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# MEETING OF THE CHAIRPERSONS OF THE COMMITTEES ON EDUCATION, SCIENCE AND CULTURE AND THE COMMITTEES ON THE DEVELOPMENT OF INFORMATION SOCIETY "UNITED IN DIVERSITY: POLITICAL AND SOCIAL DEVELOPMENT ASPECTS OF EU LANGUAGES AND CULTURES"

#### CONCLUSIONS

26-27 September 2013, Vilnius

#### **Introductory remarks**

The Meeting of the Chairpersons of the Committees on Education, Science and Culture and the Committees on the Development of Information Society United in Diversity: Political and Social Development Aspects of EU Languages and Cultures was held in the Seimas of the Republic of Lithuania on 26–27 September 2013.

The Meeting focused on two topics: Machine translation of European languages: problems, challenges, prospects and Digitalisation of a language as a part of cultural heritage.

The Meeting was opened by Ms Audrone PITRENIENE, Chair of the Committee on Education, Science and Culture of the Seimas of the Republic of Lithuania. The introductory remarks were followed by welcome addresses by Dr Vydas GEDVILAS, Speaker of the Seimas of the Republic of Lithuania, and Mr Rimantas SINKEVIČIUS, Minister of Transport and Communications of the Republic of Lithuania.

Session I was chaired by Ms Audrone PITRENIENE, Chair of the Committee on Education, Science and Culture, where the following keynote speakers took the floor: Dr Sabine KIRCHMEIER-ANDERSEN, Director of the Danish Language Council; Mr Jan TRUSZCZYŃSKI, Director General of the Directorate General for Education and Culture of the European Commission; Ms Maria Cristina DE PRETER, Head of the Portuguese Language Department of the Directorate General for Translation of the European Commission; Dr Algirdas SAUDARGAS, Member of the European Parliament; Dr Andrejs VASIĻJEVS, Director of Tilde.

In session II, chaired by Dr Mindaugas BASTYS, Chair of the Committee on the Development of Information Society of the Seimas, the floor was taken by the following keynote speakers: Mr Kimmo ROSSI, Head of the Research and Innovation Sector of the Unit Data Value Chain of the Directorate General for Communications Networks, Content and Technology of the European Commission; Prof Hans USZKOREIT, scientist, Chair of the META-NET Executive Board, Coordinator of META-NET and T4ME; Ms Kaisa OLKKONEN, Member of the



Executive Board of the Association DIGITALEUROPE, Vice President for Government Relations of Nokia Corporation.

The presentations were followed by a general debate. The Meeting concluded in consideration and adoption of the Conclusions.

#### **Conclusions of the Meeting**

#### EU policy on multilingualism in times of information technology

- Linguistic diversity is an essential characteristic of European identity and cultural heritage.
   This diversity ensures social participation and full citizenship to every citizen of each
   Member State. Due to the processes of globalisation and migration, the importance of
   knowledge of languages has particularly increased in today's European societies while
   language teaching has become one of the key objectives of EU language policy in the area
   of education.
- 2. The first regulation adopted by the Council of the European Economic Community (15 April 1958) confirmed the equality of the official state languages of the Member States and their status as official and working languages of the European institutions. Since then, EU documents have been translated into all official languages of the EU and the EU has been spending substantial funds on the promotion of multilingualism.
- 3. During the last 60 years, Europe has become a distinct political and economic structure, yet culturally and linguistically it is still very diverse. One classic way of overcoming the language barrier is to learn foreign languages. Yet without technological support, mastering all official languages of the Member States of the European Union and some 60 other European languages as well as receiving information in these languages is an insurmountable obstacle for the citizens of Europe and its economic, political, and scientific progress.
- 4. Europe's future sustainable growth and competitiveness depends to a large extent on its ability to embrace the digital transformation in all its complexity. In the area of multilingualism, information and communication technology (ICT) will offer European actors tremendous advantages, not only within the common European market but also in trade relations with emerging markets of third countries. Technology solutions will eventually serve as a unique bridge between Europe's languages.

## Endangered European languages and linguistic diversity in the European Union

5. The objective of safeguarding each and every facet of the European Union's cultural and linguistic heritage has been bolstered under the Lisbon Treaty because linguistic and cultural diversity is one of the fundamental principles of the European Union, as enshrined in Article 22 of the Charter of Fundamental Rights, which reads: 'The Union shall respect cultural, religious and linguistic diversity'. All languages, including those which are endangered, reflect historical, social, cultural and ecological knowledge and skills that form part of the richness of the European Union.

- 6. The European Union and the Member States are encouraged to pay more attention to the extreme danger that many European languages are in if they cannot be used to communicate using modern information technology and to commit wholeheartedly to preserving the diversity of the Union's linguistic and cultural heritage by supporting ambitious protection policies within the language communities concerned and by intensifying storage and digitalisation of language resources and research and development of language technology.
- 7. In this era of information technology, many languages are at risk of disappearing because they are not present in the digital technology space. Those languages which will fail to establish their presence in information technologies and the global digital space may be doomed to face digital extinction.
- 8. The study conducted by META-NET (Network of Excellence) concludes that digital support for 21 of the 30 European languages investigated is "non-existent" or "weak" at best. Only English was assessed as having "good support".
- 9. Survival of languages, particularly of those with fewer users, can be ensured through their full-scale viability in the digital space. Therefore, the Meeting of the Chairpersons of Parliamentary Committees expresses concern over uneven development of language technology in Europe and insufficient sustainability, applicability and completeness of available language resources.
- 10. Language technology has the potential of opening up new ways of multilingual communication, using machine translation and automatic interpretation, as well as information dissemination and retrieval systems. However, the pace of change in this area is so high that efforts aimed at language planning and stabilisation are no longer able to address every challenge in time. The fact that the market forces drive companies to give priority to products for the most widely spoken languages results in the slow introduction and dispersion of language technology and tools and the inadequate development of digital language resources for languages that are less widely used. We have to make sure that we equip all smaller and under-resourced languages with the necessary base technologies and allocate resources, financial included, to that end; otherwise these languages will not be able to serve their users in the digital space. Instead citizens will be forced by the technology to use another language than their own, which is a violation of their linguistic human rights.
- 11. The participants of the Meeting call on the Commission and the Council to adapt various EU policies and programmes so as to support all European languages and linguistic diversity using EU financial support tools for the period between 2014 and 2020, making sure that programmes on education and training, youth and sport, culture and media, as well as structural funds provide all instruments designed to promote languages in new technologies.
- 12. Participants of the Meeting welcome the efforts and the results already achieved regarding the deployment of the machine translation service (MT@EC) by the European Commission, also soon to be made available to national administrations. Participants consider that it is essential to concentrate special attention on the morphologically complex

languages, where the results so far are less convincing. For this purpose, cooperation between the EU institutions and national stakeholders should be encouraged.

## Ways to satisfy the needs of EU multilingual society in the digital space

- 13. The participants of the Meeting welcome the EU's position to support substantial research efforts to make online content more accessible across languages and to reduce linguistic and social exclusion.
- 14. Seeking to promote multilingualism in the digital space, there needs to be, first and foremost, a much stronger focus on developing transversal skills and basic skills at all levels and making educational resources more available in mother tongue. Schools, universities and vocational training institutions must increase access to education via open educational resources ('Rethinking Education').
- 15. It is essential to promote adult language learning through the use of media, new technologies, cultural and leisure activities.
- 16. The EU is a major employer of translators and an important player in the European translation market. This is why it is necessary to follow the developments in translation training in Europe closely and contribute to them.
- 17. Europe badly needs high-quality machine translation software for all European and major non-European languages in order to finally overcome language barriers and thus future-proof European languages. The participants of the Meeting are convinced that the provision of new applications and services to citizens would create a host of new opportunities for the European labour market and language industries.

#### Promotable initiatives on language and its heritage resource digitalisation

- 18. It is vital to design and develop multilingual digital resources and tools necessary for machine translation and advanced analysis of linguistic data, which are a prerequisite for building quality machine translation software, thereby ensuring the status of equality enjoyed by all official languages of the EU. The participants of the Meeting are of the opinion that digitalisation performs not merely a technological function. Digitalisation of language resources and items of linguistic heritage preserves characteristic features of the languages concerned and keeps record of their historical development. In the digital space, language becomes crucial in expressing the identity and culture of a modern, progressive and creative nation.
- 19. The participants of the Meeting regret that in reality digitalisation of resources of smaller (non-commercial) European languages and their heritage is becoming a local academic mission, which is often complicated by the lack of human resources and insufficient focus, support and funding by public and commercial institutions. These circumstances constitute a systemic reason contributing to the actual digital divide among languages in Europe.
- 20. One of the fundamental challenges is that the effort needed to describe a language is the same, regardless whether the language has many or few speakers. The effort needed to

provide the necessary language resources and relevant research for the digital representation of English is exactly the same as the effort needed for Lithuanian or any other language. There are just more speakers to share the burden and a greater market to give a proper return on investment for English. This disproportionate situation should be regulated so that every language has an equal chance to be digitally present on an advanced level.

#### The participants of the Meeting encourage and welcome the initiatives which:

- 21. prioritise funding aimed at the reduction of the digital divide so that all European languages would come closer to the minimum EU-standard for language technology development; apply public-private partnership (PPP) principles in designing and developing multilingual digital resources and tools;
- 22. seek, through legal regulation, resolution of the problem of disproportionate costs of international projects;
- 23. enable consistent integration of smaller languages into multilingual scientific infrastructures related to the design and development of digital resources and language technology; ensure, at the European level, sustainability and international standards of digital language resources and technologies that build them, and foresee the level of their accessibility and availability.

#### Overview of the presentations and debates

# SESSION I: MACHINE TRANSLATION OF EUROPEAN LANGUAGES: PROBLEMS, CHALLENGES, PROSPECTS

In her presentation, Dr KIRCHMEIER-ANDERSEN, Director of the Danish Language Council, stressed that languages were closely linked to our identity and that they allowed seeing the world from a different perspective not only from the cultural point of view but also in terms of commerce or politics. She stressed that machine translation (MT) was becoming more prevalent and that in the future MT would be reachable instantaneously, for example on our smartphones. The current most widespread MT resource was Google Translate, but it worked well only for well digitised languages and only in the general domain. Dr KIRCHMEIER-ANDERSEN pointed out that market forces alone would not be sufficient to develop MT systems, and that was why significant funds that the EU spent on the development of such systems should be welcomed. She noted that the development of such systems would allow information to flow easily between different languages in Europe.

Mr Jan TRUSZCZYŃSKI, Director General of the Directorate General for Education and Culture of the European Commission, referred to the scientific conference *United in diversity:* the importance of languages for mobility, employment and active citizenship that had taken place in the Seimas in the days preceding the Meeting. During the conference the importance of languages for jobs and mobility had been discussed. He stressed that languages were on top of the priority list for the Commission in education policy. Translation into other EU languages was also a key factor ensuring democratic legitimacy of the EU, as European citizens required to access information on EU decisions and legislation in their own languages. He also

mentioned that, after the 2004 enlargement, the EU managed to cope with the influx of new languages well largely due to language processing technologies. The EU intended to continue supporting language technologies through different funding programmes, such as the Horizon 2020, for example.

Ms Maria Cristina DE PRETER, Head of the Portuguese Language Department of the Directorate General for Translation of the European Commission, mentioned that out of the 6000 languages that existed in the world 40% were vulnerable. She stressed that the EU stood for language diversity and that it invested heavily in MT technology and had developed its own MT system called MT@EC. She pointed out that MT could help the languages survive. One of the MT systems funded by the Commission and most widely used in the world was *Moses*. Such systems brought us closer to the goal of enabling people in Europe to interact with each other in their own languages. She also emphasised that the Commission saw MT as an important factor in completing the single market in the EU.

Dr Algirdas SAUDARGAS MEP, stressed that English was the contemporary *lingua franca*. Even if people used their native languages, English was the language connecting people. MT was currently rooted in English but if real multilingualism was to be ensured, the situation had to be turned upside down to root MT in native languages, not English. He underlined the importance of other languages catching up with English, and that this could be achieved only with the use of public funds. He emphasised the importance of acting and thinking *glocal*, i.e. strengthening local identities while at the same time increasing global interaction.

Dr Andrejs VASILJEVS, Director of Tilde, started his presentation by pointing out that capital and people could move freely in Europe, but that the language barrier still existed. According to him, less than 40% of Europeans used online content in foreign languages and 46% were not able to hold a conversation in a foreign language. Technology could help overcome the language barrier. MT was sometimes already good enough for publication and could save money and improve the competitiveness of small and medium-sized enterprises in the EU's single market. It would also enable citizens to get better acquainted with other cultures in Europe. That is why the EU should move forward towards creating a real single digital marketplace, which would mean that Europeans would be able to access any products or services in their own language. This would signify a truly multilingual society. He also pointed out that globalisation was a race against time and that the dominance of English would be even more felt in the future. But this should encourage the EU to invest in other languages to make the EU a truly multilingual community.

#### The debate

During the debate many participants stressed that all languages should be supported in the EU, not only English. But in efforts to develop effective MT more efforts should be made to digitise European languages. This would also potentially allow developing automated voice interpretation in the future. It was mentioned that the idea of united Europe rested on multilingualism, not the dominance of one or two languages. Participants also spoke of the need for the EU to develop its own strong MT sector. One of the priorities should be to introduce translation technologies for pupils at schools. It was also important to prevent languages from digital extinction and thus to support the digitisation of languages to avoid the gap between the

real and the digital space. Concern was expressed that MT could create disincentives for Europeans to learn other languages. It was therefore stressed that Europeans should be encouraged to learn other languages as well.

# SESSION II: DIGITALISATION OF A LANGUAGE AS A PART OF CULTURAL HERITAGE

In his presentation Mr Kimmo ROSSI, Head of the Research and Innovation Sector of the Unit Data Value Chain of the Directorate General for Communications Networks, Content and Technology of the European Commission, stressed the barriers that the lack of language knowledge presented in the single market. Mr ROSSI said that 80% of e-commerce in the EU was in one language only. The EU spent around 150 million EUR on MT systems through its 7th Framework Programme. Now funding for that purpose would be allocated through Horizon 2020, the Connecting Europe Facility and the structural funds. Yet the development of such technologies was not the same as their deployment. In this area there should be more coordination between the Commission and the Member States. For example, in order to develop automated translation there was a need to collect and digitise linguistic resources. This could only be achieved by the Member States themselves, even if with the help of the Commission. The Member States should be the ones most interested in the preservation of their languages and therefore assist the Commission in its efforts.

Prof Hans USZKOREIT, Chair of the META-NET Executive Board, Coordinator of META-NET and T4ME, pointed out that technology had improved dramatically, and now robots were talking, search engines had improved, and MT systems had advanced. He identified three major problems in terms of language diversity in Europe: 1) the language barrier remained one of the most significant obstacles in completing the EU single market; 2) European companies had a competitive disadvantage because of the diversity of languages in the EU; 3) many European languages, with the notable exception of English, were poorly digitised, which prevented effective MT systems from being developed for these languages. Poor digitisation could even lead to digital language death. He stressed that European companies and researchers were leaders in MT technology but that the EU's competitive advantage was weakened by market fragmentation. He singled out priority themes for researchers: developing a translingual cloud, improving social intelligence, and working on socially aware interactive assistants.

Ms Kaisa OLKKONEN, Member of the Executive Board of the Association DIGITALEUROPE, noted that consumers wanted services in their own languages. Therefore companies on the internet that provided services or information in local languages had an advantage over those than only operated in English. Even if it was costly to create content in a local language, at the end it paid off. Moreover, ICT technologies could help harness economies of scale. In the EU single market companies were faced with a load of national regulations that came only in the national language. This prevented many companies from starting operations in another Member State. More efficient and affordable MT systems would allow solving this problem.

#### The debate

The participants stressed that languages in the EU, especially the smaller ones, were vulnerable and that digitisation was one of the measures to protect them. That is why projects like

METANET and others should be funded from the EU and/or national budgets. It was stressed that public funding could lead to landmark technologies, like the GPS, which had been developed with the help of the government in the United States. An idea was raised that the EU should contemplate the creation of a central repository for digital content in order to protect the linguistic and cultural diversity.