# **Meaning of Digitalization**

#### Andrej Flogie

Director General for the Information Society Ministry of Higher Education, Science and Technology Kotnikova 38, 1000 Ljubljana, Slovenia andrej.flogie@gov.si

#### **Robert Repnik**

Faculty of Natural Sciences and Mathematics University of Maribor Koroska cesta 160, 2000 Maribor, Slovenia robert.repnik@uni-mb.si

Abstract. The improvement of information and communication technology has substantially relieved the common way to projecting the modern Europe [1] and it has enabled the participation of all its residents. Everyone can contribute his part and everyone can participate in the activities that take place in his country. There are no boarders anymore, only rough lines of these countries that our contemporary world can overcome and connect mutually. Information and communication technology makes the swing of digital issues possible, it enables the interconnection and access to these topics and it offers many great opportunities in development and science.

#### Keywords. ICT (Information and

Communication Technologies), digitalization, econtents, internet, ageing.

## **1** Introduction

Information and Communication Technologies (ICTs) continue to be a major driver of economic and social modernisation. Today, businesses in the EU devote 20% of investment to ICTs, and the sector accounts for 26% of overall research expenditure. Moreover, 60% of basic public services are now fully available online and more than half of EU citizens use the Internet regularly. The i20102 strategy, launched on 1 June 2005, was the first coherent policy framework for the of era convergent telecommunication and media services.

Traditional European values like freedom, tolerance, equality, solidarity and democracy have been built for many years and in that time they have achieved the present level. Europe has been growing and developing, in some countries faster, in some countries slower. Each European country has contributed its own piece to the development of Europe, each country has developed its own culture, language and in each country their cultural heritage has grown as well. Europe has become the common area of diverse cultures and their aspects of the world. Each country by itself decides when to proceed expanding their knowledge, culture and experience abroad.

The result is united Europe, which has the familiar cultural identity, common aims and tendencies. Mutual help is the only way for Europe to be successful, socially and economically impartial and progressive in development.

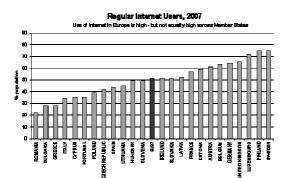
#### **2** Political background

European Digital Libraries is one of the flagship initiatives of Commissioner Reding's initiative "i2010 - a European Information Society [2] for growth and jobs", adopted by the Commission on 1 June 2005 (IP/05/643). On 25 August 2006, the Commission adopted a Recommendation on digitisation and digital preservation (IP/06/1124, MEMO/06/311) which urged EU Member States to set up large-scale digitisation facilities, so as to accelerate the process of getting Europe's cultural heritage online via the European digital library. In February 2007, the Commission adopted a Communication on "Scientific Information in the Digital Age: Access, Dissemination and Preservation" to examine and support new ways of promoting better access to scientific information online and to preserve research results digitally for future generations (see IP/07/190 and MEMO/07/57). More in detail are goals of development of information society in EU for time period from 2005 till 2010 of European commission discussed in message "European information society for growth and employment" [3,4].

# **3** Role of ICT (digital contents and digitalization)

The improvement of information and communication technology has substantially relieved the common way to projecting the modern Europe and it has enabled the participation of all its residents. Everyone can contribute his part and everyone can participate in the activities that take place in his country. There are no boarders anymore, only rough lines of these countries that our contemporary world can overcome and connect mutually. Information and communication technology makes the swing of digital issues possible, it enables the interconnection and access to these topics and it offers many great opportunities in development and science.

Internet spreads with speed (Fig.1), unthinkably for whichever previous shape of communicating. It's already achieved entire population in most developed parts of world in two decades (250 mio daily internet users in EU).



**Figure 1.** Percentage of population using the internet on average every week in the last three months of 2007 for some European countries and for EU27 in average. Source: Eurostat.

Internet is universal, because it's uniting pictures, sounds, texts, films etc. Today in digital shape occurs already 95 % off all notified. This is becoming inevitable shape of our expressing,

from which open also fully new dilemmas of our creature.

The rich cultural heritage has been created through the years of Europe's development and growing up. The heritages distinguish the identity in culture of each nation by itself, but as a whole it represents the cultural identity of Europe. During the period of migration of peoples everyone took a part of his culture and a part of his nation with him, but the link with his origin has been lost in his new country.

Historical archives are being filled up, the museum collections are getting richer, the number of records is increasing; this is a work and creation of our ancestors, this is our product and our result. The archives get older, the documents decay, audio and video records are destroyed; it is urgent to begin with extensive archives digitalization; documents, audio, video, television and radio archives. museum collections, libraries, cultural heritage - the whole history needs to be converted from analogous to digital readout. There is no easy way, there are a lot of obstacles but the objective is well-defined; it means the access to our history, to our culture.

Access to the information society, to the ICT and Services, should be given to all [5]. Everyone should be acquainted with the cultural identity of other nations; everyone should get to know the language of others, everyone should be the part of information society. Particularly, it is very important that access to this information should be given to those displaced people all over the world and to those, whose abilities don't allow them an easy access, for example disabled people, blind and weak-sighted, deaf and deafand-dumb and older people. Permanent keeping of digital information is a guarantee to preserve our work and the creation of our ancestors, so the culture can be continued and protected. The same should happen to scientific topics, whose assignment is to carry on and extend the knowledge. Actually, the latter is the proper guidance for the development and progress.

Our work doesn't end with digitization. We need to assure that all new content is produced in digital form and that they are of a high quality. We need to assure an easy access to it [6], which assures its use and reuse at the level of individual citizen as much as society at large. In this respect, European initiatives such as Digital library initiative are of a great importance. In this initiative Slovenia will also try to participate with its systems such as COBISS (Co-operative Online Bibliographic System & Services) for access to library catalogs and SICRIS (Slovenian Current Research Information System) for access to information about research activities at the national level. In the future, the activity of creating new digital materials and contents brings us big moves in the system of education. From classical education, which takes place mainly in educational institutions, we extend the method of teaching based on distance learning. Advantages of this kind of system are reflected in more qualitative, unified and multi-media materials, which are accessible to the majority, with no time and no place limit. These educational programs request some changes for both: students and teachers. Constant society growth and progress are represented by a process of education. The permanency of a contemporary society is to study continuously and its qualitative implementation means opening new working places and new progress and therefore creating conditions for the society based on knowledge. The access to knowledge for everybody allocates the basis to include all people [7] into the educational system.

To stimulate the progress of the information society brings out also some dilemmas and problems, which can be surpassed and solved. Problems are reflected by skilled workers, technical solutions and financial resources. Information society opens the opportunities for new working places and new educational programmes, which will result within skilled professionals. Technically, there are more approaches to digitalization, but only the joined, standard and adjusted approach is the most suitable and reasonable one. At this point, Europe must overcome the economical interest and it must follow the common goal.

# **4** Conclusions

The Lisbon reform process will be crucial, and needs to ensure progress while stimulating uniform development across Member States. The European Union is characterised by fragmentation for most of the information society indicators considered in mid-term review report of i2010 strategy (main political waypost for the development of information society in EU memberstates).

Online content in Europe developed rapidly last year, but at a highly uneven pace. The overall use of online media by the public is growing fast across the whole of Europe, with areas such as user-created content, online games and online advertising all showing considerable developments.

Use of information and communication technology contributes the essential share in overcoming the cultural diversity and preserving the cultural identity. This is a link between history and modern times, a bridge between technology and issues and finally, it is a connection among generations. To cross over the limit of digitalization means to overcome the digital divide and we can be successful only with **united approach** to include all social segments into information society.

## **5** Literature

[1] EU: **European Commission**, available at <u>http://ec.europa.eu/</u>, Accessed: 27<sup>th</sup> June 2008.

[2] Europe's Information Society: **Europe's Information Society site**, available at <u>http://ec.europa.eu/information\_society</u>, Accessed: 27<sup>th</sup> June 2008.

[3] Ministry of Higher Education, Science and Technology of Republic of Slovenia: **i2010 – Evropska informacijska družba za rast in zaposlovanje**, available at

http://www.mvzt.gov.si/nc/si/splosno/cns/novica/ article/12023/499/, Accessed: 27<sup>th</sup> June 2008.

[4] Preparing Europe's digital future i2010 Mid-Term, European Commission Information Society and Media, COM(2008) 199 SEC(2008) 470, April 2008.

[5] Europe's Information Society: **Reforming the current telecom rules**, available at <u>http://ec.europa.eu/information\_society/policy/ec</u> <u>omm/tomorrow/index\_en.htm</u>, Accessed: 27<sup>th</sup> June 2008.

#### [6] Audiovisual and media policies of EU: Commission adopts strategy for "Creative Content Online", available at

http://ec.europa.eu/avpolicy/other\_actions/conten t\_online/index\_en.htm, Accessed: 27<sup>th</sup> June 2008.

[7] Europe's Information Society: **e-Inclusion**, available at

http://ec.europa.eu/information society/activities

<u>/einclusion/index\_en.htm</u>, Accessed: 27<sup>th</sup> June 2008.