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2019 International Year
of Indigenous Languages



GOVERNMENT OF
THE KHANTY-MANSIYSK
AUTONOMOUS OKRUG • UGRA



International Conference
**Language Technologies for All (LT4All):
Enabling Linguistic Diversity and Multilingualism Worldwide**

in the framework of
the 2019 International Year of Indigenous Languages

4 - 6 December 2019
UNESCO Headquarters, Paris, France

In partnership with



United Nations
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IFAP
Information for All
Programme



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International Speech Communication Association (ISCA)



International Committee for the **Co**-ordination and **St**andardisation of Speech **D**atabases
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META-NET - Multilingual Europe Technology Alliance



AFCP – Association Francophone pour la Communication Parlée



ATALA - Association pour le Traitement Automatique des Langues

Introduction

Information and knowledge in different languages is key to the achievement of sustainable development. The production of new knowledge and adequate responses to emerging challenges, such as poverty, climate change, the digital divide, uneven economic opportunities and social exclusion, will require the preservation of knowledge accumulated in local traditions and practices through the appropriate tools.

In today's world, digital literacy, access to broadband connectivity and quality content, including in local languages, are also prerequisites for the fulfillment of our human rights and fundamental freedoms, as well as for our participation in the development of societies. The denial of such rights and freedoms concerns access to knowledge and information in different languages.

Despite the policies implemented and the technological progress achieved, many language users, particularly Indigenous peoples, still experience barriers to access information online. At school, in the workplace, and in everyday life, they encounter obstacles in using the domain name system, mobile phones, computers, applications and other tools in their own languages. These difficulties are compounded by gender, disability, linguistic, economic, socio-political and digital divides.

In this context, Language Technologies (LT), greatly contribute to the promotion of linguistic diversity and multilingualism in the digital world. These are moving outside research laboratories into numerous applications in many different areas. They include keyboard technologies, spelling/grammar checkers up to speech and speaker recognition, machine translation for text and audio, speech synthesis, and spoken dialogue. They also include text and document understanding, generation and summarization, as well as sentiment and opinion analysis, answers to questions, information retrieval and knowledge access, sign languages processing, etc.

However, a small number of some 7000 languages spoken around the world have associated Language Technologies, with various levels of quality. The majority of languages can be referred to as under-resourced or as not supported. This situation puts the users of many languages – a vast majority of Indigenous languages – in a disadvantageous situation, creating a digital divide, and placing their languages in danger of digital extinction, if not complete extinction.

For over a decade, UNESCO has been committed to promoting a new vision of inclusive knowledge societies, highlighting the importance of creation, dissemination, preservation and utilization of information and knowledge using digital technologies. This approach acknowledges the increasing role of information and knowledge in society, as powerful resources for the creation of wealth, social transformation and human development.

Therefore, UNESCO considers that it is essential to support linguistic diversity and multilingualism as essential pillars of fostering pluralistic, equitable, open and inclusive knowledge societies. The Organization also recognizes linguistic diversity and multilingualism as a source of enrichment for humanity and development. It also encourages its Member States to develop comprehensive language-related policies, to allocate resources and use appropriate tools in order to promote and facilitate

linguistic diversity and multilingualism, including the Internet and media. In this regard, the Organization through the Recommendation concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003), promotes the development of multilingual content and systems, facilitation of access to networks and systems, development of public domain content and reaffirmation of equitable balance between the interests of rights holders and the public interest.

Furthermore, UNESCO as a lead UN agency for the organization of the 2019 International Year of Indigenous Languages has worked to raise awareness on the critical status of many indigenous languages around the world, and to mobilize necessary resources for an immediate action as well as the implementation of the Action Plan for organizing the 2019 International Year of Indigenous Languages.

Based on the Roadmap towards UNESCO's World Atlas of Languages, the Organization is already developing the online platform that will contain data on languages, policies, regulations, technical recommendations and best practices in this field. It is expected that a new globally accessible and open online platform will be used for monitoring and promotion of the world's languages online, strengthen cooperation and knowledge sharing. This will be by using open and inclusive technological solutions among international, regional and national language institutions, language users and other public and private partners.

Key messages

The development of Language Technologies provides opportunities to improve the free flow of ideas by word and image in different languages and should leave no one behind regardless of the users' age, gender, abilities, language or location.

All language users should have access and be able to use Language Technologies, to provide and receive appropriate content and services in their own language.

Equipping language users with the necessary tools to benefit from the latest digital developments requires the joint and long-term efforts of all stakeholders, including governments, language users, in particular Indigenous peoples, academia, civil society and the private sector.

Major objectives, expected outcomes and outputs

Within the framework of the 2019 International Year of Indigenous Languages, the 3-day International Conference will look at the evolving environment of linguistic diversity and multilingualism which play an important role in our societies. The event also aims to identify recommendations on how to harness technology for the preservation, support and promotion of languages, including lesser-used and Indigenous languages, as well as on how to increase and facilitate communication between language users. The Conference will conclude its work with an Outcome Document in order to set out the direction for future global actions in the area of Language Technologies.

With a view to provide access to information and knowledge to all language users and facilitate their inclusion and participation in building sustainable knowledge societies, UNESCO, in close cooperation with the Government of the Khanty-Mansiysk

Autonomous Okrug-Ugra (Russian Federation), the European Language Resources Association (ELRA) and its Special Interest Group on Under-resourced languages (SIGUL), and in partnership with UNESCO Intergovernmental Information for All Programme (IFAP) and the Interregional Library Cooperation Centre, as well as with support of other public organizations and sponsors, is organizing this conference with the title “Language Technologies for All: Enabling Linguistic Diversity and Multilingualism Worldwide” at its Headquarters in Paris, France from 4 to 6 December 2019.

The major objective of the event is to promote the human rights and fundamental freedoms of all language users to access and create information and knowledge in language they best understand and to encourage all relevant stakeholders to take concrete measures for the promotion of linguistic diversity and truly multilingual internet and Language Technologies, with special focus on Indigenous languages within the context of the international normative instruments and international cooperation mechanisms such as the 2019 International Year of Indigenous Languages (IYIL2019).

The specific objectives are to:

- Identify existing challenges and barriers for language users to access and create information and knowledge in different languages,
- Explore the relationship between technologies and languages from a scientific, technical, cultural, linguistic, economic and political perspective,
- Look at the socio-cultural impact of technologies on languages and their users, with special focus on lesser-used, minority and Indigenous languages,
- Raise awareness of the significance and complexity of linguistic diversity and multilingualism, and the sense of urgency for taking concrete measures and actions by all relevant stakeholders,
- Share good practices on existing technological solutions to tackle the growing linguistic divide between users of different languages.

The expected outputs:

- Concrete recommendations to improve the status of linguistic diversity and multilingualism with regards to the role of language technologies in increasing access to multilingual information and knowledge,
- Research and identification of good practices and technical solutions for the promotion of linguistic diversity and multilingualism,
- More public-private stakeholders engaged in the production of multilingual content, the establishment of enabling environments and further deployment of appropriate Language Technologies for the promotion of linguistic diversity and multilingualism,

The expected outcome:

- Long-lasting commitment of all stakeholders to the development of new Language Technologies, as an effective and necessary means for promoting linguistic diversity and multilingualism.

New technology such as Artificial intelligence is used in providing translations between languages, documentation of languages and learning languages through natural language and voice interface platforms. While technology is advancing in artificial intelligence, some languages are disadvantaged by the economic models prevalent in such emerging technologies.

The International conference will therefore also take stock of the technological state-of-the-art in language technologies, including Artificial Intelligence methods such as Machine and Deep Learning, and its need for linguistic data.

The 3-day conference will be composed of keynote talks, oral and poster presentations, panels as well as reports, demonstration of systems and innovative applications, and experiences gained in the deployment of technologies in promoting linguistic diversity and multilingualism. Innovative solutions will be presented at the exhibition specially installed during the event. The event will draw conclusions, recommendations and Outcome Document resulting from the presentations, panels and reports and discussions.

The conference will gather UNESCO Member States, international bodies, regional governments and administrations, academia, language technology researchers, linguists, industry, indigenous peoples' and language policy and decision makers from around the world.

The attendance at the conference is on invitation and the audience will be targeted to a maximum of 400 people. Online registration is obligatory for the participation at the International Conference.

Organizing committee

The International Conference is organized by UNESCO, Government of the Khanty-Mansi Autonomous Area – Ugra and the European Language Resources Association (ELRA) and its Special Interest Group on Under-resourced languages (SIGUL), in partnership with the UNESCO Information for All Programme (IFAP) and Interregional Library Cooperation Centre.

The Conference is conducted by the Organizing Committee that is chaired by the Assistant Director-General for Communication and Information of UNESCO. Other members of the Organizing Committee include a representative from the:

- Government of the Khanty-Mansi Autonomous Area – Ugra (Mr Alexey Shipilov, First Deputy Governor of the Khanty-Mansiysk Autonomous Area – Ugra),
- European Language Resources Association – (Mr Khalid Choukri, General Secretary, European Language Resources Association ELRA-ISCA, Mr Joseph Mariani, Honorary President of ELRA, and Ms Sakriani Sakti, Secretary, Joint Special Interest Group on Under-resourced languages, SIGUL),
- UNESCO Intergovernmental Information for All Programme (Ms Dorothy Gordon, Chair and Mr Evgeny Kuzmin, Vice-Chair),

- Steering Committee for the organization of the 2019 IYIL2019 (Ms Aili Keskitalo, Indigenous Co-chair and Chair of the Ad-hoc group on Language Technologies),
- UNESCO Secretariat (Ms Irmgarda Kasinskaite-Buddeberg and Mr Jaco du Toit).

The Organizing Committee is also supported by the sub-committees:

- International Honorary Advisory Committee (thematic tracks)
- Program Committee (thematic tracks, technical and scientific advisory)
- Outcome Document Drafting Committee.

Format and structure

The International Conference programme of three days, consists of plenary oral and poster sessions, introductory presentations and thematic discussions in each session, as well as the exhibition on innovative language technologies and supporting events (such as welcome receptions). The Conference will approve a forward-looking Outcome Document, which seeks to capture concrete recommendations for international cooperation, research and development. The document will capture main debates, discussions and solutions for informed decision making, then be globally distributed among various stakeholders and integrated into new follow-up activities, including to the 2019 International Year of Indigenous languages.

Language Technology exhibition

The exhibition will showcase Language Technology solutions by both public and private partners, with relevance to the theme of the conference.

The Draft Program Tracks

Day 1. CONTEXT. Multilingualism for building knowledge societies (Room IV)

Welcoming remarks

Session 1: The multilingual landscape and Indigenous Languages

Session 2: Languages and Communication in the 21st century

Session 3: Language policies and globalization: challenges and opportunities

Session 4: Multilingualism in education and research

Welcome Reception

Day 2. ACHIEVEMENTS. Applying language technologies for linguistic diversity and multilingualism (Room II)

Opening Session

Session 5: Innovative applications made possible by Language Technologies

Session 6: Scientific aspects related to the state of the art in Language Technologies, for spoken, written and sign languages

Session 7: Infrastructures and resources

Reception

Day 3. CHALLENGES. Addressing the digital divide and multilingualism (Room II)

Opening Session

- Session 8: Strategies in using Language Technologies for Minority and Indigenous Languages
- Session 9: Activities for language documentation, preservation, reclamation, and enhancement
- Session 10: Scientific aspects related to handling linguistic diversity and multilingualism, particular of under-resourced and indigenous languages

Closing Session: Outcome Document and Recommendations

Contacts

UNESCO
Communication and Information Sector
7 place de Fontenoy
75352 Paris 07 SP
France

Link to the conference website : <https://en.unesco.org/events/LT4All>

Useful links:

- The [Recommendation](#) concerning the Promotion and Use of Multilingualism and Universal Access to Cyberspace (2003)
- [UNESCO](#) Linguistic diversity and multilingualism in cyberspace
- Government of the Khanty-Mansi Autonomous Area ([Ugra](#))
- The Russian Government, [Federal Agency](#) for Ethnic Affairs
- UNESCO Intergovernmental Information for All Programme ([IFAP](#))
- European Language Resources Association ([ELRA](#))
- Special Interest Group on Under-resourced languages ([SIGUL](#))
- 2019 International Year of Indigenous Languages ([IYIL2019](#))
- National IFAP [Committee](#) in Russian Federation