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ICT FOR THE EU MULTILINGUALISM

STRESZCZENIE

"Multilingualism" is regarded as the ability of communities, groups and individuals to use more than one language on a regular basis in their daily activities, the way to unite "rich in diversity" Europe. ICT can make any necessary information available and accessible, help eliminate language barriers. The European Commission is developing 30 research and innovation projects of language technology which purpose is to help Internet users to get access to the information in their native languages. These projects include the protection of minor languages, the promotion of sign languages, the development of translation technologies.

Key words: multilingualism, ICT, sign languages, linguistic diversity, on-line translation.

TECHNOLOGIE INFORMACYJNO-KOMUNIKACYJNE DLA WIELOJĘZYCZNOŚCI UE

„Wielojęzyczność" jest interpretowana jako zdolność wspólnot, grup i pojedynczych osób do korzystania z więcej niż jednego języka regularnie w codziennej działalności; jako sposób łączenia „bogatej w różnorodność" Europy. TIK robią niezbędną informację dostępną i jawną, aby pomóc w podołaniu barier językowych. Komisja Europejska opracowuje 30 projektów badawczych i innowacyjnych, celem których jest pomoc użytkownikom Internetu w uzyskaniu dostępu do informacji w ich językach ojczystych. Projekty te obejmują ochronę języków mniejszości, wsparcie języka migowego, opracowanie technologii tłumaczenia.

Słowa kluczowe: wielojęzyczność, TIK, język migowy, różnorodność językowa, tłumaczenia online.

"Everybody must have the chance to communicate efficiently in the enlarged EU. This does not only affect those who already are multilingual but also those who are monolingual or linguistically less skilled. The media, new technologies and human and automatic translation services can bring the increasing variety of languages and cultures in the EU closer to citizens and provide the means to cross language barriers. They can also play an important role to reduce those barriers and allow citizens, companies and national administrations to exploit the

opportunities of the single market and the globalising economy. Faced with the globalising online economy and ever-increasing information in all imaginable languages, it is important that citizens access and use information and services across national and language barriers, through the internet and mobile devices. Information and communication technologies (ICT) need to be language-aware and promote content creation in multiple languages"[1].

Languages are the basis for the Europeans who want to work together. There is a need to teach and promote the linguistic heritage of the Member States but there is as well a need to understand each other, neighbors, partners of the EU. The knowledge of many languages makes businesses and citizens more competitive and mobile. The European Commission is to familiarize the EU citizens with its results and to perform this function it should communicate the languages they understand. Promoting multilingualism is a great way to unite Europeans. The EU understands "multilingualism" as "the ability of communities, groups and individuals to use more than one language on a regular basis in their daily activities"[2].

"The fact that multilingualism has been made an EU policy area in its own right is a clear indication of a heightened awareness on the part of the Commission of the increasing importance of the multilingual challenge for the European project. As a result of enlargement, the Single Market and increased mobility within the EU, the revival of the regions, the advent of the knowledge society, migration into the EU, and globalisation, this multilingual challenge has reached a completely new dimension – in terms of size, complexity, and policy relevance"[3].

In the sphere of language policy the role of the European Commission is to coordinate achieving the goal of multilingualism and objectives of language strategy together with national governments[4]. Languages should not be an obstacle to the participation in the society and marginalized language groups should be identified, represented and included in society. Directorate-General for Education and Culture (Commissioner Adrula Vasiliu), responsible for education, culture, youth, sport and language, works close with policy makers and civil society across Europe to ensure effective implementation of the multilingualism strategy. In this area, its priorities are[5]:

- to ensure the availability of information in all the official EU languages;
- to ensure the involvement of regional and minority languages;
- to guarantee the inclusion of sign languages;
- to promote early learning of languages;
- to promote bilingual education.

Nowadays the European Commission stresses that an ability to communicate in foreign languages provides better opportunities for mobility and employment, enhances the EU's competitiveness and trade opportunities in a globalised world and fosters social inclusion and active citizenship. The three key aims of the Commission's multilingualism policy are

- to encourage language learning,

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[1] High Level Group on Multilingualism. *Final Report*, http://www.lt-innovate.eu/resources/document/ec-high-level-group-multilingualism-final-report-2007 [online].

[2] Ibidem.

[3] Ibidem.

[4] Language Policy, http://ec.europa.eu/languages/policy/language-policy/index_en.htm [online].

[5] Directorate General for Education and Culture (DG EAC), http://ec.europa.eu/dgs/education_culture/index_en.htm [online].

- to promote a healthy multilingual economy, and
- to give all EU citizens access to legislation, procedures and information of the Union in their own language.

EU promotes linguistic and cultural diversity of its citizens by supporting the teaching and learning of their languages. The aim of the EU is to enable its citizens to freely speak two languages besides their mother tongue. The EU institutions use 24 official languages, which guarantees equal access to policy and legislation for all the citizens of the EU regardless of whether they speak a major European language or a less known one.

Multilingualism has been part of Community policy, legislation and practices from the time of the Treaties of Rome. In the early days, it was exclusively associated with the language regime set for the European institutions, including their contacts with authorities and citizens in the Member States. For the first time the term "official language" was proposed on April 15, 1958 in the first Regulation of the European Economic Community, under which Dutch, French, German and Italian as the languages of the then Member States gained the status of official languages.

Official and working languages have the following rights:
- documents and responses can be sent to and from the EU institutions in any of these languages;
- EU Regulations and any legal documents, the Official Journal as well, are published in official and working languages.

However, due to time and budgetary constraints, only a small number of documents are translated into all EU languages. The Commission uses English, French and German as common procedural languages and the European Parliament provides translation in different languages depending on the needs of Member States[6].

The EU conducts the policy of protection and promotion of regional and minor languages. Nowadays the EU is home to more than 60 indigenous regional or minority languages, spoken by around 40 million people. They include Catalan, Basque, Frisian, Saami, Welsh and Yiddish. EU policy is to protect and promote minority languages by funding relevant initiatives with this objective.

In 1992 the European Commission initiated the research of minor languages – "Euromosaic"[7]. In 2004–2005 the Commission introduced the ADUM[8] project aimed at providing information about EU programs concerning funding projects of the minor languages support. The CRAMLAP[2] (Celtic, Regional and Minority Languages Abroad Project) inspected and evaluated the higher educational institutions to ensure the use of the Celtic languages and regional or minority languages of Europe.

The Network to Promote Linguistic Diversity (NPLD)[10] is a European wide network in the field of language policy and planning for constitutional, regional languages and the languages of small nations in Europe. NPLD members are governments, NGOs, universities and associations. The main purpose of the network is to enhance the awareness of the importance of linguistic diversity at the European level.

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[6] Language Policy, http://ec.europa.eu/languages/policy/language-policy/index_en.htm [online].

[7] Euromosaic, http://ec.europa.eu/education/languages/languages-of-europe/doc145_en.htm [online].

[8] ADUM, http://www.adum.info/app/adum/web/01_presentation/index.jsp [online].

[9] CRAMLAP, http://www.cramlap.org/ [online].

[10] Network to Promote Linguistic Diversity (NPLD), http://www.npld.eu/about-us/ [online].

An important part of the European linguistic diversity is a sign language. Austria, the Czech Republic, Finland, Portugal and Slovakia recognize the national sign language at the constitutional level. Other Member States apply the laws or other measures to provide sign languages with the official status. These activities are supported by the European Parliament which in 1988 adopted a Resolution on sign languages calling on the Commission and Member States to promote sign languages and to ensure people with hearing impairments to work and learn using the language they prefer[11].

Dicta-Sign[12] project was aimed to facilitate online communication for users with hearing impairments. The fact is that Web 2.0 technologies which eased the communication for ordinary people are not acceptable to those who use only the sign language because these technologies are based on the written language. The objective of the project was to develop the necessary technologies that would make Web 2.0 accessible to the deaf: a user sends a message in symbols to the webcam, the computer recognizes the signals, converts them into an internal representation of the kinetic language and through animated images transmits to the user.

SignSpeak project (Scientific understanding and vision-based technological development for continuous sign language recognition and translation)[13] is also directed to assist users with hearing disabilities in their integration into education, social life and employment. The purpose of the project is to develop the technologies that are based on the images for long kinetic language translation into the text in order to provide new electronic services to the community of deaf people and to improve their communication with those who do not have hearing impairments.

The main requirement of a democratic EU law is to enable everyone to speak his/her own native language at the negotiating table. Legislation effects the lives of ordinary people so there should be no obstacles to understanding. EU can be seen as a long daily conference with the duration of 50 years. That is the Directorate General for Translation that provides written translation of documents and materials produced by EU institutions and Member States to cooperate. Directorate General for Interpretation ensures accurate and correct translation of speeches and thus informing the EU citizens. The task of the Directorate is to provide quality translation services, to offer effective services to the organization of conferences, including technical support, to assist the Commission to implement the strategy of multilingualism[14].

In 1994 Translation Centre was established to meet the needs of other decentralized EU agencies in translations[15].

The Commission does not ignore the need of ordinary EU citizens for translations and the accessibility of the Union documents. The European Commission has made available a special version of the translation software that translates a text in any of the 24 languages of the EU. Its database has more than 1 million words and phrases. With the help of this interpreting program all the Europeans are able to read and translate EU documents from and into any suitable languages, including rare ones like Irish.

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[11] Regional and Minority Language Products, http://ec.europa.eu/education/languages/languages-of-europe/doc147_en.htm [online].

[12] What is Dicta-Sign? http://www.dictasign.eu/ [online].

[13] SignSpeak, http://www.signspeak.eu/en/index.html [online].

[14] Directorate General for Interpretation, http://ec.europa.eu/dgs/scic/index_en.htm [online].

[15] Translation Centre, http://www.cdt.europa.eu/cdt/ewcm.nsf/_/8F422D256807CD0DC1256E9000364EC6?OpenDocument [online].

Since 2005 the training of highly qualified translators who would specialize in the issues of the European Union has become a separate field of the language policy of the EU. In October 2006 the EU Directorate General for Translation held a number of conferences in Brussels to discuss the prospects of creating a unified university curriculum to train interpreters to work in the EU institutions and within its problems. The process involved about 1,000 European universities and other organizations related to education and the use of teaching activity. Among them there were representatives of international organizations (UN, NATO) and the professional associations of translators. They discussed the problems of training the translation in the EU and the creation of a standard European Master's Program in Translation as suggested by the Directorate General of Translation. In spring 2009 the Commission invited the European universities that train professional translators to join the European Master's in Translation network[16].

Lingua Connections – a network of project teams – offers strategic advice and useful methods to everyone who is looking for new ideas to promote the study of languages at local and European levels[17].

E-CLIL[18] project envisages the elaboration and creation of resources and virtual resource centre to use content and integrated language learning. The focal point of the project is language learning, language strategies, multiculturalism and multilingualism. The E-CLIL mission is to improve the quality of teaching foreign languages through the use of E-CLIL resources (special materials, guidelines) to encourage Europeans to speak "mother tongue plus two foreign languages". The project is supposed to develop interactive activities, tasks, games within the central storyline, which will be translated into languages of project participating countries.

Vice-President of the European Commission for the digital agenda Neelie Kroes believes, "If we are serious about making every European digital, we need to make sure that they can understand the web content they want. We are developing new technologies that can help people that cannot understand a foreign language"[19]. For example, when shopping online, people prefer their native language, 9 out of 10 Europeans believe that the websites presented in their respective countries, must contain their national languages.

ICT are utilised in a wide range of applications such as machine translation tools, various kinds of dialogue systems, sophisticated web search engines, automatic information retrieval etc. They have the potential to make online content accessible and exploitable for everyone, to reduce costs for businesses by increasing the efficiency of certain work processes and to help create the European digital market.

Today, the European Commission is developing 30 research and innovation projects of language technology which purpose is to help Internet users to get access to the information in their native languages. Thus, iTRANSLATE4[20] develops the first Internet portal that provides access to free online translation by more than 50 European and world languages, and allows to compare the results using the commonly used tools (Google, Bing, Systran, Trident,

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[16] Мовна політика як інструмент розвитку комунікативного простору Європейського Союзу, http://old.niss.gov.ua/Monitor/Juli2009/23.htm [online].

[17] Lingua Connections, http://www.linguaconnections.eu/Lingua_Connections.htm [online].

[18] E-CLIL, http://www.uam.es/proyectosinv/eclil/index.html [online].

[19] Digital Agenda: more than half EU Internet surfers use foreign language when online, http://europa.eu/rapid/press-release_IP-11-556_en.htm [online].

[20] iTranslate4: Internet Translators for all European Languages, http://ec.europa.eu/information_society/apps/projects/factsheet/index.cfm?project_ref=250405 [online].

Linguatec). The project costs €2 mln. Further progress in the development of language technologies require cooperation and continuous dialogue between industry, researchers, the public sector and citizens.

META-NET project (Multilingual Europe Technology Alliance), founded in 2010, € 6 mln, creates a technological alliance (already more than 200 members) for multilingual Europe. The motto of the project is "The rich and linguistically diverse heritage of Europe must be the multicoloured fabric from which its web is made rather than hindering the free flow of knowledge and thought"[21.]

Within the framework of META-NET the Strategic Research Agenda for Multilingual Europe 2020 has been elaborated which outlines the next priority themes for the development and cooperation[22] :

Theme 1. *Translingual cloud* : the goal is to create the Multilingual European society where all citizens can use any services, have access to knowledge, enjoy all the media and control any technology in their native language, because there are no language barriers thanks to high quality translation. The citizen, the professional, the organisation, or the software application in need of cross-lingual communication will use a single, simple access point for channelling text or speech through a gateway that will instantly return the translations into the requested languages in the required quality and desired format.

Theme 2. *Social intelligence and e-participation*: the goal is to use information technology and the digital content of the web for improving effectiveness and efficiency of decision-making in business and society. The quality, speed and acceptance of individual and collective decisions is the single main factor for the success of social systems such as enterprises, public services, communities, states and supranational organisations.

IT provides a wide range of instruments for intelligence applications. Business intelligence, military intelligence or security intelligence applications collect and pre-process decision-relevant information. Analytics programmes search the data for such information and decision support systems evaluate and sort the information and apply problem-specific decision rules. Decision processes can be structured, monitored, documented and visualised, so that joining, following and benefitting from them becomes much easier. In the EU many collective discussions involve participants in several countries, so cross-lingual participation of EU member states or enterprise locations needs to be supported.

Theme 3. *Socially aware interactive assistants* are conversational agents their socially-aware behaviour is a result of combining analysis methods for speech, non-verbal and semantic signals. These assistants support people interacting with their environment, including human-computer, human-artificial agent (or robot), and computer-mediated human-human interaction. The assistants must be able to act in various environments, both indoor (such as meeting rooms, offices, appartments), outdoor (streets, cities, transportation, roads) and virtual environments (such as the web, virtual worlds, games), and also be able to communicate, exchange information and understand other agents' intentions.

So, the EU strives for uniting its citizens through the implementation of the multilingualism goal. Multilingualism helps eliminate any linguistic, cultural, trade etc. barriers, facilitates integration and active participation of the citizens. The EU Commission introduces

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[21] Introducing META-NET, http://www.meta-net.eu/ [online].
[22] Strategic Research Agenda for Multylingual Europe 2020, http://www.meta-net.eu/vision/reports/meta-net-sra-version_1.0.pdf [online].

the policy "mother tongue plus two foreign languages" to encourage language learning. Its Directorates General for Translation and Interpretation provide efficient services and support the development of free on-line translation technologies. The EU pays big attention to the inclusion of minor and sign languages by elaborating and implementing special projects based on information and communication technologies.

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