Newsletter - *Calibrated for Creative Communications*

Vol. 7, no. 3, Autumn 2009

Falling Colors

Fall promises to be exciting!

UNESCO will soon elect a new Director General, a new European Commission is in the making, some important ICT conferences such as the *IT STAR event on ICT Skills, Education and Certification* on 27-28 November in Rome are in the pipeline – this is just a small assortment of forthcoming events on the rich autumn palette.

This issue offers:

- An interview with Ina Marčiulionytė, Ambassador of Lithuania to UNESCO, Vice-President of UNESCO's Executive Board and candidate for Director General
- ICT Vulnerability: A FORMIT Study
- International Olympiad in Informatics – Plovdiv
- Impacts of Social Computing
- e-Skills in Europe: State of Play
  (incl. the-Competence Framework revisited)

CEPIS and the Lithuanian Computer Society (LIKS) turn 20 and plan various initiatives to mark their anniversaries, some of which are reported in this issue. This newsletter warmly congratulates the two organizations and wishes them all the best in future.

There is much more so make yourselves comfortable and take the Journey,

Plamen Nedkov

IT STAR representatives

Austria/OCG-E. Mühlvenzl, **Bulgaria**/BAS-K. Boyanov, **Croatia**/CITS-M. Frkovic, **Czech Rep.**/CSKI-J. Stuller, **Greece**/GCS-S. Katsikas, **Hungary**/NJSZT-B. Domolki, **Italy**/AICA-G. Occhini, **Lithuania**/LIKS-E. Telešius, **Macedonia**/MASIT-P. Indovski, **Poland**/PIPS-M. Holynski, **Romania**/ATIC-V. Baltac, **Serbia**/JISA-D. Dukic, **Slovakia**/SSCS-I. Privara, **Slovenia**/SSI-N. Schlamberger

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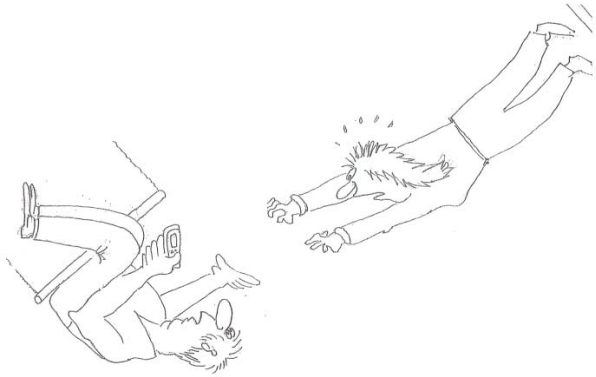
Cartoon of the Issue

IT and Acrobatics



"Hang on, I got an SMS!"

The Delivery Co., Sep'09 ■

UNESCO

[In June, we contacted EU Commissioner Benita Ferrero-Waldner (AT), Ambassador Ina Marčiulionytė (LT) and Ambassador Irina Bokova (BG), as candidates for the post of UNESCO Director General, with invitations for interviews for the Autumn 2009 Newsletter issue. Our interest in their nominations is threefold: they are career diplomats with an acute understanding of the importance of ICT and Information Society issues in general, they are citizens of EU member states represented in IT STAR, and they are women and as such could provide "new" leadership to UNESCO. The countries of Central, Eastern and Southern Europe have proactively contributed in putting the "communications" agenda and information society issues in UNESCO's mandate and the visions of these candidates for UNESCO are important. We are pleased to publish below the considerations of Ambassador Ina Marčiulionytė, the nominee of the Baltic countries, and wish her all the best for the forthcoming UNESCO elections. – PN]

Ina Marčiulionytė is Ambassador and Permanent Delegate of the Republic of Lithuania to UNESCO. Previously she served as Vice Minister (Regions and Cultural Heritage) in the Lithuanian Ministry of Culture. Her UNESCO experience includes her current position of Vice-President of the Executive Board of which she is a member since 2005. Ms. Marčiulionytė is also Chair of the UNESCO Headquarters Committee, was Chair of the World Heritage Committee and serves on various other boards. Ina is a graduate in linguistics from the Vilnius University, has specialized in Belgrade and Budapest in cultural management and professional communication and has done a PhD course in international relations and diplomacy at the Centre d'Etudes Diplomatiques et Stratégiques, Paris. Ms. Marčiulionytė speaks Lithuanian, English, Russian and French.

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Ex officio: IT STAR MS representatives (see page 1)

EDITORIAL POLICY

This Newsletter maintains a world-class standard in providing researched material on ICT and Information Society activities from the perspective of Central, Eastern and Southern Europe (CESE) within a global context. It facilitates the information and communication flow within the region and internationally by supporting a recognized platform and networking media and thus enhancing the visibility and activities of the IT STAR Association.

The stakeholders whose interests this newspaper is addressing are

- IT STAR member societies and members
- ICT professionals, practitioners and institutions across the broad range of activities related to ICTs in government, business, academia and the public sector in general
- International organizations.

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Special arrangements for the production and circulation of the Newsletter could be negotiated.

The newsletter is circulated to leading CESE ICT societies and professionals, as well as to other societies and IT professionals internationally. Everyone interested in CESE developments and working in the ICT field is welcome to contribute with original material. Proposals for articles and material for the Newsletter should be sent two months before the publication date to editor@starbus.org. ■

P.N. - If elected, what would be the 3 most important things that you would initiate to affirm UNESCO's role as the World's intellectual organization?

That's a challenging question. I believe that UNESCO should demonstrate its intellectual credentials in every sphere of activity. But nowhere more so than in the Science sectors.

UNESCO should be the lead UN organisation promoting policies that use the power of scientific knowledge to transform our societies. A central advantage of UNESCO's science portfolio is that it can harness natural, social and human sciences to tackle poverty reduction, disease prevention and environmental conservation. UNESCO is providing valuable advice to developing countries on the best use of resources for capacity-building in science, engineering and technology. Reform of the Science Programmes has been discussed at length in recent years. One significant outcome of reform should be measurable progress in understanding and mitigating climate change, as a result of much greater coordination between IOC, IHP, MAB and IGCP and their extensive global research assets. Throughout UNESCO's science programmes, priority-setting based on relevance, effectiveness and impact will bring about a much-needed concentration on major global and national challenges, and a more clearly recognised role for UNESCO.

I cannot omit culture and education. I would propose a Cultural Diplomacy Initiative: UNESCO is the only truly worldwide organisation in this field and is better positioned than any other to organise intercultural encounters and dialogues at regional or global level, if it fully mobilises its networks. And we would start planning the World Education Summit in 2012, which should help us to prepare for the second stage of Education for All programme.

P.N.- What concrete actions would you wish to see in promoting the issues related to informatics and information society within UNESCO?

In 2000, UNESCO launched the *Information for All Programme* (IFAP) as a framework for international cooperation and partnerships in "building an information society for all". I would like to see IFAP become the cornerstone of UNESCO's action to tackle 21st century challenges arising from the exponential growth and social penetration of information and communication technologies (ICT).

The development of these technologies provides tremendous new potential for the creation of a Knowledge Society and all parts of UNESCO need to make use of such potential. Some important steps in this direction have been made: for example, UNESCO's participation in the World Digital Library project, or its active position on the public domain in cyberspace, etc. Yet much remains to be done, especially in UNESCO's Education and Science sectors.

I would therefore like to see much more action from UNESCO Member States on implementing the IFAP Strategic Plan (2008-2013), which adheres to the Geneva Declaration of Principles and Plan of Action, the Tunis Commitment and Tunis Agenda for the Information Society, as adopted by the World Summit on the Information Society (WSIS).

In this context, we must not forget that in many countries, especially in the developing world, there is growing dissatisfaction that, in spite of many meetings and declarations, the digital divide is widening. I saw this for myself on recent visits to many of these countries. I would like to see UNESCO actively advising Member States on how to update their existing policy frameworks to facilitate the development and democratization of ICTs. I would also like UNESCO to continue and enhance its activities as a forum for international debate on information ethics, to support linguistic and cultural diversity of content in cyberspace, and to promote the development of digital resources accessible to people with disabilities.

To achieve all these objectives, UNESCO's financial and human resources, in all its sectors, should be refocused accordingly. It goes almost without saying that UNESCO cannot achieve these goals alone and that more active cooperation with partners in the public and private sectors is therefore needed. ■

ICT Vulnerability

The Role and Vulnerability of ICT in Italy and Romania: Analysis and Comparisons


by Fabio Bisogni, Simona Cavallini and Cristiano Proietti[1]

Introduction

This paper highlights some of the results of research project VIS[2] – *"The Vulnerability of Information Systems and its inter-sector economic and social impacts"*[3]. The aim of the VIS research is to rank industrial sectors by vulnerability to ICT breakdowns according to quantitative measures of the socio-economic damages suffered. The VIS project examines the effects at the sector level, in Europe and in 5 Member States (Italy, Spain, Ireland, Luxembourg and Romania) while this paper is focused on the comparison of ICT breakdown effects in Romania and Italy, two countries with different levels of ICT maturity.

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[1] Fondazione FORMIT (http://www.formit.org/)

[2] http://www.formit.org/vis/

[3] FORMIT Foundation was awarded a grant for the VIS project into the European Programme CIPS

How ICT propensity matters: the Romanian technological capability

This section is devoted to describe the technological capability (IT use, skills and infrastructures) of Romania. According to official statistics provided by international organisations and institutions, Romania is one of the less developed but also high-growing countries in terms of ICT capability at the European level. Looking at the value of ICT Development Index (IDI)[4] for the period between 2002 and 2007, Romania gained the 46th position in the IDI world ranking. It maintained the last position in the ranking of the EU27 countries but registered a really positive improvement in technological development by gaining fourteen positions in the world ranking (IDI values for Romania have grown by 67,7% - Figure 1).

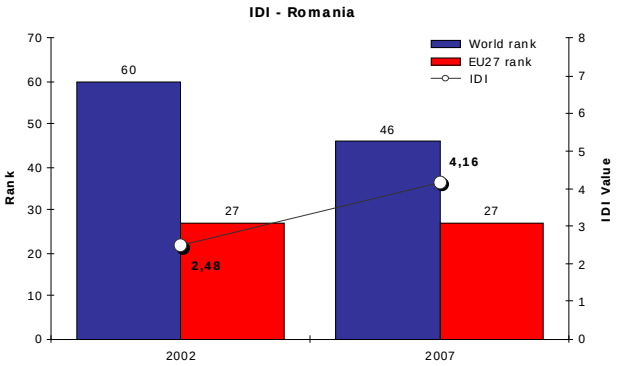


Figure 1 - ICT Development Index (IDI) – Romania

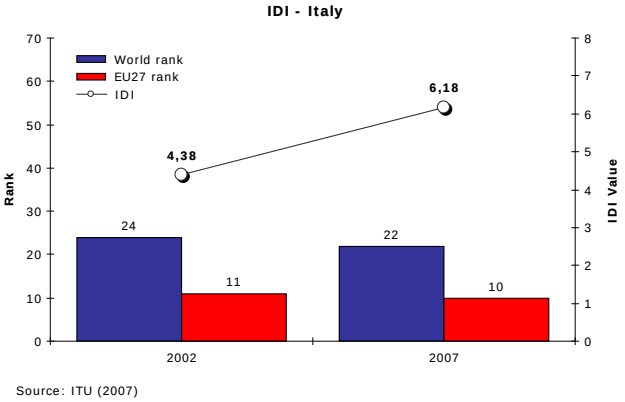
These high rates of growth are characteristic of countries in a phase of technological development. At the moment, Romania, according to the ITU classification, ranks only in the second group as *"Upper Country"*[5] with an IDI value of 4,16. These data highlight the weakness of Romania in the ICT sector especially compared to other European nations such as Germany, France and Italy that achieved an IDI value of over 6.

How ICT propensity matters: the Italian technological capability

Referring to the value of IDI, Italy shows a good positioning in the world ranking, resulting in the group of the most ICT advanced countries (classified as *"High Country"* according to the ITU definition[6]).

Due to its maturity, within the period between 2002 and 2007, Italy registered a moderate improvement in technological development gaining two positions, from 24 to 22, in the IDI world ranking and one position in the ranking of EU27 countries from 11 to 10.

Despite the moderate improvement in the European and world ranking in the considered 5 years, the IDI values for Italy grew by 41,1%.



Source: ITU (2007)

Figure 2 - ICT Development Index (IDI) – Italy

Rankings of the VIS Project

This section shortly describes the theoretical approach and the research results.

The Economy is divided in sectors according to the *'General Industrial Classification of Economic Activities within the European Communities'* (NACE), provided by EUROSTAT. The 1 digit NACE classification at 16 sectors and 2 digit NACE classification at 57 sectors are considered in particular.

The most important outcomes are rankings of the economic sectors according to their vulnerability to ICT breakdown.

Italy (2004) % of direct and indirect ICT on the total sector inputs	
Computer and related activities	25,02%
Financial intermediation	17,54%
Post and telecommunications	15,05%
Research and development	12,97%
Activities auxiliary to financial intermediat	8,82%

Source: elaboration of data within the VIS Project, 2008

Table 1 – The Italian sectors most dependent on ICT - NACE 2 digit

Romania (2004) % of direct and indirect ICT on the total sector inputs	
Construction work	5,06%
Research and development services	4,58%
Other business services	3,36%
Water transport services	1,68%
Trade, maintenance and repair services of motor vehicles and motorcycles; retail sale of automotive fuel	1,33%

Source: elaboration of data within the VIS Project, 2008

Table 2 - The Romanian sectors most dependent on ICT - NACE 2 digit

A first type of rankings refers to their ICT use. On the base of Input/Output tables[7], the percentage of "*Computer and related activities*" used by other sectors in their final production is calculated. In this way, it is possible to compute the dependence of the sectors by ICT (as example see Ta-

[4] ITU (2009)

[5] ITU (2009). pp. 46-48

[6] ITU (2009) pp. 46-49.

[7] Eurostat Database

bles 1 and 2) and compare the Italian and Romanian situations.

A second type of rankings produced through the VIS model takes into account the effective output damages in each sector caused by ICT breakdowns.

Romania and Italy in comparison

The following tables describe Romanian and Italian economic scenarios assuming an ICT breakdown reducing 10% of the technological resources of each sector with a recovery time of 50% of the production loss equal to 5 days.

In order to make comparison with the rankings shown in Table 1 and Table 2, instantaneous effects on each sector are reported in terms of percentage output deviation from the hypothetic situation without breakdown.

ITALY, NACE 1-digit
10 % ICT breakdown with recovery of 50 % of loss in 5 days
OUTPUT - Percentage deviation from situation without ICT breakdown

Rank[1]	NACE code[2]	Economic sector	Instantaneous effect			
			After 1 day	After 1 week	After 1 month	After 1 quarter
1	ICT	Computer and related activities	-11,01 %	-2,89 %	-0,02 %	0,00 %
2	J	Financial intermediation	-1,21 %	-0,32 %	0,00 %	0,00 %
3	I	Transport, storage and communication	-1,12 %	-0,29 %	0,00 %	0,00 %
4	K	Real estate, renting and business activities	-1,04 %	-0,27 %	0,00 %	0,00 %
5	G	Wholesale and retail trade; repair	-0,83 %	-0,22 %	0,00 %	0,00 %
6	E	Electricity, gas and water supply	-0,74 %	-0,20 %	0,00 %	0,00 %
7	F	Construction	-0,70 %	-0,18 %	0,00 %	0,00 %
8	O	Other community, social and personal services	-0,69 %	-0,18 %	0,00 %	0,00 %
9	C	Mining and quarrying	-0,66 %	-0,17 %	0,00 %	0,00 %
10	A	Agriculture, hunting and forestry	-0,65 %	-0,17 %	0,00 %	0,00 %
11	D	Manufacturing	-0,61 %	-0,16 %	0,00 %	0,00 %
12	H	Hotels and restaurants	-0,59 %	-0,16 %	0,00 %	0,00 %
13	L	Public administration and defence	-0,58 %	-0,15 %	0,00 %	0,00 %
14	B	Fishing	-0,57 %	-0,15 %	0,00 %	0,00 %
15	N	Health and social work	-0,49 %	-0,13 %	0,00 %	0,00 %
16	M	Education	-0,40 %	-0,10 %	0,00 %	0,00 %

[1]Rank according to 1-day data
[2]For analysis purpose, the sector *Real estate, renting and business activities* (K) does not include *Computer and related activities* (ICT), shown separately.
Source: elaboration of Eurostat data

Table 1 – ICT breakdown impact on the Italian productive sectors (1 digit)

ROMANIA, NACE 1-digit
10 % ICT breakdown with recovery of 50 % of loss in 5 days
OUTPUT - Percentage deviation from situation without ICT breakdown

Rank[1]	NACE code[2]	Economic sector	Instantaneous effect			
			After 1 day	After 1 week	After 1 month	After 1 quarter
1	ICT	Computer and related activities	-11,17 %	-2,93 %	-0,02 %	0,00 %
2	J	Financial intermediation	-0,61 %	-0,16 %	0,00 %	0,00 %
3	G	Wholesale and retail trade; repair	-0,31 %	-0,08 %	0,00 %	0,00 %
4	K	Real estate, renting and business activities	-0,29 %	-0,07 %	0,00 %	0,00 %
5	L	Public administration and defence	-0,28 %	-0,07 %	0,00 %	0,00 %
6	I	Transport, storage and communication	-0,27 %	-0,07 %	0,00 %	0,00 %
7	O	Other community, social and personal services	-0,25 %	-0,07 %	0,00 %	0,00 %
8	A	Agriculture, hunting and forestry	-0,22 %	-0,06 %	0,00 %	0,00 %
9	E	Electricity, gas and water supply	-0,21 %	-0,06 %	0,00 %	0,00 %
10	H	Hotels and restaurants	-0,20 %	-0,05 %	0,00 %	0,00 %
11	D	Manufacturing	-0,20 %	-0,05 %	0,00 %	0,00 %
12	F	Construction	-0,19 %	-0,05 %	0,00 %	0,00 %
13	B	Fishing	-0,18 %	-0,05 %	0,00 %	0,00 %
14	C	Mining and quarrying	-0,18 %	-0,05 %	0,00 %	0,00 %
15	N	Health and social work	-0,17 %	-0,04 %	0,00 %	0,00 %
16	M	Education	-0,17 %	-0,04 %	0,00 %	0,00 %

[1]Rank according to 1-day data
[2]For analysis purpose, the sector *Real estate, renting and business activities* (K) does not include *Computer and related activities* (ICT), shown separately.
Source: elaboration of Eurostat data

Table 2 – ICT breakdown impact on the Romanian productive sectors (1 digit)

Results, expressed in percentage, allow to illustrate the difference of the impact of an ICT breakdown between a country which is still developing its ICT capability (Romania) and a country that has already achieved an ICT maturity (Italy).

Except for *Computer and related activities,* which are not considered in our analysis, for all sectors output is more vulnerable in Italy than in Romania. As shown in Table 1 and in Table 2, an explanatory case is the *Financial intermediation* sector that ranks in second position in both countries but in Italy the percentage of loss is double with respect to Romania.

It is a proof of what is described in the Paragraphs 0 and 0: the higher output loss in Italy is a consequence of the larger adoption of ICT in society as well as of the deeper pervasiveness in the economic sectors. It follows that an ICT shortage causes more damage in Italy than in Romania.

Table 3 shows the comparison of the rankings of the most vulnerable sectors to an ICT breakdown in Italy, Romania and EU27 in terms of output loss. The most important consideration that emerges is that the Romanian ranking diverges significantly from the Italian and the European which are more similar.

Financial Intermediation fills always the second position, while starting from the third position there are some important divergences. In fact, differently from the other two areas, in Romania Transport loses positions, *Electricity, gas and water supply* ranks in the ninth position instead of sixth, *Wholesale and retail trade; repair* is third and *Mining and quarrying* is not included in the top ten most ICT vulnerable sectors.

The Italian ranking is more similar to the European one. The most significant difference is the position of *Public administration and defence (*thirteenth in Italy and seventh and fifth, respectively, in Europe and Romania).

Percentage output deviation, NACE 1-digit
Comparison of rankings (Top 10 sectors in EU27)
Impact after 1 day - 10 % ICT breakdowns (recovery 50 % loss in 5 days)

NACE code	Economic sector	EU27	Italy	Romania
ICT	Computer and related activities	1	1	1
J	Financial intermediation	2	2	2
K	Real estate, renting and business activities	3	4	4
I	Transport, storage and communication	4	3	6
G	Wholesale and retail trade; repair	5	5	3
E	Electricity, gas and water supply	6	6	9
L	Public administration and defence	7	13	5
O	Other community, social and personal services	8	8	7
A	Agriculture, hunting and forestry	9	10	8
C	Mining and quarrying	10	9	14

[1] For analysis purpose, the sector Real estate, renting and business activities (K) does not include Computer and related activities (ICT), shown separately.
Top 3 sectors in blue
Source: elaboration of Eurostat data

Table 3 – Italy, Romania and EU27: Rankings in comparison

Conclusions

The aim of the article is to highlight the divergences between Romania and Italy, two nations with a different ICT maturity, in terms of economic damages caused by an ICT breakdown. To this purpose, a scenario simulating an unexpected breakdown in the ICT sector at national level is created through the VIS model.

The results emerged from the rankings of the most ICT vulnerable sectors demonstrate that an ICT breakdown is more harmful in the countries more developed in terms of technological endowment. In detail, impacts in terms of percentage of production output loss are, on average, double in Italy compared to Romania.

The presented rankings are only a small part of the potential results of the VIS model. In fact, the model can provide rankings of industrial sectors for other socio-economic variables such as labour variation, price increase, production value loss and welfare loss, and can operate with data at both macro and micro level furnishing results about the vulnerability at sector level of all national industrial systems in the EU27.

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http://ec.europa.eu/justice_home/funding/cips/funding_cips_en.htm ■

e-Skills

e-Skills in Europe: State of Play

André Richier is Principal Administrator, Enterprise and Industry Directorate-General, Innovation Policy Directorate (ICT for Competitiveness and Innovation Unit)

by André Richier

This is a summary of recent reports[8] (August 2009) concerning e-skills in Europe. Together with the results of on-going projects and initiatives, they will be presented and discussed at the European e-Skills 2009 Conference "Fostering ICT Professionalism" on 20 November 2009 in Brussels. This conference is organised by the European Commission in cooperation with the European Economic and Social Committee and in partnership with CEPIS.

There is broad consensus among stakeholders that e-skills are crucial to boost competitiveness, productivity and innovation as well as the professionalism and employability of the workforce. There is a need to ensure that the knowledge, skills, competences and inventiveness of managers, ICT practitioners and users meet the highest global standards and that they are constantly updated in a process of effective lifelong learning.

The demand for e-skills has been growing very fast in the last decades. In 2008, the total number of ICT professionals in Europe amounted to roughly 3.95 million according to the core definition[9], approx. 4.78 million according to the broad definition. The number of ICT professionals according to the core definition has more than doubled since 1995. The four largest countries, Germany, UK, France and Italy account for more than half of Europe's labour force, and the seven largest employer Member States (adding Spain, the Netherlands and Poland) account for around 75%. The majority of ICT professionals (54.5%) are working in ICT user industries. Less than half (45.5%) of the ICT professionals are working in the ICT industry. The workforce has increased between 1998 and 2008 by around 77% for the core category and by around 82% for the broad category.

A trend affecting the demand for e-skills is global sourcing. A look at trade balance sheets shows that Europe imports more ICT goods and exports more ICT services and it exports more expensive ICT products and services and imports less expensive goods and services. Therefore it is clear that Europe needs highly e-skilled professionals that can contribute to innovation especially in services. A major factor influencing the evolution of the demand and supply of e-skills will be the effects of the current economic crisis. There has been a long term trend that is visible since the 1960s beyond all business cycle developments. In the middle of the 1980s we saw a deceleration and a severe downturn in 2001. Although ICT growth rates have in the past followed general economic trends, ICT growth rates have until now been performing better than the overall economy in these times (the exception was the Internet bubble burst). In its most recent assessment, the OECD indicates that although ICT growth slowed down rapidly in 2008, first signs of a recovery could be detected in mid-2009. For the ICT sector it seems that employment in ICT manufacturing is experiencing a clear decline, while ICT services employments is less vulnerable. ICT specific unemployment has stayed way below total unemployment rate at all times. On average, during the last ten years the ICT workforce unemployment rate was around 36% of total unemployment.

8 These are "The Evolution of the Supply and Demand of e-Skills in Europe" by Empirica & IDC, "ICT Curricula in Higher Education in Europe" by INSEAD and "Financial and Fiscal Incentives for e-Skills in Europe" by EU-RA

9 The core definition of ICT professionals includes only ISCO 213 computer professionals and ISCO 312 computer associate professionals. A broad definition includes also ISCO 313 optical and electronic equipment operators and ISCO 1236 computing services managers.

Since the current crisis is not related in particular to the ICT sector it seems reasonable to assume that the unemployment of ICT professionals will most probably not increase above the threshold of around 40-50% of the general unemployment rate.

As the demand for ICT professionals and e-skills grew very fast, formal education and training systems could not cope with the demand. Computer science graduates constitute obviously the most relevant new labour market supply. But students who drop out of tertiary education computing courses prior to receiving a diploma or other degree often have acquired sufficient ICT skills to work as ICT professionals and do so. The number of computing graduates measured as the total of tertiary graduates has risen constantly since 1998 until its peak in 2005. Since then, the total number has slightly decreased[10] by 6.000 to reach a total of around 148.000 computing graduates in 2006. The UK and Spain show a clear drop in the proportion of graduates having taken computing courses since 2003-2004, while other countries, such as Germany, the Netherlands and Poland show an increase in computing graduates at the same time. In Italy, the share of computing graduates remains more or less stable. Graduates from other fields[11] regularly enter the labour force as ICT professionals, be it from closely-related courses in the field of "science, mathematics or engineering" or "manufacturing and construction" or from other more thematically distant fields, such as social sciences or the humanities.

There are two general types of curricula development efforts to develop attractive curriculum. Industry-led efforts are led by ICT vendors[12] to develop courses and certification exams that academic institutions can offer – either for free or by paying a membership fee. University-led efforts at developing curricula represent efforts that involve Universities, industry and government offices to develop curricula that foster e-competences (e.g., IT-Vest in Denmark and the Innovation Value Institute[13] in Ireland). Finally, curricula development efforts are part of a broader, more systemic approach at enhancing e-competences. E-skills UK[14] is coordinating and leading a number of efforts aimed at building skills throughout the life of learning. Several experts referring also to impressive efforts from Finland (e.g., Aalto University), and Germany (e.g., Karlsruhe University) noted their holistic approach. The types of e-skills required by employers vary constantly. In 2008 a survey[15] addressed more than 3,500 IT managers in nine countries (Australia, Canada, China, France, Germany, India, Italy, Japan, The Netherlands, Poland, Russia, South Africa, U.K., and U.S.). The frontrunners were the e-skills relating to "security/firewalls/data privacy" followed by "soft" skills (customer service, sales, project management, communication etc.), "non-specific server technology" and "general networking, network infrastructure". According to a survey[16] by IDC of 533 organisations across Europe conducted in February 2009, "networking" and "security" skills were the most difficult to find, but systems architects and project managers were also challenging in some countries.

The European Commission adopted a Communication[17] on "e-Skills for the 21st Century" in September 2007 which includes a long term EU e-skills strategy following extensive consultation and discussions with stakeholders and Member States in the context of the European e-Skills Forum. The long term e-skills strategy has been welcomed by Member States in the Competitiveness Council Conclusions in November 2007. Stakeholders also welcomed a long term e-skills agenda. The industry has established the e-Skills Industry Leadership Board to contribute to the implementation of the strategy. A study conducted by EU-RA found that national ICT policies tend to focus on developing basic ICT user skills. The development of ICT practitioner skills is often considered to be part of continuing vocational training policy. They found that nine countries have policies which are aimed at development of e-business skills. Twenty six countries have policies designed for e-skills for users, while eleven countries: Denmark, France, Germany, Hungary, Ireland, Malta, Spain, Portugal, Romania, United Kingdom and Turkey have policies that are specifically aimed at the development of ICT skills of practitioners. EU-RA identified a total of 45 initiatives that are specifically targeted at the development of ICT practitioner skills.

Good progress has been made on the implementation of the e-skills strategy as demonstrated at the European e-Skills Conference in Thessaloniki at the end of 2008. A European e-Competence Framework[18] has been developed, a European e-Skills and Careers Portal has been launched together with several high-level multi-stakeholder partnerships. New activities have been

10 Particularly alarming are is the number of female students (less than 1 in 5 computer scientists are women).

11 A rough idea of the importance of non computer-science degree holders might be derived from an available statistic for Denmark where these graduates make up 70% of the workforce in ICT occupations.

12 For example, the Microsoft Academy is an annual membership program that enables member academic institutions to deliver training on Microsoft technologies. SAP University Alliance also provides University faculty with tools and resources to teach students how organizations get value from ERP technology - however their content is not specific to SAP products and services. Similarly, IBM efforts to develop services in science represent funding of interdisciplinary curricula on designing and managing services.

13 IVI was co-founded in 2006 by the National University of Ireland, Maynooth, and Intel. The content of the courses is based on an IT Capability Maturity Framework.

14 E-skills UK is an employer-led, not-for-profit company, licensed by the UK government. It is a Sector Skills Council for Business and IT.

15 CompTIA: Skills gaps in the world's IT force, 2008

16 IDC Insight, March 2009

17 COM (2007) 496. See: http://ec.europa.eu/enterprise/ict/policy/ict-skills/ict-skills_en.htm

18 See: www.ecompetences.eu

launched in 2009. These includes actions related to supply and demand (including the development of foresight scenarios) to better anticipate change, the development of European e-competence curriculum development guidelines; the promotion of relevant financial and fiscal incentives etc. In addition a major awareness raising campaign will take place in March 2010 (The European e-Skills Week).

In the long term, the demand for e-skills in the workforce is on the rise. In the short term however, the effects of the current crisis on the labour market may prevent a lack of ICT professionals. Nevertheless, as soon as the economy starts to pick up again, it will be crucial for Europe to have a large pool of highly skilled ICT professionals. They will be crucial for Europe to fully make use of its innovative potential. The problem of ICT demand and supply may not be so much of a quantitative nature. Qualitative mismatches between the ICT skills provided by the workforce and those demanded by employers seem to be nearly unavoidable at the current state of affairs and therefore seem a much more pressing problem to address. This means that both the "basic" education and continued education and training have to be adapted in order to avoid a substantial mismatch between the skills required by employers and the skills provided for by university courses. ■

European e-Competence Framework

In Vol. 7, no 1, Spring 2009 and Vol. 7, no 2, Summer 2009 of this NL we published authored articles on the CEN/ISSS WS on ICT-Skills and the European e-Competence Framework (e-CF).

e-CF is a flagship project of the CEN/ISSS WS on ICT-Skills. It is a multi-stakeholder effort of ICT and human resources experts, intended as a pan-European reference tool for ICT specialists, managers and HR departments in academia, governments, industry and the public sector, educational and social partners across Europe.

e-CF focuses on ICT competences needed and applied on the workplace. It is intended to assisting transparency and mobility in the EU labor market and is a benchmark from the ICT business employers' perspective, useful in various ways according to specific needs and perspectives. For detailed information on e-CF, including the user guidelines, please visit www.ecompetences.eu.

Until now, the new EU member states (the majority of countries in the IT STAR region) were insufficiently represented in the WS activities and in the e-CF project. A follow-up CEN/ISSS WS project activity named "e-CF in Action" was kicked-off in early 2009 and is intended to update various components of the current Framework so as to provide wider visibility and access, and to address specific needs of the academic community. One of its objectives is to attract and actively involve stakeholders in the new EU member states.

IT STAR has a particular role in this process as the e-CF provides excellent opportunities for further compatibility and integration of the region within the related EU schemes and labor market. To assist our efforts, we invited several representatives from Central, Eastern and Southern Europe to consider and comment the e-CF. Their statements are published below.

The NL readers are invited to visit www.ecompetences.eu and to share their impressions, suggestions and critique. Various perspectives, including from academic institutions, government, industry including trade unions and SMEs, are most welcome.

The Editor

"The Polish Information Processing Society (PIPS) is a nationwide professional association supporting a wide range of activities related to IT professionalism. It is involved in national and international certification programs and from this perspective, PIPS appraises the value of the e-Competence Framework as a common reference for the classification of ICT competences, which is compatible with our EUCIP certification system. I hope that the professional ICT community in Poland and in other new EU member states will be more closely involved in further developments related to e-CF. On its part, PIPS would be happy to assist the promotion of this activity in Poland."
Marek Holynski, Poland
President, PIPS

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"The European e-Competence Framework (e-CF) represents the competence needs of the ICT industry, which influence the development of academic programs, and provides an environment for a multi-stakeholder partnership between universities and companies. A process of matching the computing curricula at Sofia University with the European e-CF has been initiated and will further reflect on the bachelor, master and doctoral levels of education."
Roumen Nikolov, Bulgaria
Faculty of Mathematics and Informatics,
Sofia University

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"ICT competences are probably the most critical factor for innovation and competitiveness of our economies. Thanks to the support expressed by the European Commission, the e-Competence Framework is a powerful way to bring IT professionalism and related competences to the attention of decision-makers.

As far as I can see, the CEPIS and IT STAR community is keen to contribute to a wide diffusion of the e-Competence Framework; in order to facilitate its adoption, we are available to develop further guidelines on how to integrate the e-CF with our EUCIP system, that can provide a wide range of competence measurement tools along with the richest European dictionary of ICT knowledge and skills."
Giulio Occhini, Italy
AICA CEO & IT STAR Coordinator

"The Council of European Professional Informatics Societies (CEPIS) was established to make the voice of the European IT Professional heard. It meets this purpose very competently by being active and visible in many projects sponsored by the European Commission.

CEPIS, along with DG "Enterprise and Industry" and CEDEFOP, supports the management of the CEN/ISSS Workshop on ICT Skills and is keenly interested and supportive of its activities as Professionalism is one of the most important issues for ICT related goods and services for Society in general.

The e-Competence Framework is an important WS project, which serves the purpose of a common European reference tool for ICT competence requirements across Europe intended to bring IT professionalism and related competences to the attention of decision makers. Clearly, CEPIS is strongly supportive of this activity."
Niko Schlamberger, Slovenia
CEPIS President
President, Slovenian Society INFORMATIKA

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"ECDL Lithuania offers a range of products related to ICT Certifications and we see the merit of potential links between our programs and e-CF. This could be a valuable experience as our programs extend to the other Baltic countries and the Russian-language region."
Eugenijus Telesius, Lithuania
CEO, ECDL Lithuania ■

E-Guardian Programme for Certification of Skills in Children Protection on the Internet

Eugenijus Telesius is Chief Executive Officer of ECDL - Lithuania

by Eugenijus Telesius

The Internet is getting increasingly prevalent in our daily life. We communicate and manage our bank accounts online, we use e-services, read the news, browse the Internet for different information, etc. Thus our ability to use the Internet safely and to protect our friends and relatives against potential threats is gaining in importance. The numbers of Internet users are rocketing. Moreover, the users are becoming younger. Alongside with the benefits provided by the Internet, it poses ever-greater risks for children and youngsters. At times evil-minded people crop up on the Internet. They are apt to exploit, ridicule, abuse the gained trust, spread viruses, steal and destroy information, to say nothing of the pornography business, which has literally flooded the Internet with content inappropriate for children. The worst of it is the availability of such content to the minors, who are highly sensitive to it although quite often they are not able or willing to discuss that with adults.

Safe work of children on the Internet requires due attention: children can contact with strangers through chat sites and e-mails (sometimes children agree to meet with their Internet contacts without suspecting that they may be very different from what they pretend to be). Another threat to the mind of a child or a youngster are the Internet sites with inappropriate content (promoting pornography, violence), which can have a negative effect on the development of the child's personality. We should also bear in mind the possibility of buying almost anything on the Internet. If a child can buy things on the Internet without the parents' or guardians' supervision, he/she can do it without clearly understanding the outcome.

Results of research conducted in different European countries show that half of all the Internet users are teenagers from 8 to 14. We have to acknowledge that number of users among the elderly is decreasing, but increasing among minors and teens. Most of the young Internet users browse the Internet free of any restrictions or control.

Although children and youngsters are frequently good in Internet technologies and understand the threats and possible ways to avoid them, they are not mature enough to recognise the potential threats they face. There are numerous educational and information programmes designed to deal with this problem. Frequently they are known under a common name of e-Parent programmes. Lithuania also has interesting works in this field [1, 2]. Their importance can hardly be overestimated. Safety of children on the Internet is among the prime concerns of the European Commission [3]. The main goal of e-Parent programmes is to help parents to gain the knowledge necessary to protect their children. Programmes are intended to give knowledge for adults, to become able to understand the situations, possibilities of actions and usage of tools for those actions to perform. The main purpose of e-Guardian programme is also to directly help getting the needed knowledge to protect children from dangers on virtual world. The main difference is that there is a formal final ECDL Foundation level certification proving the level of competency for employees of institutions dealing with children on daily basis.

The ECDL Foundation offers a large number of computer literacy certification programmes. Initially, the ECDL Foundation had only elementary and core computer skills certification programmes. At a later stage, specialised programmes were developed. Such programs are designed for skills and knowledge certification in specific fields. Lately, ECDL Licensees in different countries were allowed to create certification programmes addressing special requirements of specific target groups. Such programs are called ECDL Foundation Endorsed Partner Programmes. Endorsed Programmes are locally developed certification programmes which adhere to a high standard of content and operational administration. Adherence to these standards allows the developer use of the 'Endorsed

by ECDL Foundation' logo in its promotion of the product. Although Endorsed Programmes are not owned by ECDL Foundation, the content, structure and maintenance method is approved and validated against the ECDL Foundation Endorsed Programme Quality Assurance Standards.

The standards are grouped into three categories:

- Syllabus standards relate to the specification of the certification's skills/knowledge domain
- Assessment standards relate to the rationale behind and development of the mechanisms for deciding to certify a candidate
- Operational standards relate to rules around the administration of the programme and ensure the ongoing high quality of the certification's operation

Once launched in one country, the Endorsed Programmes can be introduced in other countries. ECDL Lithuania has completed the works of e-Guardian certification programme realisation.

In April 2008, the content of the e-Guardian programme was developed and the questionnaire was drawn up in pursuance of the ECDL Foundation requirements [4]. This questionnaire, accompanied by the application form of the adherence to the Endorsed Programme standards, was submitted to the ECDL Foundation. After the questionnaire was approved at the end of 2008, the e-Guardian Automated Question and Test Base (AQTB) was produced. The AQTB was again submitted to the experts of the ECDL Foundation. Numerous corrections were made in the light of their comments and ultimately in 2009 a pilot test was launched on the test system of ECDL Lithuania. In response to the requirements of the ECDL Foundation experts, the pilot tests were run in several European countries (Lithuania, Latvia, and Bulgaria). Feedback was received from over 60 experts in safety online. Currently (in August 2009) the e-Guardian testing system has a complete Endorsed Programme Licence from the ECDL Foundation. It has been recognized to adhere to the Endorsed Programme Standards.

E-Guardian offers certification covering areas:

- Common means for safety assurance – understanding benefits of computer system updates, need of user accounts and passwords, standart OS integrated security means, data protection and backups, etc.
- Malicious software - understanding different malicious software, threats of malware infected emails, securable usage of instant messaging, knowing security software to protect systems against malware, etc.
- Electronic messages.
- Securable web browsing and paying on Internet – understanding Internet browsing threats, tools that ensure safety, encryption keys, distinguishing safe/genuine online transaction/commerce sites from unsafe , being able to perform online transaction using credit or debit cards, etc.
- Children safety – understanding that open communications between parents and children is important to keeping children safe, knowing about online predators, financial scams, malware, cyber-bullying and the pervasiveness of pornography on the Internet, being able to use software to control children use of Internet, knowing about children protection software, defensive software, quality anti-virus, anti-spyware, spam blocker, etc.

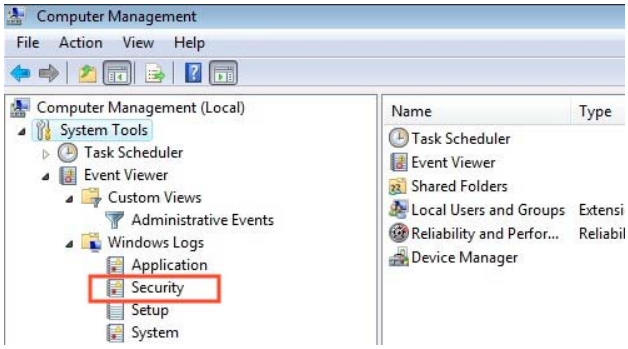
To pass the e-Guardian certification test, at least 80% of the answers to 30 questions must be correct. The questions are picked out from the Automated Question and Test Base using a special random selection algorithm. The question base includes questions from all five aforementioned sections.

Below you can find two sample questions from the e-Guardian test. As required by the ECDL Foundation experts, the questions are in English. This is also helpful when the e-Guardian test is introduced in other countries.

Question 1.
You configure parental controls on your computer for your child's user account. How can you ensure that your child cannot access inappropriate Web sites?

Configure Web sites you approve of in the list of Trusted Sites of Microsoft Windows Internet Explorer
Use password protection for all user accounts
Disable the default administrator account
Enable Microsoft Windows Firewall

Question 2.
You want to view which users have been connected to a Windows Vista computer. What do you have to click?



After a candidate passes the test, e-Guardian certificate with 'Endorsed by ECDL Foundation' logo is issued. It certifies that the person can properly protect data, computer software and hardware, and children who use Internet systems in particular.

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Member Society News

Bulgaria

The Bulgarian President Georgi Parvanov declared open the 21st International Olympiad in Informatics, which was organized from 8 to 15 August in Plovdiv with the participation of 81 competing teams from 78 countries.

The overall winner with a total score of 743 is the phenomenal 14-year old Henadzi Karatkevich from Belarus, followed by Kazuhiro Hosaka from Japan. YiHan Gao and YiHan Gao, both from China, share third place with a score of 721 points.

The teams from the IT STAR countries, traditionally strong in these competitions, won the following medals:

- 2 gold and 2 silver for **Poland**
- 2 gold, 1 silver and 1 bronze for **Romania**
- 1 gold and 3 silver for **Croatia**
- 2 silver and 2 bronze each for **Bulgaria** and **Italy**
- 2 silver and 1 bronze for **Slovakia**
- 1 silver and 1 bronze each for the **Czech Rep.**, **Lithuania** and **Serbia**
- 1 silver for **Austria**
- 1 bronze each for **Greece** and **Hungary**

[The detailed list of winners is available at http://www.ioi2009.org]

The 1st IOI was organized in 1989 in Bulgaria [For more information on the origins of IOI please refer to the article of P. Kenderov "*Bulgaria – Birthplace of International Competitions in Informatics for School Students*" in IT STAR NL Vo.5, no. 3, Autumn 2007].

Italy will host the 24th IOI in 2012.

Hungary

Enterprise Information Systems International Conference on Research and Practical Issues of EIS (CONFENIS 2009) 28-30 October 2009, Gyor, Hungary
http://rs1.sze.hu/~raffai/confenis2009/
Organizers: NJSZT, Szechenyi Istvan University and IFIP TC8

Lithuania

Multi-event "Computer Days - 2009" (celebrating the 20th Anniversary of the Lithuanian Computer Society)
http://www.liks.lt/en/kodi
September 25-26, Kaunas University of Technology, Kaunas, Lithuania
Organizer: Lithuanian Computer Society
liks@liks.lt , http://www.liks.lt/en/kodi ■

20th CEPIS Anniversary

by Julian Seymour,
General Manager of the CEPIS Secretariat

CEPIS is celebrating 2009 as the 20th anniversary of its founding. To highlight the contributions of CEPIS and its 36 member informatics associations over the past 20 years, a number of activities are planned to emphasise the impact of informatics on society and the economy and underline the important role of informatics societies. The 20th anniversary events will also showcase the crucial part that informatics and informatics societies will play in society and the economy in future.

Among the events planned, CEPIS will support a high-level conference held by the European Commission and European Economic and Social Committee on Professionalism and eSkills on Friday, November 20th, aimed to address key issues around ICT Professionalism in Europe and their impact on Europe's economic competitiveness.

A special strategy meeting for the Presidents of CEPIS member societies and Past Presidents is also planned and will reflect on the CEPIS strategy for the coming years. Other activities in honour of the 20th anniversary are outlined below.

UPGRADE

CEPIS is producing a special issue of its bi-monthly e-journal 'UPGRADE'. Beginning publication in 2000, this technical journal is designed for informatics professionals in Europe and read around the world. UPGRADE serves

as an educational resource for informatics professionals to advance their technical expertise and develop their practical professional knowledge.
The 20th anniversary edition of UPGRADE will reflect on the core achievements of CEPIS provided through the perspectives of CEPIS Past Presidents over the past 20 years. In addition to this chronological overview, the issue will include a section on the state of informatics in Europe today. Papers[19] will highlight both the diversity and the unity of the profession through both regional perspectives and thematic areas. Contributions from every corner of greater Europe provide the reader with an overview of the European informatics scene. The thematic areas will bring together the diversity of the regional perspectives by providing overview of the current status of eSkills, professionalism and the ICT industry in Europe as well as provide an outlook for the future of the ICT industry.

CEPIS History & Activities

Established in 1988, by 9 European informatics societies, CEPIS has since grown to represent approx. 300,000 informatics professionals in 33 countries. CEPIS has 33 full members and 3 affiliate members. CEPIS is the representative body of national informatics associations throughout greater Europe.

CEPIS' main aim is to promote the development of the information society in Europe. It achieves this by focusing its efforts on a number of areas that are of particular interest to its members. The first area of focus for CEPIS is to be a leading organisation in the promotion and development of IT skills across Europe. CEPIS is responsible for the highly successful ECDL and EUCIP programmes and produces a range of research and publications in the area of skills.

As a professional body, CEPIS is actively involved in promoting Professionalism in IT practice amongst its members. This occurs through regular Europe-wide events and specific publications. Education & Research is the third main area of focus to which CEPIS is committed. CEPIS continues to highlight the importance of structured investment in education and research across Europe as it plays a critical role in the advancement of society and the greater European economy.

CEPIS Membership

CEPIS membership is open to national computer societies from all countries belonging to the Council of Europe. International or pan-European associations are also welcome as affiliate members. For more information see www.cepis.org. ■

[19] Editor's note – IT STAR has contributed to this issue with an article on *Current State of Informatics in Central, Eastern and Southern Europe* by P. Nedkov (with contributions from B. Domolki, G. Occhini and N. Schlamberger)

IPTS

The Impact of Social Computing on the EU Information Society and Economy

IPTS issues a new report on Social Computing

by Marc Bogdanowicz

Social Computing hit the Information Society in 2003 unheralded. Six years later, hundreds of millions of users worldwide use Social Computing applications such as social networking sites, blogs, collaborative filtering of content, file, photo and video sharing, tagging and annotation, online multi-player games and collaborative platforms for content creation and sharing.

A new report of the Institute for Prospective Technological Studies, one of the Research Institutes of the Joint Research Centre of the European Commission, examines the socio-economic impact of Social Computing in Europe. It finds that Social Computing leads to disruptive impacts on industry, citizens, identity, social inclusion, education, health and public governance.

Some findings from the report:

1. With Social Computing, users are in the driving seat
Social Computing is novel and disruptive as it enables the open collaborative creation and sharing of content by users and the re-use of such content for multiple purposes. With Social Computing, unlike any previous ICT innovation, the user is in the driving seat. Users are active participants, co-producing content, determining reputation/feedback, sharing storage capacity, increasing connectivity, producing collective intelligence and generating network effects.

For possibly the first time in the development of the Information Society, such user-friendly, sharing and collaboration tools are distributed and available on a mass scale on the network. But Social Computing goes well beyond social networking and entertainment; it has been adopted widely by industries and governments to provide more user-centric and effective services. A disruptive characteristic of Social Computing is the capacity it brings to harness collective intelligence for learning and problem-solving by whole organizations, communities and societies.

2. Social Computing has become mainstream
Social Computing is today an extensive social and technological phenomenon, in terms of reach, time-use and activities carried out. For example, at the end of 2008 about a third of EU Internet users were engaged in Social Computing activities; More time was spent on social networking and personal blogging sites than on email; Social Computing applications have become one of the largest identity and reputation management systems in the world; The number of blogs doubled since 2007 to more than 100 millions worldwide, where more than 100.000 blogs are created daily; More than 1 billion photos and 40 million

user-created videos are uploaded in photo- and video-sharing sites like Youtube or Flickr.

3. Social Computing is an engine of growth and employment
The Social Computing industry has shown phenomenal growth, becoming a multibillion Euro business in terms of revenues and valuation. A conservative estimate of yearly revenues of top 100 Social Computing application companies was 3 billion US$ for 2007, employing between 7.000-8.000 people. The Social Computing industry is also increasingly attracting significant capital investment. In the same year it attracted about 5 billion US$ in cumulated venture capital investments or acquisition. Despite the impressive development of the Social Computing industry, business models still appear immature and even major Social Computing companies such as Facebook struggle to generate revenue. In practice, advertising is the main revenue stream for Social Computing applications, which reached 2 billions US$ worldwide in 2008.

4. Social computing is disrupting other industries
Enterprises across sectors are adopting innovations introduced by Social Computing for improving internal work processes, recruitment, customer relations, product and service quality and design, aiming at increasing competiveness. Social Computing also enables firms to increasingly expand operations beyond their boundaries outside the organization by sharing or trading knowledge with external organizations and online communities of practice. Between 20-35% of enterprises are using or planning to invest in Social Computing.

5. Europe is lagging behind the US in the supply of Social Computing
The EU position in the supply and development of Social Computing applications is weak. Although uptake of Social Computing applications is almost as high in Europe as in the US, about two thirds of Social Computing applications are provided by US companies, with similar such shares for revenues, employees and even higher shares for traditional innovation indicators such as patents, venture capital and R&D expenditures. However, Europe is stronger in social networking sites and online social gaming (with 25% of companies based in Europe) and also in mobile social computing. These areas seem to provide opportunities for European Social Computing industry in the future.

6. Policy challenges
Policy challenges emerging from the analysis of the socio-economic impact of Social Computing relate to two different perspectives: the need to manage the risks deriving from the misuse of Social Computing and the opportunity to stimulate the realization of the transformative potential of Social Computing.

7. Future prospects
The key characteristics of Social Computing are likely to flourish, as the innovation and added value of Social Computing resides in its practices rather than in discrete technologies. As the current young generations move into employment and management roles, one may expect significant changes in the way civil society is functioning and everyday life is lived, in the way businesses are run and public and social services are managed. It is expected that Social Computing will contribute to these changes. In the long term, it has the potential to contribute to positive developments in society, education, health, governance and social inclusion, if changes are properly stimulated and managed by supporting policies. However, at the same time, the fast development and adoption of Social Computing technologies and applications could accelerate the risks connected to it, if not properly and timely governed.

The full report will be soon available at http://ipts.jrc.ec.europa.eu/publications/index.cfm under the title: **"The Impact of Social Computing on the EU Information Society and Economy".** ■

MultiCulti

Knocking on Heaven's Door – South Tyrol

by Dorothy Hayden

My love for South Tyrol dates back to the time my parents used to visit Völs, overlooking the Isarco valley, located at the foot of the Schlern and the Seiser Alm, Europe's highest mountain plateau. Stories of sorcerers thrive here, but the magic is the stunning nature of Langkofel, Plattkofel, Sella, Val Gardena and other landmarks in the Dolomites, a World Heritage landscape. My folks would drive to Bolzano, the district capital 15 km down the narrow winding road, which was also my choice as a teenager - gelati, the market-square with stalls of local vegetables, fruit, spices and aromatic scents, the Cathedral and arcades, just hanging around. These visits often ended with another drive 15 km south to a village with a famous wine cellar named Torgglkeller. My parents would enjoy there a glass of wine and the impressive view of the Dolomites from the cellar's terrace, while I would settle for apple or grape juice and the Tyrolean "speck brettl jause".

This time Multi-Culti takes you to Kaltern (www.kaltern.com), which you won't find in the Guide Michelin. It is a very personal tip for some leisure days, intended to relax after hard work. For the "jet-set" type, this place would probably not be "in", but for others it could offer serenity and pure nature, biking, hiking, swimming in pristine lakes, good food and excellent wine.

On my recent visit we dropped in at Hotel Weingarten (www.hotel-weingarten.it), recently enlarged with a new wing, wellness center, outdoor pool and garden in the middle of the vineyards.

Kaltern is a tourist-oriented municipality of some 7,000 souls spread in small hamlets around the "Weinstrasse" at the foot of the Mendel pass. The Kalterer Lake, located south, provides excellent conditions for windsurfing and bathing. At an altitude of 450 m, Kaltern enjoys a Mediterranean climate with lots of sunshine during the day and healthy mild mountain temperatures for pleasant dreams at night - perfect conditions! As a comparison, at the time of my visit, Austria and Northern Europe were flooded by rainfall, while southern Europe was overheated.

Once a week, there is a travelling market in this region – shoes, jackets, bags and other leather goods, food & wine, and other wares. In Kaltern, this happens on Wednesday mornings in front of the wine cellars and the South Tyrolean Wine Museum. Wine is central as the village and the region boast the noblest and the most of it. I am personally fond of the common Kalterersee (a light red wine), which is served chilled to quench the summer thirst. Apart of the vineyards, the sea of orchards around Kaltern that feed the EU with apples and other fruit is impressive. The Market square is picturesque with its fountain and the main street running through, with numerous open cafes and restaurants, the central church … and the Torgglkeller. I was stunned that Kaltern provided more evening ambience than Baden, Austria where I live - it must be the cultural brewing and the summer feeling that makes it mild and comfortable here!

On the westside up the slope, a Swiss engineer designed and built in 1903 the Mendelbahn, the steepest (64%!) and longest continuous cable car in Europe. Once at the top, some 12 minutes away on the rope, you experience wonderful views of the region – Bolzano, Kaltern, Kalterersee, Tramin, Eppan and much more. The eastside is dominated by orchards, groves and walking paths that lead to everywhere and nowhere … a bit further are the Montiggler lakes, 2 hrs hiking to destination. Kaltern's northface is Eppan and Bolzano – fantastic places: visit Eppan and take the hiking trail back to Kaltern leading you through the 'ice caves', a natural phenomenon, or take the hiking path from St. Pauls, leading to three castles, and you will be rewarded with a unique natural and cultural experience! Finally, if you choose to drive on to Bolzano, spare some time for the cable car, which will take you up to Oberbozen, a lookout place to see the Schlern profile (an emblem for the Dolomites), and possibly Völs, where I started this story.

The competitors in the Trans-Alp cycling race had their before-last stop in Kaltern as we readied to leave the next day! Many of the teams had booked the night in "Weingarten". We were at the poolside when they came diving in and I heard them saying, "This must be Eden ". ■








IT STAR Member Societies

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Croatian Information Tech. Society – CITS
Ilica 191 E/II,
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Czech Society for Cybernetics and Informatics – CSKI
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PROGRAM 4th IT STAR WS on **ICT Skills, Education and Certification: the Multi-stakeholder Partnership, 27 – 28 November 2009, Rome, Italy –** www.itstar.eu

Venue: **Villa Aurelia** - www.villaaurelia.net

Hosted by AICA

Friday, 27 November

10.00 – 11.30 Opening

Opening address by **Bruno Lamborghini**, President of AICA, Chairman of EITO

Keynote speakers

- **Msgr. Paul Tighe**, Secretary, Pontifical Council for Social Communications
- **Karol Jakubowicz**, President, UNESCO's Intergovernmental Program "Information for All"

11.30 – 12.30 Panel on Gov. Policies

- **Wojciech Wiewiórowski**, Secretary, ICT and Telecommunications Committee of the Council of Ministers, Poland
- **Slovenian Vice-Minister** for ICT-related issues (t.b.c.)
- **t.b.c.**

12.30 – 13.30 Buffet Lunch

13.30 – 15.30 National and International Programs and experiences

- **Vasile Baltac**, President of ATIC and CEPIS President Elect ("*Education and the Second Generation Digital Divide*")
- **Renata Danieliene, Eugenijus Telešius**, ECDL Lithuania *("e-Guardian: ECDL-F Partner Program")*
- **Daniele Nardi**, Chairman, Undergraduate School in Computer Science and Engineering, "Sapienza" University of Rome, CINI representative
- **Damien O'Sullivan,** Chief Executive,ECDL-F
- **Niko Schlamberger**, President of Slovenian Society "Informatika" and CEPIS President
- **Jenny Sendova et al,** Inst. of Mathematics and Informatics, BAS and Faculty of Mathematics and Informatics, Sofia University *("Harnessing ICT for Building a Creativity-based Society"*)

15.30 – 16.00 Coffee break

16.00 – 18.00 Industry experiences

- **Roberto Bellini,** AICA-EUCIP and CNEL
- **Elena Bonfiglioli,** Director, Corporate Citizenship Microsoft
- **Caroline Jacobsson**, European Metalworkers' Federation
- **Franco Patini,** Confindustria, Italy
- **André Richier**, Principal Administrator, EC-DG Enterprise and Industry (*"EU e-Skills Strategy"* - t.b.c.)
- **Representatives,** TELECOM Italia and Finmechanica

20.00 Conference Dinner

Saturday, 28 November

09.00 – 09.30 Keynote

Speaker **t.b.c.**

09.30 – 11.00 National Reports

Albania: **Neki Frasheri** and **Betim Cico**, Faculty of Information Technology, Polytechnic University of Tirana

Croatia: Speaker **t.b.c.**

Hungary: Speaker **t.b.c.**

Lithuania: **Alfredas Otas**, Chairman of LIKS and **Saulius Maskeliūnas**, Institute of Mathematics and Informatics, Vilnius (*"Development of Computer Literacy in Lithuania")*

Poland: **Wojciech Wiewiórowski** *("ICT Education for All: What Skills are Required in the Knowledge Era")*

Other presentations

- **Antonino Mazzeo et al,** University of Naples "Federico II" *("An Operational Approach for Document Content Characterization in Specialized Domains")*

11.00 – 11.30 Coffee break

11.30 – 12.30 CEN WS on ICT Skills

- **Paolo Schgör**, CEN/ISSS ICT-Skills WS Chairman *("Setting European ICT-Skills Standards")*
- **Dierk Ladendorff**, Program Director KWB e.V., Germany *("Web-based ICT Job-profiling in Action")*
- **Plamen Nedkov,** Chief Executive, IT STAR *("European e-Competence Framework")*

12.30 – 13.00 Wrap-up and adoption of Conference Declaration

Further information:

Please check at http://starbus.org/ws4/ws4.htm for Mission, Organizers, Participation and fees, Registration Form and other useful information.

Organizing and Program Co-chairs:

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(Local arrangements)
Plamen Nedkov <nedkov@utanet.at>
(International coordination)

Registrations:
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