Time to Lead

Good news on the economic front for the EU: In the second quarter of 2010 the EU economy grew at its fastest pace in recent years, significantly due to Germany's economic growth. Other EU members are also faring well but it is too early to consider the recovery as "Mission Accomplished".

The USA, the lead EU economic partner, is struggling hard to avoid a second Great Depression. The transatlantic economic relationship to a great extent shapes the global economy and a further downturn on the other side of the *big pond* could have unforeseeable consequences in Europe and elsewhere. There are also mixed messages about the economic recovery in a good part of eastern and southern Europe, a region hard-hit by the crisis, and this could be a source for further serious headaches in the EU if exit strategies fail.

It's **Time to Lead** in refining strategies and policies for Europe as a leader in a global setting. For the EU and its national governments, in partnership with all stakeholders in the socio-economic sectors, there is a perpetual call to invent, explain, introduce and apply new solutions and technologies, in particular in the ICT agenda as an ubiquitous sphere that places it at the forefront of growth scenarios.

IT STAR, as a regional professional association of national computer societies in Central, Eastern and Southern Europe, focuses on Information Society issues with activities (conferences, projects, publications and

IT STAR representatives

Austria/OCG-E. Mühlvenzl, **Bulgaria**/BAS-K. Boyanov, **Croatia**/CITA-M. Frkovic, **Cyprus**/CCS-P. Masouras, **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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statements) that provide a forum to stakeholders from academia, government, industry and civil society to work in partnership. It generates findings and recommendations on strategy, policy and decision-making related to information society development in the Region and in Europe. This makes it a veritable partner to all efforts related to ICT scenarios. The *IT STAR Newsletter* conveys the message for the need of leadership in the ICT field – regionally directed with international amplitude.

The current issue takes a look at the many facets of e-Business: Policy, Practice, and More …

We Practice what we Preach!

Take the Journey,

Plamen Nedkov ∎

Letters to the Editor

Extracts from emails to the Editor with respect to the last issue ... comments and suggestions are always welcome – our coordinates are on page 1.

"The newsletter looks very impressive and we are very honored indeed to have our contribution published."

Dr. Linas Eriksonas, **Lithuania**

"You and your colleagues are really doing a marvelous job, and I sincerely appreciate being kept informed!!"

Professor Woody Horton, **USA** ∎

Catch of the Day

∎

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

Individual articles from the Newsletter may be reprinted, translated, and reproduced, except for denoted copyright protected material, provided that acknowledgement of the source is made. In all cases, please apply for permission to the Newsletter Editor.

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 info@starbus.org.

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International Olympiad in Informatics (IOI)

Waterloo and the 22nd IOI

This newsletter has reported in past issues on the organization and results of the International Olympiads in Informatics [see Vol. 5, no.3, Autumn 2007; Vol. 7, no.3, Autumn 2009] and we continue by providing the results of the 22nd IOI, held from 14 to 21 August 2010 at the University of Waterloo, Canada.

In the overall ranking, the first three places were won by
1. Gennady Korotkevich (Belarus) - total score of 778 points
2. Rumen Hristov (Bulgaria) - 749 points
3. Adrian Jaskółka (Poland) - 736 points

The teams of the countries in the IT STAR region won the following medals:
- Bulgaria – 2 gold, 1 silver, 1 bronze
- Czech Rep. – 2 gold, 1 silver, 1 bronze
- Croatia – 1 gold, 3 silver
- Poland – 1 gold, 2 silver, 1 bronze
- Slovakia – 2 silver, 2 bronze
- Italy – 2 silver, 1 bronze
- Hungary – 2 silver, 1 bronze
- Romania – 1 silver, 3 bronze
- Lithuania – 1 silver, 2 bronze
- Slovenia – 1 silver
- Serbia – 3 bronze
- Austria – 1 bronze
- Macedonia – 1 bronze
- Greece – 1 bronze

The full list of winners is available at
http://www.ioi2010.org/FinalResults.shtml.

Italy hosts 24th IOI in 2012

by Giulio Occhini

Giulio Occhini *graduated as physicist from the University of Milano and his professional activity started at the National Research Council (CNR) where he was involved in pioneering work on finite element methods for solving fluid dynamics problems. At that time, he had the opportunity to benefit from the first digital computers in Italy. This led to his entry in the ICT industry in 1960 where he served in a number of technical and managerial positions. He maintained close contact to academia: Professor of Information Systems at the university of Pavia, long-lasting cooperation with Bocconi University and the research consortium of Politecnico di Milano.*

In the mid 90-ties, Giulio served as President of CEPIS during a period that was crucial for introducing ECDL on a pan-European scale. In AICA, the Italian Association for Informatics and Automatic Computing he held senior positions including National President and Chairman of the Board. Currently he is AICA's Chief Executive Officer and IT STAR Coordinator.

The Welcome Message at the IOI website by the IOI President Arturo Cepeda [Mexico] -- *see* http://www.ioinformatics.org/admin/president.shtml -- contains the following text:

"The International Olympiad in Informatics is an annual international informatics competition for individual contestants from various invited countries, accompanied by social and cultural programmes. In the scope of the IOI the concept Informatics means the domain that is also known as computer science, computing science and information technology, but not the domain known as computer engineering. The original idea of initiating the IOI was proposed to the 24th general conference of UNESCO by the Bulgarian delegate Professor Sendov in October 1987. UNESCO initiated and sponsored the first IOI, which was held in Pravetz, Bulgaria in 1989. The main objectives to be accomplished by the IOI are:

- *To discover, encourage, bring together, challenge, and give recognition to young people who are exceptionally talented in the field of informatics;*
- *To foster friendly international relationships among computer scientists and informatics educators;*
- *To bring the discipline of informatics to the attention of young people;*
- *To promote the organization of informatics competitions for students at schools for secondary education;*
- *To encourage countries to organize a future IOI in their country".*

IOI is one of the most recognized computer science competitions in the world. The participants are among the best young computer scientists in their respective countries, and indeed worldwide. The competition tasks are of algorithmic nature. The contestants have to show such basic IT skills as problem analysis, design of algorithms and data structures, programming and testing.

From the 22 IOI competitions so far (*see* http://www.ioinformatics.org/loc.shtml) and the medals that were won, one could conclude that the countries of Central, Eastern and Southern Europe were the cradle of this initiative and continue to be very active in its further manifestations. The region has hosted IOI competitions in Bulgaria (1989, 2009), Belarus (1990), Greece (1991, 2004), Hungary (1996), Turkey (1999), Poland (2005) and Croatia (2007). The results of the 22nd IOI competition recently held at the University of Waterloo in Canada confirm the strength of the Region and the national organiza-

tions involved in discovering and working with young talented individuals.

Most IT STAR member societies are actively involved in the organization of IOI competitions at a national, regional [i.e. Balkan Olympiad in Informatics (BOI), Central European Olympiad in Informatics (CEOI)] and international level.

The Italian IOI participation is organized by AICA in co-operation with the Italian Ministry of Education. AICA sees the IOI competitions as fully coherent with its engagements as a professional ICT association to assist and promote ICT knowledge in Italy and to attract young people in these activities. In this vein, it supports the selection process of the Italian IOI team, which is a process starting at the level of individual schools and going through regional competitions and national games. The experience of the other countries in the IT STAR region is important to us and in the last few years we have established valuable contacts.

In view of the growing interest in the Informatics Olympiads in Italy, an Italian invitation was extended and accepted by the IOI to convene the 24th edition of the competition in 2012 in Italy. AICA and the Italian Ministry of Education, in cooperation with the regional authorities of Lombardy, plan to hold the competition at the grounds of the Brescia Fair and will offer accommodation to the teams in the lovely town of Sirmione on lake Garda.

The 24th IOI in Italy is special in the sense that it will be held 25 years after the original proposal was presented and accepted by the 24th General Conference of UNESCO. In conjunction with the competition, we plan to organize an international conference on Talent in Informatics. Acad. Blagovest Sendov who proposed the original idea to UNESCO will be a keynote speaker at this event and we look forward to working with IT STAR and its member societies, as well as with UNESCO, the European Commission and other interested national and international organizations and individuals in making this conference a huge success. ∎

Institute for Prospective Technological Studies

The Videogames Software Industry

by Jean-Paul Simon

Senior researcher, IPTS, Information Society Unit

The Institute of Prospective Technological Studies of the European Commission has issued its report on the video-

games software industry: "*Born digital/ grown digital. Assessing the future competitiveness of the EU videogames software industry*"[1].

The report analyses the video game software industry, its market potential, its value chain organisation and business models and its current line of evolution, so as to outline major emerging technologies and to investigate on their disruptive potential. Moreover, it assesses the strengths and weaknesses of EU firms, in order to highlight drivers, opportunities and challenges for improving the future competitiveness of the EU video game software industry.

I. Mapping a very young industry

In spite of being still a rather young industry, video games already managed to become a significant and growing share of the media and content industries. The global video game market is estimated at some 45 to 50 billion € as of 2009, and is expected to grow four times faster than the media and entertainment market[2] as a whole. The former is expected to grow by almost 70% by 2013, whereas the latter is expected to grow by only 17%.
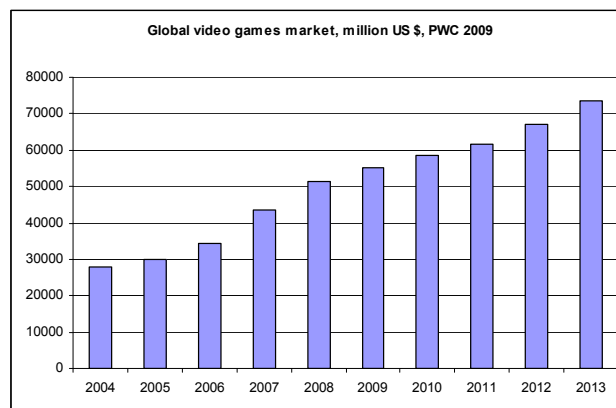
The Europe-Middle East-Africa (EMEA)[3] region is the biggest market for video games: France, Germany, Italy, Spain and UK, in 2009, accounted for 15.2 billion dollars, which is equivalent to nearly 30% of the global video games market. Within this market, the console game segment is the biggest component of the EU market and is now eight times the size of the one-time market leader, PC games with one analyst predicting the size gap to grow to ten times by 2013[4].

II. The traditional value chain

In this value chain, the platform hardware owners (Sony, Nintendo, Microsoft) develop their strategies within a strongly oligopolistic market, both for home and handheld consoles. These strategies are reinforced when considering the proprietary characteristics of the Operating Systems running on those consoles, as well as when observing the vertical integration of the industry. In particular, those hardware owners are often also acting as game publishers and own development studios.

Second, publishers occupy a stronghold for most types of games development, partly because video games together with all digitalised creative content goods have their production characterised by high fixed costs and low marginal costs. The initial financial investment to create the first "copy" is extremely high, while once funded, the additional copies can be (re)produced (but not necessarily distributed and sold) as at almost zero cost. This creates a need for an early stage investment that affects the power relation in the value chain, and leads to the emergence of the publishers as financing actors, and therefore dominant actors. Those publishers, out of which some are also the platform owners (Microsoft, Nintendo, Sony), behave again within an oligopolistic market.

On the opposite, small studios, gathering multidisciplinary teams around the creation of the games characterise the developer segment. Companies are numerous and hence it is a highly fragmented segment. The development can take place within in-house development companies fully owned by publishers but also in independent companies. Alternatively, some developers publish their own games and therefore can be regarded as publishers and developers.

Within the software production process, the video game software industry needs to work out its position taking in account the central role of middleware, serving partly as "game engine", thus enabling game development, or adding capabilities to games[5], enabling networking. It allows improved performance or more effective development. Middleware is crucial to enable portability among platforms thereby permitting platform independency, and to allow third parties to develop applications in a faster and more effective way.

III. Trends

The industry produces entertainment software for use on personal computers, video consoles, portable devices and mobile phones and is characterised by creativity and constant innovation. This has led to the continuous development of new forms of entertainment, and an increasing number of devices upon which interactive software may be enjoyed. Increasingly, games are used online and the majority of new games that are being developed are designed for online play. Technological achievements and gaming diffusion across ages as well as competitive pressure end up changing the market.

One of the disruptive trends in the video games business is the emergence of new actors coming from different businesses, accompanied by the possible short-cutting of existing actors in oligopolistic position. The structure of the industry is still a work in progress and expecting to keep evolving: the relative position of each player in the value chain is not stabilized (hardware producers, game developers, publishers, software producers). Because of on-line and mobile opportunities, new companies might become essential intermediaries in the video games value chain, such as on-line portals (MSN, Google, Yahoo, pogo.com), Internet service providers, social networks (Facebook, MySpace) or even telecom operators (e.g.. Vodafone) and handsets manufacturer companies (e.g. Nokia). A new market dynamic is created as it also allows entering new partnerships with other organizations (movie industry, sports organizers,…) and more lifestyle partners, opening up new experiences.

These dynamics result in further changes in already differentiated business models, which in fact are still an open issue. Who does and will benefit, in economic terms, of the growing videogames market remains to be seen, as it is a vivid battlefield.

Finally, really innovative technologies are potentially disruptive, as has been seen with improved Human-Machine interfaces (i.e. sensors with the Wii example). Technological progress might still influence the business trajectories.
Within such moving context, online and mobile video games are expected to see their markets increase most, surpassing off-line PC games, handheld video games, trailing only console games in the medium-term future. The growth of the video games software market is expected to be primarily driven by online and wireless game software, while hardware would proportionally decline in terms of revenues, changing hence the rules of the game. It is forecasted that especially the online space will substitute on the long run the currently available boxed product.

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[5] Physics middleware: physics engines are taking care of the simulation of physics models, thus providing to the game the management of effects such as those of mass, velocity, wind resistance, etc.

IV. Where does Europe stand?

Europe appears to be currently present at all stages of the games value chain but to different extents.

- While absent within the consoles hardware segment, it challenges the incumbents in the mobile segment (for example, Nokia with the Symbian operating system environment)

- The European industry is represented only by a few companies among the major publishers, in particular by Ubisoft, out of the top world video games publishers.
- The European industry supplies a large share of world's middleware needs. Middleware (games engines) is playing a central role within a new era of modularised engines.

- Europe hosts a large population of developers' studios, often the creators of major market successes. This numerous population of highly creative small development studios is observed mainly in the UK, France, Germany, the Nordic countries and to a lesser extent in Spain.

The EU market is likely to grow strongly[6] over the next few years and will increasingly be focused on the online market as new broadband penetration stimulates growth and as consoles increasingly offer online gameplay options. This growing role of the online segment opens up opportunities, especially for European stakeholders and SME's. Some necessary conditions seem to be met to supply a sound basis for the competitiveness of the EU Videogames software industry:

- The EU benefits from a rich milieu of developers and an important population of middleware producers,

- The EU is strong on telecom services, especially mobile, with seasoned customers.

However, these positive conditions may not be sufficient to overcome the weaknesses in publishing and segments of devices. Other enabling specific policies could play a key role. For instance, the deployment of the next generation of broadband (wireline and wireless) or adequate business conditions for creative developers (funding, venture capital…).

This industry went through the continuous development of new forms of entertainment, and of an increasing number of devices upon which interactive software may be enjoyed. The gaming industry may have furthermore a promising potential not only for its entertainment side but also for education and training.

The videogames software industry appears to be one of the most innovative labs for the coming Digital Economy: it is developing and experimenting new digital services (online, off-line and mobile) that manage to reach a growing

share of the population. Born digital, the industry shows a digital growth that is taking advantage of many opportunities to offer user-friendly, intuitive services at a very large scale. The potential audiences are enlarged, worldwide communities reached, and the access platforms added (consoles, portals, mobile handsets, etc.).

This digital native may turn out to be the living lab of the digital economy.

All such essential observations about the structure of the industry, and its dynamics are further detailed within the report, authored by G. De Prato, C. Feijóo, D. Nepelski, M. Bogdanowicz, J.P.Simon, available in its pre-publication version at http://ipts.jrc.ec.europa.eu/ publications/index.cfm, in the coming months.

The report will also be presented at the forthcoming DigiWorld summit 2010, 17-18 Nov. in Montpellier, within the format of the IDATE conference - http://www.digiworldsummit.com/2010/pages/?page=215&idl=22 ∎

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[6] By a compound annual rate of 6.9 % from Euro 13.5 billion to 18.8 billion. *Source*: Price Waterhouse Coopers, *Global entertainment and media outlook*; 2009-2013.

TENTATIVE PROGRAM

5th IT STAR WS on **Electronic Business**
12 November 2010, Zagreb, Croatia – www.itstar.eu
Venue: Hotel Four Points
by Sheraton Panorama Zagreb – http://www.hotel-fourpointspanorama.com/

Hosted by

09.30 Registration

10.00 – 12.00   Opening

Opening address by **Mladen Glasenhardt**, President of CITA

Keynote speakers

- **Bruno Lamborghini**, Chairman of the Board, EITO

- **Representative of DG "Enterprise and Industry"**, European Commission (t.b.d.)

- **Diana Šimić (HR)**, Chair of eSEE Initiative, Zagreb University - *e-Business policy and practice in Southeast Europe*

12.00 – 12.45 National and International Programs and Experiences

- **Pavol Fric (SK)**, Vice-president for Strategy, Slovak ICT company "DITEC" – *E-Signature*

- **Roland Schmuck (HU)**, University of Pecs - *How to Get the Most Out of Company Websites*

12.45 – 14.00   **Lunch**

14.00 – 16.00 National and International Experiences (cont'd)

- *Legal Framework of E-Business and Security Issues in Italy (*speaker t.b.d.)

- **Ranko Smokvina (HR)**, senior ICT consultant, Leader of Croatian e-Invoice Project (e-Invoicing) - *E-Invoicing in Croatia*

- *E-Business in **Poland** (speaker* t.b.d.)

- *E-Business in **Romania*** (speaker t.b.d.)

- **Gyula Szabo & Peter Bago (HU) -** *Global parameterization of country-specific SAP modules*

- *Presentation (t.b.d.)*

16.00 – 16.30   Coffee break

16.30 – 17.30   E-Skills for E-Business

- **Vasile Baltac (RO, CEPIS President)** – *CEPIS Initiatives in e-Business*

- **Denise Leahy (IE, Trinity College, Dublin) & Dudley Dolan (IE, Chair of CEN WS on ICT Skills)** - *The Skills Challenge for e-Business*

- *Presentation (t.b.d.)*

17.30 – 18.00 Wrap-up and adoption of Conference Declaration

20.00   **Conference Dinner**

Conf. web-site http://starbus.org/ws5/ws5.htm

Organizing and Program Co-chairs:
G. Occhini, M. Frković & P. Nedkov

Contacts:

Plamen Nedkov nedkov@utanet.at (Program)
Kresimir Sikulin ksikulin@hiz.hr (Local arrangements)

e-Business Policy and Practice in Southeast Europe

by Diana Šimić

Diana Šimić is a professor of information and communication sciences at the University of Zagreb, Faculty of Organisation and Informatics. She has held positions of assistant minister for information technology at the Ministry of Science and Technology in 2002-2004, and deputy state secretary at the Central State Administrative Office for e-Croatia in 2004-2008. She is a member of two working groups for negotiation of the Croatian accession to the EU. She represented Croatia in a number of UN and EU working groups related to the development of information society.

Diana is a member of the eSEE Initiative working group since 2002, and its Chair since 2007.

Political and Institutional Framework of Regional Cooperation

The establishment of the Stability Pact for South Eastern Europe in 1999 encouraged regional cooperation on development of the information society among the countries experiencing transition to a market based economy. The initiative for Electronic Southeastern Europe (eSEE Initiative) was formally established in October 2002, with the signing of the „eSEE Agenda for the Development of Information Society" (eSEE Agenda) during the Telecommunications for Development Conference in Belgrade. Signatory countries (Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Moldova, Yugoslavia [Montenegro and Serbia]) nominated e-Envoys and Senior Policy Officials to participate in the eSEE Initiative Working group that meets four times a year to discuss progress, plan further activities and exchange regional best practices.

After the Regional Cooperation Council (www.rcc.int) succeeded the Stability Pact in 2008, the eSEE Initiative continued its activities within the regional cooperation framework.

The UNDP office in Sarajevo provides continuous support to the Initiative by hosting the eSEE Initiative Secretariat and carrying on support projects (www.eseeinitiative.org). The Secretariat also publishes an online eSEE Newsletter providing insight into the regional activities and best practices.

In 2008, an innovative regional public-private-partnership institution Centre for e-Governance Development (www.cegd.eu) was established to provide a sustainable support to the eSEE Initiative. Its founding members are the eSEE Initiative, Government of the Republic of Slovenia, Regional Cooperation Council, United Nations Development Program, INA Academy, European Foundation,

Microsoft, Siemens, and SRC.SI. The Centre's mission is coordination of activities, transfer of knowledge, education and research in the field of eGovernance development in Southeast Europe.

Activities of the eSEE Initiative have also been supported by other national and international institutions such as USA CLDP, Hellenic Aid, European Commission, Government of the Republic of Italy, etc.

Regional ICT Policy

The eSEE Agenda, adopted in 2002, aimed at establishing legal and institutional framework and developing national policy for the development of information society. The legal framework covered areas of electronic signature, electronic commerce, electronic documents, cybercrime, telecommunications and personal data protection. Its implementation was presented at the European Ministerial Conference on the Information Society "New Opportunities for Growth in an Enlarged Europe" in Budapest in 2003. At that occasion ministers signed a joint statement reaffirming the commitment to implement the eSEE Agenda.

In 2005 at the South Eastern Europe Ministerial Conference on Information Society in Thessaloniki, eSEE members signed a Memorandum of Understanding on the regional broadband development and a Ministerial Declaration in which ministers recognize the potential of e-Business models to stimulate economic growth, job creation, and regional trade and acknowledge the proposed guideline National Strategy for Building a Framework for e-Business. UNMIK Kosovo joined the eSEE Initiative by signing the Ministerial Declaration, while the Broadband MoU was also signed by two EU member states – Greece and Romania.

By the end of 2006, most of the countries had reached all the objectives of the eSEE Agenda, and a new document eSEE Agenda plus was prepared. It was adopted at the Ministerial Conference of Electronic South Eastern Europe Initiative in Sarajevo in 2007. eSEE Agenda Plus shifted the focus from legal and institutional enablers to implementation projects. The document is closely aligned with the goals of the EU i2010 Initiative, with objectives adjusted to the regional context and resources.

eSEE Agenda Plus defines three priority areas:

- Single SEE information space
- Innovation and Investment in ICT research and education
- Inclusive information society

Within these priority areas several objectives are directly relevant for the development of e-Business e.g. availability of broadband and rich online content, electronic identity management, development of ICT skills, e-government and e-Business.

In particular eSEE member states have agreed to develop national strategies for e-Business development, remove

barriers for e-Business, stimulate business incubators, techno-parks and business start-up centres through partnership with universities and private sector, and create environment for all companies to use ICT in their daily operations.

Monitoring and Implementation

The Secretariat of the eSEE Initiative has created several instruments for monitoring the implementation of the eSEE Initiative commitments. Current status of the Matrix of Fulfillment of eSEE Agenda Plus, eSEE Agenda and bSEE MoU is updated quarterly and published as WG and ICT related documents on the eSEE Initiative web site.

Implementation of eSEE Agenda Plus has been slowed down by the global crisis, but there is a steady progress in all eSEE member states.

Croatia is the only eSEE Initiative member state to have adopted an e-Business Strategy, while Albania, Macedonia and Serbia have included e-Business objectives within their national information society development strategy or business development strategy, and Romania plans adoption by the end of year.

All the countries report some activities on removing the obstacles for e-Business. When it comes to favorable tax-schemes, only Macedonia, Montenegro and Serbia report having reduced tax rates for ICT equipment, Moldova has a tax-free regime for enterprises working on software, and Romania offers income tax exemption for IT specialists. Croatia, Macedonia, Moldova, Montenegro, Romania and Serbia have functional business incubators and technological parks. However, only Albania, Croatia, Romania and Serbia provide support and training to strengthen the technological capacity of SMEs.

Even though all the countries have adopted legal framework for electronic signature, only Croatia and Moldova have established national root CA, in Serbia there is a NRCA for government institutions, and other countries are in the process of establishing a NRCA.

Croatia and Romania have established a national Computer Emergency Response Team (CERT), and Montenegro, Serbia and Kosovo are in the planning phase. All the eSEE member states except Kosovo have ratified the Convention on cybercrime, and Kosovo has initiated the process of ratification.

Broadband penetration is still significantly below the EU-27 average. However, the highest penetration rates, reported in Croatia (39%) and Macedonia (34%) are above EU member states Greece, Bulgaria and Romania. Data on broadband penetration in enterprises is only available in Croatia (69% in small to 94% in large enterprises) and Romania (36% to 81%). Croatia, Macedonia and Serbia collect data on enterprises using computers, and the rates are well above 90% in these countries.

Conclusions

The countries of Southeast Europe lag behind EU in information society development. eSEE Initiative guides and supports a coordinated development of national ICT policies, and building of institutional capacities and infrastructure for information society development. Global crisis had a negative impact on the speed of implementation of the eSEE Agenda Plus, but steady progress was still maintained.

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The Skills Challenge for e-Business

by Denise Leahy and Dudley Dolan

Denise Leahy is a Senior Lecturer in the School of Computer Science and Statistics in Trinity College Dublin. Before moving to the academic world, she worked for many years developing and managing information systems in business. Denise was very involved in the creation of the European Computer Driving Licence (ECDL) and chaired the international groups, which developed the syllabus, tests and testing procedures. Her main research interests are in the areas of information systems, digital literacy and accessibility. She is Course Director of the M.Sc. (Management of Information Systems) and is a member of IFIP Technical Committee 3 (Education) and Special Interest Group 3.9 (Digital Literacy). She is a Chartered Engineer and a Fellow of the Irish Computer Society.

Dudley Dolan is a retired Senior Lecturer from Trinity College Dublin. He has been a Vice-President of CEPIS and a Trustee of IFIP. He is a Founder and Distinguished Fellow of the Irish Computer Society and an Honorary Fellow of the British Computer Society. He was Vice Chairman of the CEPIS User Skills Task Force, which developed the ECDL. He is currently Chairman of the CEN WS on ICT Skills.

In the Information Society of today, e-skills are vital for business, education and for normal daily living. The EU recognises this [1] and has defined e-skills in three areas - ICT practitioner skills, ICT end-user skills and e-business skills [2].

ICT practitioner skills include the competencies required by ICT practitioners, working in all areas of the ICT business. The CEN workshop on ICT skills has examined these needs and has defined a framework for ICT Professionals [3]. ICT end-user skills, often called "Digital Literacy", are the skills required for everyday living in the Information Society and have been defined at different levels, including ECDL, Microsoft Digital Literacy and others. The CEN Workshop on ICT Skills has recently completed a project examining the needs for a framework for End-User Skills. E-Business skills are those skills required to use ICT to identify and exploit business opportunities, to use ICT internally and externally in all business processes, and to improve business performance and competitiveness. In the magazine "ICT for Competitiveness and Innovation" [4], the EU stresses the importance of e-skills for innovation and to help economic recovery.

It is generally believed that investment in ICT brings worthwhile returns but it is not just a case of investing in technology, there must also be an understanding of innovation and the benefits of using new approaches to business. Successful companies actively cultivate new ideas, put those ideas to work quickly and efficiently, and harvest the business value benefits of successful innovations. The area of e-Business skills aims to ensure that the management of companies know how technology can be used to improve business processes. The limitations of the technologies should be assessed. It is just as important to avoid the use of unsuitable technologies as to select the appropriate technologies to meet the needs of the business.

E-Business can help an organisation gain competitive advantage, streamline business processes, enable collaboration and motivate employees. The ICT Skills Monitoring Group identifies a great need for ICT skills in "the growing importance of Internet technology, telecommunications devices and infrastructure and the increasing use of these technologies (ICT tools) to re-engineer business processes and to raise productivity." [5] The EU's definition of e-Business skills includes "e-leadership" skills where it is stated that "These correspond to the capabilities needed to exploit opportunities provided by ICT, notably the Internet; to ensure more efficient and effective performance of different types of organisations; to explore possibilities for new ways of conducting business/administrative and organisational processes; and/or to establish new businesses." [6] It is clear that a vital skill is the ability to identify new opportunities, to re-engineer business processes, to discover new ways of working; in short - to be innovative by using technology.

One of the innovative areas being pursued by many businesses is the use of social media for marketing and customer relationship management (CRM). This approach is particularly suitable for SMEs and can reap rich rewards when implemented successfully. Social media allows a company to develop a much more intimate relationship with its customers, can encourage feedback and bring a wealth of innovative ideas from the people using its products and services. It gives the company an opportunity to keep in touch with its employees in a more immediate way and can be used to motivate staff and encourage innovation from within. Internally focussed social media can be used as a means to empower the workforce. In order to use social media successfully a company must understand its own needs, the product range it provides, the services it offers and the market segment which it addresses. Clear business objectives to be achieved by the introduction of social media technologies should be defined and a strategy for the introduction of social media should be developed. The Forrester report of 2007 suggests a method for successful implementation of social media technologies. "First, examine the Social Technographics Profile of your customers. Second, choose your objective: listening to, talking with, energizing, supporting, or embracing your customers and their ideas. Third, build a strategy around changing your relationship with your customers. Finally, pick the appropriate technologies to implement. Companies that take these four steps in order and then put success metrics in place are the most likely to succeed." [7]

What specific e-business skills are needed to exploit the opportunities presented by ICT; is specific practitioner knowledge needed; and what end-user skills are required

by all e-business users? The full paper to be presented at the Zagreb IT Star Conference examines the skills required for e-business and suggests areas where further research regarding the development of "Innovation Skills" can be linked to the e-business skills agenda.

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E-Skills Manifesto

IT STAR and many of its members were actively involved in the European e-Skills Week campaign (http://eskills-week.ec.europa.eu), which was given wide visibility in previous issues of this NL.

One of the outcomes of this project is the e-Skills Manifesto, published by European Schoolnet and DIGITALEUROPE. The publication looks at the needs for e-Skills and suggests areas in which action needs to be taken; it covers various aspects of the issue – policy, education, competencies, environment, green IT, management and innovation. It is aimed at policy makers and ICT professionals.

With regard to EU e-Skills strategies – the development of the e-Competence Framework (e-CF), sponsored and continuously promoted by this NL (*see* 2009 and 2010 NL issues), is singled out in the Manifesto as uniquely providing a European multi-stakeholder agreed neutral reference for ICT practitioner competencies across Member States and all industry sectors.

For more on the Manifesto check http://eskills-week.ec.europa.eu; http://www.ecompetences.eu for e-CF.

MultiCulti

Destination – Zagreb

by Dorothy Hayden

Earlier this year I was in Zagreb, and, in view of the forthcoming IT STAR Conference there in November 2010, I thought a brief account with my impressions might be of interest to the IT STAR Newsletter readership.

The main tourist attraction in Croatia is its fantastic Adriatic coastline – Istria, Kvarner and Dalmatia, dotted by numerous islands – but Zagreb also has much to offer to the business and the pleasure traveler and the city's importance as a travel destination will increase with Croatia's accession to the EU.

The earliest record of the name Zagreb dates back to 1094 with the foundation of a diocese by the Hungarian King Ladislaus. Today, with a population of over 800,000 the capital of Croatia is the largest city and the country's political, economic and cultural center. It is well connected by road, rail, air and water – the Sava is an international waterway. It is home to more than a third of Croatia's workforce and has the highest nominal GDP per capita in the country. Zagreb consists of Gorni (Upper) Grad with a concentration of historical and cultural monuments, churches, restaurants and theaters, and Dolni (Lower) Grad, which includes the shopping area, parks, and museums.

Among the city's main attractions are the Cathedral of the Assumption with its twin spires (see *photo above*), St. Mark's Church with Croatia's coat of arms and checkered design of the roof, the Jelacic Central Square and pedestrian zone and the nearby Mt. Medvednica and lake Jarun. The Croatian National Theater was built in 1895 and opened by emperor Franz Joseph I of Austria. The University of Zagreb was founded in 1669 and is one of the largest and oldest in Southeast Europe. There are numerous museums and art collections such as the Mimara Museum located in a late 19th century neo-Renaissance palace, the Archaeological Museum, the Croatian Natural History Museum and the Museum of Technology.

My short visit just before Easter coincided with a spell of rainy weather and yet the impressions that I carried away were of a lovely city with a Central European character. My hotel was on the main shopping street named Ilica and my sightseeing included the marketplace close to the Cathedral of the Assumption, which was certainly a pleasant experience of color, sound and aroma. The cathedral itself is a landmark and temple of worship at all times to many

devout believers. Enormous Easter eggs, decorated by leading Croatian painters, were placed at the Jelacic Square and in front of St. Mark's Church, which is surrounded by an architectural complex of government and state buildings.

St. Mark's Church   *Cable Car to Gorni Grad*

A highlight of my visit was the dinner invitation of the President of the Croatian Information Technology Society at "Bistro Apetit", Jurjevska St. 65a. The restaurant is located in the Upper Town's green residential area. Wining and dining there would satisfy even the most demanding connoisseurs. It is run by an Austrian "4 toques" chef (and owner) with a wide international experience in the catering business, and is the choice of many local and international celebrities.

As we drove there, our Croatian companions referred to this area as the Zagreb Grinzing. Indeed, the scenery, villas, parks and atmosphere leave most pleasant memories.

Detailed information on Zagreb and its surroundings is available at http://www.zagreb-touristinfo.hr/?l=e ∎

Member Society News

Croatia

Croatian ICT Association – CITA

by Marijan Frković

Marijan Frković is Vice President of CITA and National ECDL Coordinator. He is the CITA representative to IT STAR.

The Croatian Information Technology Association (CITA) (www.hiz.hr), is the umbrella organisation of Croatian ICT experts. It was founded in 1975 with the objectives to create the conditions for faster and more efficient introduction and application of ICT by

- Advocating the status and the quality of profession
- Initiating and implementing projects of mutual interest
- Promoting and using open systems
- Encouraging and organising the participation of young people in ICT
- Exchanging skills and experiences in using ICT
- Organising professional gatherings

CITA participates in the work of international ICT associations of informatics experts – IT STAR at a regional level, CEPIS at European, and IFIP at a worldwide level. ECDL Croatia and EUCIP Croatia are active within CITA.

CITA holds the licence for certification of users of personal computers according to ECDL standards (www.ecdl.com) and (www.ecdl.hr), and the certification of professional ICT experts (www.eucip.com) and (www.eucip.hr) in Croatia. It participates in programs of the European Union.

The members of CITA are included in the implementation of the National ICT strategy, especially the strategy for electronic business in the Republic of Croatia for the period 2007 – 2010.

There are more than 200 legal entities and a few thousand individuals active in CITA.

This year, CITA celebrates its 35th anniversary of continuous activity and there will be several manifestations and conferences organised on the level of the umbrella organisation and its associations to mark the anniversary. One of the more significant ones is the international gathering of the member countries of IT STAR within the frame of which there will be a regional conference on electronically conducted business, to be held in Zagreb on 12 November, where it will be possible to exchange experiences in achieved levels of applications and with problems referring to the introduction of electronically conducted business in the countries of Central and Eastern Europe (http://www.starbus.org/ws5/ws5.htm).

There are several organisations, experts and users of ICT active within the scope of CITA aiming to introduce and apply ICT technology more quickly and more effectively, and to open opportunities for the exchange of skills and experiences, such as:

- Open computer systems and Internet
- Oracle technologies
- Young informaticians
- Linux technologies
- GIS technologies
- SAP solutions
- ECDL test centres

The Croatian Society for Open Systems and Internet (HrOpen) was founded in 1992 with the intention to promote the development and advancement in applying these systems in the Republic of Croatia. This is being implemented by organising seminars, lectures and workshops, by establishing the collaboration with experts and associa-

tions for open systems and Internet in Croatia and abroad, by encouraging the usage of program support in the field of Open Source and Free Software.

One of the most important activities of the Society is the annual conference «Open Systems Days» (DORS) organised for the purpose of informing people about open systems, their usage, the experiences of users and problems in application. It should also be added that HrOpen participates in training activities for teachers of primary and secondary schools to use open systems, and it is also very active in technical committees of the Croatian Institute for Standardisation in the field of open systems, introducing and applying international standards.

The Croatian ORACLE User Group (HrOUG) has been active ever since 1995, working on the exchange of skills and experiences of users in the application of ORACLE technologies, and on the improvement of the relationship between the users and ORACLE Corporation.

The annual conference of Oracle users needs to be specially singled. It gathers several hundred participants with the objective to make people acquainted with the new Oracle products and present new solutions, existing problems, presentations of Oracle representatives, etc.

The Croatian Society of Young Informaticians (HrSIN) was founded in 1985 with the intention to involve young informaticians, to carry out programs and to provide help to members, organise district and state competitions, winter schools and summer camps for informaticians, preparations and participations of young informaticians at international competitions, information schools and manifestations, and to organise competitions for software projects of young informaticians and their presentation. There are several thousand young people being active in HrSIN and the best of them participate successfully at state, regional, European and world Olympiads in informatics for young people, in which they have won more than 100 medals. HrSIN organised successfully in 2007 the International Olympiad in Informatics (IOI) in Zagreb, and this year they won one gold and three silver IOI medals in Canada.

The Croatian Linux Users Group (HULK) was founded in 1966 to promote the operational system Linux, to advise and inform the members about new achievements in open standards and technologies, to help those who are interested how to use Linux, to organise the program of translating well-known open programs and systems, to collaborate with other societies, such as HrOpen and other. HULK maintains the Central Linux portal in Croatia (www.linux.hr), organises central Linux conference (cluc.linux.hr), adjusts Linux to the users in Croatia, and generates open code programs.

The Croatian Society of Geographic IS (HrGIS) was founded in 1994 in order to make GIS technologies popular and organise education in GIS, to promote the production of national GIS standards, to participate at European projects and programs, to organise professional presentations at Croatian and international gatherings, to raise the level of skills in the field of GIS technologies at the facul-

ties and vocational schools, to collect and distribute publications and professional works in GIS. HrGIS organises successfully annual conferences titled „GIS Odyssey" where GIS works are presented and professional exhibitions and manifestations held. In collaboration with the embassy of the Republic of Poland in Zagreb the exhibition «New and Old Polish Maps» was held in Zagreb this year. An exhibition under the same topic will be held in Poland in 2011, this time with Croatian maps. In collaboration with the State Geodetic Agency from Zagreb and the one from Warsaw, the work on the project of producing maps and plans for blind and low vision people is being continued.

The Croatian Society of SAP users (HrUSKO) organises the communication of users with the firm SAP and helps in exchanging information among the members. It organises professional conferences for the users of SAP tool and databases, represents the interest of the members by publishing information on of their new products, organises a demo centre of new program products, as well as the teams for testing beta versions, organises the participation at Croatian and international fairs, exhibitions and conferences.

The Croatian Society of ECDL test centres (HrECDL) unites the activity of test centres in Croatia dealing with the problems of introducing and applying ECDL, the introduction of new versions of ECDL programs, publishing literature, ECDL marketing, and delivering the conclusions and suggestions to ECDL Croatia.

CITA has been working successfully on the ECDL program in Croatia since 2003. More than 50,000 employees, citizens, unemployed, persons with special needs and others have been working so far within the scope of some of the programs, with 40,000 of them having certificates to do so. The government of the Republic of Croatia has accepted ECDL as a standard in schools and state administration. So far, more than 20,000 teachers in primary and secondary schools and more than 2,000 employees in state administration have been certified.

In 2006, the 10th World Conference was held in Dubrovnik with the participation of representatives of 140 countries in which ECDL is applied. This gave full credit to CITA for its successful application of ECDL in Croatia.

In order to provide conditions for a faster development of electronic business in the region (with the information literacy being one of essential presumption), CITA organised in 2007 the first annual ECDL conference. The following conferences were held in Slovenia and Serbia. Bosnia and Herzegovina will play host this year.

CITA became a member of IT STAR in 2002. This was followed by membership in CEPIS and IFIP. It hosted the IT STAR Business meeting in 2003. These first initiatives present the beginning of CITA being active in international ICT organisations, which has significantly contributed to the acquisition and transfer of new skills in Croatia and the exchange of experiences, and has made Croatia more prepared for the transition to an information society.

Italy

AICA ANNUAL CONGRESS 2010

L'Aquila
Historic, Digital and Future-oriented

The city that rebuilds itself as an experimental lab of the national scientific and industrial ICT Community

September 29-30 and October 1, 2010
University of L'Aquila

AICA's Annual Congress is a national cultural event for the Academic, Industrial and ICT-user communities to meet and exchange ideas and experience on new developments in ICT and their application in all sectors.

The 48th Edition of the Congress is organized **jointly with the University of L'Aquila**, the city that was devastated by an earthquake on 6 April 2009.

The reconstruction is in progress and ICT is a driving force and facilitator.

AICA's Congress aims to help the process by offering a forum in L'Aquila to all stakeholders – researchers, teachers, professionals and managers coming from universities, research institutions, companies and public administration involved in the ICT sector – to exchange experience and achievement.

Please check http://aica2010.univaq.it and www.aicanet.it for detailed information on this major national event. ■

Slovakia

Slovak Society for Computer Science (SSCS)

The 37th International Conference on Current Trends in Theory and Practice of Computer Science will be held in Hotel Atrium, Novy Smokovec, Slovakia, in January 22-28, 2011.

Tracks:

- Foundations of Computer Science
- Software, Systems, and Services
- Processing Large Data Sets
- Security and Trust

SSCS is the organizer of this event, in cooperation with the Czech Society for Cybernetics and Informatics (CSKI).
■

IT STAR Congratulates IFIP

The International Federation for Information Processing **(IFIP)** comes to the age of 50 in 2010 and the Anniversary will be celebrated during the forthcoming IFIP World Computer Congress in Brisbane, Australia – http://www.wcc2010.com/.

IT STAR was founded under the auspices of IFIP and in 2004 took its own independent journey as a regional ICT Association. The good relations remain at various levels with links between the two organizations - most of IT STAR's member societies are IFIP members and many personal relations provide the yeast for mutual interest.

This Newsletter is also grateful to IFIP – its first 2 issues (*see* http://nl.starbus.org) were prepared at the IFIP Secretariat and we are glad that IFIP activists continue to contribute with content to this publication.

There are two retrospective projects we did for IFIP some years ago:

The Day of the President -
http://www.ifip.org/images/stories/ifip/public/Newsletter/1983to2003/2002-sep.pdf
http://www.ifip.or.at/secretariat/presidentday.htm

and **Visions from the IT Engine Room** -
http://www.ifip.or.at/secretariat/tcvisions.htm

which remain cornerstones in IFIP's history and it's a good time to recall their availability.

Congratulations to IFIP!

P. Nedkov
IT STAR Chief Executive and NL Editor ■

Type of organization

Regional non-governmental and non-profit professional association in the ICT field.

Date and place of establishment

18 April **2001**, Portoroz, Slovenia

Membership

Countries represented (*see next page for societies*), year of accession, representatives

- Austria (2001) V. Risak, G. Kotsis
- Bulgaria (2003) K. Boyanov
- Croatia (2002) M. Frkovic, M. Glasenhart
- Cyprus (2009) P. Masouras
- Czech Republic (2001) O. Stepankova, J. Stuller
- Greece (2003) S. Katsikas
- Hungary (2001) B. Domolki
- Italy (2001) G. Occhini
- Lithuania (2003) E. Telesius
- Macedonia (2003) P. Indovski
- Poland (2007) M. Holynski
- Romania (2003) V. Baltac
- Serbia (2003) G. Dukic
- Slovakia (2001) I. Privara, B. Rovan
- Slovenia (2001) N. Schlamberger

Statutes

IT STAR Charter http://www.starbus.org/download/charter.pdf adopted on 23 October 2004 by the IT STAR Business Meeting in Prague, the Czech Republic.

Mission

"To be the leading regional information and communication technology organization in Central, Eastern and Southern Europe which promotes, assists and increases the activities of its members and encourages and promotes regional and international cooperation for the benefit of its constituency, the region and the international ICT community."

Governance

IT STAR is governed according to the letter of its Charter by the **Business Meeting** of MS representatives:

2009   Rome, **Italy** (November)

2008	Godollo, **Hungary** (November)
2007	Genzano di Roma, **Italy** (May)
	Timisoara, **Romania** (October)
2006	Ljubljana, **Slovenia** (May)
	Bratislava, **Slovakia** (November)
2005	Herceg Novi, **Serbia & Montenegro** (June)
	Vienna, **Austria** (November)
2004	Chioggia, **Italy** (May)
	Prague, **the Czech Republic** (October)
2003	Opatija, **Croatia** (June)
	Budapest, **Hungary** (October)
2002	Portoroz, **Slovenia** (April)
	Bratislava, **Slovakia** (November)
2001	Portoroz, **Slovenia** (April)
	Como, **Italy** (September)

Coordinators

2006 –	Giulio Occhini
2003 – 2006	Niko Schlamberger
2001 – 2003	Plamen Nedkov
	(currently Chief Executive)

Major Activities

- 4th IT STAR WS and publication on Skills Education and Certification - http://starbus.org/ws4/ws4.htm
- 3rd IT STAR WS and publication on National Information Society Experiences – NISE 08 http://www.starbus.org/ws3/ws3.htm
- 2nd IT STAR WS and publication on Universities and the ICT Industry http://www.starbus.org/r_d_ws2/r_d_ws2.htm
- 1st IT STAR WS and publication on R&D in ICT http://www.starbus.org/r_d_ws1/r_d_ws1.htm
- IT Professional Pool Database (in progress)
- Workshop and publication on National Experiences related to the EU's 5th and 6th FP http://www.starbus.org/download/supplement.pdf
- Joint IT STAR – FISTERA Workshop on ICT and the Eastern European Dimension http://fistera.jrc.es/pages/roadshows/prague%2004/FINAL%20REPORTrevised.pdf
- Support to Member Society initiatives and events

Periodicals

The IT STAR Newsletter (nl.starbus.org) published quarterly.

Web-site

www.itstar.eu   ■

IT STAR Member Societies

Austrian Computer Society – OCG Wollzeile 1-3, A-1010 VIENNA, Austria Tel. +43 1 512 0235 Fax +43 1 512 02359 e-mail: ocg@ocg.at www.ocg.at	**Bulgarian Academy of Sciences – BAS** Institute for Parallel Processing Acad.G.Bonchev str.Bl.25A SOFIA 1113, Bulgaria Tel +359 2 8708494 Fax +359 2 8707273 e-mail: boyanov@acad.bg www.bas.bg
Croatian IT Association– CITA Ilica 191 E/II, 10000 ZAGREB, Croatia Tel. +385 1 2222 722 Fax +385 1 2222 723 e-mail: hiz@hiz.hr www.hiz.hr	**The Cyprus Computer Society – CCS** P.O.Box 27038 1641 NICOSIA, Cyprus Tel. +357 22460680 Fax +357 22767349 e-mail: info@ccs.org.cy www.ccs.org.cy
Czech Society for Cybernetics and Informatics – CSKI Pod vodarenskou vezi 2, CZ-182 07 PRAGUE 8 – Liben Czech Republic Tel. +420 266 053 901 Fax +420 286 585 789 e-mail: cski@utia.cas.cz www.cski.cz	**Greek Computer Society – GCS** Thessaloniki & Chandri 1, Moshato GR-18346 ATHENS, Greece Tel. +30 210 480 2886 Fax +30 210 480 2889 e-mail: epy@epy.gr www.epy.gr
John v. Neumann Computer Society – NJSZT P.O. Box 210, Bathori u. 16 H-1364 BUDAPEST, Hungary Tel.+36 1 472 2730 Fax +36 1 472 2739 e-mail: titkarsag@njszt.hu www.njszt.hu	**Associazione Italiana per l' Informatica ed il Calcolo Automatico – AICA** Piazzale R. Morandi, 2 I-20121 MILAN, Italy Tel. +39 02 760 14082 Fax +39 02 760 15717 e-mail: g.occhini@aicanet.it www.aicanet.it
Lithuanian Computer Society – LIKS Geležinio Vilko g. 12-113 LT-01112 VILNIUS, Lithuania Tel. +370 2 62 05 36 e-mail: liks@liks.lt www.liks.lt	**Macedonian Association for Information Technology – MASIT** Dimitrie Cupovski 13 1000 SKOPJE, Macedonia e-mail: indovski.p@gord.com.mk www.masit.org.mk
Polish Information Processing Society ul. Puławska 39/4 02-508 Warszawa Tel./Fax +48 22 838 47 05 e-mail: marek.holynski@gmail.com www.pti.org.pl	**Asociatia pentru Tehnologia Informatiei si Comunicatii – ATIC** Calea Floreasca Nr. 167, Sectorul 1 72321 BUCAREST, Romania Tel +402 1 233 1846 Fax +402 1 233 1877 e-mail: info@atic.org.ro www.atic.org.ro
JISA Union of ICT Societies Zmaj Jovina 4 11000 BELGRADE, Serbia Tel.+ 381 11 2620374, 2632996 Fax + 381 11 2626576 e- mail: dukic@jisa.rs www.jisa.rs	**Slovak Society for Computer Science – SSCS** MFF UK, Mlynska dolina SK-842 48 BRATISLAVA, Slovak Rep. Tel. +421 2 65426635 Fax +421 2 65427041 e-mail: SSCS@dcs.fmph.uniba.sk www.informatika.sk
Slovenian Society INFORMATIKA – SSI Vozarski pot 12 SLO-1000 LJUBLJANA, Slovenia Tel. +386 123 40836 Fax +386 123 40860 e-mail: info@drustvo-informatika.si www.drustvo-informatika.si	