;
3. lack of a great interest in this process on the part of the broad user community. The support of the site costs at most 600 roubles a month, which is not a terribly great amount by today’s standards.

Another example of Internet content, contributing to the preservation and promotion of the ethnic aspect though not directly connected with language, is a copy of a printed book devoted to Chuvash history. The book itself can be called “popular” because it was written not by an academic but by a schoolteacher of home science by the name of Elena Enkka (an alias). The site guestbook thanks to the author’s and new visitors’ comments have actually turned into a sort of forum. I found the following comments left in the guestbook meaningful: 1. Leonid: “Good afternoon. I am pleased that this site exists. I am a Chuvash but live in Yaroslavl; I always wanted to learn about Chuvash history and the life of Chuvashes in the past.

I've learned a lot thanks to you. Thank you so much". 2. Aleksei: "Thanks for a terrific informative site. I met a girl who is an ethnic Chuvash. I myself am Russian and I decided to learn about the history of her people. I have learned a lot! Your site was a starting point in a long road of knowledge. Thank you!" 3. Lydia: "Although there has been much talk about impending death of the Chuvash language, I thank the creators of the Chuvah People's Site for their patriotism and their faith in tomorrow. As long as you are here let no one dare talk about its demise!"

Apparently, disputing about the book's contents is yet another good way of limelighting Chuvash history and culture and mother tongue learning.

Wikipedia seems to me the most interesting project popularising the Chuvash language across the globe and drawing into its ambit a snowballing number of users. It will be remembered that a Russian version of the "people's encyclopaedia" appeared four months after the launch of the English version; today, it is easily among the top ten among the 264 language portals; the Russian version has 295 000 entries and the English one, 2.5 million. According to some of the contributors to the Chuvash-language project, it started in December 2004: a user known as Untifler created Chuvash, Tatar and Bashkir sections. Today, the Chuvash Wikipedia (www.cv.wikipedia.org) has almost 8000 entries and it leads by a head among the native languages of Russia. Leaving without comment the unique features of the people's encyclopaedia and being unable to appraise the quality of its content, I will only note what struck my eye. In an interview given to the *Cultural Provider of Chuvashia* site in the autumn of 2005 the already introduced creator of people's sites N. Plotnikov admitted that the Chuvash Wiki has only 900 entries while the Tatar one has some 3700 and called on active users to participate in the project. When I looked up the portal statistics the other day, I was surprised to find that the Tatar section remained at the same level despite the widespread belief in the user community that Tatar ethnic resources formed by the public are leading a more full-blooded life than Chuvash ones. What struck me even more was the insignificant number of versions of Wikipedia in the languages of the nations of Russia and the surprisingly little amount of content in the projects. Given Wiki's popularity as a reference resource among the young people, we are clearly losing opportunities for popularising these languages.

Modern Internet offers one more form of publicity (I would say, aggressive publicity) for the language: the *LiveJournal* (LJ). Blogging has become so active worldwide that media researchers speak of convergent journalism. Designers of conventional media are eyeing apprehensively homebred competitors. But the blog mania epidemic safely passed over ethnic users. Unfortunately, the dozen or so personal pages of Chuvash authors, both in the *LJ* resource and in other domains I

discovered do not in point of fact answer the idea of blog mania, that is to say, at least daily topical comments. All of them are, alas, little different from personal homepages, which were once created either for self-hype or in the first flush of enthusiasm which petered out almost as suddenly as they appeared.

Fortunately, several sites maintained by Chuvash national cultural associations in St. Petersburg, Moscow, Krasnoyarsk and Estonia are more active in maintaining their rather feeble resources. But taking into consideration the fact that, as I have mentioned, it has 76 registered organisations, it is also like a drop in the bucket. Most of the information provided on these sites is in Russian. Incidentally, my attempt to have the leaders of 22 Chuvash national associations place information about their activities on a special page of the Ministry of Culture have, alas, not borne fruit yet.

It should be emphasised that in Chuvashia there is a great networked resource, which undoubtedly very soon may boost up the Internet activity of the bulk of the public. To bridge the digital gap inside the republic a complete infrastructure of public access to the Internet was built upon libraries, post offices and Public Access Centres (PACs) at district administrations of village municipalities, numbering more than 1000 in the small Chuvashia. PACs provide free access to Intranet-Chuvashia content for all users, the underlying idea being not only to make government transparent to taxpayers but also to bring services nearer to the user.

Right after the formation of 291 rural settlements, in line with new local government laws, within a month a project was implemented to equip all local government bodies with computers and to hook them up to the common information network of the Chuvash Republic government agencies. Therefore, first, Chuvashia has really brought to life Russia's only full-scale e-government project embracing all levels of local self-government. And second, the appearance of rural settlement websites in January 2006 triggered off an active process of "village" site building. Besides official sites created with government participation there appeared sites of not only district centres but even of villages, and not just with information about the community life but also with Internet attributes such as chat forums and rooms. Within rural settlements there already appeared their own virtual communities consisting of the sites of schools, libraries, various institutions and organisations, as well as kindergartens and even parishes. I wish Chuvashia's experience would spread across the Russian territory as soon as possible.

At present, work is in progress on a Web portal called *Memory of Chuvashia*, which is designed to provide access to the unique documentary heritage of not only the Chuvash people but of all the ethnic groups of Chuvashia. As I already mentioned before, the collection of the state art museum has been digitised, an electronic Corpus of Book Monuments of the Chuvash Republic has been created, a full-text National Electronic Library and union catalogues of Chuvash books are being built

and the retrospective conversion of local history catalogues in Russian and Chuvash is in progress. All museum workers should join archivists, journalists and artists on the Internet. The goal of the new project is to enable anyone to gain access via a single entry point (most likely a library) to the cultural heritage of the Chuvash Republic and to all world treasures, provided that the professional community finally unifies and standardises the techniques of information conversion from any material to virtual form. I feel that this kind of globalisation is not only harmful but that it should give a powerful charge for the flourishing of cultural diversity and the preservation of ethnic identity for future generations. Placing our stake on cyberspace in this sense can be very effective.

Summing up what has been said, as it were, and answering myself the question, what is hindering the development of the national segment of the Russian Internet, I will take the liberty of referring to an interview of almost three years before with Denis Sakharnykh, the creator of an Udmurt language and culture Web project, *Udmurtology*, which was published on the News of North and South Ossetia portal (www.ossetia.ru) under the title “The Language Situation and the Internet: Ossetian-Udmurt Parallels”.

I note, first, that these parallels are far more “parallel” for they repeat almost one-for-one the situation of all other languages in Russia. Second, despite the fact that three years is a rather long time and there is steady, if not very active, interest in ethnic languages and cultures, the issues highlighted by the expert are surprisingly topical to this day. National sites or national blogs on the Web have not appreciably increased in the intervening period!

Thus, several systemic factors have an adverse effect on the growth of the ethnic Internet. They seem to fall into two groups.

The first group, in my opinion, is of a socioeconomic and more global, public nature:

1. the humanities and intellectual life as a whole in ethnic communities is in decline;
2. national media lack an active stand on the Internet;
3. the Internet penetration in Russia is still low and communication services are too expensive for low-income groups;
4. linguists are totally indifferent to language promotion through the compilation of fundamental grammars and dictionaries—for mental as well as material reasons;
5. technical difficulties exist such as lack of standard national type fonts and keyboard layouts, which builds a great technical and psychological barrier to users.

The second group describes the mental state of society, or more exactly, its members:

1. linguistic assimilation of a considerable part of the ethnos, particularly the youth;
2. regarding the Internet's varied resources as a truncated post office (e-mail, ICQ, and that is all);
3. a consumer perception of Internet content as media or a book, i.e. complete lack of co-authorship or creativity;
4. the habit of waiting for solutions from outside—government, community, a goody-goody from abroad, etc.

The long and the short of it, the situation of the national Internet depends on the general situation in the field of the modern national language and literature. Sadly, I have to associate myself with experts who say that the Internet and most of the minority languages are still strangers to one another.

To quote the great 20th century poet Thomas S. Eliot, "Tradition ... cannot be inherited, and if you want it you must obtain it by great labour." Despite the fact that the Chuvash language, according to Wikipedia, is among eight languages of Russia spoken by more than one million people (1,325,000), not only patriotically minded members of the ethnos but government structures as well should feel anxious about the possibility that the wave of globalisation may in a not too distant future wash out a beautiful and interesting phenomenon called Chuvash culture. We should counter it with systematic care about the national heritage. At the same time, it should be kept in mind that the preservation of the language depends not only on the quality of its teaching at school and government policies but, in equal measure, on how this issue is perceived in society or, more accurately, in every family.

Every language is unique, it is the basis of culture, thinking, communication and development. It helps to hand down from generation to generation unique traditions, skills and knowledge. The fact that a language dies every two weeks in the world emphasises the need for the protection of our ethnocultural wealth as a pressing national task. At the same time, we should realise that there is no way people can be forced to read and communicate in their mother tongue, and to care for it. It is therefore important that our compatriots soak up the beauty and spirit of their language with mother's milk and that parents inside their families pursue a policy of civic wisdom and maturity, and that their children regarded the mastery of several languages as real wealth, giving them a unique opportunity to improve the quality of their life.

Yelizaveta SIDOROVA

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Co-chair of the National Committee of the Republic of Sakha (Yakutia) for UNESCO

National Committee of the Republic of Sakha (Yakutia) for UNESCO

It was with the creation of the National Committee for UNESCO that the Republic of Sakha (Yakutia) began to work in the international and external economic arena.

At the end of 1990, the republic's government made a proposal to the Commission of the USSR for UNESCO and the Ministry of Foreign Affairs of the RSFSR to establish a regional office of the union commission for UNESCO in the form of a national committee in Yakutsk. The proposal was supported.

On January 11, 1991 the Presidium of the Supreme Soviet of Yakutia adopted a decree "On formation of the National Committee for UNESCO." On February 23, 1991 the Committee held its first founding session, which was attended by over 160 representatives of creative unions, scientists, cultural and art workers of Yakutia. The session was attended by Rosa Otunbayeva, Chairman of the USSR Ministry of Foreign Affairs for UNESCO.

The Yakutia Committee for UNESCO seeks to facilitate communication and cooperation between UNESCO and public institutions, non-governmental organizations of the republic, recognized authority people within UNESCO competence. It acts as a liaison with the republican government on matters concerning Yakutia's involvement in UNESCO's activities, and works to raise public awareness about the UN agency's objectives, principles and programmes.

The Committee is currently chaired by Mikhail Nikolayev, the first president of the Republic of Sakha (Yakutia), now a Deputy Speaker of the Federation Council – the upper chamber of the Federal Assembly of the Russian Federation.

During his visit to Yakutia on July 23-26, 2006, UNESCO Director-General Koïchiro Matsuura met with the republic's leader, Vyacheslav Shtyrov. The two officials signed a joint communiqué, agreeing to cooperate on a variety of programmes in education, culture and science.

UNESCO holds that the cultural heritage of any nation, community or group should be treasured, regardless of their perceived contribution to the world's heritage, and sees culture as a broad phenomenon, including expressions and practices as well as monuments and sites.

In order to ensure the preservation, transmission and renewal of the global cultural wealth and to sustain diversity, UNESCO adopted the Proclamation of Masterpieces of the Oral and Intangible Heritage of Humanity in November 1997 (UNESCO General Conference, 29th session). The original list included 19 items. The three subsequent Proclamations, in 2001, 2003, and 2005, expanded it to include 90 Masterpieces from 107 countries across the world.

The first attempt to give definition to “intangible cultural heritage” was made at a UNESCO conference in March 2001. The term was then defined as “peoples’ learned processes along with the knowledge, skills and creativity that inform and are developed by them, the products they create, and the resources, spaces and other aspects of social and natural context necessary to their sustainability.” Today UNESCO distinguishes the following three categories:

1. Social and cultural expressions of a community that are fixed in tangible form, such as religious rituals and traditional arts & crafts (e.g. the Sicilian puppet theatre L’Opera dei Pupi, China’s Kunqu opera, and the Jema’a-el-Fna Square in Marrakesh, Morocco);
2. Non-physical expressions, collective or individual, such as language, memories and oral traditions;
3. Symbolic and metaphoric meanings of objects that constitute the tangible cultural heritage.

At the 32nd session of its General Conference (September 29 to October 17, 2003), UNESCO adopted the Convention for the Safeguarding of the Intangible Cultural Heritage. The document came into force on April 20, 2006, and the number of its States Parties reached 68 by November 11 of that year.

According to the Convention, intangible cultural heritage is manifested, inter alia, in the following domains:

- oral traditions and expressions, including language as a vehicle;
- performing arts;
- social practices, rituals, and festive events;
- knowledge and practices concerning nature and the universe;
- traditional craftsmanship.

The Convention calls on each of the States Parties to identify the various elements of the intangible cultural heritage present in its territory and take necessary measures to ensure their safeguarding.

In Yakutia, one of such measures was the development of a targeted government programme on Olonkho preservation and revival. Designed for the period through 2025, it is aimed primarily at encouraging and systematizing research into the Olonkho as an example of oral epic literature.

Under the ICH Convention, each of the States Parties shall ensure the safeguarding of the intangible cultural heritage by following a well-planned policy aimed at promoting the function of the intangible cultural heritage in society.

In so doing, they shall focus on the following measures:

- fostering training in the management of the intangible cultural heritage;
- ensuring access to the intangible cultural heritage while respecting customary practices governing access to specific aspects of such heritage;
- supporting institutions involved with the documentation of the intangible cultural heritage (such as museums, libraries, and archives) and encouraging the creation of new ones.

Each State Party shall endeavour to ensure recognition of, respect for, and enhancement of the intangible cultural heritage in society, in particular through educational, awareness-raising and information programmes, aimed at the general public; encouraging non-formal means of transmitting knowledge; keeping the public informed of the dangers threatening such heritage, and of the activities carried out in pursuance of the Convention; and promoting education for the protection of natural spaces and memorial sites whose existence is necessary for expressing the intangible cultural heritage.

Within the framework of its safeguarding activities of the intangible cultural heritage, it is necessary to ensure the widest possible participation of communities, groups and individuals that create, maintain and transmit such heritage, and to involve them actively in its management. That kind of collaboration should be conducive to the development of targeted government programmes.

Legal measures should be provided, to protect the intangible cultural heritage and ensure its inter-generational transmission and promotion in and outside the community without undermining the interests of third parties.

Along with copyright protection, measures to protect folklore and traditional knowledge at documentation institutions should include:

- protecting the life and health of tradition – or heritage – bearers, as well as the confidentiality of their personal data;
- ensuring optimum storage conditions for folklore collections and archives;
- elaborating strategies for protecting folklore collections against illicit use, with documentation institutions to be held responsible in the event of misuse.

An important stage in UNESCO's efforts to ensure the safeguarding of the intangible cultural heritage is the implementation of the *Living Human Treasures* programme, developed in 1993.

The first such system was set up in Japan back in 1950. Since then, many countries across the world have launched their own national schemes to protect individuals who excel in some traditional craft.

In Yakutia the implementation of Guidelines for the establishment of Living Human Treasures systems is integrated into the Olonkho state targeted programme. The republic is in need of legislation that could provide support and protection for living bearers of the Olonkho tradition as well as music and craftsmanship traditions.

Languages are a supreme achievement of human intelligence. About half of the world's 7,000 languages spoken today are said to be in danger of disappearing. Aware of this, UNESCO pursues a number of programmes aimed specifically at safeguarding endangered languages. The Atlas of the World's Languages in Danger is just one of them.

It is within the Atlas' framework that UNESCO is carrying out in Yakutia its project for the preservation of the Yukaghir language and traditions, focusing primarily on measures to enhance indigenous communities' educational resources.

Yakutia is the only place where Yukaghir communities have survived to this day, with their total population currently numbering around 600. Representatives of the taiga Yukaghir subgroup, known as Odul, now live in the village of Nelemnoye, in the Upper Kolyma District; the village of Andryushkino, in the Lower Kolyma District, is home to tundra Yukaghirs, known as Vadul. According to scholars, the two subgroups differ from each other considerably in terms of dialect, as well as in folklore and traditional culture.

The situation in which the Yukaghir language has now found itself is quite alarming. According to a 2002 population census, only 19.5% of ethnic Yukaghirs recognize it as their mother tongue, while the percentage of fluent Yukaghir speakers may be even smaller. Yet, many young members of the community show interest in rediscovering their roots these days, and tradition-bearing elders are generally quite enthusiastic about passing on their knowledge to new generations.

The project on the safeguarding of the Yukaghir language and culture focuses on the following four fields of action:

1. arranging training workshops with tradition-bearing community members;
2. engaging schoolchildren in folklore recording sessions and helping them create audiovisual collections at schools;

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3. developing multimedia teaching aids on the Yukaghir language and culture;
 4. digitizing folklore recordings stored in public and private archives with a view to building an e-library of the Yukaghir oral and intangible heritage.

Training Workshops

The organization of training workshops with tradition-bearing Yukaghirs is an important way of safeguarding the indigenous group's oral and intangible heritage. Twenty-four such workshops were held in Yakutia's Yukaghir communities within a space of just one month.

Village of Nelemnoye

Akulina Sleptsova, a craftswoman and storyteller, held six workshops. She shared some of the recipes for Yukaghir fish dishes and demonstrated traditional embroidery patterns, as well as leather processing and fish skin drying techniques.

She introduced her young audience to the Yukaghir fire-feeding ritual, practiced to this day. And she also performed the Met Ununie song, whose lyrics contain some original topographic names for the Rassokha River valley, an ancestral Yukaghir land. The kids enjoyed themselves as they sang along, gesticulating to the music to imitate the traditional form of presentation.

The vocalist Maria Turpanova devoted one of her workshops to the Yarkhadana song, which tells the story of a young man's unrequited love for a girl. Maria said she had heard that song for the first time from her mother.

Another workshop delivered by her was devoted to the traditional Yukaghir dance known as Londol. She performed this dance, accompanying her movements with singing. At the end of the class, kids in the audience all came together into a circle to practice.

The music teacher I. Dyachkova offered a tutorial on the Yukaghir throat singing style, Tunmul Khontol. To learn the technique, students tried to imitate the seagull squalls, bear snoring and other sounds. They also listened to recordings of veteran Tunmul Khontol practitioners N. Dyachkova and A. Shadrina.

In the village of Zyryanka, the poet Lyubov Dyomina held a workshop on Yukaghir folk songs. She also told her audience about the traditional Yukaghir system of beliefs concerning natural phenomena and recited poems about the Yukaghir alphabet.

Village of Andryushkino

On-site tutorials on Yukaghir lifestyles and foodways provided children with firsthand experience in living in a yaranga tent and cooking and eating meals based on the indigenous diet.

At his workshop, the singer and songwriter Ilya Kurilov performed several songs to an accordion accompaniment, with the kids singing along.

The reindeer shepherd N. Tretyakov devoted his master class to traditional game playing techniques and the handling of the lasso.

Workshops on the Kurilov brothers' artistic legacy took place on the premises of a school museum. The participants recited poetry by S. Kurilov and acted out one of his tales.

In addition, five workshops for teenagers were held in either village.

Nelemnoye was the venue of the following tutorials: "Imitation of Bird and Animal Sounds", "Yukaghir Games in the Kichil School", "Yukaghir Children's Toys", "Birch-bark Kitchenware", and "Making Sinew Strings".

The workshops in Andryushkino all focused on Yukaghir conversation, featuring topics such as "Introducing Oneself", "My Family", "My Work", "My Land", and "Traditions and Practices in My Community".

Workshops on the Yukaghir language and culture aroused a lot of interest both among students and tradition bearers. These latter were keen to share their knowledge and skills with the young.

Folklore Recording Sessions and the Creation of Audiovisual Collections at Schools

Efforts to enhance the educational capacity of Yukaghir schools involve the creation of folklore archives right on the school premises, with sound recordings and video footage assembled by students as well as scholars.

The idea behind is to stimulate interest in the native language and culture among younger members of the community through their direct involvement in ethnographic activities.

Along with engaging local school students in folklore collecting, the organizers also provide community schools with appropriate audiovisual and software tools. Two schools were offered each a music center, a digital camera, and a digital voice-recorder. A series of workshops were then held to introduce their students to fieldwork recording and archiving techniques.

The recordings made in the village of Nelemnoye included a recitation by A. Sleptsova of the Myth of Fire and A. Shadrina's recount of her father's childhood and the memories of the family's hard life.

The project aroused a lot of enthusiasm among local children, and many of them were keen to take part in the fieldwork.

Here is what one of the participants, the eighth-grade student Anna Ayanitova, has to say: "I love collecting folklore. That's really exciting. You can thereby learn new tales, legends, real-life stories, popular beliefs... I, for one, have been so lucky as to hear a recount of the Myth of Fire, which my great grandfather, nicknamed Daidykan, once narrated. The Yukaghir language does live on. It's in us, deep down, and all we need is recalling. But we should study more to be able to perpetuate it. Collecting information from the elderly is one way of going about it. This is an enjoyable activity, and when at it, you can have fun while at the same time doing something good for others."

Developing Multimedia Teaching Aids

Given the shortage of paper manuals on the Yukaghir language and culture, UNESCO has launched a programme to develop e-tutorials for local schools.

Five digital tutorials have been compiled and published under this programme so far: three CDs *My Yukaghir Language*, in the Odul- and the Vadul-dialect versions, intended for kindergarten and primary school children, as well as two DVDs, *Yukaghir Dress* and *Tales of Elders*, designed for secondary and high school students.

Odul speaker L. Dyomina has voiced the content of audio tutorials, featuring conversations, folk tales, songs, and children's poetry. Two scholars—P. Prokopieva, head of the Paleoasiatic Philology Department at the Institute for Northern Minorities Problems (Russian Academy of Sciences' Siberian Division), and M. Lukina, a senior fellow at this same department—have compiled the texts.

The *Yukaghir Dress* DVD has been created by the historian L. Zhukova, a senior fellow at the Institute for Northern Minorities Problems. The text is richly illustrated with photographs taken by the author herself, and is presented to a folk music accompaniment. One of the rare bits is a recording of a Yukaghir craftswoman's vocabulary.

V. Shadrin, who works at the Institute's Department of History, Ethnography and Archeology, has compiled the other DVD, offering an opportunity to see living Yukaghir elders and hear them speak.

Digitizing Audiovisual Heritage

Yukaghir folklore recordings made in Yakutia under the UNESCO-sponsored project are digitized for better conservation. Many of them are offered to schools to be used for lessons of the Yukaghir language and culture.

Eleven CDs and DVDs have so far been published. L. Zhukova, P. Prokopieva and M. Lukina, as well as the author and journalist N. Kurilov, have contributed materials, featuring songs, stories, tales and legends of the Yukaghir people. V. Shadrin has put all the bits and pieces together.

The researchers involved in the project believe that tradition-bearing communities should themselves stand to benefit from what they so eagerly share with others. This is why all the discs compiled on the Yukaghir language and culture are made readily available to members of the indigenous community as well as the academia.

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Multilingualism in the Republic of Dagestan

According to the 2002 census data, the territory of the Republic of Dagestan is home to 122 nationalities.

The republic has no *titular nation*, its political attributes vested today in 14 ethnic groups, whose languages belong to three families:

- *the Nakh-Dagestani branch of the Ibero-Caucasian family of languages*: Avars (together with 13 ethnoses having separate languages akin to the Avar language: Andis, Archins, Akhvakhs, Bagulals, Bezhtins, Ginukhs, Godoberins, Gunzibs, Didoys, Karatins, Tindals, Khvarshins, Chamalals), Aguls, Dargins (including Kaitags and Kubachins), Laks, Lezgins, Rutuls, Tabasarans, Tsakhurs and Chechens (including Chechen-Akins);
- *the Turkic group of the Altaic family of languages*: Kumyks, Azeris and Nogais;
- *the Indo-European family of languages*: Russians and Tats.

The Constitution of the Republic of Dagestan says: “The state languages of the Republic of Dagestan are Russian and the languages of the peoples of Dagestan” (Art. 11), but it does not specify either the nations or the languages of Dagestan. This is not due to disregard of these matters but on the contrary, to their great significance. The fact is that any attempt to create such a statutory list of nations and languages would inevitably cause a wave of mutually exclusive protests and essentially unresolvable disputes.

The complexity of the language situation in the region also stems from the fact that the exact number of languages of Dagestan has not been established yet; as a rule, they speak of approximately 60 independent verbal languages.

Some languages of Dagestan ethnic groups have distinct dialects, which severely impedes the development of a nationwide literary language of these groups. For instance, the *Avar* ethnicon, in a restricted sense, which comprises at least 13 linguistically independent ethnic groups, also has seven distinct dialects. True, in this case the Khunzakh dialect of Avar, or the *bolmac*, has served for more than 300

years for the entire Inner Dagestan (“Avaria”) as a so-called multi-service language. Therefore, not only the Avars proper but also all the Avars (i.e. the above-mentioned 13 ethnic groups with their own languages) are still fairly fluent in the Khunzakh language. For the inhabitants of the whole of “Avaristan” the bolmac still determines the ethnic identification of the ethnic groups calling themselves Avars. The modern Avar language evolved from the bolmac.

The *Dargin* nationality unites the speakers of three linguistically kindred languages: Dargin, Kaitag and Kubachi. Besides, the speakers of Dargin proper are sharply split dialectally into at least Akushins, Urakhins and Tsudakhars. By observers’ estimates, the linguistic features of these dialects are so strong as to rule out the understanding of anything said by a speaker of one dialect by a speaker of another. Moreover, traditional “Darginia” has not evolved an interethnic communication language feeling no need for it. While in “Avaria” the bolmac united into a single community not only dialectally disparate jamaats⁵³ but also linguistically independent ethnic groups, the separate unions of jamaats in “Darginia” had no need for unification. The Dargin literary language formed in the socialist era. It is based on the Akush dialect because Akusha was the capital of the most important union of jamaats, Akusha-Dargo. Observations and polls suggest that Dargins are reluctant to learn their literary language, speaking among themselves in their own dialects and preferring to communicate in Russian with Dargins from other jamaats.

Dagestanis take the knowledge of *Russian* very seriously because the language opens the door to great opportunities for social mobility, both horizontal and vertical. Russian in Dagestan is not merely a language of interethnic communication but, in substance, a nationwide language of the republic, which ensures all the sociopolitical life, science and the greater part of the cultural life of Dagestan society.

Thus, the development of literary languages of Dagestan nations is being handicapped, on the one hand, by jamaat languages (which may be independent languages or dialects), and on the other, by the Russian language, which assumes, *inter alia*, the functions of intranational communication wherever dialectal differences get in the way. As a result, Dagestanis, with the possible exception of Avars, rather neglect the study of their native literary language, giving preference to the language of their jamaat and to Russian.

Many intellectuals in Dagestan, concerned about the future of native languages, believe that polyethnic Dagestan is in a multifaceted crisis, which covers both the

⁵³ Jamaat: a Muslim community; in Dagestan, it is the community of all adult males living in the same area (a village jamaat, the Lak district jamaat, the Avaria jamaat, etc.).

demographic and ethnocultural reproduction and manifests itself in both people's life and consciousness. De-ethnisation processes have become pervasive. A sense of belonging to their nation is not a central concern for a great many Dagestanis, who have made, or are making, their choice in favour of other national values.

Recent decades saw a decline of interest in their native language and culture among young Dagestanis. By a 2002 population census, the number of speakers of each Dagestani language is almost the same as the number of members of the respective ethnic group. In reality, however, these figures differ widely. Some of the developments named as possible causes of this sad phenomenon are urbanisation, growing intermarriages, labour migration, national nihilism and some other factors of modern life.

Aware of the need for preserving vernaculars as the basis of ethnocultural systems in the context of increasing informational unification, public authorities in the Republic of Dagestan are giving much consideration to promoting multilingualism in all spheres of social life.

Further government support of ethnic cultures, languages, media and publishing is the subject of annual messages of the president of the Republic of Dagestan. A number of legislative acts and comprehensive programmes were adopted, which include the tasks of developing a regional language policy.

On 27 February 2008 the People's Assembly of the Republic of Dagestan passed the law On the Approval of the Programme of Development of Ethnic Relations in the Republic of Dagestan for 2008–2010. The implementation of this government programme will help to eliminate or minimise possible negative aftereffects in interethnic relations and to conduce to their harmonisation.

Great hopes for positive change in the complicated language situation in Dagestan are pinned on the Research Council on the Language Life of Dagestan, which was recently set up at the G. Tsadasa Institute of Language, Literature and Art. With a view to establishing a scientifically based regional language policy, the council pooled the efforts of a large group of experts in the humanities: philologists, culturologists, ethnologists and political scientists.

The council, in particular, coordinates the compilation of spelling, defining and bilingual dictionaries. This is very important: documenting the vocabulary of a language significantly reduces the very real danger of its extinction, and in some cases, dictionaries are perhaps the only hope for its preservation. The publication of great academic bilingual Russian–Dagestani dictionaries for the main written literary languages was a big event in 2003–2008. Each of these dictionaries has 30,000 to 40,000 entries. Dagestani-Russian dictionaries are in preparation. With the assistance of the Max Planck Institute for Evolutionary Anthropology in

Germany and Leiden University in Holland, Dagestani scholars created and published 10 dictionaries of unwritten languages.

In the cultural situation of Dagestan, which features the coexistence of not merely different types of culture, but also different patterns of cultural behavior, special emphasis is laid on the general education system. The national school faces a special psychological and educational challenge: to ensure mutual understanding and cooperation in the context of diversity in culture and world view and difference as the norm.

Under the Republic of Dagestan Education Law the languages of instruction in the republic are Russian and native languages; in Russian-language educational institutions native languages are a compulsory subject.

Most of preschool institutions in Dagestan are concentrated in towns with a multinational population. Many kindergartens run special mother tongue classes according to methods developed by specialists at the A. Taho-Godi Dagestan Pedagogy Research Institute.

Native language appears as a major subject in the curricula of all types of comprehensive school. In mononational schools instruction in the first four years is in the native language, then in Russian. They allot five or more hours a week to the study of a native language in the first form and up to one hour in the eleventh form. Most pupils in these schools have a good command of their mother tongue, show deep and solid knowledge, and engage in literary pursuits in their native language.

Teaching materials for the languages of Dagestan are continuously updated. Since 2000, 1,926,380 copies of 300 titles of textbooks in 13 languages have been published; work is in progress on the redaction of another 65 learning aids in native languages. In the last three years, 25 million rubles worth of budgetary funds has been laid out for this purpose.

Annually the Dagestan State University, Dagestan Pedagogical University and four teacher training colleges graduate as many as 250 native language teachers for schools, and more than 950 teachers of Dagestani literature upgrade their professional skills under various programmes at the Dagestan Institute for Advanced Training of Educators.

On 26 April 2007 the Dagestan Ministry of Education and Science held an enlarged collegium, which discussed “The Implementation of the National and Regional Component of Education in the Republic of Dagestan”. The collegium decisions include a set of measures towards upgrading native language teaching in schools.

The republic has developed a fairly extensive information structure and created generally favourable conditions for enforcing citizens' constitutional right to information, also in vernacular languages.

Dagestan has more than 400 registered print and electronic media. Some 200 newspapers and periodicals come out at varying frequencies. Of this number, more than 90 publications were established by government and municipal bodies; their total circulation was over seven million in 2007.

The Woman of Dagestan magazine, which comes out in seven languages, was established by the republic's parliament and government. The Writers' Union of Dagestan publishes literary journals: *Friendship* (in Avar), *Rainbow* (in Dargin), *Morning Star* (in Kumyk), *New Moon* (in Lak), *Samur* (in Lezgin) and a children's magazine, *Eyas*, which appears in the Avar, Dargin, Kumyk, Lak, Lezgin, Nogai, and Tabasaran languages.

Regional sociopolitical newspapers, which are published in 14 languages, feature great variety.

Electronic media are developing dynamically: in addition to GTRK Dagestan (State Television and Radio Broadcasting Company), which is a division of VGTRK (All-Russia State Television and Radio Broadcasting Company), a separate Republic State Broadcasting Company called Dagestan has been in existence since 2004.

GTRK Dagestan broadcasts in 14 native languages (50 minutes a day each in Avar, Dargin, Kumyk, Lak and Lezgin, 20-30 minutes a day each in Agul, Azeri, Nogai, Rutul, Tabasaran, Tat, Tsakhur and Chechen) and telecasts in 12 languages. The Dagestan Republic State Broadcasting Company airs in seven languages.

Dagestan's linguistic diversity is mirrored in cyberspace. Web pages have been created by research and educational institutions concerned with native languages of Dagestan. These institutions publish research papers on individual languages. There are websites in the Avar, Kumyk, Lak, Lezgin, Tabasaran and Tat languages. National type fonts for languages of Dagestan are under development.

The amount of Internet content in the republic's languages is little yet. It is due to different reasons, including the slow penetration of the Internet into remote regions of Dagestan, problems of national type fonts and the low computer literacy level of the population. However, as the number of Internet users in the Republic of Dagestan grows, the number and importance of ethnic websites will undoubtedly grow, too, for the Internet is a major resource for overcoming the geographic disunity of minority nations.

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Ethical Aspects of the Preservation of Linguistic Diversity in Information Society

There are many positions from which the politics of preserving linguistic diversity and many agencies' relevant efforts might be studied. This extremely topical field attracts the attention of numerous experts in various areas of research. In this contribution, the preservation of linguistic diversity is analyzed from the point of information ethics, one of the aspects of information society ethics. According to available tradition, *information ethics* (or *INFOethics*) is understood as a system for analyzing ICT from the point of their impact on socially accepted models of the interaction of members of a particular community as a whole, particularly their impact on human rights as one of the aspects of these models.

Information Society Ethics and UNESCO

Ever since the late 1970s, UNESCO has been calling experts' and high officials' attention to problems related to the ethical aspects of information society. UNESCO-initiated reflections on and discussions of the various formats and levels seek to answer the following questions:

- What are the basic ethical principles to proceed from in globalization?
- What ethical and social fruit can the skyrocketing use of ICT bring?
- How to balance out the interests of society and right holders?
- Who should be responsible for the authenticity, integrity and precision of information?

Discussions on these themes have been held even at the highest level. The final documents of WSIS (the World Summit on the Information Society) recognize the relevance of ethical norms for information society. These norms should promote justice and personal value and dignity. The documents also stress that respect for human rights and freedoms—including the inviolability of private life and freedom of thought, conscience and religion—is to lie at the basis of ICT use and of creating content in conformity with pertinent international instruments.

Thus, the values proclaimed by the Universal Declaration of Human Rights are the starting point of UNESCO for the definition of the ethical principles of information society:

- the right to freedom of opinion and expression;
- universal access to information (especially information of the public domain);
- the right to education;
- the right to inviolability of privacy; and
- the right to participate in cultural life.

UNESCO efforts in the sphere of scientific and technological ethics concentrate on the following: organization of discussion forums; standard setting; consultation support and enhancement of the potential; education and information on ethical issues.

In 2005, UNESCO started the elaboration of an open global database on bioethics and the ethics of other fields of science and technology, the Global Ethics Observatory (GEObs), whose duties include:

- definition of the basic ethical principles;
- search for trailblazing experience in this field;
- assessment of damage done to the ethical principles of ICT and damage done through the use of ICT; and
- collection of instances of conscientious practice at the most diverse levels.

At present, GEObs contains the following databases:

1. Who's who in ethics (individual experts around the globe).
2. Institutions, centres, commissions and committees in the area of ethics.
3. Ethics teaching programmes.
4. Ethics-related legislation and guidelines.
5. Codes of conduct.
6. Resources in ethics.

GEObs materials are available in the six official United Nations languages, Russian among them.

The study of ethical aspects of information society is among the priorities of the UNESCO intergovernmental Information for All Programme (IFAP). In 2006, UNESCO offered a draft Code of Ethics for Information Society to academic circles

and the public for discussion. The document was conceived as an instrument of self-regulation open for signing by all interested parties and a means of enhancing information about the ethical aspects of information society. The code was rather harshly criticized for its overly generalized and declarative character. More precise codes of ethics are expected to be elaborated later on within precisely determined sectors or groups of actors—technological professionals, users and their communities, Internet journalists, etc.

The new IFAP Strategic Plan for 2008–2013 narrows the study of ethical problems of the information society to information ethics. On the one hand, this limitation allows focus efforts on the use of ICT and disseminated information/content to provide people ever new opportunities with due respect for their human dignity. On the other hand, other aspects of information society ethics might stay for some time outside close attention of the UNESCO Information for All Programme.

Information Ethics and Linguistic Diversity

The preservation of linguistic diversity is one of the ethical challenges of information society, which can be regarded from the point of information ethics.

Globalization and the rapid development of ICT cannot but influence the linguistic dynamism, with its intricate structure. It implies the development of the conceptual field, which includes ever new meanings necessary to describe digital technologies and related processes; the acceleration of languages' impact on each other due to the use and opportunities of digital technologies; and, last but not least, the greater attraction of certain languages due to the objective imbalance of the use of languages for content placement and information exchanges in cyberspace.

The use of a language on the Internet decreases the risk of its extinguishing as its speakers get an opportunity of communication through e-mail, chats, messengers, etc; of reading news, fiction and professional literature, and receiving other relevant information through the Internet. We have to acknowledge, however, that language users in various cultures perceive the spread of digital technologies differently and ambiguously. The attempts to elaborate the general principles of spreading ICT often clash with the cultural and linguistic specifics of particular communities. A mechanism has not appeared as yet to launch an active process in which the users of various languages would involve of their own free will in the development and reproduction of digital technologies, while the discussion of cultural and linguistic specifics starts all too often only after problems arise with the introduction of ICT, certain human rights become endangered, and so on.

Many international documents on the issues of information society [1; 2; 3; 5; 7; 8] postulate that respect of human rights and freedoms is impossible with no access to information and services in the native language.

Really, it is practically impossible in the present-day world to implement the right of opinion and its expression unless cyberspace offers technical and technological facilities for self-expression in the native language.

Progress toward universal access to information necessarily demands information offered in native languages. The right to education cannot be properly implemented unless tuition is in the language of which the student has a fluent command. It is hard to implement the right to participate in cultural life in the absence of cultural and so linguistic environment in cyberspace because of great geographic distances between members of a cultural community. Even the implementation of the right to the inviolability of private life demands ICT safety regulations presented in their users' native tongue, to avoid misunderstandings, as these technologies penetrate ever new fields of life.

The neutrality of ICT toward individual languages is one of the essential related information ethical problems.

There are two mutually opposed opinions on this score. Those who approve the real, not merely declared, neutrality of ICT regard the developed and implemented technologies as non-discriminatory by nature toward any particular cultures and languages, i.e., what matters in this respect is the use of ICT and the scope of their penetration of the various spheres of life. The cultural affinity of ICT with the milieu in which they are used thus recedes into the background.

The opposite point finds expression in Charles Ess' paper: as he sees it, though everyone knows CMC (computer-mediated communication) as morally neutral and value-free, many studies show that technologies "embed and foster the cultural values and communicative preferences of their Western designers," especially North American, to clash with the cultures of receiver countries in Asia, Latin America and the Arab East. Proceeding from this point, we can say that, from their inception, ICT promote the survival and dissemination of some languages to the detriment of others. The author highlights the danger of "computer-mediated colonization" as product of the naïve and well-meaning plan of bringing the world together, which ignores the practically proved hazards of the headlong implementation of ICT without due awareness of indigenous cultures and values [10]. Such undesirable results can be avoided if we take culture into consideration as the man-machine interaction takes shape.

Thus, as I see it, the neutrality of ICT toward languages is one of the pivotal aspects of information ethical analyses. The elaboration of their practical methods and criteria should become one of the fields of research activities in this sphere.

Proceeding from the above, the preservation and development of linguistic diversity can be analyzed from the information ethics point through the studies of ICT impact on the implementation of human rights related to the use of native language, while beneficial conditions for the implementation of human rights irrespective of the language one speaks should become the principal mission of information ethics from the point of the preservation of linguistic diversity.

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**Presentation of Ethnic Languages of Russia
in the Russian Internet Segment:
Research Project on the Development
of Multilingualism in Cyberspace**

In 2007, the Interregional Library Cooperation Centre and the Russian Committee of the UNESCO Information for All Programme established partnership in yet another field, the development of multilingualism on the Internet.

To make the idea of the situation as comprehensive as possible, we have studied international documents—of UNESCO, in the first place, and analyzed other countries' experience. We have certainly made it a point to collect as much information as possible about the development of multilingualism in Russia's cyberspace. However, collection of relevant information in our country has unexpectedly presented major problems. We have not come upon a government agency or NGO to specialize on this, while materials we have found on the Internet are either fragmentary or not quite reliable.

That is how the idea emerged of a study of measures taken in Russia to develop multilingualism in cyberspace; assessment of the fullness of the representation of languages spoken in Russia in the Russian segment of the Internet; detection of the circle of agencies and experts that might be related to the problem, and establishing contacts with them.

Studies of relevant literature, Internet resources monitoring, and contacts with expert linguists and developers of fonts, e-dictionaries, information retrieval systems and websites in languages spoken in Russia resulted in the elaboration of two questionnaires. One of them, Measures Taken in Russia to Develop Linguistic Diversity on the Internet, was circulated with accompanying letters among the heads of all constituent entities of the Russian Federation. The other, Measures Taken by Russian Universities and Research Institutes to Develop Linguistic Diversity on the Internet, was circulated in universities and research establishments.

The questionnaires have helped us to learn about:

- sources of funding electronic data resources in ethnic languages used in Russia;
- the role of municipal and regional authorities in the creation and development of electronic data resources;
- the goals and basic content of such resources and developers' problems;
- languages used in their development and the extent of translation into these languages;
- the quality of used fonts;
- the availability of machine translation systems and electronic dictionaries;
- the availability of information retrieval systems adapted for Internet search in ethnic languages;
- documenting ethnic languages spoken in Russia; and
- the topicality of the problem.

Research Results

The monitoring involved the administrations of 46 constituent entities of the Russian Federation, numerous research institutes and major universities.

14 administrations—of Buryatia, Mordovia, Tatarstan, Komi, Chuvashia, Adygea, Udmurtia, Khakassia, Dagestan and Yakutia, the Murmansk, Orenburg and Rostov regions, and the Khanty-Mansi Autonomous Area—said they already possessed or were developing new electronic data resources in the languages spoken in Russia and other CIS countries.

The following establishments are documenting languages spoken in Russia and other CIS countries: Tomsk State University (Siberian languages), Kalmyk State University (Kalmyk), Bashkir State University (Bashkir), Chuvash State University (Chuvash), and the Institute of Ethnology and Anthropology of the Russian Academy of Sciences (Ukrainian and Belarusian). Bashkir and Tomsk state universities have placed their research finds on the Internet.

Diverse resources are represented in Russia's ethnic languages on the Internet: radio and television broadcasting, media outlet portals, university and national library websites, electronic libraries, databases, dictionaries and study books. Computer programmes (Windows XP, Windows Vista, Linux, MS Office 2000, Mozilla Firefox, Mozilla Thunderbird) are localized in certain languages. Computer games

are being developed to help children with native language studies. CDs offer information about ethnic history and culture and language teaching aids. Documentary films and cartoons are made.

As our study shows, electronic data resources in ethnic languages are developed on the initiative of regional executive bodies, ethnic culture societies, universities, libraries, research institutes and private persons.

Programmers, designers, linguists, librarians, archivists, university professors and students, translators, journalists, historians and other researchers, public servants, writers, poets and musicians are involved in the creation of such resources.

Help in the creation and development of data resources comes most often from government agencies, Russian and foreign foundations and programmes aiming to fund and promote language study and preservation—the Russian Foundation for Fundamental Research, the Russian Humanitarian Research Fund, the Endangered Languages Documentation Programme, the School of Oriental and African Studies, the Soros Foundation and others; national libraries, public organizations, the Russian Association of Indigenous Peoples of the North, media outlets, archives, television and radio companies, publishers and private persons.

Projects are usually funded from regional budgets or the money of organizations on whose initiative data resources are created. Foundations offer grants, and there are public and private donations. More rarely, there are federal and municipal allocations or federal targeted programme grants.

Our respondents differed in evaluating the role of regional and municipal executives in the creation of data resources in ethnic languages. For instance, regional administration spokespersons pointed at regional authorities' contribution, saying that such websites are usually established on their initiative, and were extremely sceptical about municipal authorities' role. Universities complained of the regional and municipal authorities' indifference and said it was one of the worst problems in the work for electronic data resources in ethnic languages.

Websites and CDs in Russia's ethnic languages provide public access to information, educational, cultural and research resources, and help to preserve and develop those languages and ethnic cultural heritage. They promote youth interest in and respect of ethnic history and traditions.

Ethnic language data resources mainly contain regional and local news, historical and cultural information about titular and other ethnic entities, books, articles, dictionaries and other materials for language study, bibliographic databases, and information about universities.

These resources are mostly meant for the public at large. Our respondents paid special attention to the following user categories: school and university students, people taking interest in ethnic languages and cultures, language researchers and teachers, native speakers, public servants, journalists and community activists.

10-40% of materials available in Russian are usually translated as bilingual and multilingual websites are established. More translations are not affordable. Russian-language information is in greater demand in bilingual websites than ethnic-language one.

Respondents highlighted the following topical problems.

Many complained of qualified personnel shortages. The establishment and maintenance of ethnic-language resources demands top-notch programmers and other experts with fluent command of three languages—Russian, English and native. Universities reported the shortage of experts combining linguistic and computer erudition. They also complained of underfunding, small wages and the shortage of automated facilities.

Many respondents said that the number of indigenous language speakers was shrinking and their access to the Internet limited. Many young people, who make a majority of Internet users, do not know their native language and prefer to study Russian and English, in which they have online communication, while elderly people, who know their native language, mostly live in distant settlements and have no computer literacy and Internet access.

A majority of respondents complained of the absence of standardized ethnic language fonts. Available fonts were mostly assessed as passable and only few as good. Tatarstan's administration alone said Tatar language fonts were excellent. Udmurtia has standardized its own fonts for free access on the website of the republican Ministry of Ethnic Policy.

Such problems were mentioned as the absence of a unified federal policy of indigenous language support on the Internet, the embryonic state of the regulatory environment, the absence of regional centres to offer quality computerized information, and inadequate tuition in ethnic languages. More than that, indigenous ethnic entities are usually small, so the developers and proprietors of ethnic-language information resources mostly concentrate on local news at the expense of national and international ones.

Many administrations and universities said they were interested in the development of electronic dictionaries and interpreters for indigenous languages. Certain universities and research institutes are working at them. When ready, e-dictionaries appear on CDs and on the Internet—particularly in educational portals and university websites.

Most respondents said there were no information retrieval systems adapted to indigenous languages. The Chuvash republican government alone said the Chuvash Media portal offered Chuvash-language retrieval, and evaluated the system as satisfactory.

An overwhelming majority of respondents said that the development of multilingualism in cyberspace was of critical importance. Meanwhile, they complain of the extremely limited Internet representation of ethnic languages spoken in Russia, though such resources promise not mere survival of languages and cultures but a mighty impetus to their development.

The Development of Multilingualism in Cyberspace: Problems and Prospects in Russia and Abroad

When we turn to foreign materials on the development of multilingualism in cyberspace, we see that other countries share their problems with Russia. Here are several practical instances.

1. *Government support.* The Russian Federation is doing much to develop multilingualism: there is a body of law to protect minority languages, promote their study and development, and guarantee citizens' rights to use such languages at home, in the law court, in paperwork and tuition, etc. Numerous ministries and agencies in many parts of Russia support organizations circulating ethnic-language information on the Internet. In many instances, relevant resources are established on their own initiative. However, Russia has not yet elaborated the policy of using ethnic languages in cyberspace.

The situation is similar in many countries. Daniel Pimienta in his *Linguistic Diversity in Cyberspace: Models for Development and Measurement*, and Daniel Prado in *Language Diversity on the Internet: the Political and Legal Context*,⁵⁴ also complain of the absence of a language policy and small government interest in developing multilingual electronic content. Prado says that private organizations, with their limited funds, and intergovernmental organizations without explicit duties have to do the job all too often.

2. *Software.* Inferior quality and shortages or downright absence of necessary software are mentioned as major problems of promoting multilingualism in cyberspace not only in Russia. The absence of character sets for a great many

⁵⁴ These contributions translated into Russian can be found in the book Измерение языкового разнообразия в Интернете on the Russian IFAP Committee website <http://www.ifapcom.ru/365/523/>.

languages is one of the greatest hindrances. Languages with no written form are even harder put appearing on the Internet.

Development and free circulation of opensource software is one of the ways to solve the problem. Beginners would do wise to draw on the experience of the developers of software for technical problems of introducing a particular language in cyberspace.

Programme localization is also relevant to many Asian and African languages. According to J. Mikami [1], though Windows XP is localized for 123 languages, they are mostly European. Microsoft is reluctant to offer software oriented on other languages as ethnic minorities' demand as it will hardly cover the costs.

Pimienta [1] says that it is impossible to make do with character sets for new languages. It is also necessary to develop spelling and grammar dictionaries, and interpreter programmes. Computer translation has been a challenge to developers for several decades. Computers cannot compete with man to this day. However, special programmes can speed up and facilitate translators' job, and quickly offer users intelligible translations into their own language⁵⁵.

Where the technical problems of presenting languages in cyberspace are concerned, I should like to mention Marcel Diki-Kidiri's book *Securing a Place for a Language in Cyberspace*, which can be used as a guide in tackling these problems [2].

3. User community. Just as foreign experts, our respondents point out that the most active Internet users all too often cannot read or write in their own native language. This is one of the reasons of small demand for minority language materials.

To set up users' community, the younger generation should learn their mother tongue with the help of schools, libraries, cultural centres and events [2], and good online classes [1].

The Internet must also offer topical information in many languages and communication forums as an incentive for using one's native language in the worldwide web.

Access to the Internet is another aspect of forming users' community. The share of people knowing their ethnic language is greater in the countryside and small towns than in major cities. However, it is hard to get on the Internet in remote localities because of an absence of relevant facilities and small public incomes.

⁵⁵ See for details Переводческие технологии для Европы http://www.ifapcom.ru/files/publications/human_techn_rus.pdf.

Providers and the government should join hands to solve the problem—the former by giving access to the Internet, and the latter by keeping Internet tariffs at an affordable level.

It is also necessary to increase public computer literacy.

Conclusion

As we see from the above, many countries share problems of developing multilingualism in cyberspace. It takes closer partnership of all interested parties and studies of Russian and foreign expertise to solve those problems. It is also necessary to draw relevant government policy, train experts, develop software, enhance public computer competence, and provide access to the Internet. Cooperation with users' communities should become one of the focal points of support for endangered languages because it depends on such communities whether resources in their native languages will find their user, whether those resources will develop and, in the final analysis, whether their languages will survive.

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The Development of Linguistic and Cultural Diversity in Cyberspace: a Cultural-Psychological Approach

Various academic approaches are possible as we regard the development of linguistic and cultural diversity in cyberspace. The cultural-psychological approach allows the determination of theoretical and methodological bases for such practical development, and charting the ways to restructure the system of these practical efforts toward their greatest possible efficacy.

To begin with, we should indicate the basic precepts from which I proceed. By culture, I understand a relatively steady system of assumptions, which the community shares (E. Schein), and which is manifest in the sum total of interactions within the community and with the world outside it, i.e., the environment and other communities (C. Wissler). The manifestations of this sum total might be coordinated either in a formalized way or spontaneously.

The efforts to develop linguistic and cultural diversity are an attempt to meet one of the most formidable challenges of globalization—the levelling off of cultural differences. As we become aware of this challenge, we also see that the preservation of diversity is merely not only for sustainable development but also for sheer survival of humanity. As cultural research shows, monoculture leads the community to stagnation and final degradation as monoculture responds to challenges only here and now, and brings its community to dramatic upheavals once living conditions face a major change. Social development bases on cultural diversity in an intercultural dialogue. In a poly-cultural society, a unique view of the various aspects of interaction develops within every participant subculture, thus promoting exchange of ideas. Cultural diversity brings a wide range of cultural models. Though their relevance for practical social goals might differ, they are all incomparably more effective in tackling multifold problems and when we face challenges not a single culture has encountered before. *Thus, the preservation and development of cultural diversity is among the critical prerequisites for sustainable progress of humanity.*

The link between language and culture is beyond doubt. On the one hand, every culture develops its own language, and cultural models find evident reflection in the language forms and content. On the other hand, language determines the mental structure and so is one of the culture-formative factors. It would be wrong, however, to treat language and culture on a par with each other. Culture is determined not only by language. Likewise, language does not reflect culture alone. The preservation and development of linguistic diversity is only one of the many aspects of the preservation and development of cultural diversity.

As virtual reality, cyberspace is product and one of the expressions of culture at once, i.e., the cultural environment determines its development, on the one hand, while cyberspace provides an environment for cultural manifestations, on the other hand.

Culture should not be analyzed outside its development. This is one of the pivotal principles of the cultural-psychological approach. Researchers often erroneously view culture as something unchangeable and preset from the outside (M. Cole). The error stems from the relative slowness of cultural changes, due to which the bearers of culture cannot properly realize the importance of such changes as they are inside the process. However, every culture undergoes perpetual changes. So, whenever we pose ambitious social goals, e.g., the preservation and development of linguistic and cultural diversity, we should take into consideration that we cannot merely change the response of cultural subjects within the existing culture. As soon as we reach our goal, we change culture to make it open to the manifestation of desired ways and models of response. In the context of preservation and development of linguistic and cultural diversity in cyberspace, the question comes as follows: *do we desire the greatest possible preservation of the available cultures, or do we wish to change them so as to make their bearers desire involvement in the establishment, development and use of cyberspace?*

To be sure, this choice is impossible in the actual situation in the world. Whatever goal we pose proceeding from one of the answers to this question will never be attained. With globalization underway and ICT rapidly developing, we cannot preserve cultures intact because a culture that has not used the opportunities provided by cyberspace and a culture which has developed the demand for such use are, in fact, two different cultures. On the other hand, it is hard to attract the bearers of different cultures to the use of cyberspace. Such efforts might be opposed due to the mechanisms of self-preservation, which every culture possesses as it resists new forms and contact patterns imposed from the outside.

There is no way to bring the progress of cyberspace and digital technologies to a standstill, just as it is impossible, accordingly, to preserve cultures the way they are today. So, as I see it, *the preservation of cultural diversity as cultures are transforming should be our central goal.* Cultural transformation does not destroy cultural identity

only in evolution as the cultural structure gradually integrates new forms and patterns. Sharp changes most often destroy culture. That is why we should see that ICT and cyberspace are not only their users' benefit but also cultural threats when implemented too rapidly. At the same time, bearing globalization in mind, a culture is also doomed when it does not adopt ICT. That is the way to quit the global cultural system, which is deathly to a particular culture. So, I suppose, the question about the correlation of linguistic and cultural diversity and the development of cyberspace should come as follows: *how to develop cyberspace for the greatest possible smoothness of cultural evolution to provide sufficient time for the preservation of cultural diversity?*

In search for an answer to this question, we should not forget one of the principal problems of the study of intercultural differences: every one of us is the bearer of a culture, who tries to understand other culture proceeding from the models of his own culture, which he views as the only correct ones. Every culture develops its own system of values and assumptions, on whose basis interaction patterns rest. Whenever we refer to the value of information as such and, in particular, to the importance of developing ICT, we speak on behalf of members of the society we presently know as information society. As I see it, we make a bad methodological error in this: as we seek to preserve cultural diversity, we use the values and assumptions of only several cultures as the yardstick for the correctness and success of the development of a great number of thoroughly different cultures. However, even European culture came to realize the value of information as one of the basic values quite recently, from the historical point. We never doubt the merits of information today—but can we say for sure that all should share this opinion? Value expansion boils down to cultural expansion, which has nothing in common with the preservation of cultural diversity. To see how to preserve linguistic and cultural diversity to the greatest possible effect, we should look at the development of ICT and cyberspace from the point of other cultures.

In short, it is wrong to regard the development of different cultures and the preservation of cultural diversity one-sidedly, from the point of information society's culture alone. Even when we are sure that our model of cultural development is correct, this model used on its own does not suffice. It is just as wrong to influence cultures from the outside and judge the success of their development by foreign yardsticks. This point is illustrated with an example cited by Cole. After World War II, the developed countries sought to make education the tool of rapid economic and social progress of the countries we presently know as less developed. Just as the progress of ICT and cyberspace, education was regarded those days as a cure-all and the source of development. True, education remains a value even today. A bad blunder was made, however: European educational methods and content did not

work in certain African countries as they made no consideration for thorough cultural differences due to the practical experience of the involved tribes. European tuition was no more than an attempt to change their state on the outside. The external criteria used (the number of people receiving education) reflected not the actual progress of education but the extent of accepting patterns foreign to the involved culture. We know the result: the education gap has not been bridged to this day despite titanic efforts of many international organizations, and universal basic education remains topical worldwide.

This tuition error was made though anthropologist P.K. Bock, interested in culture-personality relations, studied cultural differences in cognitive development even in the 1930s. He proceeded from the idea of an individual style of thinking intrinsic to every culture. J.W. Berry and H.A. Witkin developed on this idea in the 1960s. As they studied the culture-cognition link, they demonstrated the differences between the cognitive styles of the bearers of different cultures.

The external criteria used in the past and at present to assess educational systems are simple in use and convenient in accounting. It is really easy to make statistical tables of the number and percentages of people with primary, secondary and higher education. This simplicity, however, has its cons just as pros. Such methods make institutions that have assumed the noble mission of improving education orient on criteria indices. With time, ever more labor and money is spent on improving indices. Not that the used criteria are wrong. The thing is that external criteria do not really change cultures but merely impose alien external forms on them.

Today, we are making the same error as we disseminate (or impose) the ideas and attributes of information society with no account for cultural specifics. To give every person on earth the opportunity of going to school is necessary but not sufficient to attain universal basic education. Similarly, to expand digital nets and increase the number of computers does not mean to develop cyberspace.

The Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, endorsed by the 32nd session of the UNESCO General Conference in October 2003, “deals with four aspects that must be taken into consideration so that the greatest number of people profit from the potential of ICT”:

- development of multilingual content and systems;
- facilitating access to networks and services;
- development of public domain content;
- reaffirming the equitable balance between the interests of right-holders and the public interest.

The external developmental criteria of the ICT and cyberspace potential might be absolutely correct, but I do not think that they can be applied to considerable effect unless criteria intrinsic to a culture are also applied. To assess the number of people with access to the Internet and of websites, and the volume of information they contain means gauging the effect but not the process of cyberspace development and cultural changes. To work for the numerical growth of these indices means to develop the indices themselves, not the actuality underlying them.

The character of internal criteria follows from the definition of culture in the beginning of this contribution. If the patterns of interaction are determined by the structure of societal assumptions, none but *the structure of such assumptions should be the principal indicator of success in integrating cyberspace and culture*. In this, a special evaluation system should be arranged for every particular culture proceeding from the development of its axiological scale.

Culture is a product of human coexistence, long enough to elaborate steady patterns of societal contacts (E. Schein and L.G. Ionin). Accordingly, the motive forces of cultural development are manifest in an integrated process of coordinating societal motifs, values, assumptions and demands. In particular, the development of cultures that can be defined as information society cultures depends on the presence of human demands and motifs for information production and exchange, whose implementation enhances the efficiency of solving social problems enough to make these cultures a major social value.

The development of ICT and cyberspace in these cultures is not determined by external factors but, in particular, transforms a community's cultural values into relevant interaction patterns. The realization of this point makes it possible to assume that *the development of cyberspace should base on the enhancement of information value in the value hierarchy of a particular culture with cultural and linguistic diversity preserved and for the promotion of its preservation*. The enhancement of information value in the societal value hierarchy, in its turn, leads cultures to independent development of ICT and automatically improving external indices because the priority of particular cultural values determines the priorities of action by the bearers of a certain culture. It is surely harder to gauge the structural changes of values in every culture than judge all cultures by unified external criteria. However, contemporary science has an ample choice of tools for such judgment. Besides, unified criteria do not work in the assessment of cultural diversity.

Proceeding from the above, we might attempt to set approaches to the elaboration of cyberspace developmental strategies for the various types of cultures with cultural diversity and multilingualism preserved.

We do not need separate analyses of every culture to describe the approaches to strategy elaboration. Whatever of the available culture classifications does not suit this job, either. I dare propose for it a typology and concise description of cultures based on the attitude to information as value. Though it is no less conventional than any other typology, it allows a number of essential practical conclusions.

1st type, conventionally termed I cultures (I for Information): the cultures which rank information high on their value scale as a lucrative cultural commodity. The social status of the bearers of such cultures is connected with the skills and abilities in information production, procession and circulation. The development of the ICT technical and technological infrastructure is spontaneous and determined by the public at large as the bearers of the culture determine the demand for information proceeding from their personal needs and create the conditions for the ideological and financial self-regulation of the information sector, which makes an essential part of the economy. The demand for information technology and products exceeds their offer. Language is enriched by indigenous terms to describe ICT- and cyberspace-related processes.

2nd type, conventionally termed U cultures (U for Use): the cultures which rank information high enough though below basic values. Information is valuable inasmuch as it serves values these cultures regard as the higher. A U culture accepts and uses available achievements in cyberspace and ICT. The social structure is, on the whole, independent of the human ability to process information. Only experts able to tackle practical information problems are in great demand. The development of the technical and technological infrastructure closely depends on administrative volition and external factors. The information sector does not rank high in the economy, and there is only small-scale manufacture of information products. Demand for information technologies and products is just as small or even lags behind the offer. The terms describing ICT- and cyberspace-related processes are borrowed from I cultures' languages. As we can conclude, data piracy is widespread in such cultures and does not meet with public censure because the community regards information as an instrumental, practical value inferior to the terminal, essential values (M. Rokic): the public opinion views it as something outside human desires and efforts, and independent of them.

3rd type, conventionally termed O cultures (O for Other): the cultures which do not regard information as a major value. They do not use ICT achievements and cyberspace, with token exceptions, and the ICT infrastructure is embryonic, just as the demand for and use of ICT and cyberspace, and relevant production. The language has no indigenous terms to describe ICT- and cyberspace-related processes.

I regard this typology as sufficient for an initial approach to the posed problems. It allows structuring the distribution of cyberspace development efforts and, at the same time, the preservation of cultural and linguistic diversity. Strategy setting related to every cultural type proceeds from the following necessities:

1. to preserve the available value scale as much as possible, and so preserve cultural identity thus promoting the preservation of cultural and linguistic diversity;
2. to analyze the possible ways to enhance the value of information on the available value scale as promoting the development of cyberspace and the evolutionary integration/development of ICT into the interaction patterns of particular cultures;
3. to analyze the possible ways to enhance the value of intercultural contacts on the available value scale as promoting the development of cultural and linguistic diversity in and outside cyberspace.

The attempt to bring the solution of all these problems together answers the central, twofold question asked in the present contribution: how to preserve cultural and linguistic diversity as cyberspace develops and ICTs become ever more widespread, and how to develop cyberspace and use it for the preservation of cultural and linguistic diversity.

As we can conclude from the above, a unified strategy does not work in all cultures to preserve and develop cultural and linguistic diversity in cyberspace. Every cultural type determines specific efforts necessary to solve the problem. However, all cultural types share the initial stage—the study of the system of basic values and assumptions determining public conduct. In this, we should not forget that declared values and true ones may considerably differ from each other. For instance, an O culture may be mistaken for a U culture when certain structures of the O culture aim not to develop ICTs and cyberspace but to draw secondary benefit (e.g. financial) under the development motto. The realization of the true value scale is the earnest of success. Otherwise, major errors might be made in goal setting and strategy implementation to create complications. On the contrary, the awareness of the true value scale can provide the basis for strategies differing in goals and content for different cultures.

I cultures. One might think at first that such cultures do not need whatever additional efforts to preserve cultural and linguistic diversity in cyberspace. Really, these cultures and their languages not only have an ample presence in cyberspace, and possess sufficient tools for self-development and the enhancement of such presence, but also are the vehicles of information society development. A danger, however, is concealed in their very strength—the danger of gradual subjugation of other cultures to dissolve them eventually. ICT leadership tempts them to promote

their own patterns of interaction, which boils down to cultural expansion. Multiculturalism is the sphere of sustainable development. That is why strategic efforts toward I cultures should aim at increasing the awareness of responsibility for cultural expansion, which brings fruit only at the start to bring final disaster.

The impossibility to preserve their language and develop it in cyberspace is not I cultures' problem. On the contrary, they are able to suppress and obliterate other cultures. Here is a practical illustration of this point: many experts on languages on the Internet pinpoint a major imbalance—the preponderance of the English language. Users with other mother tongues have to study English for access to many information resources. The English-language I cultures do not regard this imbalance as their own problem. On the contrary, they approve the situation. However, a hidden danger may eventually come to the surface: intercultural contacts, which are essential for cultural progress, may lose their importance to the detriment of I cultures themselves.

As mentioned above, externally conditioned actions, such as legislative limitations of linguistic expansion, have no tangible effect. What we need is a system allowing cultural self-regulation to spontaneously curb such expansion. For that, we should study the value structure of I cultures to see how to enhance the value of interlingual cultural exchanges in the eyes of culture bearers, and strategically arrange a system of measures enhancing such value.

At the same time, the experience of studying interaction patterns in I cultures provides relevant information about the structure of such communities and the history of their development. By this, it allows describe the conceptual developmental patterns of ICT and cyberspace. Such studies are of strategic importance in themselves as leading to the creation of more effective tools of enhancing information value in U and O cultures.

U cultures. If we use external criteria described above, such cultures appear successful from the point of linguistic presence in cyberspace. Some U cultures establish and develop numerous websites to tackle practical problems, while others are less active in using their native languages in cyberspace. As I see it, dependence on I cultures is their main problem from the point of preservation of cultural identity and the increase of presence in cyberspace. U cultures are doomed to lose their identity as they borrow the achievements, languages and interaction patterns from other cultures.

ICT and cyberspace are U cultures' Trojan horse, which increases their dependence and so robs them of their unique nature. There is a universally known analogue to the situation: financial aid to the developing countries. Some of them take it for granted. Such aid goes on ad infinitum, and debts are regularly written off. However, even huge sums cannot put an end to famine and poverty in the beneficiary countries, while cuts on aid, to say nothing of its stoppage, bring extremely harsh response.

Thus, U cultures owe the development of cyberspace not to their own efforts but to external influences and interaction patterns borrowed from other cultures. On the one hand, their eagerness to borrow and use ICT and cyberspace is their developmental incentive. On the other hand, dependence threatens their identity. As I see it, such cultures' strategies should aim at enhancing the value of information on their axiological scale to create the demand for the internal tools of the development and use of cyberspace—in particular, in their mother tongues.

At the same time, the study of the patterns on which the demand for ICT and cyberspace emerges in U cultures is strategically important as it allows create incentives for the involvement of O cultures in relevant processes.

O cultures. Rapid and/or mandatory involvement of such cultures in cyber-contacts threatens to obliterate them, while their presence in cyberspace is essential for the preservation of cultural and linguistic diversity. More than that, O cultures provide priceless research material for the studies of interaction patterns outside cyberspace and the patterns of opposition to the advance of ICT.

It takes the utmost circumspection and stage-by-stage arrangement to attract O cultures to cyber-contacts while preserving their linguistic and cultural identity.

To my mind, the initial stage demands comprehensive studies and analyses of the value scale of particular cultures—value priorities in a culture as a whole, the structure and interdependencies of subcultures, and their value scale. Content analysis should single out value clusters closest to information value in a particular culture and its subcultures, while structural analysis should, among other goals, include the study of such subcultures and spheres of activity whose value structure provides the greatest opportunities to extend information contacts. At the same time, it is necessary to bring out the most antagonistic value clusters and subcultures in the given culture.

It is initially up to external institutions to provide the linguistic presence of a culture in cyberspace. These institutions should actively involve bicultural persons and agencies in the work—those who identify themselves with the O culture and another one at the same time. Such activities should prepare the ground for ICT introduction in the cultural structure and, at the same time, digitize as many cultural documents and artefacts as possible. The latter task is up to foreign experts on the involved cultures.

The second stage should proceed from initial analyses to elaborate the strategies of cultural changes. It is essential in this to be extremely circumspect in the choice of the tools and methods of contacts with the many subcultures so as to achieve the greatest possible efficiency and to do the smallest possible damage to cultural identity.

The third stage allows administrative, legislative, educational, financial and other practical efforts to change a culture and influence the structure of societal relations. Permanent monitoring of the changes is of critical importance, so as to make necessary corrections in due time.

I see the final goal and indicator of the efforts made in the involved community developing the demand for progress of its own cultural cyberspace, which should eventually integrate into the global cyber-process.

Summary

The author uses the cultural-psychological approach to the developmental problems of linguistic and cultural diversity in cyberspace, whose solution is essential to meet one of the globalization challenges: the levelling off of cultural diversity. The basic aspects of this approach are defined and described. The author demonstrates that it is wrong to use external criteria and indices in assessing the success of the development of linguistic and cultural diversity in cyberspace, while the value scale and other measurable properties of the culture itself can be effective for the purpose. A practically oriented classification of cultures proceeding from value scales is proposed alongside approaches to the development of cyberspace and ICT in the structure of diverse cultures on the basis of the advanced classification and in conformity with the goals of preserving linguistic and cultural diversity.

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SECTION 2

The Internet and Other Media

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Representing the Linguistic and Cultural Diversity of Small Indigenous Nations of the North on the Web: Problems and Prospects

The information resources of a country, including each of its regions, must be regarded as a strategic economic category on a par with its energy, raw-material or mineral reserves.

In achieving cultural and linguistic diversity in cyberspace the first issue to be addressed is the acceptance by computer systems of the fonts of the alphabets of every nation and ethnic group. Unfortunately, the fonts of the Yakut language alphabet and those of the minority ethnic groups populating the northern areas of the Russian Federation have not been included in any operating system. But then, how can we talk about preserving cultural and linguistic diversity in cyberspace?

Especially vulnerable are the cultures and languages of the small indigenous peoples of the North, which are beginning to disappear under pressure from globalisation. There are very few remaining native speakers of these languages.

In order to preserve the cultures and linguistic diversity of these peoples and to have them well represented in global information space it is necessary at the very least to enter all the characters of their alphabets in the operating systems of computers and to digitise their entire written and cultural heritage.

The problem of the use of the Yakut language fonts and Northern minority languages' fonts in operating systems has been with us for quite a while. The point is that these ethnic groups use alphabets based on Cyrillic letters but also have alphabetic characters of their own, which have not been fully incorporated in coding standards and operating systems.

In the Republic of Sakha (Yakutia) efforts in this area were activated recently. When we took up this problem we found out that there are no common approaches to type coding either for the Yakut language or the languages of small indigenous peoples of the republic, nor has a common keyboard layout for operating systems been developed. Concerted efforts of a wide range of experts in the fields of language and culture and information technologies resulted in a common strategy.

To regulate and make compatible the coding standards of the Yakut language characters and those of small northern ethnic groups, the Yakut government decreed:

- to adopt the universally recognised Unicode Standard, compatible with the international standard 10646 (ISO/IEC 10646), which includes the characters of almost all the languages of the world, as the common character coding standard;
- to form a working group and to start work on the inclusion of missing characters of indigenous peoples in the Unicode standard;
- to approve a single universal keyboard layout to be included in the operating systems of Yakut language fonts and the fonts of indigenous languages of the North; and
- to explore the question of introduction of a universal keyboard layout for Yakut language fonts and the fonts of minority languages into the Windows and Linux operating systems.

An important line of work is the development of digital information resources (Web portals, sites, CDs). The Centre for New Information Technologies at Yakut State University positions itself as an active player in the Republic of Sakha (Yakutia) information space, having turned into a true educational and sociocultural centre. Since 1997 a cultural and educational environment has been evolving in a purposeful manner in the regional segment of the Internet.

Republic level

The official server of the Yakut State University, www.y-su.ru (since 1997). In 2007 the server ranked 78th in the Top 100 of the Russian higher educational institutions. In December 2007, the Centre became a winner of the All-Russia Competition

“Education in the Mirror of the Press”, sponsored by the Russian Ministry of Education and Science, in the Best Regional Resource category.

The server of the Republic of Sakha (Yakutia), www.sakha.ru (1997 to 2003). At the 2nd Interregional Web Server Festival and Competition held in Barnaul in 1999, the server came in third in two categories—Best Regional Information Resource and Best Regional Information Resource Design.

The Republic information portal, www.sakha-info.ru (since January 2006), which was produced on order of the Yakut government. The server provides cultural and educational information on the republic and news of its social life. It maintains a systematic archive of news information in the field of culture and education dating from 2003.

The Republic cultural and educational server, www.sitc.ru (designed by the Centre for New Information Technologies). At the 4th Far Eastern Display and Forum of Electronic Media held in September 2002, the server was a prizewinner in the Best Media Site of the Far Eastern Region category.

Interregional level

Pursuant to Russian Ministry of Education order No. 1214 of 9 March 2004, Ammosov Yakut State University, the leading institution of higher education in Yakutia, hosted the Northeastern Resource Centre, whose ambit covers the education systems of the Republic of Sakha (Yakutia), Magadan oblast and the Chukot and Koryak autonomous districts.

An education portal, www.rrc.ysu.ru, was created in 2005. Currently it contains 287 faculty papers from Ammosov Yakut State University, Yakut State Agricultural Academy and Yakut State Engineering-Technical Institute, as well as 27 limited edition textbooks. It has plans to post information resources from the regions within its area of responsibility.

International level

One of the larger projects in this field is the development of a multilingual Web portal, www.kuyaar.ru “Observatory of Cultural Diversity and Education of the Peoples of the Republic of Sakha (Yakutia)”, a joint project between the Ministry of Education of the Republic of Sakha (Yakutia), the Arctic State Institute of Culture and Art and the Centre for New Information Technologies at Ammosov Yakut State University. The portal was created with the assistance of the UNESCO Office in Moscow; it was officially opened and has functioned since 19 November 2006.

This portal is designed to present on the Web information about the cultural diversity of the Republic of Sakha (Yakutia) peoples in four languages (English,

Russian, Yakut and Evenki). The portal has links to different information resources in the Republic of Sakha (Yakutia) and neighbouring Arctic countries and regions.

Efforts are being made to preserve on CDs the scientific, historical and cultural heritage of the republic. The most important project is the “Eminent Scientists and Researchers of the Culture and Language of the Republic of Sakha (Yakutia)” series, which is backed by the Presidential Language Policy Council, the Institute for Problems of the Indigenous Small Peoples of the North and the Institute of Humanitarian Studies, Siberian Division of the Russian Academy of Sciences. Thus far, a total of 20 CDs on the preservation of linguistic, cultural and historical heritage have been produced.

A key work area under globalisation is the training of skilled personnel and the upgrading of scientific research in Arctic countries, for which we are planning to utilise UNESCO’s intellectual potential. International cooperation of universities under the UNITWIN programme will allow them to exchange experience and knowhow, raise their resource potential and strengthen their partnership in addressing the above-mentioned problems, which are common to all Arctic regions.

In this connection the establishment at Ammosov Yakut State University of a UNESCO department called Sustained Development of Arctic Regions under Globalisation appears to be a significant event.

Small ethnic groups of the North reside mainly in the Arctic area of Russia. Key specific factors of economic management in the Arctic area are as follows:

- extreme natural and environmental conditions of human habitat;
- vast territories, underpopulation and poorly developed transport links and telecommunication systems;
- economic management and life support conditions almost fully depending on the supplies of fuel, food and other goods via complex transport schemes using air and water ways, including the Northern Sea Route and small rivers;
- an extremely fragile environment with sensitive ecosystems, which are easily disturbed by man-made influence and almost never recover;
- the threat of disappearance of original cultures and traditional ways of living of the indigenous populations of the Arctic zone;
- economic activity and life support modes entailing high costs, in consequence of which the economy is ill suited to a market environment; and
- problems in quality education due to remoteness from research, education and cultural centres and the poor provision of training and scientific literature.

It will be seen from this list that Arctic regions face many problems, all of them calling for urgent solutions. Modern information and communication technologies can be a great help in addressing these problems because their rapid development has an integrative effect and is creating unprecedented possibilities for information communication through interaction and the use of distributed resources.

The UNESCO department as an international education and research centre should play a central role in attaining these goals. It will work in the following areas:

- rationalisation of the long-term directions of different activities in the Arctic, the evaluation of the role of the Arctic in global climatic processes and natural and climatic changes in various environments, which are influenced by natural and man-made factors;
- environmental studies, the accumulation of quantitative and qualitative characteristics of the natural resources, the comprehensive estimation of the mineral and raw-material potential and biological resources of the Arctic, and the building of databanks using state-of-the-art information technologies;
- studies in the history of the region, its culture, economy, legal problems, the health protection of indigenous population and members of polar expeditions, a search for ways of preservation and development of the original ethnic cultures and traditional activities of the indigenous population of the Arctic and their representation in the global information space via the Internet; and
- scientific research on information society problems, the impact of globalisation on the preservation of culture and sustained development of small indigenous ethnicities of the Arctic, and the provision on this basis of quality education and a high level of culture.

In our view, the implementation of the above-mentioned projects will be a great step forward in solving problems faced by the Arctic regions and will ensure information and interpersonal communication between researchers in different countries.

The main directions of the department's research activities will be the integration of the scientific and educational potential of the republic, the broadening of the regional and international cooperation among universities and research institutions under the UNITWIN programme, and the development of an Arctic Web portal, www.arctic-megapedia.ru. It will be designed to facilitate scientific communication, to combine scientists' potentials, to accumulate and concentrate scientific and public-awareness information on the Arctic's problems, including linguistic and cultural diversity, on the Web.

The enumerated events are merely a beginning for large-scale efforts to develop the global information space, in which every languages and culture of the world will be adequately represented.

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How to Guarantee the Presence and the Life of a Language in Cyberspace

Elaborate the Linguistic Resources

If we intend to guarantee the presence and the life of all languages of the world in cyberspace, we should consider that 80% of them are not yet written. Therefore, the first work to do will probably be to describe them and give them an orthography, as linguists know so well how to. Before starting to write a language which has never been written, it is better to remember a few basic observations which are too often forgotten.

1. Several writing systems exist around the world. For instance, cyrillic, arabic, latin, hieroglyphic, cuneiform scriptures. Many writing systems are well known in Asia, Africa and precolumbian America. Whenever more than one writing systems are commonly used in the same country, it may be necessary to choose in which one the language will be written. Such a choice is never without important consequences.
2. Different languages can be written using the same writing system but with different orthographic conventions. For instance «exemple» in French and «example» in English.
3. Different sounds can be written using the same letter either in the same language or in different languages. So, in French, letter |c| is pronounced [k], but when it is followed by /i/ or /e/ it is pronounced [s]. In the following examples, letter |x| notes different sounds in different languages: caxa, taxi, xhosa, Mexico.
4. The same sound can be written different ways. The sound, [k] is written in French |k| as in «képi» (a military hat), |c| and |q| in «coq» (a male chicken), |qu| as in «banque» (bank) and |ch| as in «choeur» (choir).

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5. Setting up an orthography for a language is a demanding work that goes far beyond the simple transcription of phonemes. It involves also morphology, syntax and prosody issues.

Linguistic studies are the first step. They are supposed to lead to a standard orthography, reference books such as grammars, dictionaries, handbooks, school books, literature books, etc. While the totality of the most spread languages of the world have passed this stage some thousand years ago, it is still an important step for the majority of world languages which are not yet in cyberspace.

Providing Machine Resources

Once a language is written and has a standard orthography, the next step is to provide it with machine resources. By chance the characters needed may be already encoded in Unicode fonts. If not, it will be necessary to coin the missing characters or even the whole alphabet in a specific Unicode font, and set up a special keyboard software to facilitate its use. The most commonly used software in bureautics (word processor, e-mail, explorers, presentation, calc, etc.) should be localized and translated into the language to be empowered with machine resources. All the activities related to this step require a high level of specialized competences both in linguistics and computer science. Therefore, an interdisciplinary collaboration between a linguist and a computer scientist would be useful. While doing these works, particular attention should be paid to prefer solutions that offer the best accessibility to a large variety of users, including visually impaired.

Elaborating Cultural Resources

The next step is the constitution of cultural resources in such a way that they can be easily shared. Tales, narrations, novels, legends, everything which can be written as a text, can be digitalized. The same way, any non textual cultural data (dance, pictures, music, sculpture, etc.) can be taken in a movie and digitalized in order to be diffused through ICTs. The audiovisual and textual documents created that way can be diffused on a website in a variety of forms (radio broadcast, videos, BBS, etc.). All this implies of course that there is a possibility to access Internet in the area where the language to be empowered is spoken. As soon as linguistic and cultural data in that language are diffused in a website, it can be said that that language is present in cyberspace. But being present is not enough. The website has to be maintained and continuously renewed in that language so that it gives it a way to be a living language in cyberspace. Otherwise, the presence of that language in cyberspace will look like an old wallpaper nobody is paying attention to.

Empowering the Community of Speakers

For an endangered language, enlarging and empowering the community of its speakers is a crucial step. It implies teaching the language to a large number of people, especially young people and children. In many cases, not only the language has to be taught but also a variety of cultural items which can help revitalizing the language and the culture. Indeed, in the case of endangered languages, young generation no longer practice their ancestors' cultural heritage or do it so little that there is a crucial necessity to save it before it got completely forgotten. While not forgetting their ancestral culture, young people have to live their own modern culture and learn also the computer culture of the information and communication society. Learning all these cultural dimensions will help building and consolidating an empowered linguistic community which will be then able to develop living activities in its language in cyberspace.

Conclusion

Training people and cultural development need a long-lasting effort and the consistent support of local authorities as well as national and international organizations. A large number of juridical instruments exists relatively to fundamental human rights, linguistics rights, education and information rights, etc., which can be called upon to undertake actions in favour of the empowerment of language communities. It is quite clear that any effort to guarantee the presence of and maintain alive a language in cyberspace while developing its speakers' community can't be fully efficient without governmental support and funds.

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Fonts for Russia's National Languages on the Internet

Russia is a vast and polyethnic country, perhaps the vastest and most polyethnic in the world. Having been like this since long ago, it has accumulated a solid experience of friendly coexistence in a united family of nations.

In such a country, the most obvious integrating element is not the territory and certainly not the language. All of us, the people of the Russian Federation, are united by our writing and its graphic tools, the fonts.

In Russia today, Cyrillic writing is used by more than 70 languages with more than 10,000 speakers each. The total number of languages, including unwritten ones, is in excess of two hundred, of which 90 languages use or used the Cyrillic script.

Minor Languages. Romanisation

The term “minor languages” can be applied to vernaculars on the Internet; it was once adopted to describe minority languages that acquired a new Cyrillic writing in the Soviet era.

The story of the origin and development of writing systems for minority groups in Russia has for the most part been rash and messy.

It was mainly in the 1930s that efforts to develop writing systems for vernacular languages were made by the All-Union Central Committee for a New Alphabet (VCKNA in Russian). The Committee, backed up by People's Commissar of Education Lunacharsky, advocated the Romanisation of writing and the conversion to the Roman alphabet for every language, including Russian, in the young workers' and peasants' country. These efforts resulted in a so-called New Alphabet based on Roman letters—an attempt at the systematic development of writing systems for a large group of languages. By 1936, 68 ethnic groups with a total population of about 25 million had adopted this alphabet.

The thinking behind the New Alphabet was to build an extended Roman alphabet common to all the languages of the USSR. It was supposed that the main phonemes of a language would have independent characters and that the same characters would represent similar phonemes in different languages. The originators of the alphabet followed the following rules:

- avoid digraphs whenever possible;
- avoid diacritics written separately from a letter and use instead joined-up diacritic marks (“tails” like a cedilla or a strikethrough);
- if necessary borrow characters from other writing systems so long as they are consistent with the style of the Roman alphabet;
- invert letters if necessary, etc.

Although the majority of linguists thought highly of the Committee’s scientific achievement its systems approach led in practice to a superfluous and ineffectual alphabet; exceptions to the rules had to be made, muddling up the picture. In 1936, the Romanisation was found to be a mistake and the New Alphabet abolished, the Committee was disbanded, and the conversion to Cyrillic letters was carried out post-haste.

Minor Writing Systems. The New Cyrillic Alphabet

A new pan-Cyrillic alphabet was developed by the same people; as a matter of fact, it relied on the same principles as the New Roman alphabet, its core formed by the Russian alphabet and dozens of derivative characters to represent the basic phonemes of minority languages. The New Roman alphabet was developed and applied over more than a decade. The Cyrillic alphabet took much less time thanks to accumulated expertise and a less rigorous approach to the design of auxiliaries. The whole transition took less than five years, and by 1941, there was not a single of the 68 Roman alphabets left, all of them having been superseded by Cyrillic ones.

Cyrillic Fonts

Unlike the story of the Roman alphabet whose character design was shaped over centuries by carvers, engravers, calligraphers and scribes, that is professional type designers, the story of the Cyrillic alphabet is much shorter and less natural. The original Cyrillic writing was developed at the time of Sts. Cyril and Methodius (9th century) for ecclesiastical purposes through compilation and modification of then existing alphabets. The system, evolving slowly up to the 18th century, existed in four basic forms: the uncial, the semi-uncial, the ligatured script and the cursive. In

1708, Peter I reformed the writing system and decreed the introduction of the so-called civil, or Russian, type, which was patterned after the Dutch antique of that time. The shapes of many characters were radically changed and the Russian alphabet itself was seriously modified. Therefore, the modern Cyrillic writing is only 300 years old. Its initial design was far from perfect, having been probably sketched by Peter I himself, who, though said to be a jack-of-all-trades, was a rather poor type designer. The 18th and 19th centuries were quite productive with regard to font development. In the early 20th century, Russia had dozens of letter-foundries and hundreds of type fonts, and its printing industry was up to European standards.

In the Soviet era, Cyrillic fonts were developed under government contracts by a small Department of Artificial Scripts at the Printing Machinery Research Institute. Their resources were nothing like what was available in countries using the Roman script. As a result, we entered the computer typography age with a miserable family of ten types and a set of fifty national alphabets containing characters of often poor design—even poorer and more artificial than Peter’s Cyrillic alphabet.

The last decade of the second millennium and the first decade of the third were very productive and went a long way towards improving the Cyrillic font repertoire. The situation changed beyond recognition. Type design and make-up have shifted to the domain of computer technologies, hence became more efficient, faster and less constrained by technology. With the appearance of Unicode, national alphabets were normalised, with Unicode software supporting work with multilingual texts. Lastly, hundreds of fonts were designed by professionals, to be used both for typesetting and for jobbing applications such as advertisements, signage, markings, etc. Although the Cyrillic alphabet is still rather inferior to the Roman alphabet in the quantity and diversity of type fonts, its existing fonts are sufficient for fairly respectable work.

Fonts and Language Issues Today

If one looks at requests for national languages’ type fonts at the website www.paratype.ru, one finds that they are quite numerous. We consider the support of national alphabets an important part of our business. For instance, Cyrillic-Asian fonts support 35 languages in addition to Russian, and Unicode types have even broader capabilities. There is an ongoing process of the development and regularisation of vernaculars, regional language laws are written and passed, and this process must be accompanied by the appearance of publicly available, professional-quality national type fonts. Local language laws typically demand that parallel texts and inscriptions in the vernacular be present on official documents, roadway markers, signs etc. Besides, irrespective of any law, there must be a national language literature, in particular, textbooks and dictionaries.

Finally, national Web-resources must be developed.

As to type fonts proper, what matters is that national fonts are *available*.

The PT_Originals_Asia set from the ParaType library serves to support the Cyrillic Asian and ten Uralic languages. There is a basic set of four fonts in the so-called CIS encoding, which cover all the written languages of the Soviet Union from the Baltic languages to Armenian.

However, these are all proprietary fonts owned by a commercial firm, and though the price of a typeface is not high and any individual or organisation can buy a license and download it in a matter of minutes, they cannot rightfully be called generally accessible.

Fonts that can be qualified as freely available are either supplied as part of an operating system or are on the Web for public access. Freely available national fonts do exist, but they do not meet other criteria. Publicly accessible type fonts on the Web are, generally, of very poor quality in both design and execution, and the few fonts with an extended character set supplied with Windows cover only five national languages on the Cyrillic-Asian list: Kazakh, Kirghiz, Azerbaijani, Tatar and Uzbek. It is ironic that the population of a huge country with a budget of seven trillion rubles generally uses type fonts produced by a private overseas company. With all due respect for Microsoft, even knowing the company's serious attention to national traditions, one cannot expect them to embrace the unembraceable and to find a solution to the problem of preservation and development of writing systems for Russia's ethnic minorities. While generally available fonts are not essential, though desirable, for paperwork and book and newspaper printing—after all, government offices and private businesses can afford to spend a few thousand rubles on commercial fonts—national Web resources cannot be developed without free type fonts. Even if an author makes use of some legit fonts for the design of their site, they have to be installed on Web visitors' computers as well. Otherwise, they would see it in a different layout or be unable to read the content at all.

Here is what we see as a logical solution in this situation. The government should place an order for a set of national types and then put them on the Web. Besides, it is desirable that these types be made part of localised operating systems distributed in Russia. These type fonts must support at least all languages with more than 10,000 speakers. In addition, the local governments of ethnic regions should be able to order their own type sets with national alphabet support, thereby extending the pool of generally available types. However, before we take up questions of font design and dissemination, we should at last clarify the situation with the alphabets and artistic design for national character

graphemes. The development of a set of national types recently completed on order of the Bashkir government illustrates a good approach to this task. What was positive about this project was mainly its setup and management.

The client, the National Language Institute, presented sketches of Bashkir alphabet auxiliaries. It had collected, processed and stated grapheme design criteria applicable to both handwritten and typographic characters, which were consistent with the state of the art in writing system development and its idea of tradition. These sketches formed the basis for type sets designed by ParaType's professional artists who, having had some work experience with many alphabets and being free of national bias, could adjust them in a way that characters used in kindred Turkic languages had a reasonably universal and acceptable shape.

National character sets are regrettably underutilized on Web sites. They are, as a rule, system fonts—Arial, Times or Tahoma. Besides, their use often goes against licensing rights. Fonts are illegally modified by embedded national characters and then offered at Web sites for free downloading.

There are not more than twenty Web sites using national languages. It is a negligible number for a multilingual country like Russia. Yet, the PT_Originals_Asia set from the ParaType library includes 182 type fonts with support of national characters. There are choices for text, decorative and handwritten types. Moreover, their use is universal: it can be the Internet, book typography, media or educational programmes.

Last but not least, a couple of observations. The changeover to computer technologies moved fonts from the material product category to the intellectual product category. For all the pluses of this transition, it had one grave minus: given the prevalence of piracy in the field of intellectual property and the present organisation of the war on piracy, there is little hope that the type designer will be a popular profession with new talent. As a result, disastrously few type designers are trained even in central Russia, let alone the national republics, where there are simply none.

Is it not surprising that the country's and national republics' leadership does not give much thought to national type fonts? The preservation and development of written culture is the backbone of the preservation of national identity, by no means an easy task in today's globalising world.

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Increasing the Numbers of Sakha-Speaking Internet Users

In recent years, the Internet made great progress in the Republic of Sakha (Yakutia). Inhabitants of large cities in the Republic can no longer imagine living without the Internet⁵⁶, which helps them study, work, create and relax. By experts' estimates, however, the share of Sakha-language Web-sites falls short of one per cent of the total sites devoted to Yakutia and its inhabitants.

The low Internet penetration of the Sakha language is due to several reasons:

- Town dwellers generally communicate in the dominant language both with members of their own ethnos and with members of other ethnic groups. It is true of every age group, but most typical of young people.
- Rural citizens have no access to the Internet for technical reasons (many population centres lack good communication facilities), financial constraints (expensive services) as well as social reasons (the low standard of living in the countryside).

All of it tends to lower the need for Sakha-language resources and, as a consequence, results in a lack of incentive for their development. With no minority language information on the Web people are compelled to use majority-language resources only, and eventually this information acquisition method becomes a habit and the desire to learn in a native language diminishes.

The development of the Sakha segment of the Internet is also hindered by general language problems:

- the unilateral bilingualism, where almost all the population of the Republic speaks one language and only half of them speak the second language;

⁵⁶ According to a survey conducted by Sakha Internet the number of users in the city of Yakutsk increased from 16,000 in 2001 to 88,000 in 2008 to make up about 41% of the Republic's population (<http://www.kursor.ru/article.aspx?id=8627>).

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- a certain ambiguity in modern grammar rules; there are ongoing spelling and pronunciation disputes in the media, particularly with respect to borrowings from Russian or via Russian;
 - the virtual absence of occupational bilingualism, where the use of the Yakut language is severely restricted in some activities such as transport, communication, industry and construction, science (with the exception of cultural research), specialised secondary and higher education, document management in government offices (with the exception of judicial proceedings at the municipal level) and in organisations of various types of ownership;
 - a reduction in the general culture of native speakers, their alienation from their roots, the loss of a sizable proportion of their vocabulary, the impoverishment of their language due to social change, which forces people to use the other language; and
 - the almost total absence of language learning opportunities for middle-aged and senior citizens on account of the lack of affordable training facilities, competent professionals and social problems.

Lack of Sakha-Language Information

At this time, there is almost no native-language Web content in such important areas as the law (no texts of the Republic of Sakha (Yakutia) laws, Sakha-language legal forums or professional advice), economics and finance at the national and organisational level and economics at the household and individual level, very few folklore texts, let alone contemporary literature.

The Sakha-language content of existing sociopolitical websites adds up mainly to the unpopular replicas of printed newspapers, e.g., *Kyym*⁵⁷ and *Sakha Sire*⁵⁸).

Existing forums and other communication services targeted at Yakuts do not for the most part afford an opportunity for Yakut-language communication; for example, the rules of the forums at the Sakhatelecom popular portal “Yakutsk-Online” explicitly say that Russian is the preferred language of communication⁵⁹. While other forums do not impose any ban they do not provide any technical support either; because websites do not support Unicode or particular characters, some letters of the Yakut alphabet are misrepresented.

⁵⁷ *Kyym* – <http://www.kyym.ru/>.

⁵⁸ *Sakha Sire* – <http://www.sakhasire.com/>.

⁵⁹ <http://forum.ya1.ru/rules.php>: “3.1. Russian is the language of communication at the Yakutsk-Online forum. Messages in other languages are not encouraged.”

There is also the problem of different encoding schemes used for writing Yakut characters, which also has negative implications. True, the Republic government paid attention to this problem lately and there is hope that the “Unicodisation” process will be regularised.

The Role of Wikipedia in Increasing Minority Languages’ Presence on the Internet

The government and its agencies play a great role in enhancing the representation of minority languages in information and communication technologies (ICT), in particular in cyberspace, though social institutions also play an important role.

In this connection, I should like to mention a curious phenomenon of Wikipedia.

Wikipedia is a popular global Internet project, a multilingual interactive encyclopaedia embracing all fields of human knowledge. At this writing, Wikipedia contains about 11 million entries.

What makes it different from other encyclopaedias is the fact that entries can be written and edited by virtually anyone who has access to the Internet. No special computer skills are required, a working knowledge of MS Word being sufficient; an entry is updated right away.

The main idea behind Wikipedia is information accessibility: *“Imagine a world in which every single person on the planet is given free access to the sum of all human knowledge. That’s our commitment”*. Participation, i.e. the contribution of articles to Wikipedia, is free of charge, as is the use of its materials for any, even commercial, purposes.

Wikipedia is needed by everybody who looks for structured, reliable and relevant information in any of the multitude of world languages. At present, Wikipedia is written in 264 languages.

A minority-language Wikipedia can be useful both for scholars as a source of native speakers’ texts, for students of the language for some practical purposes and for teachers. Lastly, it can be useful as a means of preserving a threatened language.

Wikipedia, as it engages people in work around a national project, has them pay attention to the global problems of minority languages’ disappearance and their representation in cyberspace.

In December 2006, a group of enthusiasts initiated the procedure of registration of a new language section in Wikipedia, a Yakut one. After one and a half years of test mode functioning in a so-called incubator, our Yakut-language section was approved by the international community of Wikimedians, the Sakha-language Wikipedia received a domain name, www.sah.wikipedia.org.

What Difficulties Are Faced by the Initiators of New Language Sections of Wikipedia?

During the development of the Yakut section, we met with a number of difficulties, first and foremost, technical ones. Most computer programmes do not support Unicode, which means characters of some national alphabets. For that reason some participants had to replace their software (either upgrade their operating system or switch to a different browser), and some confined themselves to replacing missing national characters by similar graphemes.

The next, but no less important set of problems concerns the underrepresentation of the language on the Web and the paucity of native speakers willing to use it in the Global Network. Yakut users are not in the habit of searching information in their native language and not prepared to write and communicate in it. This creates a vicious circle: no information—no users; no users—no information, for there is no one to provide information for.

The third group of difficulties came from the international Wikimedian community being insufficiently aware of the Yakut language with some of its members focussed not hard enough on the success of the project. How did it show itself? One had to prove to them that the Yakut language does exist, that it is distinct from the other Turkic languages and that it is different from Russian, even if it uses Cyrillic letters.

But the biggest problem is the priority of the future project's success over its utility. While ethnic groups are willing to use Wikipedia in their own language as a knowledge repository and a language support medium, very many people in the Wikipedia administration (Wikimedia Foundation) wish but one thing—guarantees of dynamic development. From their perspective, a resource must be visited and be popular from day one and it must be updated on a daily basis. For new sections, the biggest problem is to have enough skilled participants. The reason is that the older generation willing and able to share their knowledge has no access to ICTs, while the younger generation simply has not matured enough. The problem is aggravated by the paucity of native speakers generally and the already mentioned fact that young people are used to socialising in cyberspace in the majority, functionally stronger, language.

How to Secure Greater Participation of Minority Language Speakers in Such International Multilingual Projects?

In the present context, the primary task is to increase the numbers of Internet users at home with these languages and to impart to them the skills and habit of using their mother tongue on their computer and the Internet.

There are two paths: to accustom senior citizens to ICTs and to induce the younger generation to use their mother tongue in cyberspace.

Conclusion

Everything said suggests a low degree of Internet penetration of the Sakha (Yakut) language.

Given the increasing role of information technologies and the Internet as means of communication, training, work, creativity, and knowledge repositories, the introduction of a minority language into the Global Network is an increasingly important condition for its preservation. One way of achieving the goal of making the language usable in all human activities and knowledge areas and increasing the demand for it is to increase the numbers of Sakha-speaking users of the Internet.

How to Do It

1. Pay attention to the *“Internetisation” of the countryside* as a “reservoir” of the language.
2. Make a point of creating opportunities for *children* to socialise, study and create in the Yakut language; develop specialised children and teenager resources.
3. *Localise* into the Yakut language the most common office programmes and computer games, develop spellcheckers, electronic textbooks and phrase-books and facilitate the setting of the Yakut keyboard layout for unskilled users. This will help to make the use of the Yakut language in the field of computer technologies a common practice.
4. *Make wide use of social international projects* such as Wikipedia to induce young people to use their native language in cyberspace and to introduce senior citizens to emerging information technologies.

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Linguistic Attitudes and the Development of Linguistic Resources in the Republic of Sakha (Yakutia) Cyberspace

Today, when sociocultural trends are linked with the development of information space, building an information and computer framework for knowledge evolution is particularly important.

The *man – language – reality* relation in our changing world, which predetermines rapid and profound changes in communication processes, cannot but affect man's language and sociocultural attitudes. The rapid growth of interethnic and transnational contacts, changes in the Russian landscape and Russia's new geopolitical role move the question of interethnic and intercultural communication methods from the theoretical domain to the category of pressing practical tasks.

Sociopsycholinguistic studies of 2007–2008, which revealed features of the language situation and the verbal behaviour of native speakers of Yakut, Russian and other languages, made it possible to determine the linguistic attitudes existing in today's polyethnic Yakutia.

Pilot experiments based on a linguoecological approach reflect a decline in the spoken Yakut culture, which, influencing the language's grammar and style, began to penetrate into other, deeper sections of linguistic consciousness. These phenomena have affected in a varying degree the countryside, which is homogenous in composition. Main conclusions drawn from an associative experiment, which brought out features of the communication consciousness of bilinguals and ethnic Yakuts who could not speak their native (Yakut) language are based on the cancellation of mixed speech. The main criterion of the rhetoric ideal is *pure speech*. Yet, despite the fact that respondents put a ban on borrowed words, the tolerance category was fairly important. The concept core also includes an aesthetic requirement whereby the primary source and model of language aesthetisation is, on the one hand, imaginative writing, and on the other, folklore texts (mainly the *olonkho*).

The language situation in the Republic of Sakha (Yakutia) is multicomponent. In addition to the speakers of the state languages, Russian and Yakut, and the official languages of the indigenous minorities of the North, the Republic has 24,053 persons speaking Ukrainian, 5,758 persons speaking Tatar and 4,251 persons speaking Buryat; this suggests that there are other ethnic communities with their own languages and cultures. The aggregate task of creating a balanced language situation under the present typological attributes—the endoglossic and policomponent quality, the active contact type of bilingualism (mainly Yakut-Russian) and the insufficient communicative and demographic capacity and social base of the titular Yakut language—calls for reciprocal, Russian-Yakut, bilingualism, which has not become a reality yet. Preliminary findings of a mass survey show that the polyethnic population of the Republic has a sizable group willing to learn and use/write/read/understand a language for particular purposes. These people are found in different ethnic and age groups irrespective of their place of residence.

The speech behaviour patterns that were recognised in the Republic's districts and *uluses* vary in many socioeconomic, geographic and demographic parameters. The language learning and use attitude is complicated by differences in linguistic integration strategies.

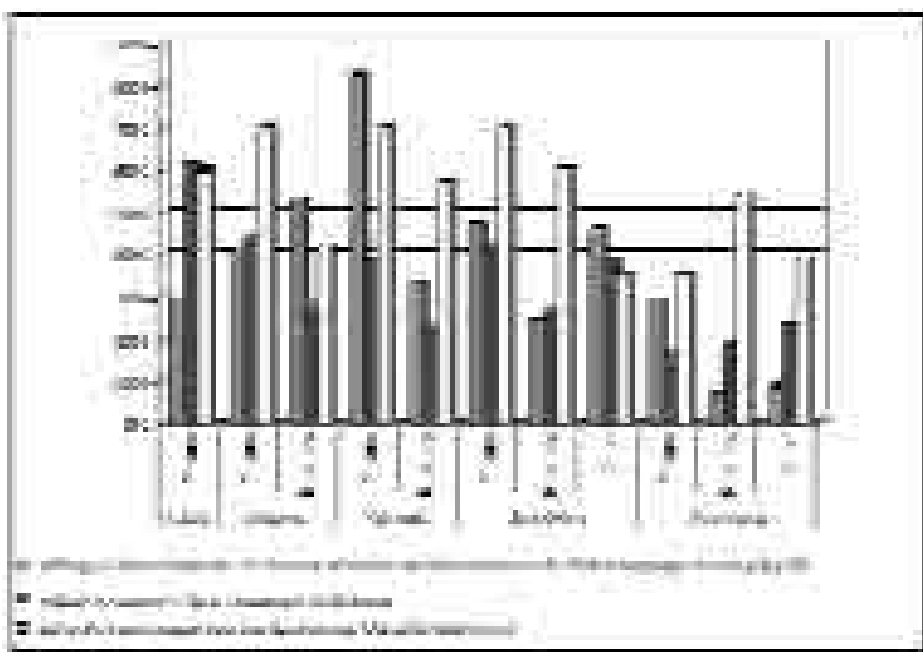


Figure 1. Language attitudes of the Republic of Sakha (Yakutia) population: Chai, a monoethnic Yakut village; Tomtor, a polyethnic Yakut village with an insignificant share of other ethnicities; Vilyuisk, a polyethnic centre of an agrarian ulus with an insignificant share of other ethnicities; Kysyl-Syr, a polyethnic industrial townlet; Neryungri, a polyethnic industrial town with an insignificant share of indigenous population.

The dominant tendency in language learning is a considerable interest in foreign languages, typical of young and middle-aged respondents, which is paralleled by a Russia-wide trend; according to preliminary data from the 2008 Unified State Examination, secondary school pupils performed best in their knowledge of foreign languages. Young Yakut respondents show preference for Oriental languages (Chinese, Korean or Japanese). Language behaviour with respect to the acquisition/improvement of Russian correlates with linguistic competence: the higher it is the lower is the interest in learning. In the monoethnic rural Yakut environment, there is a strong need for learning Russian. In ethnically heterogeneous communities, speech behaviour—in view of the prevalence and the demographic and communication power of Russian—is the least complicated by linguistic integration strategy variations.

A commitment to the learning/improvement of Yakut and its use in everyday life is found in all social groups. What is striking is the extent of interest in the study of their mother tongue among ethnic Yakuts who speak it. This need is particularly strong in the monoethnic Yakut populations of *ulus* centres, e.g., in the town of Vilyuisk. For ethnic Yakuts not having a good command of their native language the assertion of their national identity manifests itself in the reverse inculturation in the context of contact bilingualism. The change vector in the linguistic attitudes of non-Yakut-speaking ethnic Yakuts is the relaxation of their negativism with regard to the Yakut language. What is important in the Yakut learning and use by Russian populations is their shift from a monoethnic to a polyethnic, urbanised attitude. As can be seen, the desire to be more integrated by means of a language is prevalent in the Russian population living under contact bilingualism.

Russian population generally has a positive attitude to the need for Yakut learning. Possible explanations are: (1) civic consciousness: “... I live in Yakutia and I should know the local language”; (2) pragmatic purposes: the knowledge of the language of the titular nation makes for social mobility; (3) psychological advantages: multilingual Russians unlike bilingual Yakuts are limited in their acquisition of information in Yakut and barred from access to Yakut culture, which has an adverse effect on their psychological well-being.

Generally, responses reflected the openness of ethnic communities, their rather high ethnic and linguistic tolerance, and their language learning strategies, all of it leading to growth in integrative trends, that is, the mutual adaptation of different groups in the social space of one region.

The results of the experimental study of the motivations for Yakut learning and potential motivation patterns are attributable to extralinguistic social and psychological factors and individuals' inner attitudes. The body of respondents' motives for Yakut learning, in the case of ethnic Yakuts who do not speak their mother tongue, reflects their institutional needs: good communication inside a multiethnic family or at work in a mixed or a predominantly Yakut speaking team.

The need for ethnic identification is not pronounced, being somewhat spontaneous. The need for direct ethnic identification is the most pronounced in older respondents.

Non-Yakut-speaking Russians are mainly motivated by institutional needs: integration in a work team, business or corporate interests. This group also includes respondents who are offsprings of mixed Russian–Yakut marriages, who were discovered to have a problem identity. Also prevalent in this group are cases of a fully conscious civic attitude regarding the need for functional bilingualism, which, however, does not materialise in real life for lack of personal motivation for learning or polishing up the Yakut language.

Native speakers of other languages who do not know Yakut are guided by institutional and linguocultural needs: the desire to not only use functionally but also better learn a related or “neighbours’ language” and also understand humour. The desire of members of a different ethnocultural community to learn the language of the indigenous population, the primary cultural marker, is a very significant indicator, a value attitude revealing the linguistic and interethnic tolerance with respect to the titular ethnos, which is living through ethnic self-awareness growth and aspires to a greater prestige for its native language and the equalisation of the social functions of the two state languages.

Present-day realities—the reference is to an ethnic paradox reflected in a sociopsychological phenomenon of the late 20th century, whereby ethnic cultures are losing their unique features while ethnic self-awareness is on the rise—dictate their terms and give rise to peculiar sociopsychological phenomena. “According to the so-called *contact hypothesis*, prejudices, unless they are deeply rooted in an individual’s character structure, can be reduced through the equal-status contact between majority and minority groups in a common goal situation. The effect will be enhanced if this contact is backed by social institutions (e.g., laws, customs or the local atmosphere) or if it leads to the perception of common interests and shapes humanitarian relations” (Lebedeva: 2005, 50). Therefore, the ethnocultural world, while maintaining its distinctness and identity, is indeed becoming more interrelated and interdependent, and the younger generation appears as the potential for interlingual, interethnic and intercultural tolerance, which should be further promoted and cultivated.

The development and coordination of ICT linguistic resources in the implementation of national language policies began with the State Target-Oriented Programme *Linguistic Construction in the Republic of Sakha (Yakutia) (2005–2007)*. The projects planned under the section “Information Technology Support of the Functioning of State and Official Languages of the Republic of Sakha” are 72%

completed. The section work received a high rating due to (1) the ongoing development of innovative information technologies in language application, and (2) the information technology support of the functioning of state and official languages in mass communication.

Thanks to competent language planning and initiatives of enterprises, associations and individuals the Republic's indigenous languages became objects of many information technology projects. At the first stage, advances in IT application were associated with the establishment of Web-sites, portals and electronic textbooks; users of the Yakut Internet gained access to a Yakut–Russian/Russian–Yakut dictionaries, the final version of Windows Vista for business users became available (under corporate licensing programmes) at the end of 2006 (for home users, officially as from 30 January 2007). The Yakut language was realised as a codepage in various version of Vista. It made for the unification of various versions of Yakut type fonts in Vista.

The wide use of applied techniques and technologies in analysing language policy aspects allows examining and addressing many topical issues of language planning and finding new answers in the framework of most up-to-date language information. Several projects have been approved and launched since 2007 as part of the State Target-Oriented Programme *Development of Education in the Republic of Sakha (Yakutia) (2007–2011)*:

Development of an electronic training guide, Let Us Speak Yakut. The project aims to produce a Yakut self-teaching guide. This multimedia manual teaches the basics of spoken Yakut, correct pronunciation, spelling, and reading. It is addressed to the broad public.



Development of an electronic Russian exercise book. The project aims at creating an electronic Russian self-teacher and test guide targeted at the Unified State Examination test tasks. A test-based Russian language exercise book will be developed; it will be in three parts containing spelling and punctuation tasks as well as correct phrasing tasks.

Creating the Base for an Electronic Catalogue of Place Names of the Republic of Sakha (Yakutia). This mid-term project is focused on the priority concern of toponymic science development of a normalised and consistent list of place names, to be used by government and municipal services as well as communication, transport, media institutions, etc. In the context of the information society development the role and importance of place names as exact landmarks can hardly be overestimated. The Russian language's borrowings need to be accurate, consistent and systemic in their transcription of local place names. In a bilingual and multilingual context, it is extremely important that accurate lists of geographic locations in regional languages be put in place.



The electronic catalogue, equipped with a number of operations to facilitate searching for normalised names with interpretations and the locations of population centres and areas of the republic, as well as ethnographic commentaries, will be based on a body of unified and approved linguistic material. This project holds out hope of joint studies in the Web using information technologies, which would support researchers' interaction. It would open up fresh scientific cooperation opportunities for researchers from different regions.

A CD series promoting the legacy of regional scholars, authors etc. has been launched.

In the future, it will be necessary to create conditions for linguistic studies and projects built around information technologies. Such investigations form a science-based foundation with pragmatic functions, which are essential for many language

policy areas such as the development of educational software tools, the analysis of the phonological system of the Yakut language, the development of a representative database of the lexical stock, etc.

All the projects underwent an examination by the Yakut Presidential Language Policy Council and have concrete prospects. Targeted financing went a long way towards the intensification of projects. Now this tendency is materialising in innovation-driven projects, and once completed they will justify the investments.

Preventing spontaneous application is the key to competent development of linguistic resources in cyberspace at this stage. If we are to improve the scientific validity and practicability of modern application programmes, it is essential that:

1. a theoretical and procedural basis is created;
2. linguists' examination procedures are made compulsory; and
3. brain work products can be freely disposed of and optimum conditions are created for the distribution of software products.

Drawing on the concept of cultural relativism, which proclaims the unique value of every culture for all humanity, the Presidential Language Policy Council headed by Vice President of the Republic of Sakha (Yakutia) E. Mikhailova, Yakut Minister of Education E. Gabysheva, who is the coordinator of the State Target-Oriented Programme *Development of Education in the Republic of Sakha (Yakutia)*, and the Yakut Ministry of Science and Professional Education in the person of Minister A. Pakhomov are creating conditions for promoting diversity in the republic's cyberspace and overcoming its mosaic pattern, for activating information and education space with a view to maintaining a sufficient emotional and intellectual intensity for all participants, which stimulates their creative activity.

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The Type Fonts of the Yakut Alphabet and Those of the Minority Peoples Residing in the Republic of Sakha (Yakutia): Challenges of Applying in Operating Systems

New information technologies offer great opportunities for the preservation of cultural diversity. Now people can communicate, write and make cultural information known to the wide public. Language is a fundamental cultural attribute, and cultural diversity in cyberspace is a global objective for the world community today. From an objective point of view, there are no serious impediments to the promotion of linguistic diversity in Russia, and the democratic nature of this state allows publishing on the Internet with equal facility cultural information in all the languages of the nations of Russia. There are some technical difficulties, however. In the first place, we must address the feasibility of using in our computer operating systems the fonts of the alphabets of every nation and ethnic group. The limited set of characters that can be used on a computer prevents all languages from being duly represented in cyberspace.

The absence of a common character coding standard and a common keyboard layout caused serious difficulties. For example, students of minority languages of Yakutia, when they write reports and manuscripts in their native language, have to draw some characters by hand, which is very time consuming and at odds with the present level of development of information technologies.

Generally, to write texts in a native language they used keyboard drivers that could incorporate specific characters developed by some enthusiasts. The net result was to make texts typed in incompatible codes illegible. This problem came to be felt in particular in the use of Web resources (“empty squares” in place of letters).

In order to address this issue a creative group of three was formed, which studied the state-of-the-art and defined the essence of the problem. The group initiated several meetings to which language specialists were invited, and developed common approaches, which were later examined and supported by the Republic of Sakha government. The gist of these approaches is as follows:

1. To recognise the international standard Unicode as a compulsory coding standard for the characters of the Yakut language and those of the minority languages of the North.
2. To approve the universal keyboard developed by the creative team as the main one to be used to enter characters of the Yakut language and those of the minority languages of the North.
3. To ask Microsoft and ALT Linux to include the approved keyboard layout in their respective operating systems.
4. To set up a working group to prepare documents for the Unicode Consortium and the International Organization for Standardization justifying the inclusion in the Unicode standard of the missing letters of the Yakut alphabet and those of the smaller peoples of the North.

The following technical assignment was drawn up for the project.

Fonts

The fonts are to contain the characters of the Cyrillic code table of the Unicode standard, version no earlier than 5.1, with Russian letter glyphs and the following glyphs of the officially recognised Yakut letters and letters of the smaller peoples of the North residing in the Republic of Sakha (Yakutia):

Һ – CYRILLIC CAPITAL LETTER SHHA (code 04BA)

һ – CYRILLIC SMALL LETTER SHHA (code 04BB)

Ө – CYRILLIC CAPITAL LETTER BARRED O (code 04E8)

ө – CYRILLIC SMALL LETTER BARRED O (code 04E9)

Ҥ – CYRILLIC CAPITAL LETTER GHE WITH MIDDLE HOOK (code 0494)

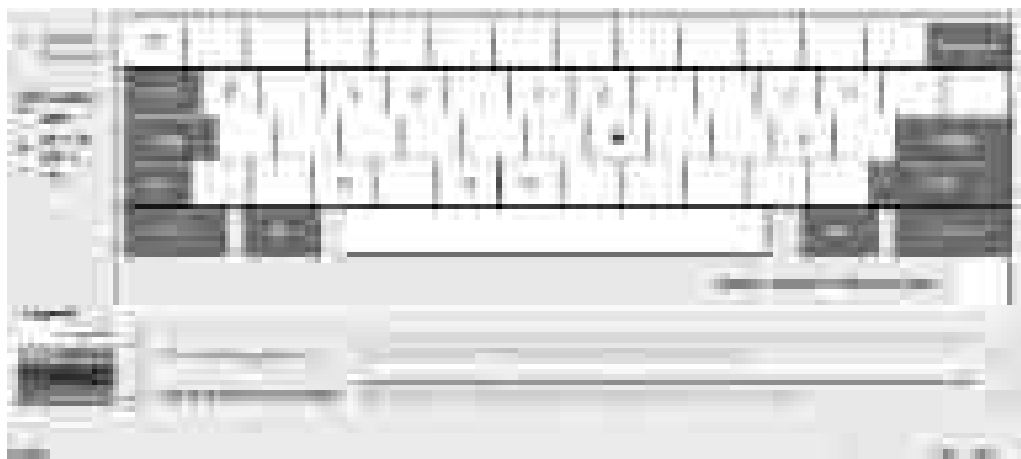
ҥ – CYRILLIC SMALL LETTER GHE WITH MIDDLE HOOK (code 0495)

Ү – CYRILLIC CAPITAL LETTER STRAIGHT U (code 04AE)
ү – CYRILLIC SMALL LETTER STRAIGHT U (code 04AF)
Ғ – CYRILLIC CAPITAL LETTER LIGATURE EN GHE (code 04A4)
ғ – CYRILLIC SMALL LETTER LIGATURE EN GHE (code 04A5)
Ӧ – CYRILLIC CAPITAL LETTER SHORT I WITH TAIL (code 048A)
ӧ – CYRILLIC SMALL LETTER SHORT I WITH TAIL (code 048B)
Ө – CYRILLIC CAPITAL LETTER BARRED O WITH DIAERESIS (code 04EA)
ө – CYRILLIC SMALL LETTER BARRED O WITH DIAERESIS (code 04EB)
Ҕ – CYRILLIC CAPITAL LETTER KA WITH HOOK (code 04C3)
ҕ – CYRILLIC SMALL LETTER KA WITH HOOK (code 04C4)
Ӏ – CYRILLIC CAPITAL LETTER ABKHASIAN DZE (code 04E0)
Ӂ – CYRILLIC SMALL LETTER ABKHASIAN DZE (code 04E1)
Ω – CYRILLIC CAPITAL LETTER OMEGA (code 0460)
ω – CYRILLIC SMALL LETTER OMEGA (code 0461)
Ӳ – CYRILLIC CAPITAL LETTER U WITH MACRON (code 04EE)
ӳ – CYRILLIC SMALL LETTER U WITH MACRON (code 04EF)
Ҥ – CYRILLIC CAPITAL LETTER EN WITH HOOK (code 04C7)
ҥ – CYRILLIC SMALL LETTER EN WITH HOOK (code 04C8)
Ӧ – CYRILLIC CAPITAL LETTER I WITH MACRON (code 04E2)
ӧ – CYRILLIC SMALL LETTER I WITH MACRON (code 04E3)

E.g.: *Arial* version 5.01, *Courier New* version 5.00, *Microsoft Sans Serif* version 5.00, *Tahoma* version 5.00, *Times New Roman* version 5.01, *MS Mincho* version 5.00 (MS Vista fonts).

The layout is geared to the standard keyboard (PS/2 Microsoft Natural) and must have an icon with SA letters. All the characters are the same as in the Russian layout and extra letters are entered via AltGr (right-hand Alt for lower case and right-hand ALT+SHIFT for upper case):

Ө – Ё, Ӧ – Й, Ү – У, Ғ – Г, Ғ – Н, Ӏ - З, Ӂ - Х, Ө - О, Ω – Ж, Ӳ – Ч, Ҥ – М, Ӧ – И



The list of fonts included in the universal keyboard is not final because all fonts have not been incorporated into the Unicode system and work in this direction should be continued. Before this universal keyboard layout is made a part of the Microsoft operating system talks at the appropriate level must be conducted.

As agreed with AltLinux the proposed keyboard layout was included in the AltLinux Junior operating system under development, and in the near future, it will be installed on PCs in the comprehensive schools of the Republic of Sakha (Yakutia). Besides the Yakut people, this keyboard layout can be used by nine small ethnic communities of the North, which reside not only in the Republic of Sakha (Yakutia), but also throughout the northwestern part of the Russian Federation.

The inclusion of this universal keyboard layout in the Microsoft Windows and Linux operating systems will be a weighty contribution to the preservation and development of the languages of Siberia and the Russian Far East and will allow these languages to be duly represented in the global information space and in print publications, primarily of scientific, popular-scientific and educational nature.

SECTION 3

The Role of Libraries in the Preservation of Linguistic and Cultural Diversity

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The National Library of Belarus's Efforts in Preserving and Promoting Linguistic and Cultural Diversity

Questions of linguistic and cultural diversity were always of current concern for my country. For centuries Russians, Ukrainians, Poles, Lithuanians, Tatars, Jews, Gypsies, and members of other ethnic groups inhabited Belarus. Historically, it is a land where different cultures have interacted in consequence of its location at a crossroads of Occidental and Oriental civilisations and its having been part of multinational states.

The first state to emerge in what is now the Belarusian territory was the Grand Duchy of Lithuania, which formed and developed as a multinational community. Along with Belarusians (Litvins) its territory was populated by Ukrainians, Poles, Russians and members of numerous tribes of the southeastern coast of the Baltics. From the 16th century downward, there was mass migration to the Belarusian territory of Russians: Moscow aristocracy, freethinkers, Old Believers, and fugitive serfs. In the same period, Poland's Jews migrated there *en masse*. The union of the Grand Duchy of Lithuania with Poland to form a single state, the Rzeczpospolita, led to an increase in the share of Polish population and well as of other European ethnic groups.

After the Partitions of Poland of 1772–1795, the territory of today's Belarus was incorporated in Russia with ensuing changes in the population mix. By the end of the 19th century, according to the 1897 census, the population of Belarus within its present confines was more than 6.5 million [2].

Twentieth century's global disasters such as the First and Second World Wars, the Russian revolutions and Civil War, Stalin's repressions, the Chernobyl catastrophe and the breakup of the Soviet Union led to considerable loss of population and a change of demography. According to the All-Union Population Census of 1939, the population of Belarus was 5.5 million, i.e. one million less than at the turn of the century. Of this number 83% were Belarusians, some 7% Jews, 6.6% Russians, about 2% Ukrainians and 1% Poles [2].

In the post-World War II period, which saw the reconstruction of the national economy and the building of large industrial enterprises in Belarus, its population grew also because of specialists who came to construction projects from other Union republics: Russia, Ukraine and Central Asian republics.

Today Belarus is a multinational state. Its population at the beginning of 2007 was 9.7 million [2]. According to the 1999 census, 81% of its population were Belarusians and 19% were members of more than 140 nations and ethnic groups (123 in 1989). Eleven per cent of them were Russians, 3.9% Poles, 2.4% Ukrainians and 0.3% Jews. There are more than 10,000 Armenians and Tatars, about 10,000 Gipsies, more than 6,000 Lithuanians and Azerbaijanis, more than 4,000 Moldovans and the same number of Germans, and 3,000 Georgians; 41 ethnicities are represented by ten or fewer people (see Table 1).

Table 1

Nationality	Population size by year									
	1959		1970		1979		1989		1999	
	thousand people	%	thousand people	%	thousand people	%	thousand people	%	thousand people	%
Belarusians	6,532.0	81.1	7,289.6	81.1	7,568.0	79.4	7,904.6	77.9	8,159.0	81.2
Russians	660.2	8.2	938.2	10.4	1,134.1	11.9	1,342.1	13.2	1,141.7	11.4
Poles	538.9	6.7	382.6	4.3	403.2	4.3	417.1	4.1	395.7	3.9
Ukrainians	133.1	1.7	190.8	2.1	231.0	2.4	291.0	2.9	237.0	2.4
Jews	150.1	1.9	148.0	1.6	135.4	1.4	112.0	1.1	27.8	0.3
Others	41.5	0.4	43.0	0.5	60.8	0.6	84.4	0.8	84.0	0.8
Total	8,055.7	100	8,992.2	100	9,532.5	100	10,151.8	100	10,045.2	100

Belarus Population Structure by Nation

The numbers of Armenians, Azerbaijani, Arabs, Georgians, Germans, Ossetians, Tajiks, and Turkmens increased over the 1989 census. Almost all the other populations—Russians, Ukrainians, Poles, Tatars, Lithuanians, Latvians, Estonians, Moldovans, Uzbeks, Chuvashs and others—saw decreases. Due to emigration the Jewish population fell to 28,000 from 112,000.

The population exchange between CIS and Baltic countries and Belarus was more than 20,000 people in 1999. The bulk of migratory exchange is with Russia, Ukraine and Kazakhstan, which account for 83% of arrivals. Thanks to migratory exchange, new arrivals are young and well-educated; 11% are college educated and 74% have secondary, post-secondary or general education [3].

In Belarus, ethnic, racial, linguistic or denominational conflicts or clashes are non-existent. Interethnic concord in society can be attributed to the citizenry's mindset, the historical traditions of peaceful interethnic contacts and longstanding and firm relations between the ethnic groups residing in Belarus.

An important factor in the interethnic stability is the government's consistent policy of national and cultural development of ethnic communities and interethnic relations. It strives to create conditions for the development of every ethnic group in the republic as a single Belarusian nation and for the spiritual and cultural growth of Belarusian diasporas worldwide.

The Republic of Belarus has acceded to principal international human rights treaties and consistently puts into practice the principles of democratic national policy focused on free development of the culture, language and customs of every ethnic community and on complete equality, respect, and consideration of their rights and interests [1, 4, 6].

The Belarusian state has created a firm legal framework regulating interethnic relations. The Republic of Belarus Constitution says that all citizens of the country have equal rights, including the right to the development of national cultures.

The equality of the citizens of my country is enforced by a number of legislative acts. Some of the earliest instruments laying the foundation of interethnic concord were the laws On Citizenship and On National Minorities, passed on 18th October 1991 and 11th November 1992, respectively [5].

The national language policy, including educational policy, is democratic to the utmost. According to Article 50 of the Republic of Belarus Constitution, the state guarantees the freedom of choice of the language of upbringing and instruction. Every nationality residing inside Belarus is guaranteed the right to learn and use its native language.

The law On the Languages in the Republic of Belarus, which made the Belarusian language official, was passed in 1990. During a nationwide referendum held in May 1995, 83% of the voting citizens of the Republic voted for granting the Russian language an equal status with Belarusian. The Republic of Belarus is one of the countries where Russian enjoys the most favourable conditions for preservation and development. The spread of the Russian language depends on deep historical traditions, the friendly relations of the Belarusian and Russian nations for many centuries, and it is consistent with the current policy of the country's leadership.

The Republic of Belarus guarantees to every resident an inalienable right to be raised and educated in Belarusian or Russian. It means that every ethnic minority member has the right to get education in Belarusian or Russian, which is an interlanguage. This right is secured by the system of pre-school institutions, general education schools, vocational schools, specialised secondary and higher educational establishments.

Enrollees are given an option of taking an examination in either of the two official languages. About 50% of entrants to specialised secondary educational establishments indicate their willingness to take a written exam in Russian and another 50% take a written exam in Belarusian. A roughly similar ratio is observed at matriculation. In colleges, 65% of the students are taught in Russian and 27%, in Belarusian and Russian.

The Republic of Belarus laws On Education and On Culture grant ethnic communities the right to learn their native language in special classes, groups and schools and also to restore their culture and traditions. In my country there are schools that teach in Polish and Lithuanian; there are Hebrew classes; 180 general education schools offer an ethnocultural component.

Besides, the Republic of Belarus has adopted and enacted about 20 legal instruments some of the provisions of which fix the rights and freedoms of minority group members, among them the laws On the Press and Other Media, On Political Parties, On Non-governmental Organisations, and On Freedom of Conscience and Religious Organisations.

To coordinate interethnic relations activities a special body was established in January 1997, the State Committee for Religious and Ethnic Affairs, to be later on transformed into the administration of the Commissioner for Religious and Ethnic Affairs within the Council of Ministers of the Republic of Belarus.

Members of most of nationalities residing in Belarus—Armenians, Azerbaijanis, Koreans, Lithuanians, Moldovans, Germans, Russians, Ukrainians and others—have created their cultural and educational societies. They promote the study of their history, culture and art, hold meetings, exhibitions, festivals, and establish communication with their mother countries.

The Republican Centre for National Culture in the capital city of Minsk was established in 1997, among other things, to miniature interethnic relations peculiar to economically advanced multicultural societies of Europe, Americas and Asia. One of its outputs is all-Belarusian festivals of national cultures, which focus on portraying in an artistic form the identities of the ethnic groups populating Belarus, their cultural values and their achievements in reviving and developing their artistic heritage.

The country's regulatory and legal framework and its governmental and non-governmental structures enable members of different ethnic groups to gain, on an equal footing with the titular nation, access to information and education and to develop their culture, traditions and customs.

The country's publishing policy aims to help people to exercise their right to equal access to information. The bulk of publishing in Belarus is in Russian: 86% of books and brochures, 80% of journals and periodicals, 71% of newspapers; 7% of the total number of 2007 imprints is in non-Russian languages. Non-governmental ethnic associations in Belarus publish bulletins, newspapers and journals in their native languages such as Lithuanian, Polish and Ukrainian. For example, there are two national-level newspapers and a regional one in Polish and one national-level Ukrainian newspaper.

In Grodno region, which features compact Polish communities, the regional telecaster and broadcaster air in Polish. The Brest regional radio station airs a Ukrainian-language programme, "Ukrainskaya vital'nya" [Ukrainian Parlour]. National minorities are thus enabled to get necessary information in both Russian, the interlingua, and their native language.

The national policy of the preservation and promotion of linguistic and cultural diversity is implemented also through libraries. The National Library of Belarus in performing its mission develops its information resources and serves users with due regard for the interests of all the nations and ethnic groups residing in and outside Belarus.

As the country's main library the National Library of Belarus maintains a collection of national documents. With a total stock of 8.5 million, national Belarusian documents make up 11% of books, 7% of journals and 56% of newspapers. By collecting and keeping them the library performs its mission towards humankind because it preserves Belarusian culture, language and traditions on a global scale. Details of these documents are recorded in the information systems of the National Library of Belarus and made accessible to users worldwide.

In an effort to make the Belarusian language and Belarusian culture better known around the world so as to supply the needs of both its compatriots outside Belarus and foreign nationals the library is developing a national electronic library. The goal is to make the more socially important Belarusian monuments of book culture, both

old and modern, available electronically. The success of the project depends on our active interaction with major international projects, in the first place, the Memory of the World, the World Digital Library and the European Digital Library.

In this connection it sets one wondering when a double standard policy is applied to librarianship; the reference is to the nonadmission of the National Library of Belarus to a very important library organisation, the Conference of European National Librarians (CENL), and accordingly, its nonadmission to the European Digital Library project. Is it really possible that the unavailability of publications in Belarusian and about Belarus in the European Digital Library will promote cultural and linguistic diversity in Europe?

The holdings of the National Library of Belarus are 77% in Russian. More than 16% (or one-eighth) of its materials in English, German, French and other languages, a total of 50 languages of the world. Thanks to publications in world languages, library users can get to know the cultures of different nations of the world.

Users of electronic resources can enjoy wide access to national and global information resources. By providing access to more than 100 largest foreign and national electronic databases, whose information capacity is many times as much as that of conventional library stocks, the National Library offers its users unique opportunities for studying the cultures and languages of the nations of the world.

The Library's sociocultural activities play a special role in promoting cultural and linguistic diversity. It collaborates with embassies, cultural and educational centres, and non-governmental organisations in holding various cultural and educational projects, which foster a climate of trust, humanism and mutual respect. The National Library of Belarus hosts a number of international-level events, which promote interethnic and cultural development.

It is an established tradition now to hold, during Days of Culture in the Republic of Belarus, thematic book exhibitions, exhibitions devoted to the International Day of the World's Indigenous People, human rights, the struggle for elimination of racial discrimination, theatre days, poetry days, book days, copyright days etc., as well as exhibitions dedicated to anniversary and memorable dates in the world's calendar.

Some of the events that evoked public response were a book illustration exhibition titled *Kazakhstan. The Cultural Heritage Programme*, the book exhibition *Days of Jewish Books*, the foreign literature exhibition *New Foreign Books: A Window on the World of Architecture, Economics, Politics, Religion, Art, and Law* and a presentation of electronic resources, as well as exhibitions devoted to the International Year of Planet Earth, the International Year of Languages (*From Multilingualism to the World Linguistic Heritage*) and some others.

The Library gallery and exhibition complex implemented international-level art projects such as Italian Donata Pizzi's photographic exhibition *Citta metafisiche*, an exhibition of Estonian artists in the framework of the Second Tallinn Illustrations Triennial, an exhibition of reproduction of the works of Napoleon Orda from the collections of the National Museum in Warsaw, an International Landscape Festival dedicated to V. Tsvirko, the First Minsk International Exhibition of Drawings "Art-Line", and some others.

Joint cultural and educational events aim to overcome existing stereotypes and perceptions of the culture and lifestyles of different peoples. They are not confined to book and art exhibitions (which include catalogue publication or accompany conferences and forums), meetings with authors, but include the participation of Belarusian libraries in international library and cultural projects and international book fairs. As the international cooperation of libraries and cultural centres presupposes two-way interchange, as any other rich culture with inexhaustible values, the culture of Belarus intends to present itself to different nations. The library community is no exception. The National Library organised a number of travelling exhibitions of Belarusian publications—in Germany, Moldova, Poland, Russia, Ukraine, Estonia, etc.

The development and expansion of intercultural cooperation makes it possible not only to conduct joint activities (culture days, meetings with authors, exhibitions etc.) and to build collections, but also to enhance the role of libraries as mediators between cultures and their carriers. Belarusian libraries' experience of serving a multicultural population testifies that libraries are one of the most important institutions in sociocultural relations. They depend on book culture to contribute to the preservation of national identity, native languages, unique features of the historical and cultural development of nations, their spiritual and moral heritage, and also to instill respect for other cultures and mutual understanding. We must continue to refine our approaches to cultural interaction, foster the alliance of civil society groups and to support broad cooperation of cultural institutions, in particular libraries, non-governmental organisations and national-culture associations in the fields of culture, art, education and citizen diplomacy. This will help to strengthen intercultural and interregional links on the basis of tolerance and respect for national cultures, languages, traditions and customs and the maintenance of interethnic peace and concord.

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Weekend Schools of Ethnic Languages and Literature as Model of Library Services to Ethnic Minorities with Limited Access to Cultural Information

To me, languages of the peoples are as stars in heaven. I would not like them to merge into one huge star, big enough to hide half the sky. We have Sun, after all. Yet, may stars also shine. May everyone have a star of his own. I love my star—my mother tongue. I believe geologists when they say that even a tiny hill might conceal huge gold placers.

Abutalib GAFUROV

Dagestan is known as a kind of museum of ethnic minorities, each of them doing its bit for cultural diversity, social and environmental harmony, cooperation and understanding. The preservation of multiethnicity boils down, primarily, to natural survival of small ethnic entities and groups.

A majority of the population of Khasavyurt belongs to three ethnic communities—the Avar, Kumyk and Akka Chechen, each group roughly making a quarter of the city population. Their native languages, cultures and traditions are studied at school. The city arranges folk festivals of those people, and their newspapers are published. Local authorities guarantee the state policy of preserving and promoting ethnic cultures, and make organizational allocations from municipal and extra-budgetary funds.

The other 25% of the Khasavyurt population are small dispersed ethnic communities of 500-1000 people. Standing out among them are the Lak, Lezgin, Dargin and Azerbaijani. They are entitled to quota'ed participation in municipal self-government. Prominent figures of ethnic arts are invited to the city, and libraries are replenished by books and periodicals in ethnic languages.

There are, however, very few schoolchildren of those ethnic entities, so it is impossible to have regular classes of their ethnic languages, history and cultural traditions. The absence of proper tuition leads to detrimental results. These peoples'

languages are on the verge of extinction. The use of native languages does not cross the limits of everyday routine. The absence of command of ethnic written languages bars the access to native literature. Gradual extinction of language, customs, folklore, arts and crafts erodes the culture of ethnic minorities.

Concern with the situation naturally moves the Khasavyurt Central Municipal Library System to provide information protection from negative social conditions with the project “Weekend Schools of Ethnic Languages and Literature as Model of Library Services to Ethnic Minorities of Dagestan with Limited Access to Cultural Information”. It is our contribution to a programme related to the International Decade of the World’s Indigenous People.

The four weekend schools—the Azeri Sevil, the Dargin Kuppa, the Lak Shunudag and the Lezgin Sharvili—are rehabilitation centers to reproduce the social and psychological patterns of ethnic minorities. They provide linguistic succession of generations, promote family ties and enhance the prestige of native languages. Curricula base on ethnic culture in its connection with the world civilization.

Weekend schools provide information through native languages with an emphasis on communication not grammar.

The Azeri Sevil School

Sevil is a beautiful Azeri female name. The school received it because girls made a majority of pupils. Boys had no objections.

The pupils first met their teachers on Independence Day of Azerbaijan. The opening class was dedicated to Azeri folk tales. The drama school of the local teacher-training college and little amateur actors of the Brook kindergarten staged scenes from tales, and Children’s Book Center librarians held a quiz. After that, the gathering divided in four groups to illustrate the tales they had just seen enacted. Superb samples of children’s art were the result.

The school taught the Azeri alphabet. When a parcel came from Baku—a collection of Azeri folk tales put out by Tutu (Parrot) Publishers—all the kids could read the book, and seldom made mistakes. Weren’t they proud of the achievement!

Ethnic history had to be taught in Russian—the children were not fluent enough in Azeri. School books were taken from Khasavyurt libraries or came as gifts from Azeri traders. Ample information on archeology, ethnography, place names and religion came from the Internet.

Historian Ismail Agayev, Ph.D., the project consultant, told stories of gripping interest about fire worship, the ancient religion of Azerbaijan. Information about contemporary life in Azerbaijan came from the press the school subscribed to. Pupils translated press contributions with the teacher's help in class, and translation contests were regularly held.

The book *A Hundred Famous 20th Century Azerbaijanis* enjoyed tremendous popularity with children and parents alike. What makes it especially valuable is that it contains texts in Azeri, English, Arabic, Russian and Turkish.

A memorable thematic class, "Baku, the Seaside Fortress", was held on the eve of the National Revival Day of Azerbaijan. Pupils arranged a concert of recitals and music, a fine video film was shown, and there was much singing and dancing after a tea party with Oriental delicacies cooked by mothers and grannies. It was an enjoyable day.

The Nauruz Bairam spring festival was just as merry. That time, little girls made food for the party with their own hands under the supervision of Zeinab Mamedova, who excels in folk cuisine. Folklore good wishes were made that day in the mellow Azeri speech: "May you never trample on a stone!", "May your bread be always white and your days sunny!", "May all locked doors come open to you!", "May the star of your luck ever shine!", "May you have seven sons and sit with them at an opulent table!", "May you have everything your heart desires!", "May your table be as vast as your soul is!", "May I have pilaf at your wedding repast!", "May the righteous never depend on the sinner!" and so on.

The Azeri of the whole world celebrate Solidarity Day on December 31. Music headmaster Sona Gabibova arranged a concert attended by several generations of Azeri families long living in Khasavyurt. Children from other weekend schools were also invited. Girls of the Little Bell choir sang in Azeri, Russian and Kumyk. Other children recited poems and played folk games. Samples of children's arts and crafts were demonstrated at the Ancestral Traditions show.

Especial attention belongs to esthetic education. Members of the project staff and volunteers read lectures on "The Zurna Pipe as Harbinger of the People's Joys and Achievements", "Sculptor Katib Mamedov", "Rustam Ibragimbekov and His Films", "The Ashug Bards", and "Folk Craftsmen". Choreographer Rima Babayeva conducted a master class on Azeri dances. After it, many children never blush as they join the round dance.

An excursion replaced the final class. Eldar Mamedov, the elder of the local Azeri community, arranged children's trip to Derbent, an ancient city and unofficial capital of the Azeri living in Dagestan. The outing was timed to May 28, the

Republic Day. Historian Dadash Zainalov and poet Neskhanum Rzayeva told the children in Azeri about 5,000 years of city history, its places of interest, and local customs and traditions.

The children admired the majestic Naryn-Kala fortress, inhaled the fragrance of highland meadows, and felt proud of ancestral history, eager to carry on old traditions with honor.

The Dargin Kuppa School

A majority of Dargins living in Khasavyurt come from the ancient village of Kuppa in the Levashi District of Dagestan, and speak their own dialect of Dargin, which has no written form. To preserve this unique dialect was the main aim of the weekend school.

Classes were held on Sundays twice a month for 14 children between 7 and 13 years of age, with experienced teachers and volunteer students of the local teacher-training college.

An entire academic year was dedicated to the heritage of Suleiman Rabadanov, a renowned local bard and story-teller whose fables, parables and maxims are very popular with the Kuppa people, though they never appeared in print with the exception of several concise newspaper publications that retold his works in literary Dargin. Rabadanov's widow helped us with an exhibition of his manuscripts, literature on Dagestani folklore, and ancient household utensils and other things lovingly preserved in pupils' homes.

The exhibition was of major interest not only to the project target group. It lasted three weeks on the request of the Khasavyurt central library, and had close on 200 visitors. The children felt proud.

Prominent Dargin-language children's poet Aminat Abdulmanapova visited the school. She is fluent in the Kuppa dialect, so the meeting was very useful in language studies. The children prepared for the meeting—they staged several of her works and learned a song to her lyrics. The poet was amazed and overjoyed. She said she had never expected to hear such fluent speech in town. She had heard it only on very few occasions talking to ancients in her native village. Aminat wished the school prosperity and gave it her latest editions, while pupils made her a gift of a home-made album of their own illustrations to her verse.

Arts and crafts flourished in Kuppa in olden days. Women knitted lacey woolen shawls and men were excellent smiths. Superb swords and daggers of their work had sheaths decorated with elaborate patterns. Present-day people of Kuppa are famous

hatters. Fine astrakhan *papakha* hats, so popular with Caucasians, come out of their hands. Children begin learning folk crafts in tender age from their parents and grandparents. An exhibition of children's works aroused great interest of people of all ages and ethnic backgrounds. It was interesting to compare them to old things taken out from family closets and cupboards. The things on show meticulously imitated the shapes, colors and patterns of the old samples though they were somewhat inferior in craftsmanship.

Two classes dedicated to folk cuisine were held at school principal Ravzanat Magomedova's home. The girls learned to cook delicious *khinkal* dumplings and halvah, and the boys now know all the intricacies of kebab making.

The teachers and pupils dreamed of an outing to their ancestral village of Kuppa after the end of school year but weather unexpectedly thwarted the plans with a sudden blizzard in the mountains and landslide danger. Many of the pupils had been to Kuppa before, so the final class was dedicated to their oral accounts of meetings with villagers and their feelings during the trip. City councilor Shamsulguda Magomedov, who attended the class, described the emotional conversation as "praise sung to Kuppa".

The Lak Shunudag School

The Lak of Khasavyurt come from two Dagestani mountain localities—Lak and Kula. They had to move to the plain when Akka Chechens were deported to their native highland. After Chechens were allowed to return, many Lak families moved to Khasavyurt. They did not sever their ties with native land. They cherish ancient customs and their mother tongue. The weekend school was named after their holy mountain Shunudag.

The school had weekly Lak language classes. The pupils met with historian Ramazan Sheikhov, talked about well-known composer Murad Kazhlayev, saw and discussed a video film about the first Shunudag festival of Lak songs, and saw a collection of slides dedicated to the Dagestani Art Museum (which they called a virtual excursion). They had a master class of Lak folk dancing, a matinee dedicated to Lak folklore, and a family celebration of the Nauruz spring festival. There was a Read and Draw contest of illustrations to Lak folk tales, the Granny's Chest ethnographic show with more than 300 visitors, and girls' gatherings dedicated to Lak cooking.

Teachers highlight the following school achievements:

- fluent command of spoken Lak acquired by 24 pupils;
- steady interest in ancestral history, culture and traditions developed by children and their parents;

-
- ample information about outstanding Lak people and their contribution to research and the arts;
 - children's newly acquired awareness of intercultural ties, of roots shared by Dagestani peoples, the inimitable originality of those peoples, and the harmony of their diversity.

The pupils could not use Internet resources as they were not good enough in computer work, while adults involved in the project received a solid stock of information.

The Lezgin Sharvili School

Lezgistan has been known since times immemorial for its *pekhlevan* warriors of immense strength and valor. The epic hero Sharvili won not only through superiority in strength and martial arts but also through his strategic gift and farsighted tactics.

Pupils of the Lezgin weekend school call themselves Sharvili's heirs. Shahnisa Shirinova, who taught them ancient Lezgin traditions, chose the heroic epic *Sharvili* for the main source of information. The pupils started studying it in the Russian translation later to pass to detailed linguistic analysis of the Lezgian original as they made progress in their native language.

A video recording of *Sharvili*, a production of the Suleiman Stalsky Lezgin Musical Drama Theater, helped children to understand the profound message of the hero's exploits. As the play was analyzed scene by scene in class, the pupils were prompted to speak Lezgian. At first, they had problems expressing their opinions but later on got accustomed to speaking their mother tongue.

As the children penetrated the glorious past, they became wiser, purer and more responsible. The inspiring example of Sharvili, who united the tribes of Dagestan to repulse invaders and live according to the laws of justice, called them to acts of love and kindness.

*May other tongues cure other men
 In their particular way,
 But if tomorrow Avar die,
 I'd rather die today!
 No matter if it's hardly used
 For high affairs of state,
 It is the language that I choose—
 To me Avar is great!*

These lines of classic Dagestani poet Rasul Gamzatov, after whom the Khasavyurt central library is named, are the motto of library work within Weekend Schools project.

Its implementation counterbalances the negative fruit of technological civilization advancing on the life of the indigenous population. As it improves interethnic relations, the project is a powerful instrument of reviving minority cultures on a new technological basis. These cultures have no support from without, and they would never achieve revival if not for the latest technologies.

Project supervisors enumerate its achievements:

- protection of ethnic minorities' rights, offering them a choice allowing to preserve cultural identity while taking part in political, economic and public life;
- meeting information, cultural, educational and other social demands and interests of ethnic minorities connected with their ethnic identity, and offering them free access to ethnic cultural values;
- the preservation and development of contacts between Dagestani peoples;
- circulation of information about the situation, culture, languages, rights, hopes and aspirations of Dagestani ethnic minorities; instilling in the nation respect for their cultural values, traditions and forms of social organization; public educational measures to eradicate prejudice against ethnic minorities;
- improvement of the existing practice of territorial distribution of the cultural potential, especially in outlying localities—the strongholds of indigenous historical and cultural heritage.

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Kazakhstan's Cultural Heritage Programme Goes Digital

Located at the crossroads between Europe and Asia, Kazakhstan has for centuries been a meeting point of varied civilizations and religions. Many a time have waves of migration swept across Kazakh territory, shaping the country into a multiethnic society with a rich and diverse culture.

Modern-day Kazakhstan is a multiethnic nation with a population of over 15 million. It is home to representatives of more than 130 ethnicities, with the Kazakh majority accounting for about a half.

Multilingualism is an inherent quality of Kazakhstan and one of the country's strategic assets. Along with Kazakh and Russian, its media use 11 other languages, such as Ukrainian, Polish, English, German, Korean, Uyghur, Turkish and Dungan.

The state provides financial support for periodicals in minority languages, like the Uyghur-language newspaper *Uyghur Avazi*, the Korean-language *Kore Il'bo*, and the German *Deutsche Allgemeine Zeitung*.

But there is only so much it can do to meet the education needs of each of the country's many ethnic groups. Work to advance education in minority languages is done primarily through community centres' Sunday schools, operating in close cooperation with the Assembly of Peoples of Kazakhstan, an advisory body under the wing of the Kazakh President.

The Assembly's primary goal is to maintain communal harmony in Kazakhstan, where representatives of many different ethnicities, cultures and faiths have been living peacefully side by side for centuries. It works to preserve and promote the country's cultural and linguistic diversity, spreading knowledge about the history, customs and traditions of every constituent community. This organization is widely renowned for its efficiency in solving interethnic issues.

Kazakhstan's government has recently launched a programme to promote interethnic and interfaith dialogue, including through the mass media. Community centres that arrange minority language courses at Sunday schools receive wide-ranging support from the state. Thanks to the growing amount of subsidies, they can consistently form student groups, employ qualified teaching staff, and publish textbooks and dictionaries.

Some 7,000 students—children as well as adults—currently attend Kazakhstan's 196 Sunday schools; 1,163 students are enrolled in its three *Ethnic Revival* schools, based in the cities of Ust Kamenogorsk, Petropavlovsk, and Pavlodar. These institutions offer courses in thirty local languages. Kazakh-language courses become increasingly popular as more members of Kazakhstan's ethnic minorities seek to improve their command of the national language for better integration.

All these state-sponsored language programmes help maintain the climate of tolerance in the country, promoting multilingualism and intercultural dialogue.

Kazakhstan is open to global information flows. Satellite television and the World Wide Web have now become part of everyday life here. The Internet is the most vibrant segment of Kazakhstan's media market these days, with the number of regular Internet users having topped 1.5 million.

Kazakhstan's openness to the world is not mere rhetoric. This is a strategic priority, a deliberate choice reflecting the nation's vital interests.

Globalization has given more freedom to us all, but it has also made us interdependent. It is from this perspective that we determine our key priorities in fostering trilingualism in Kazakhstan. One of the strategic goals set by the country's president, Nursultan Nazarbayev, is to raise the international standing of the Kazakh language so that it could function on a par with major world languages, and to create equal opportunities in Kazakhstan for the use of Kazakh, Russian and English.

At this point, however, priority should be given to the national language. The aim is to enhance its status, thereby stabilizing the linguistic situation in Kazakhstan.

These tasks are inseparable one from another, despite the individual peculiarities of each. Proficiency in one's national language is indispensable in studying foreign languages. Kazakh should therefore be seen both as the base and the vertex of Kazakhstan's linguistic triangle.

A lot is being done in today's Kazakhstan to promote the national language. A special language law was adopted in 1997; Kazakh-language schools open their doors to students each year; more Kazakh-language books come out of print; Kazakh-language courses are launched.

A recent consultation meeting organized by the Culture and Information Ministry in association with the Assembly of the Peoples of Kazakhstan brought together members of the Russian community, the Coordination Council and the Association of Russian, Cossack and Slavic Organizations of Kazakhstan, and of the Slavic public movement Lad. Leaders of other communities and representatives of the academia were also in attendance. The Minister of Culture and Information and the leader of Kazakhstan's Russian community, Yuri Bunakov, signed a memorandum of understanding and cooperation. The sides agreed to hold regular competitions for best command of the national language among young Russians, at the national as well as regional and local level. They also decided to start contests for best knowledge of Russian literature and the English language and to expand the network of Sunday schools offering advanced Kazakh-language courses for ethnic Russians.

We've come a long way in diversifying the methodology of teaching the Kazakh language, notably to adults and government officials. A nationwide festival of media classes has been held in Kazakhstan for the first time; leading European Union educators have been invited through the OSCE to hold workshops on modern language training techniques.

Working in collaboration with the Agency for Public Service, we have developed a concept, standards and curricula for intensive teaching of the Kazakh language to government officials, with a particular emphasis on multilevel language programmes and computer-based teaching tools.

Among the programmes developed to redress linguistic imbalances in Kazakhstan, the *Cultural Heritage* programme, adopted in 2004 on presidential instructions, is, perhaps, the most effective. It offers a striking example of heritage rediscovery and promotion in a post-Soviet state.

Initially, this programme was designed for a three-year period, and it involved archeological, historical and ethnographical surveys in and outside Kazakhstan. Some \$22.5 million was allocated for it from the treasury coffers at the initial stage, in 2004-2006; more than \$33 million came in for the second leg.

The programme is being coordinated by a public council formed from internationally renowned scholars leading research in history, ethnology, archeology, linguistics, philosophy, Eastern studies, and political science, such as Abumalik Nysanbayev, Kamal Burkhanov, Seit Kazkabasov, and Karl Baipakov. The second leg is mainly about raising public awareness of Kazakhstan's cultural heritage. Heritage sites have been selected from among monuments dating as far back as two thousand years, the Bronze Age.

Restoration works have been performed on some thirty sites across the country; scientific expeditions sent to Egypt, Mongolia, China, Russia, and European countries have brought home 5,000 manuscripts and printed books on the history of Kazakhstan. More than 270 titles devoted to Kazakhstan's cultural heritage have been published since the programme was launched in 2004.

These days much of the heritage-related information is available online, which brings the programme to an entirely new level.

At an open session of the Public Council for Cultural Heritage in February 2007, we suggested that digitized versions of the books published under the *Cultural Heritage* programme should be transferred to the National Research Library in Astana and be made available to the public online. President Nazarbayev hailed the idea. Given that the number of copies printed for each title does not exceed 2,000 while the number of libraries in Kazakhstan totals 12,000, this was a crucial decision to make. Indeed, the Internet provides a unique tool for expanding public access to information.

President Nazarbayev believes that the *Cultural Heritage* programme should become a major Kazakh brand and a powerful mechanism for raising Kazakhstan's international profile.

Kazakhstan does not possess monuments of global value such as the Egyptian pyramids or Rome's Coliseum, but no one can deny the significant role that its nomads played in world history. The legacy of the great steppe civilization is of much historical importance, and is waiting to be explored in depth.

According to Mr Nazarbayev, presenting Kazakhstan to the rest of the world as the cradle of this civilization is one of the main objectives of the *Cultural Heritage* programme, crucial to the revival of the Kazakh identity.

Kazakhstan's 12,000 libraries have a historic role to play here: they are to spread around all that wealth of information that has been accumulated through the country's *Cultural Heritage* programme.

President Nazarbayev believes that along with promoting Kazakhstan's heritage internationally and highlighting cultural tourism opportunities in this country, the project should also involve efforts to create chronicles of contemporary Astana history.

Libraries have a major role to play here. Kazakhstan's National E-Library project is a striking proof. This breakthrough project makes an invaluable contribution to the enhancement of Kazakh-language content in global cyberspace. This is, in fact, the nation's first online library to offer such a vast array of information in the Kazakh language. It is still very much "a work in progress," though, since more than 300,000 books published since the advent of printing to Kazakhstan are still waiting to be digitized.

The National E-Library gives access to books released in various points in Kazakh history. Along with searching and reading online, visitors can also make bibliographic inquiries and place orders. Since it was launched in December 2007, the E-Library has been visited more than 16,000 times. Its visitors come both from Kazakhstan and foreign countries, such as Russia, China, Australia, Germany, Turkey, the United States, Belarus, and Uzbekistan. Many of them use the “Ask a Librarian” service and are provided with replies in the Kazakh, Russian and English languages.

The Internet has now become part and parcel of everyday life in Kazakhstan’s government agencies, businesses, and households. The Kazakh state’s approach to Internet management has five main aspects.

The first one has to do with Internet connection (including broadband Internet access), domain names and Web hosting.

The second one is about bridging the digital divide, particularly the gap in Internet connectivity between urban and rural areas.

The third deals with e-commerce, e-banking, and the use of the Internet for other business operations.

The fourth aspect is socio-cultural, and has to do specifically with the promotion of multilingualism through the Web. For Kazakh websites, the advancement of the national language is an absolute priority.

The fifth one is about developing a regulatory basis for copyright and trademark protection on the Internet, for the use of digital signatures, etc.

These and other issues were raised at an international conference devoted to the expansion of Kazakhstan’s presence on the Web in 2008. The forum, entitled Internet Alternative, highlighted the importance of online resources such as the National E-Library, the National Heritage and the National Language portals, and the web pages of Kazakh government agencies. Each of these outlets is instrumental in enhancing the Kazakh segment of the Internet and providing broader access to Kazakh-language content for the residents of Kazakhstan as well as Kazakhstan natives based abroad.

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Library Promotion of Vernacular Languages in Cyberspace

A national library has two missions, which are at bottom mutually exclusive. On the one hand, it is a repository of national cultural heritage, and it is essential that it take care of, preserve and augment its holdings. The best way to preserve an old book or a valuable publication is to place it on a shelf in a protected space with controlled temperature and air humidity and to retrieve it from this positive, sparing environment as seldom as possible. On the other hand, it is equally important that the library be open to the public and provide access to its information resources for all segments of the population.

To resolve this contradiction libraries will digitise their collections and make electronic copies available on PCs in their reading rooms or, alternatively, make them remotely accessible—with or without authorisation—via global information networks. The selection of access mode is most often dictated by Part 4 of the Russian Civil Code (referring to the law on copyright and associated rights). Today, almost every library is in a position to add content to the cyberspace. The question at issue is what part of this content serves the purpose of promoting vernaculars.

In the Republic of Karelia, the support of indigenous peoples, Karelians, Vepsians and Finns⁶⁰, and their languages is taken seriously, although their populations make up not more than 12% of the total, with Finns accounting for 2%, Karelians for 9.2%, Vepsians for 0.7%, Russians for 76.6%, and members of other nationalities for 11.5% of the republic's population. The republic is inhabited by more than 100 different nationalities and it features more than 40 ethnic non-governmental organisations and cultural autonomies. Nine of them are organisations of the Karelian and Vepsian peoples, of which three are strictly youth ones. It is safe to say that, since the early 1990s, the republic has seen a surge of ethnic self-awareness.

⁶⁰ Finnish, Karelian and Vepsian belong to the Finnic group of the Finno-Ugric languages in the Uralic family of languages and are rather similar.

For many years, a factor that impeded the development of the Karelian and Vepsian was the inability to overcome differences in Karelian dialects and an uncertainty in the use of the Karelian and Vepsian alphabets: both Cyrillic and Roman writing systems were used. It was not until 2007 that the republic government officially approved unified alphabets of the Karelian and Vepsian languages, which use Roman letters and only symbols present in standard text editors.

The National Library of Karelia is taking an active part in the regional target-oriented programme *Karelia: A Territory of Concord* and the republic-wide goal-oriented programme *State Support of the Karelian, Vepsian and Finnish Languages in the Republic of Karelia in 2006-2010*.

Library activities in support of vernaculars in cyberspace can be categorised as follows:

- conventional book cataloguing and the maintenance of an electronic catalogue and union catalogues of publications in vernacular languages, which must be available to any Internet user, and the promotion of these resources;
- making electronic copies of vernacular materials publicly accessible;
- generating content for websites relating to indigenous peoples, their languages, cultures, unique features and traditions and early text publishing in vernacular languages.

Let us consider each of these categories separately.

Catalogues

We have been developing an electronic catalogue (EC) for fifteen years. As of July 2008 the Republic of Karelia National Library holds some 1.6 million items. There are 17,004 publications in Finnish⁶¹, 1,530 in Karelian⁶² and 272 in Vepsian⁶³. The EC on the Web lists bibliographic entries for a quarter of Finnish items, more than half of Vepsian items, and more than three quarters of Karelian items.

Besides, for more than ten years, the National Library has maintained on its website union catalogues of Karelian and Vepsian publications. The holding institutions include Karelian libraries and the National Library of Russia, to which the State Library of Ugra was added in 2008. I call on all holders of Karelian and/or Vepsian items to partner with us in keeping our union catalogues.

⁶¹ Finnish for us is a foreign language today, but we treat it in a special way, for in the period 1940 to 1956, when the Karelian-Finnish Soviet Socialist Republic existed in what is now Karelia, it was a state language on a par with Russian. The support of Finnish is important for the development of cooperation with Finland in the border area.

⁶² Karelian is a language of the “titular nation”, yet Karelian writing was underdeveloped until the 1990s.

⁶³ Vepsian is the language of the Vepsians, one of the indigenous smaller nations of northwestern Russia; it was only recently that it acquired its own writing.

Electronic Copies of Publications in Vernacular Languages

Our library has been engaged in this work for nearly five years.

We made electronic copies of publications in Finno-Ugric languages available on the Web portal Finno-Ugric Libraries of Russia, an updated version of which has been operational since March 2008. A new arrival is a collection of translations of Vladimir Vysotsky's poems in Finnish, Karelian and Vepsian.

As we digitise items in our own bookstock, we partner with Petrozavodsk State University in maintaining the Republic of Karelia Electronic Library, in which we post electronic copies of Finnish and Karelian materials and important area studies in Russian.

We attempted to find out whether there was a demand for our publications in vernacular languages. In the new version of our website, we installed page counters in our electronic collections, which signalise that Web visitors regularly browse them. Figures vary, but there are few if any items that remain unnoticed for more than a month. For some publications the number of hits may be as high as 185 a month (a Russian-Karelian dictionary) or 137 (the Gospel According to St. Matthew, one of the early printed books in Karelian). For me, contacts with live users were much more exciting than the automatic count.

Many of our users are willing to identify themselves as representatives of the Karelian or Vepsian peoples. Users are aware of our collections and sharing links and advertising our sites among like-minded people. We, on the other hand, have not always got round to optimising our websites and registering them in as many search engines and catalogues as possible. Nor have we always exploited to the utmost conventional public relations media such as announcements, leaflets or booklets.

We happened to meet with an unusual request, a user asking us to digitise the Stalin Constitution in Karelian and add it to our electronic collection. How was one to regard this request? Digitisation is a costly business, and would this text be of interest to anyone else?

In our electronic collections we posted copies of items in both Cyrillic and Latin scripts. Our young student users manually romanised our Cyrillic materials with the help of a standard text editor.

My proposal to publish the fruits of their painstaking labour on our website received no response, however. Today, RuNet users have plenty of opportunities for such publications on all kinds of forums, the Live Journal, and finally, in the immensely popular network, VKontakte (the Russian counterpart of Facebook). Numerous media blogs, online forums and so-called social networks became our competitors. Users are busy opening their accounts, setting up interest groups and engaging in direct and free communication, so unlike our own websites.

Research holding Romir polled more than 1300 active Internet users above eighteen on their familiarity with and attitude to social networks (see, http://www.romir.ru/news/res_results/468.html). The poll results show that social networks are extremely popular and that users spend much time on these services and often credit their content more than they do official sites.

Perhaps we, too, should change our attitude to social networks. Maybe we should not look down upon them, like F. Beigbeder, who believes that they have reduced Socrates' "Know thyself" to the absurd "Everybody know me"⁶⁴. Is it not about time we used the Live Journal, forums and social networks to promote our own electronic resources? Marketing agencies and PR departments of companies are now hiring professionals in charge of informal contacts with customers: "They are regulars of social media resources, familiar bloggers, their opinion is trusted on forums, communities, videofile hostings, as well as digital promotional channels (podcasts, RSS-feeds etc.)"⁶⁵. Why should not libraries use new promotional tools, which have proved their worth?

Generating Content for Indigenous Peoples' Sites

These are our current concerns. We are breaking new ground here.

There are quite a few websites devoted to indigenous and/or minority peoples and languages. They appear and disappear spontaneously and randomly. What do you need to do to prevent content on your site from replicating already published content? What should you take as your model: strictly academic, multipage publications on official websites or absurdly shallow fun pages? What should be the golden mean? What could be the implications of opening a free forum, e.g., in Karelian, on the official site of the National Library? What should be the operating procedure of its moderator? Virtual perusal is the ruin of such an undertaking; or can one create a living, active resource, which does not go beyond the bounds of decency, after all? We are seeking answers to these questions.

It turns out that our perception of what users are interested in may be out of step with reality. Therefore, we need to analyse user demand, right on our websites, and to build our offers on the results.

Users will find readable any content we mean to publish if we, publishers, consider it readable and if we do not regard publishing as a mere formality. I feel that the way we collected reading promotion material for our main site is quite useful. We met with professionals, recorded our talks on a dictaphone, transcribed the recordings and posted it to our website. We illustrated the material with photographs and

⁶⁴ Frédéric Beigbeder. *L'égoïste romantique* (2005).

⁶⁵ http://www.adindex.ru/news.type_11.id_9735.html.

electronic copies of pages of items referred to in the talk. It made for a happy author and visitors liking to browse the material. Today's journalists work this way. Are not websites turning into media? If you want your site to be described as exciting and varied you have to learn to compete with the media.

Our library's most important current "cyberproject" is the design, development of, and content generation for our website *Indigenous Peoples of Karelia*. We want a lot of content on this site: the history, demographics, languages, literatures and characteristics of indigenous peoples. Also, there must be a concise ethnographic dictionary and, by all means, a catalogue of Web resources on the subject. We are dreaming of making the pages of our new website open-ended and updatable, so that interested visitors are able to share knowledge, discoveries, ideas with others. It is worthwhile trying to trust your users. Janusz Wiśniewski, the author of bestselling *Loneliness on the Net*, said in another of his novels: "The Internet is a jungle and sometimes it resembles a garbage dump of information. Occasionally, however, one can find real gems in it"⁶⁶. Indeed, increasingly on forums you come across opinions similar to yours or statements arousing interest or a desire to respond or argue. It makes you happy.

I think that partnering with regional museums will be useful. This year, I happened to visit the Kem Municipal Museum Pomorye and the Sheltozero Vepsian Ethnographic Museum. I already can visualise very interesting prospects for joint projects.

Forecasting outcomes is not easy. Why not take a chance, though? After all, when we applied the digitisation technique we did not anticipate an impressive result that would add much to the library's performance indices. One likes to think that a job well done ought to bear fruit. Figures are not all the result, after all. The number of page hits on our main website is an order of magnitude greater than on the Finno-Ugric Libraries of Russia site. Clearly, quantitative indicators can vary greatly in weight: 500 hits in a few months is a far weightier value for the electronic pages of two early manuscripts on our site than if it referred to the downloading of a smash song. After all, the main mission of a national library is to preserve the national cultural heritage of the region. The Internet helps to bring heritage items nearer to those who want them and serves as a platform for exchange of opinions and expression of ideas. Let a library website act as a virtual umbrella for this platform. As a matter of fact, the traditional library is a meeting place not only for readers and books, but also for readers and authors and for readers with one another. Libraries are destined to restore lost communication modes; to offer as many methods and forms of exchange of views about written heritage, intellectual and aesthetic creative work and cultural heritage generally as possible; to promote the creation of a public space both in reality and in

⁶⁶ Janusz Leon Wiśniewski. *Los powtórzony* (2007).

the virtual environment. Therefore, we will try to make the new website, “Indigenous Peoples of Karelia”, a virtual meeting point for communication among these peoples and all those interested in this kind of communication.

Valentin Nepomnyashchy, a well-known Russian literary critic, speaking on the *Meanwhile* TV programme, called ethnoses the trussing of the building called humanity. Obviously, the destruction of these key load-bearing structures will inexorably lead to the destruction of the whole building.

Tentative Conclusions

Library promotion of vernaculars on the Net is justified if this service is in demand. It is in Karelia. The National Library needs specialists having a good command of these languages. It is a necessary but not sufficient condition for success.

Once it has been resolved to publish a collection of materials in vernacular languages on the Internet, you need to decide what material to choose for digitisation and publication. Staff members’ opinion does matter, of course, but it might be a good idea to discuss the matter with users visiting electronic collections, to conduct a virtual poll and to take its findings into account.

Every opportunity should be taken to promote vernacular resources, including new promotional tools that appeared in cyberspace in recent years.

Internet products should be built interactively, with a facility for information augmentation by web visitors.

Website content should be generated in close partnership with professionals, museums and national NGOs.

It is well worth creating on the website a catalogue of Internet resources devoted to indigenous peoples of the region.

As we build new websites we need to monitor and apply ever new software tools. The library staff must include specialists who can design and develop Internet resources. It is warranted by the fact that attendance and book issue, the two key indicators by which libraries are evaluated and funded, are now growing only due to virtual visits and issue.

Part 4 of the Civil Code needs to be amended to permit libraries, if only national, to digitise copyrighted works without making contracts with copyright holders in order to build a digital insurance fund and to provide access to its electronic copies inside the library.

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National Library of the Republic of Sakha (Yakutia): Promoting Indigenous Languages in Cyberspace

According to a 2002 national census, Russia's Republic of Sakha (Yakutia) is home to more than 120 ethnic groups. The three most numerous ethnicities—Yakut, Russian, and Ukrainian—account for 90.3% of the population. The Yakut are an ethnic majority, making up 45.4%, while the share of small indigenous peoples of the North is 3.4%.

The indigenous inhabitants of Yakutia are concentrated in twenty regions in the republic's north. They dwell in 152 reindeer herder camps, 232 nomadic communities, fishing and hunting settlements, and 81 villages.

The National Library of the Republic of Sakha (Yakutia) is one of the republic's key institutions with a mission to revive and promote the local indigenous languages. It boasts a rich collection of books in languages spoken by Yakutia's native communities, and is committed to preserving this unique repository as an important part of the world's heritage.

There are some 1.5 million print editions on the library's collection. As of January 1, 2008, it holds 51,417 books in the Yakut language and 1,779 in languages spoken by small indigenous peoples of the Russian North (books of this latter category account for 3.5% of the Library's total collection, 1.5% more than the national average).

The overall number of titles in indigenous languages is 625, including 294 in Even (also known as Lamut), 157 in Evenki, 68 in Yukaghir, and 21 in Dolgan—quite a lot, given that only 403 titles have been released in the republic over the past 75 years. By now, 32.6% of all of the library's books in indigenous languages have been digitized, and the digital versions are available for reading online in the electronic library of the Republic of Sakha.

Publishing policies are not much of a help in preserving indigenous languages. Books in such languages are normally released in 500-1,000 copies, but they could reach a much wider audience if placed on the Web.

A department devoted specifically to northern peoples' literature was set up at the National Library of the Republic of Sakha (Yakutia) in 1975. At the initial stage, its main task was to find and collect books in languages spoken by small indigenous peoples of the Russian North. The new unit's *Speaking Book* project gained wide acclaim among the professional community as well as the general public. The recordings made for this project were subsequently digitized and published on 14 multimedia discs. The release of the discs, which let us hear Evenki and Even authors, folklorists and scholars speak live, proved to be a momentous event in the republic's cultural life.

Two targeted programmes, *Modern Technology in Information Storage and Display at Public Libraries of the Republic of Sakha (Yakutia)* and *Memory of Yakutia*, were developed to preserve and popularize the documentary heritage of the republic's indigenous inhabitants. These programmes led to the creation of an official website of the National Library and of the online information resource www.sakhamemory.ru.

Visitors now have access to the Library's online repository, the archives of the First President of the Republic of Sakha, the Memory of Yakutia online information portal, as well as to an online full-text database of the Republic's official documentation (1922-1990).

The online information portal www.sakhamemory.ru is a window onto the documentary cultural heritage of Yakutia's various ethnic communities. Of its six current projects, three are being implemented by LS. These include *Literary Monuments of Yakutia*, *Ethnic Bibliography*, and *Voices of the Century: Music and Sound Heritage of the Peoples of the Republic of Sakha (Yakutia)*. There are plans to expand that content further.

Being a holder of the most complete repertory of books in local indigenous languages, the National Library of the Republic of Sakha works to digitize them and present in cyberspace. The Library's website displays its bibliographic databases in Russian and Yakut, in languages spoken by local indigenous communities, and in several foreign languages. These databases currently include about half a million entries.

The Library offers a complete catalogue of libraries operating in the republic and a *Sakha Sire* database with bibliographic notes on indigenous print media since 1991, such as the newspaper *Ilken*, the literary almanac *Khalarkhad* (published in seven languages), and the *Tatkachiruk* magazine.

The National Library of the Republic of Sakha (Yakutia) makes a significant contribution to the creation of multi-language information resources, notably by working to build bibliographic databases, such as *The Repertory of Books of Small*

Indigenous Peoples of the Republic of Sakha (1932-2004) (recorded from 1996, in five languages; 403 entries) and *A Complete Catalogue of Books in Languages of Small Peoples of North, Siberia and the Russian Far East* (2,603 entries in 24 languages of small indigenous peoples of the Russian North). This latter database is created in collaboration with the Russian National Library.

The topicality of these projects comes from the fact that about 40% of all the books published in indigenous languages is scattered around the country.

The Library's Department of Indigenous Peoples' Literature has compiled a bibliographic repertory of Yukaghir books published in the period between 1897 and 2006 and created a *Yukaghirica* database, with unabridged texts and bibliographic content.

These two resources serve as the foundation for endeavours to preserve and develop the Yukaghir language, almost extinct by now. According to a 2002 population census, only 208 of the 1,097 ethnic Yukaghirs recognize it as their mother tongue, while the percentage of fluent Yukaghir speakers may be even smaller.

The Library's efforts to preserve indigenous languages and literature have paved the way for the creation of the *Knigokan* e-library, which includes sections on Even, Evenki, Yukaghir, Dolgan and Chuckot, as well as on theme databases and novelties.

The Even section features, among others, the epic *Gulkokoddi Nyurgun Bootur* by Platon Oyunsky, and the *Even-Russian Phrasebook* by Nikolai Tarabukin, the founding father of Even literature.

The Evenki unit offers books such as *Traditions and Customs of the Evenki* and *The Dialectology of the Evenki Language*.

The Yukaghir section features books by well-known Yukaghir authors like Uluro Ado (*Labunmedenu Underil*) and Teki Odulok (*The Life of Imteurgin the Elder*).

The online library provides access to books by contemporary authors in keeping with the terms of copyright contracts. We hope that after all relevant agreements are signed, the e-library will have on offer as many as 302 books in indigenous languages of the Russian North.

The *Creation of the Arctic Info Centre Portal* project (implemented by the National Library of the Republic of Sakhs in collaboration with the Arctic Institute of Culture and the Arts), if supported by the state, could make a considerable contribution to the cause of preserving northern minority languages.

The *Knigokan* e-library is designed as this portal's main information resource. It will provide access to information on small indigenous peoples of the North,

serving as a lifelong learning platform for inhabitants of Russia's sub-Arctic regions. Distant learning service will provide students with teaching aids and self-check materials. And its online postal service will speed up communications and document delivery. Users will be able to attend and have their say at interactive conferences, forums, and panel discussions. The portal will facilitate research into the information needs of Russia's sub-Arctic populations.

The Library of Sakha has a lot of new ideas and plans waiting to be translated into reality. Their materialization will help to further advance the efforts toward preserving the linguistic and cultural heritage of Yakutia's indigenous communities and enhancing its presence in cyberspace.

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Buryatia Libraries Join Efforts to Promote Multilingualism on the Web

UNESCO's Universal Declaration on Cultural Diversity highlights the importance of protecting indigenous cultures and providing free access to their dissemination means in the globalization era. According to UNESCO, universal and equal access to global information networks is a major condition for the development of cultural and linguistic diversity and the preservation of the ethnic individuality and the cultural identity of the peoples of the world.

Buryatia is historically a multi-ethnic republic. Several different religions co-exist here peacefully side by side. According to a 2002 nationwide census, Buryatia is populated by members of about 160 ethnicities. Ethnic Russians form the republic's majority (665,500, or 67.8% of the total population). The number of Buryats, native to the land, is 272,900 (27.8%). Minority groups, consisting of 1,500 to 2,500 members, include Belarussians, Armenians, Azeri, Germans, Evenki and Soyots. The Evenki and the Soyot belong, along with the Buryats, to the republic's indigenous population.

Buryatia's Soyot community, with its 2,000-odd members, has not been mentioned in any reference books on the republic's ethnic landscape before. According to historians, the Soyots, originally from Mongolia, came to live in Buryatia some 350-400 years ago. Previously, they had inhabited vast territories in the East Sayan Mountains and in the Tunka Valley of Buryatia. But since there were almost no lands favourable for reindeer herding out there, some of the Soyots settled down in the Buryat-populated Tunka and Zakamenka areas and took up animal husbandry. They subsequently assimilated into the Buryat community and adopted the Buryat language. For that reason in a 1989 census, the 500 local Soyot inhabitants are registered as part of the Buryat population. Almost no Soyot speakers survive to this day.

The Evenki community has a little more than 2,500 members, according to a 2002 census. It has a rich culture, which, unfortunately, remains largely unknown to the outside world. Scholars believe the Evenki inherited their culture directly from a civilization that had emerged in the Lake Baikal area during the Stone Age. The history of the Evenki people is traced 3,500 years back. Hunting, fishing and reindeer herding are their traditional livelihoods. They live in five northern districts of Buryatia (Bauntyn Evenki, Barguzin, Muya, North Baikal, Kurumkan), where the climate and the landscapes best correspond to their traditional lifestyles. The Evenki language

belongs to the Tungusic, or Manchu-Tungus, branch of the Altaic language family, and has genetic similarities with the Turkic and the Mongolian languages. Part of the Evenki population assimilated with the Buryats and adopted the Buryat language.

It is hard for the Evenki and the Soyot languages to survive in the modern-day world. To be able to survive, a language should be taught in schools and used in state institutions and the media. A lot of activities in today's Buryatia are aimed at reviving the Soyot and the Evenki cultures. Government agencies and public organizations take measures to protect the rights of small indigenous peoples and to raise their living standards. In November 2000, a parliament resolution added the term "Soyot" to the official name of the Oka Region. To preserve Soyot culture, an association of the Soyots of the Oka Region was set up and a programme for the revival of the Soyot language was developed. In 2001, at the request of the Buryat government, top officials of the Oka regional government and the Association of the Soyots of the Oka Region the Institute of Ethnology and Anthropology of the Russian Academy of Sciences developed a script and spelling rules for the Soyot language and compiled a Soyot-Buryat-Russian dictionary, bringing it out in 2003. In 2005, republican government agencies decreed that the Soyot language should be taught in all Soyot primary schools.

The Evenki language is on the curricula of eight secondary schools and three universities of Russia, notably the Buryat State University, which has an Evenki department. Language instructors trained here go on to work across the republic as well as in neighbouring regions. Days of Evenki Language and Literature have been regularly held at the Buryat University since 2004. The republic's television and radio run broadcasts in the Evenki language, and local publishing houses release Evenki-language books.

Under the 1992 Law on the Languages of the Republic of Buryatia, Buryat is one of the two official languages here, along with Russian. Classes at ethnic Buryat schools are taught in this language, and it is offered as a separate subject at non-ethnic schools, colleges and universities. Buryat speakers have a choice of reading matter, including educational literature, fiction, essays and periodicals; radio and television broadcasts in their native language are also available. The republic's main research centres studying the Buryat language include the Institute of Mongolian, Buddhist and Tibetan Studies at the Russian Academy of Sciences' Siberian branch and the Buryat State University's Institute for the Humanities.

Libraries have enough resources today to develop multilingual content in global information networks. Modern technology enables libraries to dramatically broaden their databases and to integrate them in order to raise the quality of information services for the public. The National Library of Buryatia has already accumulated some experience in working with online resources and using multimedia means of storing and transferring information on the republic's cultural and linguistic diversity.

The National Library of Buryatia (<http://www.nbrb.ru>) is the republic's major information, cultural and educational centre. It functions as a parliamentary and governmental library, as well as a republican Book Chamber; it also manages and coordinates the work of the republic's 1,010 libraries.

The Library collection totals more than 1.2 million holdings, including 15,000 copies of rare valuable books. Work is currently underway to digitize the books for their better systematization and safety, and to create bibliographic, full-text databases as well as digital collections reflecting the republic's cultural and linguistic diversity. Seven information centres now operate on the library's premises: the Information Centre for Cultural Tourism, the Baikal Information Centre, the Agrarian Information Centre; the Legal Information Access Centre; the Internet Centre; the Microsoft Training Centre; and the Media Centre.

The Information Centre for Cultural Tourism is a unique project. It has been created to provide information support for Buryatia's tourist industry and coordinate efforts to digitize the republic's cultural heritage. One of the centre's ambitions is to build its own online resources.

Buryatia: Land of Culture, is the biggest of the digital projects, with its more than 10 megabytes of information. It draws content for digital collections from libraries, museums, archives, and community centres of Buryatia. Some of the republic's leading scholars are invited to give advice. Ample textual, video and bibliographic material in Buryatia's languages has been collected in the course of that work; it was systematized and released on a series of CDs and DVDs.

1. The DVD *The Buddhist Monasteries of Buryatia: Past and Present* offers information on the history of Buddhism in Buryatia, the life of Pandito khambo lamas (spiritual leaders of Russian Buddhism), and on local Buddhist monasteries. Content is presented in Russian, English and German. The collection took several years to put together. The database includes a bibliography on the history of Buddhist monasteries (about 200 entries), an e-library (82 texts), rare photographs, drawings, video footage, and spiritual music. Buddhism in Buryatia has been in the global spotlight since the body of the 12th Pandito Khambo Lama, Dasha-Dorzho Itigelov, was publicly unveiled in September 2002. This spiritual leader died more than 80 years ago, but his body remains in a state of preservation that has baffled scientists and drawn believers by the thousands.
2. The database *Evenki of Buryatia* offers information about the ethnography, the material and spiritual culture of the Evenki; a bibliography (more than 800 entries); an e-library (170 articles in the Russian and Evenki languages, four digital books in Evenki), and a video class on the history of Baunt.

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3. Cossacks played a major role in annexing Siberia to the Russian Empire and, subsequently, in safeguarding Siberian borders. The database *Cossacks of the Baikal Area: History and Culture* contains information about the first Cossack settlements, the formation of the Baikal Cossack army and their involvement in wars and campaigns of the late 19th and early 20th century; a bibliography with about 500 entries, a register of Web resources (18 websites), and an e-library (15 books, 146 articles, and chronicles of Cossack settlements in the Bichury, Dzhida and Kyakhta regions).
 4. Buryatia's heritage includes the Semeyski culture, which emerged in the latter half of the 18th century. The Semeyski are old believers who settled in the Baikal area following the Russian church reforms of the mid-17th century. In 2001, the Semeyski oral tradition and cultural landscape were included on UNESCO's List of Masterpieces of the Oral and Intangible Heritage of Humanity. The database *Ethnic Culture of the Semeyski Community of the Baikal Area* offers information about the history of their settlements, their religious rituals, their speech, their traditional dress, architecture, folklore and literary tradition. The DVD contains a bibliography of publications intended for scholars and laymen, digital publications (more than 700 titles), an e-library (monographs and articles from scholarly collections and periodicals; 150 titles); a large collection of photographs (over 300 images); and a collection of field research recordings (about 100 overall).
 5. The Buryat epic *Geser*, a gem of the multi-faceted Buryat oral tradition and an outstanding monument of the world's epic poetry. *Geser: Buryat Epic* is a digital publication providing information about the main oral versions of *Geseriade* in the Buryat language and about its best-known narrators, collectors and researchers. The database contains a bibliography on *Geseriade* (more than 500 entries), an e-library (152 texts, 6 digital versions of the best-known editions of the Buryat version of *Geser* in the Russian and Buryat languages), rare photographs, audio and video footage, a video lesson, and a videotaped production of Anatoly Andreyev's opera *Geser* in the Buryat language.
 6. The CD *Artists of Buryatia* contains information about talented artists and craftsmen of the 20th and 21st century (100 personalities), a bibliography of publications (1,608 titles), where some of the materials are presented in the Buryat language; an e-library (276 texts); more than 1,200 colour and black-and-white reproductions of well-known paintings, graphics, sculptures and ornamental works.
 7. Of much interest is the *Traditional Dress of the Peoples of Buryatia* database, which contains content on the dress of the Buryats, the Evenki and the Semeyski; a bibliography of publications, drawings, diagrams, photographs, audio and video footage (more than 300 titles), presented in the Russian, Buryat and Evenki languages.

In September 2007, the project *Buryatia: Land of Culture* earned the Library of Buryatia a top award in the Digital Publications category in a national competition for digital resources on culture and the arts. This project is paramount for the advancement of tourism in Buryatia and for its efforts to achieve the status of a special economic zone.

Since 2007, the National Library of Buryatia has been working, in collaboration with the Buryat Research Centre of the Russian Academy of Sciences' Siberian branch and the National Library of Mongolia, on an international project to create a digital collection *Genghis Khan: the Personality and the Epoch*, in the Russian, Buryat, Mongolian and English languages.

An extraordinary politician, the founder of a mighty empire, and a military genius, who influenced the course of world history, Genghis Khan continues to attract the attention of scholars all over the world. It was only natural therefore that UNESCO named him the Man of the Millennium in 2006. Genghis Khan was not just the founding father of the Mongolian nation. He also played an outstanding role in the unification and development of the Buryat people.

The Library's project *Periodicals of Buryatia* is aimed at building a database of press content on local lore. This project involves the digitization of editions of the republican newspaper *Buryat Mongolian Pravda* in the Russian and Buryat languages. Work is also underway to digitize the Russian-language *Baikal* almanac's editions from 1949 through 2008 (about 270 issues; 50,000 pages all in all) and the Buryat-language journal *Baigal* (from 1948 onwards). The library plans to digitize the Buryat-language newspaper *Buryaad-Mongoloi Unen* (1923-1960), local lore magazines of the 1920s, such as *Zhizn Buryatii* and *Buryatievedeniye*, and early periodicals. All the digital copies will be available on the library's website.

The Library of Buryatia's website provides an overview of the library's layout, activities and services. The news section, updated daily, informs readers on current and planned projects and the latest releases of Buryatia's publishing houses, including editions in the Buryat and Evenki languages. Books and articles in these languages can also be found in the Library's online catalogue and by making an enquiry with the online reference service and the electronic delivery service. The site is visited daily by about 700 Internet users.

An online information resource on Lake Baikal (www.baikal-center.ru), developed with support from UNESCO's Moscow Office, has been operating since 2006 on the basis of the Library's Baikal Information Centre. The website, divided into 10 sections, offers wide-ranging information on Lake Baikal that is essential to tourists, with the content sourced from environmental organizations, research

institutions, and republican and city libraries. It offers general information on the Baikal area, the Republic of Buryatia and its capital, Ulan Ude, and provides more than 130 links to regional, Russian and foreign online resources, including websites of government agencies, research institutes and public organizations, as well as theme sites on Baikal, its eco-system, local nature preserves, and tourism. The resource is visited daily by 1,000 people, on the average. It draws an increasingly large number of visitors, Russian and foreign alike, and is particularly popular in the United States, Germany, China, Australia and Japan.

The Baikal Information Centre has drawn on the accumulated material to compile reference databases with unabridged texts and bibliographies, such as *V Serdtse Narodnom Baikale (Baikal Folklore)*, *Zapovednyey Zemli Baikala (Baikal's Sanctuaries)*, *Baikal Istochnik Vdokhnoveniya (Baikal: Source of Inspiration)*, *Baikal Khozyaistvennyy (Economy of Baikal)*, and *Issledovateli I Puteshestvenniki o Baikale (Baikal: Explorers' Accounts)*. All the databases contain reference material, full texts of articles and books, an extensive bibliography, photographs, and illustrations.

The reference database *V Serdtse Narodnom Baikale* is devoted to the folklore of Buryat, Russian and Evenki communities living near Baikal and, in particular, to the image of the Sacred Lake in oral literature. Legends about Lake Baikal occupy a special place in local folklore. They use rich imagery to tell about the origins of the lake and the rivers flowing into and out of the "Sacred Sea of Siberia", as well as about how this area was settled. Related material, scattered around many different sources, has been put together by the Baikal Information Centre. The content is presented in the Russian, Buryat and Evenki languages.

The database *Zapovednyey Zemli Baikala (Baikal's Sanctuaries)* consists of seven sections. It carries information about local sanctuaries, national parks, and nature preserves of federal and republic standing.

Baikal Istochnik Vdokhnoveniya (Baikal: Source of Inspiration) features artwork by 12 artists of Buryatia. Its bibliography section lists books on artists who devoted their works to Lake Baikal. Related features are available for online reading.

Baikal Khozyaistvennyy (Economy of Baikal) is devoted to the impact of man's economic activity on the lake's eco-system. The database includes articles about the damage done to the lake by industrial enterprises, traffic, large-scale farming, logging, hunting and fishing.

Issledovateli I Puteshestvenniki o Baikale (Baikal: Explorers' Accounts) contains biographies of Baikal explorers, a bibliography of their works, an annotated list of documents on explorations of Baikal from the Library of Buryatia's rare books collection. Unabridged texts, photographs and illustrations are on offer.

The National Library's *Authors of Buryatia Online* project is aimed at popularizing Buryat literature. It has been prompted by the lack of a universally accessible, integrated online resource on major Buryat authors despite the steady interest their work arouses amongst students, the academia, people in the arts, and the reading public at large, including from outside Buryatia. Content on this website will be made available in English and Buryat.

The Library of Buryatia is to launch an *Online Buryatika Library* project aimed at creating a Buryat printed book anthology from the second half of the 19th century through the first third of the 20th century. There are plans to digitize three collections from the National Library's repositories: woodcutters and printed publications of the 19th century in the Old Mongolian language, missionary literature of the 19th-early 20th centuries in the Old Mongolian and the Buryat languages, a collection of Buryat books of 1920s-1930s in the Classical Mongol, Latin and Cyrillic scripts.

City libraries that develop and maintain their own websites also contribute to the process of preserving and promoting the cultural heritage.

The website of the Khorinsk regional library (<http://www.horlib.narod.ru>) offers general information on the Khorinsk region, its history, culture, religion, and modern development; it also presents a literary map of the region, provides links to the library network, etc. Available online are a bibliography and collected works by authors native to the region, as well as a genealogy of Khorinsk Buryats. Some of the information is presented in the Buryat language.

The website of the Baunt regional library (<http://bauntcbs.narod.ru>) features the following databases: *Traditional Evenki Dress*, *Culture of the Evenki of Baunt*, *the Baunt Evenki Area*, *Evenki Ecological Calendar*, and the *Eventika* online catalogue.

Working to preserve Buryatia's cultural heritage, we often find that the government policy to promote multilingualism in the republic and to protect its historical and cultural heritage is not carried out effectively enough. This is why the rich heritage of the republic's multi-ethnic population is still so poorly presented on the Web.

The National Library of Buryatia's experience shows that the digitization of books and periodicals is becoming a principal means of providing public access to the cultural heritage, as well as the main condition for its preservation and transfer to future generations. Universal accessibility of digital libraries in indigenous languages could give a boost to efforts to preserve the cultures of indigenous communities in the globalization era and to uphold linguistic diversity on the Web.

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Using IT to Sustain Cultural and Linguistic Diversity of the Khabarovsk Region

Russia's Khabarovsk Region is inhabited by some 1.5 million people, of whom more than 20,000 are members of 25 small indigenous ethnicities of the country's north. It ranks among those Russian provinces where indigenous populations are the most numerous.

Thirty-five registered ethnic community associations, including two autonomies, operate in the Khabarovsk Region as of today. The Regional Culture Ministry's association for science, education and culture incorporates eight community centres (Russian, Ukrainian, Belarusian, Yakut, and Korean). The province's municipalities have 14 such centres at the moment.

The Khabarovsk Region seeks to advance its economic, cultural and humanitarian cooperation with foreign countries, such as China, Japan, the United States, Canada, and South Korea.

Cultural diversity is commonly seen as crucial to the sustainable development of society these days. Many countries are facing the challenge of preserving and promoting indigenous cultures, especially those developed by small ethnic groups. The traditional cultures of many of the small indigenous peoples of northern Russia have now found themselves on the brink of extinction. Languages such as Aleut, Itelmen, Koryak, Nanai, Negidal, Nivkh, Oroch, Orochi, Udegey, Ulchi, Chukchi, Evenk, Even, Eskimo and Yukaghir are listed among Russia's most endangered. Yet, the ever decreasing number of speakers can by no means undermine the value of these languages, nor their unique character.

Information technology has a big role to play in sustaining the linguistic and cultural diversity of the Khabarovsk Region. Already, IT is being extensively employed here as a means of providing information support for various culture-related activities. Cultural institutions, leagues of art professionals, and individual artists, as well as government agencies administering the field—all of them post stories about culture and the arts on their Web sites. They use such online postings for making their content more widely accessible and up-to-date. And, of course, they try to make the most of the Internet as a communication medium.

Wide-ranging information on the Khabarovsk Region's heritage and its modern-day arts and culture scene can be found at the sites of the regional government (www.adm.khv.ru), the regional Ministry of Culture (<http://minkult.x93.ru>), the Nikolai Grodekov Museum of Khabarovsk (<http://hkm.ru/>), the regional Fine Arts Museum (<http://www.feam.info/>), and the State Research Library of the Russian Far East (www.fessl.ru), as well as at various city & region profile sites such as www.khabkrai.ru, khabarovsk.kht.ru and <http://hbr.moigorod.ru/home>.

Engaging libraries across the country in efforts to preserve and promote cultural diversity is a priority with the National Libraries Association. The Far Eastern State Research Library contributes its bit by providing information sponsorship for research and display projects celebrating the many traditional cultures of the Russian Far East. Let us cite here some of the library's recent contributions.

In 2006, the librarian community of Russia's Far Eastern Federal District took part in a large-scale international symposium, "Linguistic Policies and Language Teaching Practices in the Context of Intercultural Communication." At the forum, organized by the Humanities University of the Russian Far East, the Far Eastern State Research Library led a focus group to explore the role of libraries in promoting cross-cultural communication. The success of that focus group's meetings, as well as of the symposium as a whole, proved the relevance of their agenda.

Library professionals of Russia's Far East are keen to advance cross-cultural cooperation, both within the region and internationally. At the 2006 forum, they considered ways to transform libraries into open media centres that could effectively operate in an international and inter-ethnic environment. Here are some of the objectives discussed, with this ambition in mind:

- collecting foreign-language literature on linguistics and culture;
- introducing innovative communications technology into library practices, drawing specifically from the expertise of counterparts in Asia and the Pacific Rim;
- promoting computer-assisted language teaching and learning;
- assembling collections of books by indigenous authors and translating book catalogues into minority languages.

Reports presented during focus group meetings helped identify some of the librarian community's goals for the years ahead:

- advancing interlibrary cooperation through the sharing of ideas, information and books, including on various languages and cultures;

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- promoting wider coverage of regional libraries' international activity by specialized print media, including foreign;
 - stepping up libraries' educational activity with a view to facilitating intercultural and inter-ethnic communication;
 - supporting and further developing the practice of professional intercultural communication with counterparts in Russia and abroad, including in the Asia-Pacific region.

The symposium reemphasized a need for broader use of libraries in promoting linguistic and cultural diversity in cyberspace. Its keynote speeches are published, along with other related content, in "Problems of Language and Communication in Traditional and Modern Cultural Environment" (Khabarovsk, 2006).

In 2007, as part of events to celebrate Russian Language Year and Day of Slavic Writing & Culture, the Far Eastern State Research Library put up a large-scale display, "The Russian Language and its Role in History, Culture, Science and Education".

Later that year, the library co-organized a regional symposium on art education, "Art Education: Experience, Problems, Prospects," which ran both in Khabarovsk and Komsomolsk-on-Amur.

Many of its participants highlighted a need to add a regional dimension to the nation's online information resources on culture and the arts, emphasizing the importance of working toward that goal in coordination with fellow libraries, as well as with other information and culture institutions. Such resources should be made widely accessible, they stressed.

Following the conference, its main organizers—the regional ministries of culture and education—proposed a set of specific measures aimed at advancing art & culture education in the Khabarovsk Region. This government-approved package envisages steps to promote creative endeavours and training programmes in indigenous arts through the year 2010.

In 2007, the Library also took part in the 9th International Festival of Jewish Arts and Culture, held in the Russian Jewish Autonomy's capital, Birobijan, as well as in Days of Jewish Culture in the Khabarovsk Region.

In Birobijan, it staged a display of Jewish books from its own collection, on the premises of the local Sholem Aleichem library. For that exhibition, bibliographers prepared a prospectus featuring the library's information resources on the history and culture of the Jewish people.

The Jewish culture festival in Khabarovsk included the presentation of fresh book releases and a large-scale exhibition.

The Far Eastern State Research Library contributes to international as well as domestic projects. One of its most recent international contributions has been a book display within the framework of a Year of Chinese Culture in Russia. Entitled “The People’s Republic of China: Traditions and Modernity,” this exhibition features acquisitions of the past decade (being the Russian Far East’s largest library, it holds a rich collection of books and other print material on the “Middle Country”). A panel discussion held on the sidelines has charted a course for cooperation between the librarian communities of the Khabarovsk Region and China.

The library’s long and productive cooperation with the Japanese Consulate General in Khabarovsk has made it possible to stage another large-scale international project in the region, Days of Japanese Book Culture. Its organizers offered an interesting, wide-ranging programme of events. One of these, an exhibition entitled “Japan from A to Z,” presented the country’s diversity as shown by modern literature, in the Russian and English languages as well as in Japanese. Some 700 book titles were featured, all in all. Among the festival’s highlights there was also an encounter with Shimada Masahiko, one of Japan’s most prominent contemporary authors. The library’s international information centre became the venue of a photo display, “Khabarovsk Region—Japan: A Bridge of Culture,” showcasing fruits of their cultural cooperation and friendship.

In 2006 and 2008, the Far Eastern State Research Library also organized two festivals of Japanese poetry, in association with the Consulate General of Japan in Khabarovsk. Built on wide-ranging programmes, relevant to the present day, both these events drew poetry lovers of all age groups.

For many years now, the library has been a proactive contributor to Days of German-Russian Culture. This regularly held festival is a highlight on Khabarovsk’s culture scene, and all of its events are announced, outlined and commented upon in major regional print media, as well as on the Internet. The newspapers *Tikhookeanskaya Zvezda* and *Priamurskiye Vedomosti*, and the *Dalny Vostok* magazine provide the most extensive press coverage. Beyond that, they report on current events in culture and the arts and comment on problems facing the local artistic community and art consumers.

For a decade now, the library has been publishing a quarterly bulletin on the theory and practice of librarianship, and of archive and records management. The periodical, which also carries reports on various aspects of the region’s cultural life, is distributed among all municipal libraries of the Khabarovsk Region and central

libraries of the Far Eastern Federal District. The subscribers to its online edition include libraries in Russia's Tatarstan and in the ex-Soviet republic of Kazakhstan, as well as the Library of Congress.

In 2007, the Far Eastern State Research Library co-founded an academic journal, *Istoria i Kultura Priamuria* (History and Culture of Russia's Pacific Coast), in partnership with the regional culture ministry and the Khabarovsk Research Centre of the Russian Academy of Sciences' Far Eastern branch.

This magazine offers essays about indigenous peoples of the Russian North and their cultures, and has scholars contribute to its Dialogue of Cultures and Ethnicities column. In one of its editions, it reported on a pilot project to compile a Nanai mythology dictionary, with the ambition being to reconstruct myth images and ritual symbols of the traditional culture of the Nanai people.

The cultures of indigenous communities of the Khabarovsk Region are also the focus of another local magazine, *Slovesnitsa Iskusstv*. It was named best provincial periodical on culture and the arts in a 1999 contest organized by the Ford Foundation and a non-profit organization promoting arts journalism. *Slovesnitsa* won top prize in the nation-wide Golden Gong reporting contest in 2001, and three years later it came out the winner in another national journalistic competition, *Faces of the Russian Provinces*.

Being, as they are, efficient, time-tested tools for information conservation and transmission, books can be instrumental in preserving indigenous peoples' language, culture and folklore. The Khabarovsk Region's public libraries now hold a total of about 500 books in indigenous languages. Most of these books are in Nanai (269). There are also 55 editions in the Chukchi language, 52 in Koryak, 38 in Evenk, 29 in Ulchi, 19 in Even, 5 in Nivkh, and 4 in Udegey. They need to be brought all into one catalogue.

Work on such a catalogue could be done parallel with the compilation of databases (textual, documentary, graphic and multimedia) on traditional cultures, information banks featuring content from periodicals in indigenous languages, and compendia of unpublished folklore material, including in manuscripts, audio and video recordings.

Such information resources could become an additional precious tool for interethnic and international cooperation among scholars who work to preserve and promote the cultures of small ethnic communities in Russia's North.

Individuals and organizations committed to preserving this country's linguistic and cultural diversity and upholding its status as a multi-ethnic nation should join effort to get that groundwork done.

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Promoting Russia's Multilingualism in Cyberspace: Overview of Regional Library Input

Many of Russia's libraries are now involved in efforts to create multilingual content in global information networks, drawing on a wealth of material representing the nation's diverse cultural heritage. Regional libraries are the driving force behind that work in the provinces. They digitize print content in regional and minority languages and then make it available online.

A close look at what major libraries in multi-ethnic Russian regions do in this area makes it obvious that the digitization of literary monuments has become the principal means of providing public access to the cultural heritage, as well as a primary condition for conserving it and passing on to future generations.

The wider availability of digital material in the languages of small indigenous communities creates an important incentive for protecting their cultures in today's increasingly globalized world.

A lack of opportunities for creative expression and communication in a minority language may result in its eventual extinction. The Russian Constitution guarantees the rights of small ethnic groups, in keeping with universally recognized principles and norms of the international law as well as with international treaties signed by Russia.

In 2006, the federal government issued a list of small indigenous peoples living in our country, notably in its sub-polar regions, in Siberia, and in the Far East. The creation of Web resources in the native languages of the 42 ethnicities listed should be a key priority with all those involved in heritage preservation efforts. Certain material and technical difficulties hinder progress in this area, notably underfunding and a lack of software to display rare scripts.

Before surveying the input of some specific libraries, let us try to find out what the term "multilingualism" actually means. According to the Russian Encyclopaedic Dictionary of the Humanities, multilingualism is the knowledge and use of multiple languages by an individual speaker or a community of speakers [1]. In reference to

a community, multilingualism can thus be defined as the co-existence of multiple languages in a region or country populated by people with different ethnic and cultural backgrounds.

Many of Russia's regional libraries now work to advance multilingualism on the Internet, looking especially for ways to increase the online representation of minority languages. Here are some of the recent projects undertaken in this area by the central libraries of Udmurtia, Dagestan, Buryatia, Sakha (Yakutia), Krasnoyarsk, Kalmykia, Tatarstan, Altai, Mari El, Khanty Mansi (Yugra), and North Ossetia.

The National Library of the Udmurt Republic conducted in 2007 a sociological survey to gauge user demand for digital information resources. This survey showed that the Internet's regional segment has a rather broad potential audience, mostly among university students and young people in rural communities (with 52% of the republic's population living in the countryside). The library then embarked on a project to build an Udmurt-language site, *Udmurt Book on the Internet*, in keeping with the republic's law on official and minority languages. It also started work on an online library, *Book Rarities of Udmurtia*, featuring Udmurt- and Russian-language books published in the late 19th century and the early 20th century.

The National Library of the Republic of Dagestan holds the largest collection of books in minority languages of the peoples of Dagestan (the republic has an estimated 33 languages and dialects, of which eight have their own writing systems). In 2008, work to digitize these resources got underway, with a view to creating an online library.

The National Library of the Republic of Buryatia also seeks to bring the heritage of local ethnic minorities online. In 2005, it started the project *Buryatia: Land of Culture*, aimed at building a series of digital collections, with texts, video and bibliography material presented in minority languages of the republic. One such series is devoted to the Buryat epic "Geser," and has been released on a DVD. In 2007, work on a *Buryatia Memory* project got underway at the library, with the ambition being to locate documentary monuments related to the republic's historical heritage. An integrated website providing all relevant links should appear as a result of these efforts. In 2006, The National Library contributed to the development of the regional literary heritage site www.nomoihan.org, an online Buryat-language resource featuring Buryat literature from the Mongol era onwards. This website supports the Buryat language thanks to fonts developed by local experts. In 2006, an online information resource on Lake Baikal (www.baikal-center.ru) was created, in Russian and English alike. The resource, offering wide-ranging information on the Baikal, is now being translated into Buryat as well.

The National Library of the Republic of Sakha, in association with the republic's State Archives and the Museum of History and Culture of Indigenous Peoples of the North, is involved in implementing a targeted *Memory of Yakutia* programme. The online

information resource www.sakhamemory.ru provides links to the material and cultural heritage of the republic's ethnic minorities, featuring Yakut literary monuments, newsreels and documents from the Archives, as well as ample bibliographic material. On its website, the Library offers a complete catalogue of libraries operating in the republic. It leads the Russian librarian community's work to create online resources on the culture of northern regions, providing links to related information and promoting interlibrary exchange. Its immediate plans include the creation of an online library on the material heritage of Sakha's indigenous communities.

The State Universal Scientific Library of the Krasnoyarsk Region is instrumental in helping the many local languages go digital. There are as many as 137 various ethnic groups living in the region, including 33 indigenous ones. The library's website, www.kraslib.ru, carries a catalogue of publications in minority languages, including those spoken by some of the region's small indigenous communities. The site also offers background information on the history and the population of Krasnoyarsk.

The National Library of the Republic of Kalmykia maintains an online catalogue of region profile information. Materials on the Kalmyk language are digitized using Unicode characters, and so, too, are chronicles tracing the history of Kalmyk book publishing. The year 2009 marked four centuries since Kalmykia's voluntary annexation to Russia. The republic's effective law guarantees equal opportunities for the two official languages, Russian and Kalmyk, yet this latter remains underrepresented on the Internet. The local librarian community is now working proactively to redress that imbalance.

The National Library of the Republic of Tatarstan does a lot to promote Tatar-language books and periodicals in cyberspace. Its website, www.kitaphane.ru, is run in three languages, including Tatar, Russian, and English. The National Library has built a digital library providing access to the unabridged texts of some rare, hard-to-find books on the history of the Tatar capital, Kazan, and the city's major historical and cultural sites. It has also created an online *Kazan Millennium* collection, in Russian and Tatar (using both the Cyrillic and the Latin alphabets). This collection offers online reference books in both languages, on prominent personalities of Tatarstan's arts and culture. The *Tatar Online Library* collection features texts by native Tatar authors.

The National Library of the Altai Republic created an online project, *Altai's Books and Biblioculture*, in 2006, as part of the targeted republican programme *Protecting and Promoting the Altai Language*, intended for 2004-2008. It also released a CD with digitized works by Mikhail Chevalkov, the first Altai writer and philosopher. The materials come in two language versions, Altai and Russian.

The National Library of the Republic of Mari El came out with a long-term *Mari Online Library* project to digitize rare books of special historical and literary value for the Mari people, and created a multimedia Mari El Literary Map in 2006. These projects are both

part of a targeted programme to promote ethno-cultural and inter-ethnic ties in the republic of Mari El. According to the library staff, progress in converting Mari-language texts into the digital format is still hindered by a lack of appropriate fonts.

The Yugra State Library has released two series of online collections as part of a regional programme aimed at preserving and promoting the languages of the region's three indigenous communities (Khanty, Mansi and Nenets). One of the series, called *Yugra Reprint*, is a publishing project for books united around the idea of reviving Yugra's historical heritage. The other, *Library*, is arranged as a bibliographic database and is available in the Khanty and the Mansi languages. Among the Yugra Library's latest projects there is one seeking to digitize newspapers in minority languages down to their pilot editions, with a view to creating an online collection of regional periodicals with unabridged content.

The National Library of the Republic of North Ossetia is a major contributor to projects aimed at promoting the Ossetic language. Its online catalogue offers records in Russian and Ossetic as well as in Digor, a major dialect of the Ossetic language. The library is now involved in a large-scale targeted republic-wide programme to preserve library and museum resources on Ossetia's heritage. This programme envisages the selection of material on the history and culture of the Ossetian people for digitizing and posting online, as well as the creation of a state inventory of documents of cultural and historical value. Work is also underway at the Library toward building two online databases, *Authors of Ossetia* (in Russian and Ossetic) and *Ossetic Studies Abroad* (also in English), which would make selected texts available unabridged. Another database, *Researchers of the Ossetic Language*, is being created here in an online reference book format. This latter project is a collaboration with the State University of South Ossetia.

Summing up, Russia's provinces are instrumental in the efforts to promote this country's regional and minority languages. In many regions, it is central libraries that take the lead in digitizing information resources on the heritage of local ethnic groups. They build online collections and compile multimedia reference books and bibliographies in minority languages, including in ones spoken by indigenous communities. However, Russia's minority languages still remain largely underrepresented on the Web. The main impediments include underfunding and a lack of special fonts to support some rare languages. There is an obvious need for a common government policy that would coordinate and facilitate efforts to promote multilingualism, including in cyberspace, nationwide.

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SECTION 4

Languages and Education

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The Revival, Preservation and Development of Ethnic Language and Culture for Teaching Natural Sciences and Ecology at Nomad Primary School

The state education policy of the Republic of Sakha (Yakutia) envisages educational strategies for the indigenous Northern population—in particular, nomad schools. The revival and preservation of the Even, Evenk and other native languages and cultures of the indigenous Northern peoples demand the elaboration and implementation in tuition of the latest learning packages. They contain curricula, study and reference books, electronic and other teaching aids, didactic materials, and additional popular science materials based on innovation teaching methods for nomad schools.

It is thus necessary to elaborate the regional aspect of primary natural scientific and environmental education, considering inadequate contemporary didactic and methodological bases of teaching methods for the preservation of ethnic languages and cultures through tuition proceeding from personal assignments. Due to age psychology, junior pupils cannot study local environment, on which primary ecological education focuses, outside sensual cognition of Nature.

Present-day primary education possesses the latest technical visual aids, such as television, computers, etc. At the same time, primary school offers negligible chances of contemplating Nature—hence students' inadequate sensory culture, which impedes tuition syntonic to child psychology. Most often, children receive cut-and-dried information as passive listeners and onlookers. They do not need to exercise their brain, their feelings stay untouched, and they do not make comparisons, analyses and generalizations of their own sensual experience.

The elaboration of a learning package in the native language is certainly one of the ways to improve lifelong natural scientific and ecological education of nomads. Such a package should, on the one hand, proceed from the learner's own sensory experience and, on the other hand, encourage his research activity. G.M. Fedorov, R.S. Nikitina and Z.A. Stepanova of the Research Institute of Ethnic School of the Republic of Sakha (Yakutia) have elaborated the learning package *World Around* on the relevant UNESCO project for the 1st and 2nd grades of nomad schools. Initially made in the Yakut language as *Tulalyyr Eige*, it was translated by Z.A. Stepanova into Even as *Bugu*, into Evenk by A.N. Myreyeva as *Buga*, and into Russian by S.P. Vasilyeva. All are to be used in nomad schools of the Republic of Sakha (Yakutia). UNESCO expert Francis Lee Higginson thinks the package should be published in English, as well.

The regional learning package *World Around* takes into account the adverse conditions of nomadic life in the Far North, the mentality of tundra and taiga nomads, their world-view, perceptions and values. The package aims, primarily, to preserve and develop the Even and Evenk languages proceeding from a synthesis of ancestral knowledge with present-day scientific information and perceptions. Tuition proceeds in natural conditions, amid long-established toil and customs, and so accustoms children to ancestral culture and morals. The package focuses on new teaching priorities—mainly the didactic function of tuition, in which children are not passive objects of education but subjects of their own teacher-assisted activity—independent or in team with schoolmates. The authors pay special attention not only to information as goal of tuition but also to its content and techniques. With this approach, not only what children learn matters but also how they arrive at particular ideas. The approach proceeding from personal activity supposes no ready-made verbal curricula. On the contrary, children engage in practical cognitive research to independently make discoveries and form new habits. This approach prompts children to analyze problems, advance their own hypotheses and find a way out of every predicament. When children receive new information and habits from such practice-oriented cognition, they, so to say, create a world of their own. That is why the synthesis of ancestral knowledge with natural and social scientific information and with the fundamentals of ecology acquires personal value. It helps to unveil ever new mysteries and make personal discoveries in the immediate social and natural environment, so that the customary world appears young, amazing and admirable.

Starting with the 1st grade, children discover new ways of cognizing the world through their sensory organs and observation independently or with teacher's

prompting. They notice ever new things as they watch the animal and mineral world, the state and changes of objects, and compare the relations and dynamics of particular objects.

2nd graders do their assignments independently through research as the principal method of cognizing the social and natural environment. Every pupil advances his own hypotheses to check them through research.

The 3rd grade puts emphasis on developing pupils' habit of making simple explanatory hypotheses. Children also start modeling.

4th grade tuition concentrates on independent formulation of hypotheses and solution of problems. Children repeatedly change experimental conditions and extend their experiments, thus learning to study. They next make algorithms based on acquired knowledge and practical habits. Independent research leads them to introspection and evaluation of knowledge and habits acquired in independent research.

Junior pupils acquire a new mode of action—the project method. They generalize project results and bring them into system with simple models, graphs, drawings, applied art, tales, riddles and abstracts.

Thus, World Around classes pay special attention to extending the native vocabulary and development of love for the mother tongue through studying natural sciences at primary school as children's knowledge and practical habits of nomadic life grow. Independent work steeps them into various activities in which they acquire information and work habits on their own. All that prompts them to objectively assess their own progress and use acquired knowledge in tackling practical tasks.

Everyone knows the topicality of machine-assisted educational systems—in particular, of classroom computers—at present-day school. An electronic version of the regional learning package World Around for nomad schools of the Republic of Sakha (Yakutia) has been made through integrating traditional and scientific knowledge for teachers and pupils of the 1st and 2nd grades of four-year primary school.

This electronic aid can be used in various forms of tuition (individual, group and collective) for doing assignments, reflection and self-assessment.

The aid has the following structural components:

1. Motivation material on whose basis students acquire new knowledge and habits by way of independent discovery.

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2. Assignments aimed to develop thinking (single out the principal, discern connections, analyze, compare, interpret and generalize).
 3. Assignments aimed at the search of relevant information, checking advanced hypotheses and solving the posed problem.
 4. Observation assignments.
 5. Assignments for extending knowledge.

Students acquire knowledge and habits independently in research and practical activities. That is the main feature of the electronic aid.

The best possible combination of electronic aids with innovative teaching methods supports and complements tuition, and extends the range of children's activities. Aids introduce new information by modifying the organization of academic activities in favor of independent problem solving, checking hypotheses, and doing research and practical assignments. The aid promotes pupils' interest in cognition and in the social and natural characteristics of their native land.

The regional learning package World Around for nomad schools will be regarded as one of the leading educational instruments for the preservation, revival and development of nomad languages and cultures in the Russian North and Far East, and in the Arctic areas of Norway, Finland and Alaska.

SECTION 5

Preservation and Development of Cultural Diversity

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Multilingualism and Cultural Dialogue: Educatory Exchanges as a Source of Information about Cultural Heritage in the Knowledge Society

The United Nations has proclaimed 2008 the International Year of Languages.

The explanatory Russian-language dictionary by Sergei Ozhegov and Natalia Shvedova gives the following definition of language: “A historically available system of phonic, verbal and grammatical means objectifying mental activity; an instrument of communication, exchange of ideas and mutual understanding in society”. The initial definition is: “Language – People – Nation”.

As I talk about language today, I shall not refer to its beauty and richness. Neither shall I endeavor on linguistic excursions nor accentuate any particular language. I want to stress only one thing: I speak three languages and so possess priceless wealth—three souls and three worlds.

Knowledge of foreign languages is necessary and accessible to 21st century people. Language is an indispensable tool of communication, passing and receiving information, expressing opinions and acquiring knowledge. Business, human contacts and travel are impossible outside language—but however long the list of its functions might be, international communication is the principal.

I missed native speakers dreadfully when I was a foreign language teacher. My colleagues and I dreamed of ever visiting the country information about whose history, culture and people we received by snatches from books and rare eyewitness accounts.

Later on, when I became an expert on international contacts, we organized language study centers in Yakutsk, which employed language teachers from abroad. We also invited our foreign friends to our international language immersion summer camps.

Our friends from post-Soviet and other countries were enthusiastic about our invitations, and received guests from Yakutia with no smaller enthusiasm and hospitality. All that gave us the idea of schools of a new type with extended language classes and in-depth studies of foreign culture and traditions. That was how the present-day Sakha-Korea, Sakha-France, Sakha-Belgium, Sakha-Germany and Sakha-Canada schools appeared. To start such schools, we were to keep in touch with the involved countries. We could contact our foreign colleagues and partners only by telephone and fax. That was expensive, and distances and time lags were a nuisance.

The schools were not started from scratch. They had antecedents in educatory and cultural meetings, educational exchanges, and mutual goodwill of people from many countries. As our experience shows, good intentions and the desire to know other communities overcome distances and other obstacles, and bring together people of different races and cultures who share the drive to peace and friendly coexistence.

Whenever we met new partners, we started from lectures about Yakutia, accompanied by slides.

I had a bad shock when I first came to Belgium. When local people heard that we were from Yakutia, they turned out to have no idea where it was. We said it was in Siberia's northeast—and our new friends cried happily: "Ah, Michel Strogoff! Gulag! That's it!" They did not know anything else about Siberia. At another meeting, I heard a man saying to another that Yakutia bordered on Kazakhstan. To tell the truth, we, too, did not know much about Belgian culture and traditions—but, at any rate, we knew where Belgium was and that it had Brussels for its capital, with a beautiful Royal palace. Before going to Belgium for a first time, I went to our National Library to read about Belgian life and customs. I do it every time I go to a country I don't know. But then, book learning gets out of date rather quickly, and occasionally one cannot get enough books to learn everything one needs.

The turn of the century brought many scientific and technological breakthroughs, of which the progress of communication technologies was the most important to the whole world. The Internet and mobile telephony have become part of everyday life to make it incomparably more dynamic and informative. New technologies allow us to learn immediately what is on in any part of the world, to say nothing of online information exchanges. Friendships are started and transactions made over breathtaking distances.

I live abroad now, incredibly far from my native land, and the Internet is my only and precious means of contact with my Yakutia and my Russia.

I thank the SakhaInternet. I am even more grateful to my fellow countrymen who live in the United States. That is the family of Vera and Zhargal Solovyev. They and their friends have launched project Sakha Diaspora. Its website keeps me abreast with the latest news of my homeland. The site offers radio broadcasts from Yakutia in the Yakut language, and enjoyable video clips of wintertime Yakutsk, snow-clad, with frosts and mists. People of the Yakut Diaspora exchange letters and tell about themselves and their host countries.

Project Sakha Diaspora, also known as Sakha Open World, enjoys immense popularity with people from Yakutia now living outside it.

The project aims to bring together people from Yakutia living abroad, protect their interests, promote their cultural, research and educational contacts with the native land, and acquaint the world with the history and culture of the Republic of Sakha (Yakutia).

“As we were launching our Internet project Sakha Open World, we regarded the latest communication technologies as, possibly, the most fruitful means of bringing people together,” Vera Solovyeva wrote.

Bilingualism makes the project especially valuable.

The Russian-language website Sakha Diaspora provides information about countries where our fellow countrymen live, and about their work, ideas and opinions. One page offers e-mail addresses of people from Yakutia living abroad, which helps to start friendships in every part of the world. People from Yakutia are to be found in the United States, Australia, Austria, Britain, Denmark, Botswana, Canada, Germany, India, France, Belgium, South Korea, the Netherlands, Latvia, New Zealand, Turkey, the Czech Republic, Sweden, Estonia, Japan, and many parts of Russia.

The site regularly informs public organizations, researchers, journalists and students about grants and contests, and advises how to apply for grants the most effective way.

The Yakut-language website Orto Doidu promotes the native language as means of communication in and outside Yakutia. It helps us not to forget our mother tongue, and promotes our ethnic self-awareness. It gives us and our children another motif for speaking, reading and writing in Yakut. One of the first Yakut-language Internet forums is affiliated to Orto Doidu.

It carries the Yakut- and Russian-language versions of the magazine *Ilin*.

Sakha Diaspora is a nonprofit branch of Sakha Open World. The project team is not content with two languages, and is working to launch an English-language website to offer information about the history, culture and traditions of the peoples of Yakutia to as many people as possible.

“Project Sakha Open World, which brings together several websites, is developing and extending. We do not work at the Internet project alone but are determined to use Internet opportunities for practical endeavors.

“We are disinterested enthusiasts and people of goodwill. Our project is open to all interested persons and organizations in Yakutia and anywhere else for teamwork and partnership. We take pride in the active stances of our fellow countrymen, who help others not in word but in deed to learn our republic, its people, culture, traditions and languages—all that the word ‘Motherland’ implies,” says Vera Solovyeva.

I settled in Belgium ten years ago. The better I learn its people the better I know the country. When Belgians hear that I am from Yakutia, they become eager to know as much as possible about it. The Cold War left an imprint not only on the people of the former Soviet Union but also on the whole world. Just as we of Russia, the people of other countries are well versed in economic statistics and foreign art and literature but are ignorant on what we hold dear, and in what our concepts of honesty, integrity, modesty, common sense, justice, contract, management, law, etc. differ from theirs.

Every year I take part in the Intercultural Dialogue, where people of many nations and ethnic entities meet.

Fluent command of the local language allows me to provide comprehensive information about my native land, its people, culture and folklore.

Audiences are very reluctant to leave after such meetings, which I should like to term “educatory exchanges”. They are impressed by what they hear from a woman who represents the indigenous population. I am happy to be showered with questions. The public is interested in our life, religion, traditions and folk customs. I am often asked to say something in Yakut merely to make its sound heard. I am flattered to hear words of gratitude and approval after such meetings: “I do like your customs and traditions!”, “You might have an adverse climate but your people are very hospitable”, “You are a real ambassador of your country, madam”, “I’d love to go to your country,” and so on.

I have dual citizenship, and fluent command of the language spoken in my adoptive country is very reassuring. Belgium has many voluntary associations. Some help countries who need assistance. I joined one such association, The Crossroads of Romance Cultures, as French language teacher in 1994. The association works in contact with all Eastern European countries, Russia and Spain. My husband and I joined the Richelieu International Club in 2005. The club sponsored the publication of the collections *The Legends of Sakha*, which my husband and I translated into French as collateral reading for students of French as foreign language. The edition

is supplemented with a CD, teaching aids and a glossary for classroom work. Illustrations made by Yakut children lend it special attraction. The book is read in class in many Belgian primary and language schools. A Belgian school for blind children received a CD as gift. Many book copies were dispatched to the United States, Canada, the Czech Republic, Slovakia, Belarus and Ukraine. Yakut schools use the collection as collateral reading in French language classes. We dedicated the collection to Charles-Marie Lenoble, the first-ever European to teach his native language in Yakutia. A cheerful young man with a winning smile, he taught in the 1995/96 academic year, and won everyone's love. 20 Belgian teachers have worked in Yakutia for today. They have established their association, the Sakha-Belge, and established a French-language website about Yakutia, www.yakoutie.org.

I am glad to see Bernard's and my own endeavors bringing fruit, and I am happy to see schools for which I have done so much joining the network of UNESCO associated schools.

My basic goal for today is to give Europeans knowledge of my country, its people, culture and history. I don't want to see anymore that Gulag is Westerners' only mental association with Yakutia.

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National Digital Heritage Archive

In 2003 the New Zealand Parliament passed a review of the National Library of New Zealand Act. This provided for the establishment of a National Digital Heritage Archive (NDHA) to be designed and built for the National Library of New Zealand to safeguard the preservation of the digitised and born digital record of the country, in perpetuity. The five-year, \$24m (NZD) project is in the final stages of testing and goes live this year. The scope and purpose of the NDHA are discussed along with an outline of the quality assurance process developed.

The NDHA will exist in cyberspace as a domain characterized by the preservation and use of electronics and the electromagnetic spectrum to store, modify, and exchange data via networked systems and associated physical infrastructures. It will make accessible the digital documentary record of New Zealand, now and into the future available to the world via the Internet.

As an instrument of government it has the capability of preserving materials in the NLNZ collections in any of the three official languages of New Zealand: English, Māori and the New Zealand Sign Language.

Increasingly, New Zealand and the world's cultural heritage is being created and stored in digital form. Institutions are being challenged to preserve and provide long-term access to digital heritage collections under their guardianship.

The National Digital Heritage Archive (NDHA) is the National Library of New Zealand's technical and business solution to this challenge. The NDHA is an archive for New Zealand's digital heritage. The NDHA will provide ongoing preservation of and access to digital heritage collections under the guardianship of the National Library of New Zealand and Alexander Turnbull Library.

A digital storehouse, the NDHA will ensure that websites, digital images, CDs, DVDs and other 'digitally born' and digitised items that make up the Library's growing digital heritage collections will, despite technical obsolescence, be preserved and remain accessible to researchers, students and library users now and in the future.

Why Does the National Library Need the NDHA?

Strategically the National Library has long recognised that digital publications are a significant part of New Zealand's growing digital heritage and that long-term preservation of this heritage is one of the greatest challenges facing modern memory institutions.

The National Library of New Zealand (Te Puna Mātauranga o Aotearoa) Act 2003 broadened the National Library's legal deposit responsibilities to include electronic publications, ensuring this form of publishing was afforded the same heritage status and protections as traditional publishing. The National Library requires the infrastructure and technology to meet this expanded brief.

What Will the NDHA Mean to the National Library Users?

The National Library and the Alexander Turnbull Library's guardianship of published and unpublished heritage items ensures that they are kept for the use of present and future generations, and provides for research into all aspects of New Zealand life and culture.

The digital world is transforming national libraries all around the world as digital content creates new forms of collection and access to a much wider audience.

The NDHA is central to the National Library's development and preservation of digital heritage collections and the delivery of digital library services to users. First and foremost, the NDHA will secure the integrity, authenticity and therefore trustworthiness of digital material deposited with the National Library. The NDHA will then ensure that the content that National Library users want to access now and in the future is preserved in perpetuity and that the Library can continue to take advantage of digital access technologies.

"The New Generation National Library of New Zealand will be a library that never sleeps. A place where access to New Zealand's documentary heritage inspires new ideas and leads to the creation of new stories and knowledge. A library for all New Zealanders to connect with, wherever they are," Penny Carnaby, National Librarian and Chief Executive.

What Will the NDHA Mean to Users of the Māori Language?

New Zealand English is the most widely spoken language in New Zealand and is one of the languages of all Māori peoples. The Māori Language Act 1987 and the amendment to this Act in 1991 established in law recognition for the Māori as an

official language of New Zealand. For the National Library of New Zealand this means the NDHA includes macron capability and that the National Library will proactively pay attention to both curatorial advice and client requests to make materials in the Māori language and of interest to Māori peoples accessible through the NDHA. In addition the NDHA will be promoted to and work in partnership with Māori tribal representatives, and other collecting institutions from central and local government as well as from civil society.

What Will the NDHA Mean to Users of New Zealand Sign Language?

During 2006 the New Zealand Sign Language Act was passed thereby giving New Zealand three official languages. The NDHA has the capability to archive New Zealand Sign Language. Subject to the outcomes of an initial forum between the National Library of New Zealand and the New Zealand community of Sign Language users, confirmed for August 2008, a programme to advance mutually agreed outcomes relevant to the NDHA could be developed.

What Is the NDHA Programme?

In 2004, the NDHA Programme was established by the National Library to develop a digital archive and preservation management system. Based on the National Library's requirements, the NDHA Programme is working in partnership with Ex Libris Group and Sun Microsystems to develop digital preservation software and hardware systems.

Concurrently, the NDHA Programme is developing tools to integrate the digital preservation system with other applications the Library uses, transitioning the library's business processes and training staff.

What Is NDHA?

The NDHA is the National Library's technical and business solution to preserve and provide long-term access to digital heritage collections under its guardianship. At the core of the NDHA is a standards-based, commercial digital preservation system based on the National Library's requirements, developed by Ex Libris Group and operated on Sun Microsystems hardware. The hardware and software is designed to be scalable over time as the digital collections grow.

The NDHA also encompasses new business processes for the transfer of digital material into the digital preservation system and the ongoing management of these digital assets.

Ongoing, NDHA Business Unit will research and manage digital preservation and handling of digital material collected through legal deposit and unpublished donations.

What Part Does the NDHA Play in Delivering the National Library's Digital Services?

Tools developed by the NDHA Programme will integrate the NDHA's digital preservation system with the National Library's collection management systems and with access products that deliver digital services to its users. An example of these tools is INDIGO, an internal digital object submission tool. As with other digital preservation developments the National Library is pioneering, INDIGO is being made available to other institutions via open-source.

What Experience Does the National Library Have in the Digital Preservation Domain?

The National Library has built up a huge body of digital preservation expertise in the past six years. Successful initiatives have included the development of a preservation metadata schema and data dictionary, software for the automated extraction of preservation metadata from key file formats, involvement in international activities such as PREMIS (Preservation Metadata Implementation Strategies) and the development of the Web Curator Tool with the British Library.

The digital preservation management system the NDHA Programme is developing with Ex Libris Group and Sun Microsystems will be the first-ever commercially viable system of its type and will serve as an international model

An International Leader

In November 2005, the National Library was recognised as a Sun Centre of Excellence for Digital Futures in Libraries. The National Library was the first non-tertiary institution in the world to achieve this status, which recognises our work at the forefront of digital preservation endeavours globally.

How Are Digital Heritage Materials to be Stored in the NDHA Collections?

Digital materials that make up the digital heritage collections under the National Library and the Alexander Turnbull Library's guardianship come to the National Library from four main sources; legal deposit, web-harvesting, donors and digitisation programmes.

Through legal deposit, digital publishers use an online submission process for online publications or send physical items such as CD's and DVD's to the Legal Deposit Office. The National Library's web-harvesting programme collects websites using the Web Curator Tool.

Unpublished digital heritage material generally comes to the National Library from donors in the same ways as published material. One of the largest sources of digital material is from internal sound, audiovisual, image and print digitisation programmes. Underlying all these sources that create the digital heritage collections are the National Library's collection policies.

Harvesting New Zealand's Web Culture

The Web Curator Tool enables the acquisition of web material, such as websites, web pages, and other documents found on the Internet ready for storage and preservation in a digital archive such as the NDHA. The Web Curator Tool was released as open-source software in September 2006 and a follow-up release was made in August 2007. The Web Curator Tool, along with manuals, FAQ documents, source code, development documentation and further information, is available on the Web Curator Tool website.

How Has the International Library Community Been Involved in the NDHA Programme?

To ensure that the digital preservation system is developed in concert with general access and archiving trends and meets cultural heritage preservation and management needs of libraries now and in the future, an international Peer Review Group serves as an independent resource for the partnership.

The Peer Review Group members are recognised thought leaders and innovators from the international library and academic community with institutional expertise in the areas of digital preservation and permanent access. Members represent such institutions as the British Library, Cornell University Library, the Getty Research Institute, Helsinki University Library, Koninklijke Bibliotheek, National Library of China, Singapore National Library, the University of Glasgow and Yale University.

New Zealand's Digital Strategy

New Zealand's Digital Strategy is a vision for New Zealand to be 'a world leader at using information and technology to realise economic, social and cultural goals'.

The NDHA Programme is playing a significant part, ensuring that one of New Zealand's largest institutions responsible for digital heritage content has the appropriate digital archiving and preservation management systems. In turn, the NDHA Programme is sharing the digital preservation knowledge gained with the rest of the public sector.

When Will the NDHA Be Operational?

The NDHA will be implemented in two phases. The NDHA will be operational for digital material ingest, storage and access by the end of 2008. The balance of functionality, including support for digital preservation management, will be in place by the end of 2009.

The paper provides a background to how NDHA was developed and its role for the future. An outline of the business case and the technical specifications for the build of the NDHA are included in the presentation.

For more information about the NDHA Programme, please visit www.natlib.govt.nz/ndha.

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Azerbaijan: Cultural Synergies and Diversity

Located at the crossroads between Europe and Asia, Azerbaijan was once a meeting point of varied civilizations, such as Achaeminid Sassanid, Roman Byzantine, Scythian-Khazar, and Oguz Turkic.

If we trace the history of Azerbaijan back to its formative years, we will see that its identity has evolved through the centuries as a fusion of Azeri culture and the cultures of many smaller ethnic groups.

Ingrained in the nation's genetic memory is the history of its moving from Zoroastrianism through Christianity to Islam, and that experience should also be kept in mind while building a system of intercultural communication in and outside the country.

The mindset of Azerbaijan's people was formed in conditions of tolerance toward representatives of other cultures and ethnicities. For centuries the country enjoyed cultural pluralism, with each of the constituent ethnic groups developing a distinct culture of its own.

Evidence for Azerbaijan's cultural synergies and diversity can be found in its historical heritage as well as in monuments of material and spiritual culture. However, the controversial ethno-linguistic processes that took place in the country in the 20th century led to a dramatic change in the status of the Azeri language and languages spoken by other local ethnic groups.

In the Soviet period, the Azeri writing system underwent three revisions within a relatively short time span. That instability made it more difficult for new generations of Azerbaijan's ethnic majority to study their mother tongue and cultural heritage.

The transfer of the Azeri language from the Arabic script to the Latin alphabet in the 1930s resulted in tens of thousands of literate speakers becoming illiterate overnight. Most of the Azeri books written using the Arabic script would have been lost or destroyed as religious literature. Consequently, new generations found themselves deprived of the many valuable books produced by the 1920s, and this disrupted historical and cultural continuity in the Azeri community.

In that same period, alphabets were created for some of Azerbaijan's ethnic minorities, including the Lezgians, the Avars, the Tsakhur, the Talysh, the Tats and the Kurds. The languages spoken by these groups had previously had no writing systems of their own. In 1938, however, all these newly created alphabets were scrapped.

The Soviet government's policy vis-à-vis small ethnic groups was often discriminatory and offensive. Hence the unprecedented upsurge in their ethno-cultural activity following the collapse of the Communist empire.

The breakup of the USSR enabled Azerbaijan and other former Soviet republics to regain their sovereignty. Many then felt a need to rediscover their historical heritage and national identity.

In the early post-Soviet years, Azerbaijan's authorities faced the challenge of developing a fundamentally new concept of ethnic and linguistic policies, one that would be tactful toward the country's ethnic minorities and mindful of the sensitivities of each. They started by elaborating a law on the protection of rights and freedoms of the country's ethnic minorities in the area of culture. This document guaranteed fundamental rights for minority groups and individuals, including the right to receive education and publish press in their mother tongue. It also proclaimed some universal values of multicultural society, such as equality, partnership, tolerance, solidarity, and justice.

Then a new law on education came along, consolidating the right of Azerbaijan's ethnic minorities to set up their own schools and provide education in their respective mother tongues.

It would be fair to say that since 1993, the country has been enjoying an era of ethnic renaissance, something the national government prides itself on.

In September 1995, Azerbaijan's parliament ratified the CIS Convention on the Rights of Ethnic Minorities, signed in Moscow on October 21, 1994. The ratification of the Council of Europe's Framework Convention on the Protection of Minorities on June 16, 2000, was another important step toward restoring the nation's social cohesion.

The multiethnic and multi-faith character of society in modern-day Azerbaijan is evidenced by recent population censuses. Thus, a 1999 census showed that Azerbaijan is home to members of more than 15 ethnic groups, including 178,000 Lezgians (as compared with 171,400 in 1989); 76,800 Talysh (21,200 in 1989), 50,900 Avars (44,100 in 1989), 10,900 Tats (10,200 in 1989), and 30,000 Tatars (28,600 in 1989).

The preservation and promotion of the cultural heritage of these and other communities is a priority of the Azerbaijani government's ethnic and cultural policies.

Since the early 1990s, the main challenge in the area of interethnic relations has been to overcome the negative Soviet legacy. Authorities effectively deal with this task through a well-balanced policy aimed at reconciling the needs of the country's varied ethnic communities and maintaining cultural pluralism.

A lot of attention is paid to elements of ethnic culture such as language, arts and crafts, customs and rituals, ethical values, and traditional education practices. Azerbaijan's ethnic policy guidelines, as laid down in its Constitution, guarantee equality to all citizens regardless of their ethnic and racial origin.

Azerbaijan's early post-Soviet years saw the emergence of radio and television channels broadcasting in minority languages (Lezgian, Talysh, Kurdish, Tat, Udi, Tsakhur and Avar); these and other languages then became part of school curricula and were described in trilingual dictionaries along with Azeri and Russian. The first dictionaries in Talysh, Kurdish, Udi, Tsakhur, Tat and Lezgian came out in 1996.

Russian has long been the most widely spoken language in Azerbaijan after Azeri, and continues to be so today thanks to the country's inclusive linguistic policies.

The republic's Law on Culture and other related legislation guarantee equal opportunities for all citizens in satisfying their cultural needs and provides conditions for members of Azerbaijan's minority communities to be able to maintain contacts with co-ethnic communities abroad.

Some of former president Heydar Aliyev's policies related to cultural heritage are being pursued and further developed to this day. Thus, for instance, the entire Khynalyg area retains its status of a listed historical and ethnographic reserve, in keeping with President Ilham Aliyev's December 19, 2007 decree.

Azerbaijan has been increasingly proactive in advancing multilingualism in cyberspace. A lot of online resources have emerged here in recent years, most of them multilingual. Official websites are usually presented in three languages: Azeri, Russian and English. This practice makes it possible for minority communities to avoid the problem of language barrier.

Summing up the situation in modern-day Azerbaijan, it should be noted that:

The country's population is multi-ethnic and multi-faith; in the capital, Baku, alone, there are 20 different community centers and ethnic communities, including Russian, Ukrainian, Kurdish, Lak, Lezgian, Tat, Tatar, Georgian, Ingiloy, Talysh, Avar, Meskhetian (Ahiska) Turkish, Jewish, German, and Greek;

Both the Azeri population and the minority communities enjoy equal cultural rights, including access to the nation's common heritage.

The Armenian-Azeri conflict over the disputed border region of Nagorny Karabakh in the early 1990s seriously undermined political stability inside Azerbaijan. That conflict forced more than 1 million people to flee their homes, and some 20% of the country's territory came under Armenian occupation. Many of the refugees continue to live in substandard conditions to this day, crammed into caravans and makeshift camps, with no access to public education and healthcare. This dire situation makes it extremely difficult for displaced people to preserve their traditional culture and pass it on to offspring.

The republic's Ministry of Culture and Tourism tries hard to create an environment where citizens could exercise their cultural rights in full, promoting and enhancing the culture of their respective communities while also benefiting from the nation's common heritage.

A group of independent European experts came to work in Azerbaijan at the ministry's invitation in 2001 and 2002. They produced a report on current culture policies in the republic, devoting a separate section to national and regional policies with regard to ethnic minorities.

The Culture and Tourism Ministry works to preserve and promote the cultural heritage of the country's varied ethnic groups. Its activities include:

- working in cooperation with embassies and diplomatic missions of the countries of origin for Azerbaijan's ethnic minorities;
- cooperating with community centres and organizations representing the interests of ethnic minorities;
- holding international symposiums and nation-wide panel discussions on the cultural rights of ethnic minorities; organizing forums with professionals involved in the area;
- arranging exhibitions to showcase ethnography, arts and culture, history and traditions of ethnic minorities;
- arranging concert tours across the country and abroad for performing groups that come from minority communities;
- facilitating the participation in nationwide cultural events of individual artistes and groups representing minority cultures;
- arranging anniversary celebrations for prominent artists and performers from ethnic minorities;

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- honoring creative groups committed to promoting traditional ethnic arts;
 - providing such groups with technical and material support, including traditional dress, musical instruments and equipment.

In its efforts to support minority languages and cultures, Azerbaijan's Culture Ministry uses innovative as well as conventional techniques. An increasingly important area of activity is the use of ICT to digitize information on the cultures of the country's ethnic minority groups.

Ethnic minorities' traditions and knowledge are part of world culture, and they provide a wealth of material for research into the history of these communities, their lifestyle and worldview.

Azerbaijan's public and academic libraries regularly acquire books in minority languages for their collections and arrange presentations for such books. Thus, literature in the Lezgian language is usually brought from the Russian republic of Dagestan, while most of the Georgian-language literary acquisitions come from neighboring Georgia.

Here are some of the most significant projects implemented in Azerbaijan in recent years with a view to preserving the country's linguistic and cultural diversity:

1. *Cultural Diversity in Azerbaijan*, in association with the OSCE and the Embassy of Norway;
2. *Libraries in the Knowledge Society*, a bilingual project;
3. *Azerbaijan, the Homeland*, a festival celebrating ethnic minorities' cultures;
4. *This Is Our Azerbaijan* (a DVD featuring varied ethnic music of Azerbaijan), in partnership with UNESCO Office in Moscow and the National Commission for UNESCO.

The *Cultural Diversity in Azerbaijan* project was launched as part of UNESCO's Cultural Diversity programme.

In December 2006, the country's Ministry of Culture and Tourism organized a festival devoted to the arts and culture of ethnic minorities, *Azerbaijan, the Homeland*. The event brought together some 800 participants, including members of forty performing groups from Baku and the regions, who represent almost all of the republic's ethnic minorities. Since its successful debut, the festival has been held biannually.

As part of this same project, an *Atlas of Azerbaijan's Traditional Music* and an *Album of Azerbaijan's Ethnic Music* were released. Prominent scholars and people in the arts came together to take part in a republican conference, *Cultural Heritage of*

Ethnic Minorities and the Modernity. And a large-scale exhibition was arranged to highlight the lifestyles and traditions of Azerbaijan's ethnic minorities.

Azerbaijan's Culture Ministry is currently working on blueprints for a project entitled *Blog Marketing of Locales*. The idea behind is to highlight the unique identity and individual character of various locales, and bloggers are invited to submit stories featuring places and cultures that have a distinct character of their own. The best entries will be posted on a special website. Thanks to this project, Azerbaijan will be able to address the world via the Internet, in Azeri as well as in its other languages. Another ambition is to introduce Azerbaijani bloggers to the Internet communities of other countries, thus raising the international profile of Azerbaijan's culture.

The bilingual Azerbaijani-Russian project *Libraries in the Knowledge Society* has been a big success. The Concept for the Development of Public Libraries of Azerbaijan through the Year 2015 has a special section on the promotion of multilingualism.

The importance of preserving cultural and linguistic diversity was emphasized in the Universal Declaration on Cultural Diversity adopted at the 31st session of the UNESCO General Conference in 2001.

The UN General Assembly proclaimed 2008 as International Year of Languages, which indicates that problems of the world's languages are now in the focus of the global community's attention.

Noteworthy are efforts being made in this area by the Heydar Aliyev Foundation. It is headed by the First Lady of Azerbaijan, Mehriban Hanum Aliyev, who is a Goodwill Ambassador for UNESCO and ISESCO and a member of the republic's parliament, the Mejlis. She leads ambitious projects aimed at preserving and promoting national culture and the cultures of ethnic minorities living in Azerbaijan.

Mrs. Aliyev realizes perfectly well that the promotion of the cultural and historical heritage of Azerbaijan's varied ethnic groups is essential to the social cohesion of the nation as a whole, and she works hard to raise public awareness of the need to preserve cultural diversity.

On October 19, 2006, a gala and a photo exhibition, *Azerbaijan: At the Crossroads of Civilizations and Cultures*, took place in the UNESCO headquarters as part of the UN cultural organization's 60th anniversary celebrations. Mrs. Aliyev organized this ambitious event together with Mr Koïchiro Matsuura, then Director General of UNESCO, with the idea being to share Azerbaijan's expertise in cross-cultural dialogue with the world community. Ample information on the culture and history of the country had been put together for the display.

Social scientists involved in projects of Azerbaijan's Culture Ministry have been doing extensive research on minority languages. In a recent survey, they identified language, customs, the ethnicity of parents, and birthplace as the top four factors in the ethnic identity structure. Interestingly, the linguistic factor proved even more important for members of rural communities than for urban dwellers (72.9% against 63.2%).

Clearly, the idea of equality for minority languages and major world languages in every sphere of human life is a utopic one, as the information potentials of these two groups are not on a par.

William F. Mackey, professor at the International Centre for Research at Quebec's Université Laval, tried to find out how the proportion of each had changed over the past century by comparing figures on scholarly and scientific magazine publications in 1880-1980. According to him, publications in four world languages (English, French, German and Russian) accounted for 88.1% of the total in 1880 whereas in 1980, the percentage reached 92.7%. Meanwhile, the share of publications in other languages, such as Italian, Spanish, Japanese, Polish, Romanian, Portuguese, Hungarian, Dutch and Chinese, dropped over that period to 7.3%, down from 11.9%.

In this context, millions of people across the world are waiting for workable solutions that would integrate them into global culture while at the same time enabling them to preserve and enhance the cultural heritage of their individual communities.

In the modern-day world, information technologies have a pivotal role to play in promoting linguistic and cultural heritage as well as in providing universal and equal access to knowledge and information.

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Intercultural Dialogue in the Republic of Sakha (Yakutia)

Lack of communication was the global tragedy of the 20th century. It bred wars, interethnic clashes and geopolitical disasters.

Now, at the dawn of the 21st century, humankind has finally realized that dialogism, one of the fundamental laws of human life and culture, is the best way of overcoming the tragedy of intolerance.

Many thinkers advanced the idea of dialogue in their time—suffice to name Martin Buber (*I and Thou*), Jose Ortega y Gasset (*The Theme of Our Time*), and Gabriel Marcel (*An Existentialist Diary*). Russian scholar Mikhail Bakhtin [1] gave the most profound interpretation of the concept of dialogism as a law of human life and culture. His studies of classic writers—Rabelais, Goethe and Dostoyevsky—convincingly demonstrate the infinite potential of the verbal art in the realization of tolerance as a universal human value. More than that, Bakhtin proved that dialogism is a paradigm of humanitarian knowledge and the basis of new thinking, which proceeds from the recognition of close interconnection between man as microcosm and the world as macrocosm; between the material and the spiritual; between economics, politics, culture and morals; and between the past, the present and the future.

The dialogue of cultures attracted tremendous scholarly and public attention in the last quarter of the 20th century. There are many definitions of such a dialogue. One of the most apt belongs to Russian researcher Vladimir Mironov: “It is the cognition of another culture through one’s own by way of their interpretation and mutual adaptation.” [2]

Special interest in cultural issues is due to present-day globalization or, more precisely, to geopolitical and social processes and cataclysms that cause migrations on a gigantic scale, and so make cultural communities meet each other and open unheard-of opportunities for international and intercultural contacts.

Really, globalization has thoroughly changed human life. It especially concerns young people on the threshold of adulthood. The collapse of the customary mode of life and the change of the type of development of civilization threaten humanity with the so-called future shock—that is, loneliness and fear of the future. This danger

demands psychological protection and makes it necessary to bring up persons able to find their bearings in the dynamic and multi-dimensional contemporary world, and to tackle extremely sophisticated social, cultural and environmental problems. People aware of their ancestry and drawing inspiration from their native culture are more assured and better adapted to the complications of contemporary reality.

The renaissance of ethnic cultures in many parts of the world is indicative in this respect. Scandinavism, a theory of the uniqueness of Scandinavian nations, emerged as early as the 19th century. The early 20th century saw discussions on the cultural and mental affinity of Mediterranean nations. Celtic revival sweeps Britain nowadays.

Ethnic cultures and languages are also reviving in the Republic of Sakha (Yakutia), so a better venue could hardly be found for a conference on linguistic and cultural diversity in cyberspace. Throughout its history, Yakutia was a land of dialogues, contacts and symbiosis of cultures, languages and races. There is a theory on Yakutia as one of the probable cradles of the human species. Yuri Mochanov, Fellow of the Russian Academy of Natural Sciences, advanced it proceeding from archeological finds in the Diring-Yurekh prehistoric settlement.

Yakutia has long been ready to accept the idea of intercultural dialogue. Dialogism underlies the Northern mentality—suffice to mention the old Yakut greeting “Kepsie!”, which can be translated as “What’s new?”, or the choir accompaniment of the *osuokhai* and *sedye* folk dances, or again, the dialogue with Nature materialized in the rite of fire-feeding and diverse sacrifices.

Yakutia was incorporated into the Russian Empire in the first half of the 17th century, and information about its culture and customs gradually spread in Russia and outside it. The Academy of Sciences organized several historical and geographic expeditions to Siberia in the 18th century, which made natural scientific observations, collected ample ethnological data and studied folklore. Eminent foreign scholars on the Russian service took part in those expeditions—the Danes Vitus Bering and Martin Spanberg, the Swedes Sven Vaksel and Peter Lasinius, and the Germans Johann Gmelin and Georg Steller. German Romantic poet Adelbert von Chamisso’s long poem *The Exiles*, of 1831, consists of two parts. The first is a liberal translation of the poem *Woinarowski* by Russian Decembrist revolutionary Kondraty Ryleyev, and the other is about Alexander Bestuzhev, another Decembrist revolutionary, who was banished to Yakutia. Otto Boehtlingk, Fellow of the Russian Academy of Sciences, wrote the first-ever Yakut grammar, published in German in 1851. Polish scholars Waclaw Sieroszewski and Adam Szymanski made an honorable contribution to Yakut folklore and ethnological studies in the late 19th century. That was how prerequisites emerged for Yakutia’s cultural links with the world.

Contemporary Yakut culture is shifting from the stage of “adoption” to that of “transmission” [2], as shown by the achievements of the Yakut drama, ballet, music and pictorial arts. As many younger cultures of Latin America, Africa and the East, contemporary Sakha art draws inspiration from the evergreen traditions of folklore, mythology and even such exotic phenomena as Shamanism—hence its élan and profound originality surviving from times immemorial.

UNESCO placed the Yakut heroic epic *Olonkho* on the list of Masterpieces of Oral and Intangible Heritage of Humanity in yet another landmark event testifying to the vast dialogical potential of culture of the Republic of Sakha (Yakutia).

Verbal arts illustrate the intercultural dialogue in Yakutia the best. Studies of literary ties are among the most topical goals of contemporary literary research as they present every ethnic literature in a global context without overlooking the specifics of ethnic artistic development.

The studies of international contacts of Yakut literature are rooted in the demand for presenting that literature in an extensive literary historical context, in a search for new approaches to Yakut writers’ works, and the necessity for correct interpretation of the traditions on which the development of Yakut literature bases. Such studies allow profound assessment of its place in history, its role and mission [3].

Historical typological analysis is indispensable in disclosing the international contacts of Yakut literature. Previous comparative studies ascribed similarities between artistic phenomena solely to direct links and contacts, migrating plots and mythological archetypes, totally overlooking similar historical patterns, national destinies and stages of cultural development that might also account for similarities of artistic creation. In other words, comparative studies should reject monistic theories, such as “isolated civilizations” and “plugged bottles”, which revive cultural isolationism. On the contrary, comparativistics should proceed from the recognition of world culture as one whole. That is the earnest of success of such studies.

Yakut scholars took up the development of literary and artistic contacts in the second half of the 20th century. Such studies, however, focused on Russian-Yakut contacts and mutual influences. Yakut literature was never regarded in the global cultural context until quite recently due to stringent ideological dogmata that dominated Soviet literary studies.

The idea of world cultural unity is convincingly confirmed by the typological affinity of Yakut heroic epics and epic songs of many other parts of the world. Here, I mean not so much the connections of *Olonkho* with Turkic epics and other genetically and typologically close monuments as its parallels to Celtic sagas or the *Elder Edda*. Such parallels are evident at many levels—plot arrangement, the

imagery, the epic etiquette, etc, as Victor Zhirmunsky [4], Eleazar Meletinsky [5], Nikolai Yemelyanov [6] and other scholars have shown.

The Yakut *Olonkho*, presently available to foreign readers, are comparable for artistic merit to the best samples of world epic poetry. Thus, Platon Oyunsky's *Nyurgun Bootur the Rapid* is none inferior to such masterpieces as Shota Rust'hveli's *The Knight in the Tiger Skin* or Henry Longfellow's *Song of Hiawatha*.

Yakut literature rose on the basis of folklore and Russian literary classics. However unique it might have been, the emergence of that literature was, to all appearances, typologically close to literary development in other languages that had recently acquired a written form in Russia, and also to literary processes in certain Latin American and African countries.

As for Russian culture—in particular, literature, its well-known feature termed “universal consonance” by Dostoyevsky is spectacularly proved by contacts with the literatures of Yakutia. Attention to Russian literature by the founders of Yakut literature was indicative. An essay analyzing “the greatest merits of Pushkin's poetry” was the first work by Alexei Kulakovsky (1877-1926). His diaries show his profound and perspicacious perception of Lermontov, Koltsov, Nikitin, Nekrasov and other classic Russian poets.

Russia underwent a cultural renaissance in Kulakovsky's lifetime. A contemporary of Vladimir Solovyev, Nikolai Berdyaev, Nikolai Fedorov, Vladimir Vernadsky and the constellation of Silver Age poets, he might have had firsthand knowledge of the unprecedented rise of Russian philosophy, research, art and literature in the late 19th and early 20th century.

A philosophically-minded poet, Kulakovsky was a mighty prophet. His powerful vision brings him close to classic Russian literature. “Russian literature is the most prophetic in the world. It is full of presentiments and forecasts, and the foreboding of impending disasters imbues it,” Berdyaev wrote.

Kulakovsky's long poem *The Shaman's Dream* (1910), the most prophetic work in Yakut literature, generalizes on the entire Yakut culture and philosophically appraises the fates and destinies of the human race and the author's own people. It represents the synthetic genre by blending medieval visionary literature with the shamanic trance and modern conceptual poetry. The poet's subtle intuition foretells the fatal threat of world wars. His world perception reaches the noospheric level. With breathtaking pictures of global development, the opposition between good and evil, and apocalyptic prophesies, *The Shaman's Dream* is akin to Vladimir Solovyev's *The Three Conversations* in its artistic and philosophical concept.

Parallel to the Russian thinkers who created the philosophy of universal unity, the Yakut poet understood the inviolable wholeness of the earthly and cosmic spheres. He was a forerunner of what we know today as New Thinking—the realization of unseverable ties between Man the microcosm and the Universe the macrocosm, between matter and spirit, between the past, the present and the future, and between politics and economics, on the one hand, and culture and ethics, on the other.

Kulakovsky's philosophy developed abreast with Western thinking. He forecast the impending global disasters and cataclysms, and the degradation of vigorous culture into sterile civilization simultaneously with Oswald Spengler, with his *The Decline of the West*. He thought about the phenomenon of the mob and the new time of mass contacts and migrations as Ortega y Gasset was doing, and appealed to intellectuals as the new elite, which he considered capable of free choice and so able to rescue culture.

Kulakovsky outran his time with one of his insights—the idea of the anthropocentric concept of the world as inadequate and even detrimental. He thus advanced a new dominant of humanism—not mere recognition of the unity of the world, abounding in interconnections, but, most importantly, veneration of every living thing and concern for its survival. The world has come to this truth only now after all the trials and tribulations of the technotronic consumer civilization.

Platon Oyunsky (1893-1939) followed in Kulakovsky's footsteps with ideas of the eternal role of Russian and world literature. As he addressed his Yakut writer colleagues on Pushkin's death centenary in 1937, he called them to "master the entire cultural heritage of ages past—the masterpieces of geniuses", among whom he mentioned Shakespeare, Goethe, Byron, Pushkin, Leo Tolstoy and Gorky.

His principal works—the conceptual philosophic drama *The Red Shaman* (1925) and the legend *Kudangsa the Great* (1929)—are attempts at an artistic interpretation of the author's time of global upheavals. Oyunsky sought to comprehend the entire Yakut life as part of the historical macrocosm. Just as Kulakovsky before him, he came to a sophisticated synthesis of the national and the universal, and to a new esthetic structure, which Galina Belaya termed "the principle of cosmovision"—an alloy of the local and the global in new artistic unity.

A perspicacious student of Yakut folklore, Oyunsky regarded *Olonkho* on a par with the world's foremost and universally recognized epics, and compared them to epics by Homer, Firdausi and Rust'hveli. He was the first to translate Russian and world classic poetry into Yakut, and described translation as a capillary through which Yakut literature was invigorated by healthy donor blood.

Yakut literature thus anticipated the road travelled by many nascent African and Latin American literatures on the artistic plane, while on the philosophical plane it

rose to the higher, noospheric level of understanding man and the world, which was characteristic of the best-developed Western literatures.

Of special interest in the heritage of another Yakut literary classic, Anempodist Sofronov (1886-1935), is his meditative philosophical verse. The past era could not discern such nuances of thought and feeling in his lyrics as what scholars discover now. His poetry reflects both Yakut mentality and universal ideas and aspirations. Subtler than any other Yakut writer, Sofronov portrays the disturbed mind at the sight of age-old fundamentals of life lying in ruins. The tremendous power of his artistic expression puts his poetry on a par with masterpieces of the Russian Silver Age and contemporaneous West European poetry.

Ivan Arbita (the penname of Ivan Sleptsov, 1913–1943) should be named as another crucial figure in the intercultural dialogue. His undeservedly forgotten poetry was brought back to the reading public half a century after his death. He followed Sofronov and Oyunsky to set high artistic standards and raise Yakut poetry to a new level. Formed under the influence of Balmont, Blok, Bryusov, Byron, Heine and Baudelaire, Arbita was a trailblazing poet of tremendous erudition. He enriched Yakut poetry with subtle psychological insights, profound philosophy and virtuoso versification.

The first Yakut writers spontaneously combined the folklore element with Russian and world classic traditions. Yakut literary development might have been belated, yet it proceeded at lightning speed. A constellation of excellent authors appeared and turned Yakut literature into a worthy contributor to global literary progress, and part and parcel of the Russian and world cultural environment.

The contemporary perception of literary ties is not so primitive as to reduce them to sheer impact of the better developed literatures on the younger. On the contrary, the present-day mind is aware of cultural exchanges and mutual influences. As Russian writers turned to Yakutia, the experience acquired there could not but influence their work as a whole. If not for Alexander Bestuzhev, Ivan Goncharov and Vladimir Korolenko, Russians would have never learned what Yakutia was really like, and so would have never found some of their own self-awareness.

Since its inception to this day, Yakut literature has never been isolated. It is deservedly known as one of the richest literatures in languages that had recently acquired a written form in terms of artistry, philosophy and ethics alike. It had excellent authors worthy to be known in the world, and has such authors now. Regrettably, there are formidable obstacles on their road to the world reader—translation problems and prejudice against provincials, which leads to their underestimation.

Cultural contacts and linguistic diversity are problems of great relevance to multiethnic countries, such as the Russian Federation [7]. Yakutia is groping for a

middle road in language policy by trial and error. It has established a reliable legal basis for language functioning on the formula “2+5+1”—there are two state languages (Russian and Yakut), five official (Even, Evenk, Yukaghir, Dolgan and Chukchi) plus English as a working language. The Yakut State University possesses three philological departments—general philology, Yakut and foreign languages. There are several humanitarian research institutes. Yakutia complies with a recommendation of the Council of Europe on studies of two foreign languages at school. We have overcome certain errors—in particular, excessive emphasis on school studies of Russian or Yakut, as the case might be. Foreign language tuition was until recently imbalanced in favor of Western languages. Tuition of Chinese, Japanese and Korean started at the university a few years ago. This is necessary as 21st century geopolitical, economic and other interests of the Republic of Sakha (Yakutia) will demand contacts both with Europe and Asia.

The facts and experience of cultural contacts, and peaceful coexistence and mutual enrichment of languages are a cultural and intellectual treasury shared by all ethnic entities in the Republic of Sakha (Yakutia). They are an earnest of accord, mutual understanding and respect, and our modest contribution to comprehensive UNESCO activities to promote linguistic diversity and intercultural dialogue.

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FINAL DOCUMENT

Lena Resolution

The International Conference on Linguistic and Cultural Diversity in Cyberspace was held under UNESCO auspices in Yakutsk, Russian Federation, from July 2 to July 4, 2008. This conference represents the Russian Federation's contribution to the United Nations International Year of Languages.

The Conference was organized by the Government of the Republic of Sakha (Yakutia), the Russian Federation's Federal Agency for Culture and Cinematography, the UNESCO Moscow Office, the Commission of the Russian Federation for UNESCO, the Russian Committee of the UNESCO Information for All Programme, the Interregional Library Cooperation Center, the National Library of the Republic of Sakha (Yakutia), and the Committee of the Republic of Sakha (Yakutia) for UNESCO.

The Conference gathered more than 100 representatives from 15 countries and all continents—leaders and staff members of intergovernmental and international nongovernmental organizations, government bodies, agencies and institutions of culture, education, research, information and communications, business, civil society and the mass media, as well as political and community leaders and leading experts.

The Conference discussed the political, cultural, social, ethical and technological aspects of research and development of linguistic and cultural diversity in cyberspace, and examined issues related to the use of information and communication technologies to safeguard all languages.

The participants held three plenary meetings and five thematic sections: Political, Ethical and Legal Aspects of the Development of Multilingualism in Cyberspace; The Internet and Other Media; The Role of Libraries in the Preservation of Linguistic Diversity; Languages and Education; and The Preservation and Development of Cultural Diversity.

In concluding its work, the Conference agreed on the following resolution:

The participants of the International Conference on Linguistic and Cultural Diversity in Cyberspace (Yakutsk, Russian Federation, July 2-4, 2008),

-
1. Recalling the Universal Declaration on Cultural Diversity, adopted at the 31st session of the UNESCO General Conference in 2001, which says that “cultural diversity as a source of exchange, innovation and creativity is just as indispensable for humanity as biological diversity for Nature, and is a treasure shared by the entire human race”,
 2. Recalling further the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace, adopted at the 32nd session of the UNESCO General Conference in 2003,
 3. Taking into account the key documents of the World Summit on the Information Society (WSIS) –Declaration of Principles and Plan of Action (first phase in Geneva, 2003) and Tunis Commitment and Tunis Agenda for the Information Society (second phase in Tunis, 2005)—which all emphasize the importance of the preservation of cultural and linguistic diversity and suggest a set of measures necessary to achieve this goal,
 4. Emphasizing the need to continue preserving multilingualism because languages are stores of a rich and vast amount of human heritage and knowledge, as well as necessary instruments for social life, the expression and dissemination of social and cultural traditions, self-identification and preservation of human dignity of their speakers,
 5. Recognizing that the dissemination of multilingual information on the history, languages and culture of different nations contributes to the promotion of tolerance and mutual understanding and guarantees a peaceful sustainable development of the contemporary civilization,
 6. Taking into account that the current absence of certain languages in cyberspace contributes to the widening of the already existing digital information gap,
 7. Considering that the already existing information and communication technologies offer new opportunities for the preservation of linguistic and cultural heritage for equal and universal access to knowledge,
 8. Bearing in mind the messages of the Director General of UNESCO at the occasions of the International Year of Languages in 2008, the World Day for Cultural Diversity, for Dialogue and Development on May 21, and the International Mother Language Day on February 21,
 9. Thanking the Director General of UNESCO for his message at the opening of the current International Conference on Linguistic and Cultural Diversity in Cyberspace,

10. Thanking also the Government and the people of the Republic of Sakha (Yakutia) for their hearty hospitality, which ensured the success of the Conference,

Consider it necessary:

(a) to use every opportunity to promote the preservation of linguistic and cultural diversity in cyberspace and elsewhere;

(b) to stress the importance of implementing the Recommendations of:

- the World Summit on the Information Society (Geneva, 2003, and Tunis, 2005),
- the International Conference “UNESCO between Two Phases of the World Summit on the Information Society” (St. Petersburg, 2005), in particular action C8 (Cultural Diversity and Cultural Identity, Linguistic Diversity and Local Content), and
- the thematic meeting on “Multilingualism for Cultural Diversity and Participation of All in Cyberspace”, organized by UNESCO in preparation for the second phase of the World Summit on the Information Society (Bamako, Mali, 2005);

(c) to invite the UNESCO Intergovernmental Council of the Information for All Programme to examine the possibility of creating an expert group on multilingualism in cyberspace;

(d) to suggest to UNESCO and MAAYA (World Network for Linguistic Diversity) to convene a World Summit on Linguistic Diversity in Cyberspace;

(e) to support the ACALAN (African Academy of Languages) and MAAYA initiative for a World Forum on Multilingualism.

Suggest in particular,

(f) to invite all interested organizations and private persons to contribute to the UNESCO website “Languages Matter!”, dedicated to the International Year of Languages, and to the discussion forum “Communication and Information”, organized by UNESCO as a follow-up to the decisions of the World Summit on the Information Society in action line C8 (Cultural Diversity and Identity, Linguistic Diversity and Local Content), by placing information on their own projects in support of linguistic diversity;

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- (g) to invite the national committees of the UNESCO Information for All Program to elaborate indigenous and minority linguistic programs promoting linguistic and cultural diversity in cyberspace;
 - (h) to call the attention of governmental and other organizations regulating television, radio and mobile telephones environments to the necessity of considering the opportunity of using the latest technologies for broadcasting in minority languages during the media switch to digital broadcasting;
 - (i) to continue searching for fair and balanced solutions between the international copyright and intellectual property legislation and regulatory frameworks for the formation of digital libraries responsible for cultural and linguistic diversity;
 - (j) to increase support for libraries, museums and archives in the access to and preservation of multilingualism and dissemination of information representing cultural and linguistic diversity;
 - (k) to promote the elaboration and dissemination of relevant free/libre open source software, fonts and other technical means necessary for the use of languages in cyberspace;
 - (l) to promote the elaboration and dissemination of a unified and universally accessible set of fonts and diacritic marks supporting the languages of all cultural groups in the Russian Federation, along with Unicode enhancements as necessary;
 - (m) to continue promoting the activities aimed at documenting, preserving and developing languages, mainly minority languages, through the latest information technologies;
 - (n) to continue promoting the elaboration of multilingual thesauri and dictionaries and the inclusion of minority languages into internationally accepted thesauri on cultural heritage such as UNESCO, HEREIN, ICONCLASS, Getty, Garnier etc.;
 - (o) to continue the study of ethical aspects of the preservation of linguistic and cultural diversity in cyberspace, and their consideration in the activities aimed at preserving and promoting such diversity;
 - (p) to step up activities for the introduction, promotion and enhancement of minority languages in the educational systems and the expansion of their application and use (in the government sector, the sphere of research and art, on television, radio, etc.);

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- (q) to suggest to the participating countries the monitoring of language diversity on the Internet;
 - (r) to extend international cooperation with all interested organizations including the International Federation of Library Associations (IFLA), the Conference of Directors of National Libraries (CDNL) and the International Indigenous Librarians Forum (IILF);
 - (s) to invite the Government of the Republic of Sakha (Yakutia) to consider establishing a competence centre for the study and promotion of multilingualism in cyberspace and for sharing its experiences with the world at large.



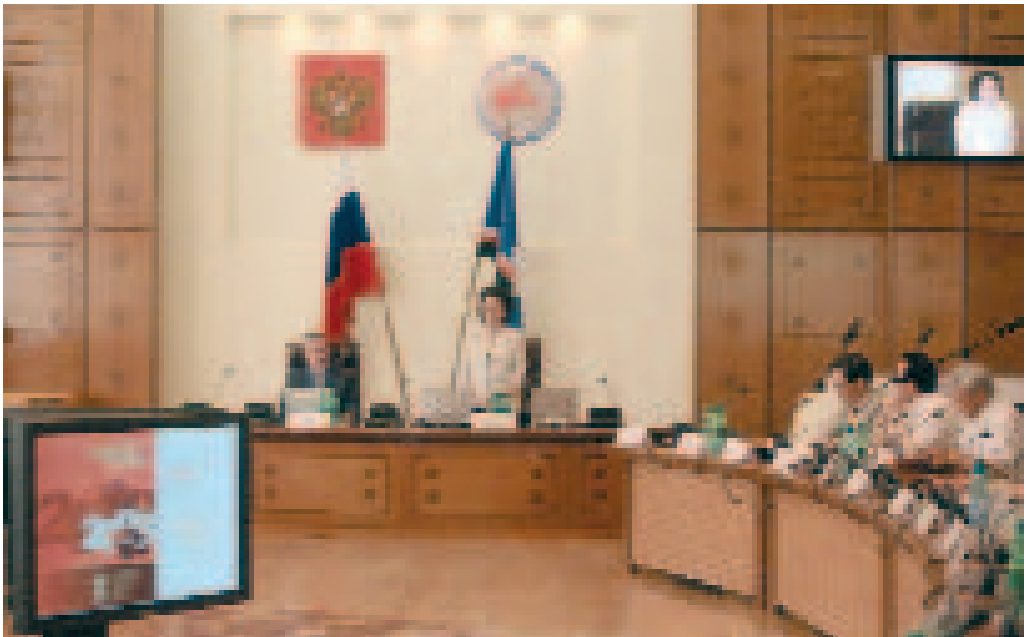
Republic of Sakha (Yakutia) greeting the Conference participants



The republic's guests tasting koumiss, traditional Yakutian beverage



Mr Adama Samassekou, Executive Secretary of the African Academy of Languages (Mali), speaking



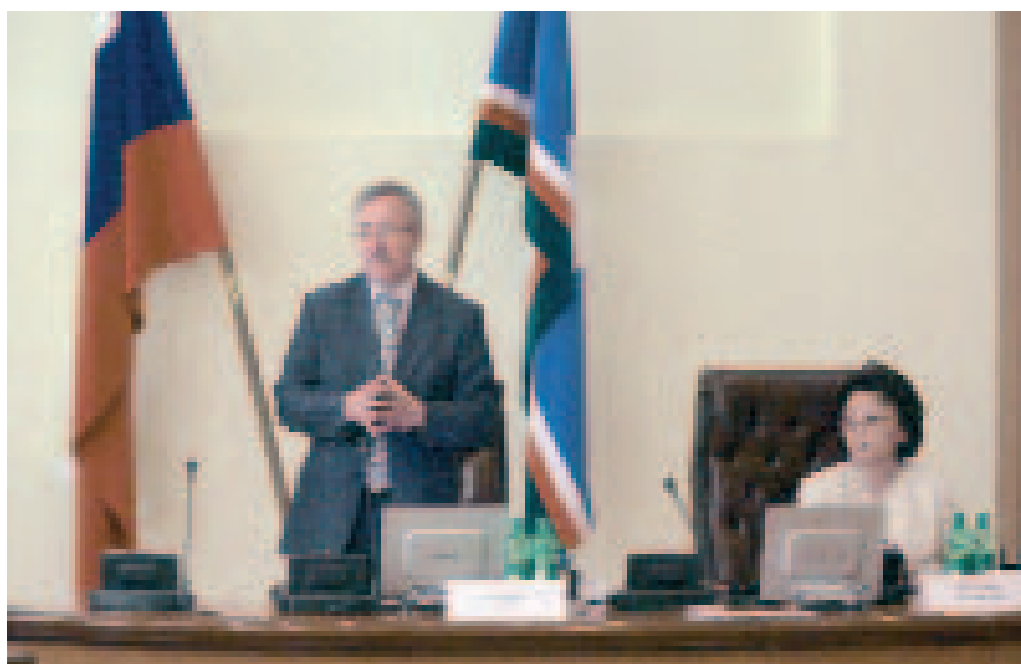
Ms Evgenia Mikhailova, Vice President of the Republic of Sakha (Yakutia) (Russian Federation), at the Conference opening ceremony



From right, Mr Henrikas Yushkiovitshus, Advisor to Director-General, UNESCO (France), and Mr Marius Lukosiunas, Advisor for Communication and Information, UNESCO Office in Moscow (Russian Federation)



Mr Daniel Prado, Director of the Terminology and Language Engineering Department, Latin Union (France)



Welcoming address by Mr Evgeny Kuzmin, Chair, Russian Committee of the UNESCO Information for All Programme; President, Interregional Library Cooperation Centre (Russian Federation)



Mr Victor Montviloff, former UNESCO Senior Programme Specialist in Information and Informatics, Infoethics and Language Diversity in Cyberspace (France), and Ms Maire Aho, Board member, Finno-Ugrian Society; Expert Librarian, Slavonic Library, National Library of Finland



From right, Ms Nadezhda Brakker, Senior Expert, Centre of Informatisation in the Sphere of Culture (Russian Federation), and Ms Irina Balkhayeva, Director, National Library of the Republic of Buryatia (Russian Federation)



*Mr Sergey Bakeykin, Executive Director, Interregional Library Cooperation Centre
(Russian Federation)*



Meeting with Mr Vyacheslav Shtyrov, President of the Republic of Sakha (Yakutia), right



Conference opening ceremony in the Republic Hall of the Government House



From right, Mr Mikhail Nikolayev, Deputy Speaker, Federation Council of the Federal Assembly of the Russian Federation; first President of the Republic of Sakha (Yakutia) (Russian Federation), and Mr Sergey Bobryshev, Business Manager, ParaType Company (Russian Federation)



From right, Mr Tjeerd de Graaf, Research Associate, Mercator European Research Centre on Multilingualism and Language Learning (Netherlands), and Mr Marcel Diki-Kidiri, Senior Expert, National Centre for Scientific Research (France)



Mr John Mohi, Director, Services to Māori, National Library of New Zealand



Mr Roman Motulski, Director, National Library of Belarus, and Ms Latifa Mammadova, Head of the Department of Libraries, Ministry of Culture and Tourism of the Republic of Azerbaijan



Ms Nadezhda Zaikova, First Deputy Minister, Ministry of Culture and Spiritual Development of the Republic of Sakha (Yakutia) (Russian Federation)



Mr Adama Samassekou, Executive Secretary of the African Academy of Languages (Mali), and Ms Yelizaveta Sidorova, Co-Chair of the National Committee of the Republic of Sakha (Yakutia) for UNESCO (Russian Federation)



Mr Bernard A. Marlière, Secondary school tuition inspector, Ministry of Education of Belgium, Ms Ludmila Mouzafarova-Marlière, municipal functionary of Jodoigne, City Council of Jodoigne (Belgium), and Ms Valentina Samsonova, Director, National Library of the Republic of Sakha (Yakutia) (Russian Federation)



Ms Ekaterina Plys, Project Coordinator, Russian Committee of the UNESCO Information for All Programme (Russian Federation), and Ms Katsuko T. Nakahira, Assistant Professor, Management and Information Science Department, Nagaoka University of Technology (Japan)



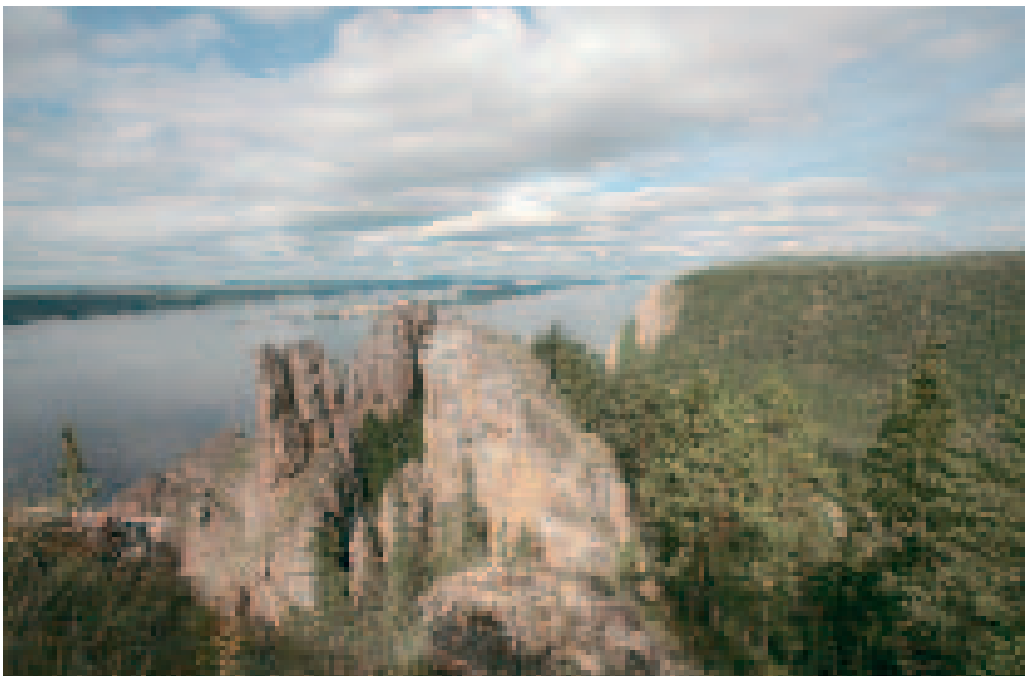
*Mr Elmir Yakubov, Director, Khasavyurt Central Municipal Library System
(Republic of Dagestan, Russian Federation)*



*Participants in the Section on the role of libraries in preserving
linguistic and cultural diversity*



After a traditional Yakut ceremony of blessing



Lena Pillars (Lenskie Stolby) national park



Performance by participants from South Korea



At the shamanic sanctuary before climbing the Lena Pillars rocks



At the plenary meeting



Working out the Conference's final document—the Lena Resolution



Lena Pillars (Lenskie Stolby) national park

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