Newsletter - Calibrated for Creative Communications

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In April this year IT STAR will mark its 10 Anniversary ... in Portoroz on the Adriatic coast, the place where it was founded on 18 April 2001. 10 is still a tender age for an organization, yet it would not be an exaggeration that a lot of valuable experience was picked in these formative years and IT STAR has developed the potential to facilitate a useful debate and initiatives at the national, regional and pan-European levels.

The Anniversary is an occasion for some celebratory rhetoric but it is also a good time to assess the journey to this junction and map the road that lies ahead.

This issue includes an article on the origins of IT STAR and the milestones until now. It also contains a section with views of some leading individuals, nationally and internationally, on developments in their societies, countries and the IT STAR region on the backdrop of the European Digital Agenda - 2011 and beyond. This is a good basis to help the Association face the future and pool its member societies' intellectual resources to identifying future areas and concrete projects in which IT STAR could play a useful role within the ICT community at large.

Join us,

Plamen Nedkov

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Editor

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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.

"Thank you again for your great contribution to the organization and holding of a very successful conference on electronic business, in Zagreb. I am confident that the next conference on this topic will continue in other IT STAR member states to contribute to the introduction of the Information Society in Europe.

This publication on electronic business is permanent proof of a very successful conference held in Zagreb, which is your merit and will be a good reference for the success of the next IT STAR Conference and IT STAR organizations in general."

Marijan Frkovic, CITA – Croatia ■

10th Anniversary Cake

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

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. ■

10th IT STAR Anniversary

The Origins of IT STAR

Plamen Nedkov

Plamen Nedkov was Head of Department for International Organizations at the Bulgarian Academy of Sciences and Executive Director of the Sofia Office, International Foundation for Survival and Development of Humanity. He served in various capacities in IFIP, including as IFIP Executive Director. He was delegate to many sessions of UNESCO's General Conference and elected representative to the NGO-UNESCO Liaison Committee. Plamen is currently Chief Executive of IT STAR.

In April 2000, I was in Portoroz, Slovenia by invitation of Niko Schlamberger, President of SSI "INFORMATIKA" and Slovenian representative to IFIP, to speak at the opening of their Annual Conference "Days of Slovenian Informatics". Following the opening Niko and I had some time to discuss various matters and we agreed that there is a need of a stronger regional ICT cooperation. We also agreed to prepare a meeting of senior representatives of computer societies, active in IFIP and within the immediate geographical vicinity, during the 2001 edition of "Days of Slovenian Informatics".

The meeting was organized and held on 18 April 2001 in Portoroz with the participation of Giulio Occhini, CEO of AICA-Italy, Balint Domolki, Honorary President of NJSZT-Hungary, Veith Risak, Past-President of OCG- Austria, Niko Schlamberger, President of SSI-Slovenia, Peter Bollerslev, President of IFIP and myself, IFIP Executive Director.

We had an exchange of opinion on the usefulness of encouraging regional cooperation and everyone was positive about the need to establish a mechanism to support this. I had prepared a draft for an agreement to be discussed in Portoroz - the proposal was to form a regional committee under the auspices of IFIP named **IT STAR** (**STA**nding **R**egional committee). My proposal was to consider the draft in Portoroz and then to allow time for the representatives to discuss it within their societies before confirming. The first to react was Giulio Occhini who said, " Why wait? We could sign this statement immediately." Everyone agreed and so it was decided to found a standing regional committee, under the auspices of IFIP, named IT STAR, with the purpose to assist regional contacts and cooperation on topics within the IT field.

Soon after this initiative was announced, some joked that it was a resurrection of the Austro-Hungarian Empire.

The founders however were dedicated, the idea of closer regional contacts was appealing and very soon there were more societies wishing to join. The geographical region

IFIP Information Release distributed on 20 April 2001

Portoroz, Slovenia, 18 April 2001 - The IFIP President addressed the participants of the Annual Conference of IFIP's Slovenian Member Society and talked about IFIP's activities, priorities and challenges. The Minister of the newly established Ministry of Information Society was among the dignitaries and in his speech described the role of the Ministry as having to "bulldoze" the way of the information society in Slovenia.

Greetings were delivered by representatives of IFIP Member Societies from neighboring countries who earlier that day held a Regional meeting in Portoroz to consider more intense contacts and cooperation on a bilateral and multilateral basis.

The Regional meeting, jointly chaired by the IFIP Executive Director and the President of the Slovenian Society "Informatika", adopted the following Statement

MEETING OF REPRESENTATIVES OF THE COMPUTER SOCIETIES OF AUSTRIA, HUNGARY, ITALY AND SLOVENIA

Portoroz, 18 April 2001 - The Computer Societies of Austria, Hungary, Italy and Slovenia met today in Portoroz, Slovenia to inform each other of their national IT priorities, activities and initiatives and to explore areas of common interest for future regional and international cooperation.

The participating societies recognize IFIP's authority and potential to initiate important international activities and are grateful to IFIP for providing its auspices to the meeting and for its willingness to continue supporting the efforts of its members in establishing closer regional links.

The meeting agreed to establish an IT STAnding Regional (IT STAR) Committee for cooperation of the participating societies. Its function would be to assess the current contacts and to assist and monitor the development of bilateral and regional programs for scientific and technical cooperation. IT STAR membership shall consist of one representative of each participating society and IFIP. It will remain open for other societies from the region.

SIGNED:
For OCG-Austria by V. Risak, Past President
For NJSZT-Hungary by B. Domolki, Honorary President
For AICA-Italy by G. Occhini, Board Member
For SSI-Slovenia by N. Schlamberger, President

represented in IT STAR expanded to Central, Eastern and Southern Europe (CESE) with 13 national IT organizations involved in IT STAR by the end of 2003.

A milestone for the future of IT STAR was the meeting on 8 May 2004 in Chioggia, Italy. There, the delegates endorsed the well-functioning regional contacts and cooperation within the IT STAR framework and stressed the need to develop an identity of a regional organization of national member societies with its own specific agenda and activities. A Mission statement and an IT STAR Charter were soon developed and endorsed on 23 October 2004 in Prague, the Czech Republic. IT STAR's mission was defined *"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"*.

The IT STAR series of events and publications was launched with the 1st IT STAR Workshop on R&D in ICT held on 11 November 2006 in Bratislava, Slovakia. Following the event, Giulio Occhini[1] was chosen as the 3rd IT STAR coordinator, and, in view of the increased level of activity, I was chosen to serve as IT STAR's Chief Executive.

Since then, many other important initiatives were implemented and this has been well documented in the IT STAR newsletter *[please check p ages 14, 15 and 16]*.

Going back to the original "2000 impulse" for closer contacts in this region - we had no recipe how this should develop but we were determined that there is an important niche … and the founding members and the individuals and organizations that soon joined found it!

IT STAR can now justify itself with its experience as a successful organization that delivers to its membership and to the international ICT community. It is unique in the sense that with minimal resources it succeeds in supporting a forum of stakeholders coming from academia, industry, government and civil society, within a regional and an international setting. ■

1 Coordinators: P. Nedkov (2001-03), N. Schlamberger (2003-06), G. Occhini (2006-10), I. Privara (2010-12)

THE EUROPEAN DIGITAL AGENDA – 2011 AND BEYOND

On the backdrop of the Digital Agenda for Europe (see planned actions at http://ec.europa.eu/information_society/digital-agenda/index_en.htm) we invited several presidents of IT STAR member societies, the Chairman of the Board of the European Information Technology Observatory and some experts to focus on the priorities of Central, Eastern and Southern Europe (the IT STAR region) by sharing their views on strengths and weaknesses of their professional societies and countries as witnessed within the current format of EU ICT collaborative programs, expectations and priorities for the immediate future, and areas of EU ICT programs and cooperation, which they find most relevant for their countries, societies and the IT STAR region.

These articles present short powerful statements intended to stimulate further discussion in order to assist policy-making at the national, regional and European level on strategies, priorities, usefulness, and deficiencies of approaches, programs and collaboration in the ICT field.

This material is dedicated to the 10th Anniversary of IT STAR and our intention is to expand this strategy and policy-making exercise by inviting other member society presidents and leading European experts to share their views in forthcoming newsletter issues.

The Editor

Digital Agenda for Europe in 2011 and Beyond

Bruno Lamborghini

Bruno Lamborghini is Chairman of the European Information Technology Observatory (EITO). He was president of AICA until 2010. Bruno is currently Vice President of AICA and professor on Information Society at the Catholic University of Milan.

The IT market in Europe has started a strong recovery after the 2009 crisis: according to latest EITO analysis, the expected average growth in 2011 for the European IT market is around 4%, with stronger dynamism (from +7% to 10%) by the Baltic States, Rumania and Slovenia. At world level (average ICT growth of +5%) high growth is shown by the BRIC countries: China at 12% rate, India at 26% rate, Brazil at 7% and Russia at 8%.

Information and communication technologies are now the drivers of a new era of industrial and social development at world level. Web services like Facebook or Twitter are the engine of recent political and social changes in North Africa and Middle East, moving millions of people in various countries at the same time. Information by text or video is being shared instantly all over the world, independently from languages or cultures. People exchange every second ideas, events, knowledge in a global environment, a lab opened to everybody bypassing educational levels and digital divide.

The digital revolution can produce advantages or on the contrary new problems; it depends from the target and the use of it. It is a process without end and we have to work on it in order to reach most positive objectives in terms of economic development, social progress, well-being and quality of life for everybody in all areas.

In the new cycle Europe has a major role to play, being a model of political and economic union based on wide cooperation between a range of countries with a highly educated population and a wide diffusion of digital networks.

The main asset is not technology in itself but people, skills, competences, intelligence, shared knowledge. Europe and especially Eastern and Central Europe have many of the resources required in the new scenario.

Europe however has not to lose momentum and move on rapidly through investment in broadband networks: broadband for all as clearly requested by EU Commissioner Kroes, who also emphasizes the need to apply an EU-wide cloud computing strategy in order to create an EU-wide access to the infinite stock of computing resources available and disposable to all, citizens, administrations, organisations.

The second round of the Lisbon strategy, the Digital Agenda 2010-2020, appears more realistic and focused on concrete targets.

There are certainly some fundamental targets in overcoming present national borders in telecommunications such as in the spectrum policies or in roaming and in what is called by the Agenda "the Non-Europe in telecommunications networks" (Action 20), but also the convergence between telecommunications and digital television which is today a reality in web networks but not at all in the traditional industry.

In Italy we are suffering because of the defensive short vision of obsolete ways of doing business, which are causing delays in adopting digital technologies in education, SMEs and public administrations.

AICA has produced detailed analysis about the cost of the IT ignorance of the Italian public administrations, schools, SMEs and healthcare organisations.

The Digital Agenda in our view should focus even more on education, e-skills, and digital literacy policies (Action 66), on recognising and identifying competences (Action 62) and also on e-Learning (Action 68).
CEPIS and AICA since many years are working to create a EU-wide environment for certifying e-skills and professional profiles building a European basis of competences which can speed up on one side the Digital Agenda and on the other side a real unification of Europe form North to South, from West to East through European certified professionals.

The EUCIP certification should be the brick on which to build the EU professional ICT profiles, following the Digital Agenda.

A main reference of the Digital Agenda is the evidence that in Europe "too many barriers still block the free flow of on line services over national borders". It is clear that many actions have to be taken at political level such as creating common legal frameworks, common trust and security issues, common standards with regard to API development, IPR regulation, on line content market issues, but we clearly consider fundamental the diffusion in Europe of a common understanding, a shared view of the target to be reached at all professional levels and at all generational levels.
This can be achieved through the preparation and education of people during their lives.

The Knowledge Society we are entering requires basically smart competences, shared knowledge, no borders, no barriers between countries or cultures, exchange of skills and jobs opening to permanent innovation and creativity based on social and cultural "mash-up".

IT STAR is clearly moving in this direction and is pushing Europe to change and to an active role in the new digital scenario at world level. ■

The Digital Agenda for Europe and Slovakia

Branislav Rovan

Branislav received his PhD in Computer Science from the University of Southern California in Los Angeles in 1972. He is currently President of the Slovak Society for Computer Science and a full professor at the Comenius University in Bratislava. His broad scope expertise is in informatics and information technologies with a main focus on foundations, education, and information society issues.

He is a founding member of the Department of Computer Science (1974), designed the first comprehensive computer science program in Czechoslovakia (1973), co-designed informatics education program, established in 1982, for preparing teachers of informatics for high schools. Mr. Rovan spent several years as a visiting professor at universities in Kuwait, Boston, and Paderborn and was invited to give talks at conferences and universities in Europe and the USA. He served on the Boards of Directors of the European Mathematical Trust, the European Research Consortium for Informatics and Mathematics, and on the Council of the European Association for Theoretical Computer Science in the capacity of the Secretary General (1995-2006).

The Digital Agenda for Europe is a much needed and most welcome amplifier for the efforts of Slovakia in the ICT area. These efforts touched upon most of the areas of the planned Digital Agenda actions. However, the intensity and outcome varied significantly among the areas. Just like in many European countries the most vividly developing area was IT infrastructure, internet infrastructure in particular. This was in line with the EU criteria for measuring success of countries in the informatization of the society and also in line with the interests of the providers. Moreover this was the area where it was easiest to demonstrate results provided large amount of money was allocated for the projects. While it is definitely positive to have good infrastructure, just a slight slowdown in this area would free much needed finances for bringing up users and content to the level that would allow for a more sound use of the infrastructure.

This note cannot give a full account of the ICT area in Slovakia. Let me concentrate on few examples showing the involvement of the Slovak Society for Computer Science (SSCS). We stepped in the preparation of the Strategy for informatization of Slovakia thereby helping a long overdue document to be formulated and later adopted by the government. The main action areas correlate well with the planned Digital Agenda for Europe. A working group of SSCS prepared a proposal of the law for electronic signature, which was approved by the Parliament instead of that prepared by the Ministry of Economy. Our group of experts prepared a Project for Education in Information Security for the Ministry of Finance, which is responsible for the IT sector. SSCS provided arguments for introducing compulsory informatics education in every year of the basic education within the latest school reform of the Ministry of Education. We also partner with the Ministry of Education in organizing the Olympiad in Informatics thereby catering for the most talented high school students in the IT area. Last but not least SSCS is running the ECDL Program in Slovakia providing incentive and uniform European de facto standard for achieving basic competence in the use of IT.

Despite the above 'success stories' SSCS did not manage to convince successive Slovak governments to invest more in research in IT. One can take this as a consequence of the unfortunate fact Slovakia is trailing the EU countries in its research funding with less than 0.5 % of GDP. Neither we managed to convince the decision makers that it is difficult to expect innovations without building up a pyramid of competence with high quality fundamental research at the top and educated practitioners at the bottom served by several communicating layers of competence transforming the understanding of new knowledge to those who can turn it into innovations. The latter is to the best of my knowledge a common problem in the EU, together with the fact that it is not generally realized that the pool of fundamental ideas in informatics is drying up and the old ones have lesser potential to bring innovations. We have become used to the fact the IT technology is consistently overtaking our understanding of its use and the consequences thereof. Take the notion of 'information', which is very basic to our field. We can measure its amount for over half a century but do we understand what are its other aspects that became important with the new ways of using and handling it (e.g., usefulness, relevance, trustworthiness, etc.)? The mass destruction arms of the past century threaten our physical existence. Is the technology we developed less dangerous because it 'only' threatens our psyche? Is the society prepared for the dramatic changes in its very basic functioning the IT brings? Indeed, IT brought so many positive things that I may sound exaggerating dangers. However I do believe that we really need to start catching up in understanding IT and this needs a lot of research (and some research funding as well). Another area where SSCS did not completely succeed in is standards. Although we managed through our representatives in the standards committees to keep the open standards in the public administration, these are still not massively used in practice. This may be a consequence of the fact that IT projects for the public administration tend to be huge and the multinationals frequently succeeding in winning the tenders have a natural tendency to ditch in and make the possibility of some other company bringing in some add-ons rather remote. Making the projects of smaller size could bring an architecture allowing interoperability making it easier for others to join. Besides, smaller projects would decrease the danger of corruption, frequently cited among the top problems in the new member states.

Slovakia can and hopefully will contribute to all planned actions of the Digital Agenda. However I expect the contribution is most likely in the areas of research, security, and enhancing e-skills. The Slovak Society for Computer Science will do its best to be instrumental in the Slovak participation in the Digital Agenda. ■

Lithuania in the context of the European Digital Agenda

Saulius Maskeliūnas, Linas Eriksonas

Dr. Saulius Maskeliūnas is President of Lithuanian Computer Society. He is head of Artificial Intelligence section, deputy director and researcher at the Institute of Mathematics and Informatics of Vilnius University.

Dr. Linas Eriksonas is Project Manager at Europarama, an R&D and innovation consultancy firm, a member of the European Techno-Economic Policy Support Network. He has conducted policy analysis for DG INFSO, DGRTD, DG REGIO and DG Enterprise, and has been managing the ICT RTD technological audit in Lithuania.

The approval of the European Digital Agenda is a milestone. The thorough understanding of ICT importance for the successful further development of societies and economies – as presented in European Digital Agenda and other EU strategic documents – can bring real benefits for Lithuania and other EU countries if put into practice. Thanks to the announced Digital Agenda, ICT policy related questions (such as to improve standard-setting and interoperability and boost research and innovation in ICT) have received the highest level of approval in Brussels, so it might seem that nothing stands in its way to implementation. Is that so in Lithuania?

Here we will consider the potential barriers for the Digital Agenda in Lithuania caused by the patchy national policy, the weak involvement of the national ICT R&D institutions in the European Research Area (especially in the Framework Programme), and the role of Lithuanian professional ICT societies, which can play a part in putting the Digital Agenda to practice.

Barriers to the Digital Agenda at national policy level

The difficulties of ICT policy in Lithuania are partially caused by the lack of main responsible authority for overseeing the policy in ICT; the functions related to the sector are divided between several ministries, namely:

- Ministry of Transport and Communications (ICT infrastructure, Information Society development, e-signature, e-document management infrastructure, e-business support);
- Ministry of Interior (trust and security, public and administrative services, e-Government, e-Democracy);
- Ministry of Economy (support of R&D and innovations in SMEs);
- Ministry of Science and Education in collaboration with Research Council of Lithuania (ICT education, e-Learning, public R&D);
- Ministry of Social Security and Labour (environments for individualised e-Learning and Lifelong Learning);
- Ministry of Culture (digital content, Lithuanian language in ICT);
- Ministry of Health (e-Health).

Information Society related questions are coordinated by Information Society Policy Department and Information Society Development Committee (ISDC) of the Ministry of Transport and Communications. ISDC was under the Government of the Republic of Lithuania until July 2010; during the reorganisation ISDC staff has been significantly reduced; on the other hand, the current attitudes of new ISDC leaders are more constructive, aim-oriented.

Recently the Ministry of Transport and Communications has prepared "Lithuanian Information Society Development Strategy, 2010-2015" (LISDS). Here the stated priorities, aims and tasks conform to priority areas and key actions of European Digital Agenda; except 1 additional task of national importance and 1 lacking priority area of Digital Agenda. I.e., it includes aim "Upholding Lithuanian culture and Lithuanian language with help of ICT" (not covered directly by Digital Agenda), and does not mention "Encouraging investment in Research and Development" priority area.

Barriers to the Digital Agenda at ICT R&D level

Lithuanian ICT R&D is the most problematic among Digital Agenda priority areas, and should receive special attention in the future.

The ICT R&D community lacks a strong political backing, which reflects in the allocations of programme-based funding, the existing policy strategies and programmes compared to other more prioritized R&D fields (such as medicine, biotechnology and lasers). The barriers in the ICT RTD policy environment are: (1) The lack of understanding of ICT as an important area of research and no real commitment to ICT RTD as the national priority; (2) The lack of focus in defining the national needs in ICT RTD; (3) only occasional and nominal involvement of ICT researchers in policy planning.

Though the number of tertiary graduates in science and technology per 1000 of population is well above the EU27 average and has been growing, yet the level of public expenditure on education and R&D as a percentage of GDP has been stagnating.

ICT business is dominated by telecommunication services and IT infrastructure-related software services (which are traditionally less R&D intensive than IT technology development firms). The level of expenditure for telecommuni-

cation hardware, equipment, software and other services as a percentage of GDP in Lithuania in 2009 (3.1%) was slightly above the EU27 average (3.0%) and the EU15 average (2.9%). However, Lithuania is much more behind its exports of high-tech products in the total exports – 4.7% versus the EU's average of 16.7%. This indicates that the national economy lacks a crucial supply-and-demand mechanism for ICT RTD relevant sectors.

Such ICT R&D situation can be improved with the following measures: (1) Creating conditions for increased motivation to participate in FP activities in public sector by restructuring national funding and reshaping public RTD entities evaluation criteria system accordingly; (2) Establishing framework conditions for aligning national ICT priorities with those of EU through supporting networking activities and involving experts with expertise on EU ICT priorities; (3) Reinforcing existing science-industry partnerships and their linkages with EU counterparts; (4) Utilizing the potential of bottom-up research activities in ICT RTD through increased national funding for COST and EUREKA programmes; (5) Establishing national framework for proactive position of Lithuanian entities in project preparatory activities; (6) Supporting the formation of clusters which are able to produce commercially viable results; making a higher use of science and technology parks as drivers for such clusters; (7) establishing competence building schemes for scientists with the focus on skills building, simulation processes, product development tasks and cross-field horizons.

Opportunities for the Digital Agenda for professional ICT societies

International and national ICT societies and associations can have a significant role in Europe: influencing governments and EU policies by means of different activities performed and roles taken, affecting research, innovation, education, society. By the way, the IT STAR Association shows a very good example of networking, experience exchange, publishing and other highly important activities in Central – Eastern – Southern Europe.

The main professional ICT societies in Lithuania are Infobalt Association and Lithuanian Computer Society. Infobalt Association (with ICT and office equipment companies, institutions as member societies) represents Lithuanian ICT business interests; participates in working groups for different Government legislatives, strategies, and in development of Lithuanian ICT market; organises various events; is an active member of the European ICT Industry Association DIGITALEUROPE, etc.

The Lithuanian Computer Society (LIKS) is a social association of ICT professionals, users, and amateurs; a member society of IFIP, CEPIS, ECDL Foundation, IT STAR, ECCAI. LIKS has specialised sections and pursues multiple activities, but the main are enhancing digital literacy (ECDL) and organising biennial multi-even "Computer Days" (with ICT scientific conference, ICT in school education conference, LIKS Congress, Workshop on ECDL implementation activities, Discussion on Information Society Development). This year on September 23–24 it will take place in Klaipėda (www.liks.lt/kodi_en); interested international participants are sincerely welcome, too!

■

ICT - 2011 and Beyond

Niko Schlamberger

Niko Schlamberger is President of the Slovenian Society INFORMATIKA. Niko has served the international ICT community in various functions including as IT STAR coordinator, IFIP Vice-President and CEPIS President.

To start with, the EU vision of ICT has not begun by producing the Digital Agenda for Europe 2020. After 1992[1] one can see a sequel of EU strategic documents[2] which, together with operational ones that foresee also the financial sources[3], provide for a consistent perspective of how and in what direction the EU should progress to ensure competitiveness, social security, and a better life for all – requirements that are seemingly inconsistent but the documents are persuasive. In my view the most important milestone was the Bangemann Report (which brings me to the sectoral aspect). The document is truly visionary in that it firmly defines the information society as the future for Europe and that it without any doubt points out the private sector[4] as the motor of progress. Of the other three institutional sectors, the public sector – government in particular – is responsible for a favourable legal environment, the households take what they are given[5], and the civil society as an independent entity offers its advice, opinion, and criticism mostly to the first two. As I in this context speak for the civil society my contribution will be so oriented.

The regional aspect is more closely related to special political and economic circumstances of my country. Needless to point out is that this is a country in transition, which is rather hard to comprehend for someone that has not shared the history and culture. The fact is that this is a three-

1 Insieme: 1992, *Toto Cutugno* (Insieme, unite, unite, Europe)
2 Bangemann Report Recommendations to the European Council:
Europe and the Global Information Society (1994);
G7 Ministerial Conference 25-26 February 1995;
"Electronic Commerce in Support of the SMEs - The White Book, results of the Lyon Workshop, 5-6 March 1997";
Results of the First Annual Conference, Bonn, 7-9 April 1997 "G7, a Global Marketplace for SMEs.";
eEurope 2005: An information society for all;
i2010 - A European Information Society for growth and employment.
3 Framework Programs and other
4 Classification of entities of a society that contribute (positively or negatively) to a country's GDP.
5 But not altogether so as every four years by election they show if their expectations towards the politics were met.

in-one process that includes domestic politics, economics, and European and global aspects all of which need to be completed successfully. Slovenia is a small country with all kinds of resources rather smaller than those of the countries of the region. However, there is one commodity that does not depend on GDP, count of population, or natural resources – knowledge. Using our understanding of the culture, history, and the languages of the region we could become an important player in the region. I believe that there are assets lying in there that we have hardly perceived, let alone exploited. The entity to do this is the private sector with the necessary support of the government.

As for Civil Society, there is in my view little for it in the referred documents. This in itself is not so bad as agreeing with tasks and accepting resources is correlated to a loss of independency. SSI has followed the example of the Bangemann Report and has in 2000 produced a publication *The Blue Book: Slovenia as the Information Society*. This was the first attempt to offer a consistent vision of where Slovenia should go, and how. If we wrote it today the goal would still be the same but the road would be somewhat different. We have proposed Slovenian "Bangemann" applications, some of which have been realised by now. There are some phenomena that have emerged in the ten years from the Blue Book and we should take them into account. The result would be possibly new Slovenian Bangemann applications but also activities that are not in an immediate relation with DAE 2020 but are of vital importance for getting there. A good idea would be to revisit *The Blue Book* after ten years or so to see what lessons have been learnt and to see what to do next. This is also something that could be recommended to IT STAR. Most of the respective countries would probably appreciate an impartial opinion, view and advice.

Digital literacy is one of the issues that is still far from being closed. It is obvious that, similarly as in industrial society where people need to be literate, in the information society people need to be digitally literate. But not only that: what is waiting out there is a digital gap of second order related to functional digital literacy and digital competence. Professionalism in ICT is another major issue. We are all well aware of job killer applications but less do we think about killer applications, which are to do with correct programming of intelligent devices. Just to think how many people's lives depend on built-in microcomputers from home appliances to avionics. ICT professionals, which are in charge of producing flawless software are in short supply which can have a harmful influence on quality of their work. Privacy and data retention together with personal data protection is another topic that has not yet seen clear-cut solutions and regulation. While it is clear that privacy starts when we enter our home and ends when we leave it there is still a vast grey area in between. Do we need to ask permission of all people standing in front of the Milan Cathedral if we would like to take a photo? Is it even possible to do this? Green computing seems to be yet another buzzword but there is more in it than meets the eye. The idea of paperless office is decades old but apparently it somehow cannot break through. The bottom line of green computing is that it must give more than it takes. There is no easy way to achieve this goal but the idea is there and eventually it must bear fruit if not in paperless computing then at least in much less use of paper than is the case now.

The overview of issues above is only a short list of important topics where the civil society needs to increase influence regardless that the players are mostly elsewhere – governments, commercial companies, and households. It is within the power of civil society that it asks right questions and requires answers and action of those which have power to act or are responsible, or both. On the other hand it has also mechanisms to actively intervene in certain areas such as digital literacy and professionalism. All of this is of general relevance and necessarily, too, of IT STAR countries and their computing societies. The forum that we have in IT STAR must facilitate exchange of ideas, coordination of activities and dissemination of best practices. DAE 2020 does not seem to offer any immediate resources to support such activities but that is less important. Fundamental is that there is such a document, that finance is available to carry out the necessary activities of governments, and that the civil society keeps an eye on how the agenda will be coming along. SSI as a part of civil society surely does understand that and I trust it will accordingly perform nationally, regionally, and EU-wide. ■

IPTS

The Asian rise in ICT production and research[1]

Marc Bogdanowicz

Marc is Principal Scientific Officer at the Institute for Prospective Technological Studies (IPTS), Joint Research Centre (JRC), European Commission and is currently managing the 'Information Society and Growth' research activities of the IS Unit.

Economic growth in Asia, in particular in the so-called emergent giant economies of China and India, is an acknowledged evidence. Meanwhile, how such growth might affect the ICT industry and its R&D is still under debate.

1 This article is largely inspired from to background documents prepared by J.-P. SIMON (IPTS) for the Asian Rise Conference held by IPTS in Brussels in February 2011. Those documents themselves owe a lot to a series of studies, some of them commissioned by IPTS itself. We are grateful to all those authors for their generous commitment to those reports and to the Conference

To actively participate to such debate, the JRC-IPTS[2] of Sevilla has been studying the rise of Asian countries since 2005 and has delivered a range of reports. Early 2011, it has organised a large international conference to give to some 20 experts, European and non-European authors of studies of Asian ICT, the opportunity to present and contrast their findings and their views about the role of European vis-à-vis Asian ICT industry.

This article introduces very briefly the reader to two major countries under scrutiny - China and India. Further information is directly available from the new webpage dedicated to this theme by the IPTS[3].

China

With an area of 9,596,960 square kilometres (3,696,000 square miles) and a population of 1,328 000 inhabitants (2008), the People's Republic of China is the most populated in the world and the largest country in Asia, the third largest in the world, next to Russia and Canada.

China is a country that went since the early eighties through accelerated reforms and economic growth, while opening its doors to global trade, commercial agreements at WTO and outside WTO, and to FDI flows. Since the reforms and opening up policies after 1978, the Chinese economy moved from a centrally planned system to a more market-oriented economy with a rapidly growing private sector. China is becoming the manufacturing engine of the world and is already a major player in the global economy.

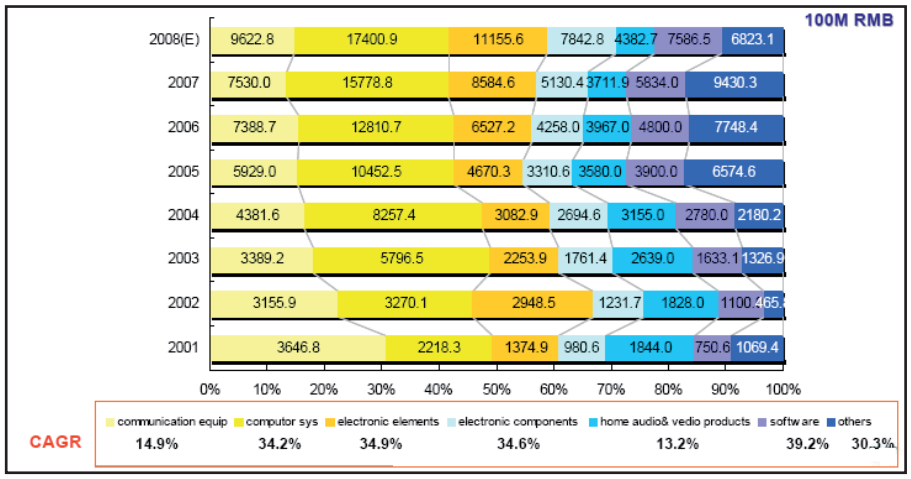
China's GDP has achieved a more rapid growth than most countries in the world. In real prices, China's average annual growth rate has reached 9% for the period of 1978-2008, much higher than 2.29% and 3.06% growth rate for the Euro Area and for the world at the same period (World Bank, WDI Databases, 2009). In 2006, China's GDP was 6156.32 billion US$ on a purchasing power parity (PPP) basis, the 2nd largest in the world after US, being about 42% of total EU27 (World Bank, 2009). The GDP per capita has grown steadily with a compound annual growth rate of 12.8% during the last decade, reaching 1857 € in 2008. Still, GDP per capita lags at a very low level, ranking China far behind the US or the EU equivalent.

China is also the second biggest trade partner of the EU (after the USA) whilst the EU itself is China's most important trade partner (2007) accounting for 6% of EU27 exports and 16% of EU27 imports. Between 2000 and 2008, EU27 trade in goods with China more than tripled in value with EU27 exports to China rising to EUR 78 billion in 2008 compared with EUR 26 billion in 2000. During this period imports rose to EUR 248 billion from EUR 75 billion. Among the EU27 Member States, Germany was the largest exporter and importer for China, accounting for 43% of EU27 exports to China and 21% of EU27 imports from China. Nearly 60% of EU27 exports to China in 2008 were machinery and vehicles, more specifically aircraft and motor cars, while the main imports included computers, parts, mobile phones and video games.

The information and communication technologies (ICT) sector in China is certainly representative of the massive changes in the Chinese industry and economy. It has developed a strongly growing manufacturing arm, with large inward and outward FDI flows and export-led activities. Since China's economic reform and opening-up in 1978, China's ICT manufacturing has been growing rapidly. Over the last years the Chinese government has been paying more and more attention and investing more in the sector. The sector has seen a very rapid growth from 2000 to 2004 with growth rate of 45% per year, and from 2005 to 2007 it became a steady 20% growth. However since 2008 it went through a sharp slowdown with a growth rate reduced to 5% allegedly due to the lack of R&D over the last ten years.

Figure 1 introduces to the distribution of sub-sector revenues of the Chinese ICT industry and its recent evolution

Figure 1: Sub-sector revenue of China ICT industry from 2001 to 2008[4]



Source: Ministry of Industry and Information Technology (MIIT), 2010

Manufacturing dominates China's ICT industry. A total of 80% of the ICT industry revenue comes from computer systems, electronic elements & components, communication equipment and home audio & video products. In 2007, China produced 48% of phone handset, 46% of PC, 42% of colour TV, 65% of monitors, 58% of program-controlled switchboards, and 57% of digital cameras for the world. Meanwhile China's software industry continues to grow rapidly, with an increase in sub-sector revenue from 6.3%

2 The JRC-IPTS is one of the seven research institutes of the JRC, European Commission.

3 See at: http://is.jrc.ec.europa.eu/pages/ISG/PREDICT/AsiaICT.html. This page, dedicated to the Asian Conference of February 2011, will be progressively amplified with some additional 20 reports covering most of Asian countries.

4 100 Chinese RMB are approximatively 10.9 Euros

to 11.7% in the last 8 years. Huawei, ZTE and Digital China ranked top 3 software companies in 2008 with respective revenues of € 5.43 billion, € 2.52 billion and € 1.08 billion from their software activities (MIIT, 2010).

China's ICT sector has played an increasingly important role in China's industry, the total economy and international trade. In terms of industry segments, the sub-sector that made the greatest contribution to the whole industry is the manufacture of electronic valves, tubes and other electronic components (NACE Code 3210), followed by manufacture of office, accounting and computing machinery (NACE Code 3000) and manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy (NACE Code 3220).

China has become the largest country producing ICT products.

India

India is the seventh-largest country by geographical area, the second-most populous country with over 1.18 billion people, and the most populous democracy in the world. India is a federal constitutional republic with a parliamentary democracy consisting of 28 states and seven union territories.

The Indian economy is the world's eleventh largest by nominal GDP and the fourth largest by purchasing power parity and growth rate has been impressive for last two decades with 9.1% in FY 2007-2008 and is forecast to grow by 8% in 2010. It is greatly placed to meet the global market demand with 64% of the population in the working age group (15-60 years). Contribution of agriculture to the national economy is declining slowly (17.5% of the national income) with rise in service and manufacturing sector. Since the introduction of market-based economic reforms in 1991, India has become one of the fastest growing major economies in the world.

The Indian ICT industry is contributing to the national economic development in many ways and almost all states in India are targeting ICT sector as a vehicle for economic development.

For historical and political reasons, an export-driven growth model developed, rather ignoring the hardware and domestic sector, despite their huge potential. Though the ICT sector is growing in all domains, **it is predominantly driven by software services**.

The National Association of Software and Services Companies (Nasscom) stressed: "*Timely government policies and increased public-private participation have played a key role in developing an enabling business environment for the Indian IT-BPO*[5] *industry. The Government's focus on education has helped create the large talent base from where the industry draws its workforce. The Government's proactive approach towards the IT-BPO industry was further highlighted in 2008 through actions such as the IT Act Amendment, extension of tax incentives by a year, removal of the SEZ Act anomalies and the introduction of progressive telecom policies that focus on work from home"*[6].

India's ICT contribution to GDP has been growing from 1.2% in 1998 to 5.2% in 2007, and 5.8% in 2008 as estimated by Nasscom. The IT-BPO (Business process outsourcing) sector overview is the following:

- Total IT-BPO industry to reach aggregate revenues of USD 73.1 billion in 2010, with the IT software and services industry accounting for USD 63.7 billion of revenues. As a proportion of national GDP, the sector revenues have grown from 1.2 per cent in 1998 to an estimated 6.1 per cent in 2010.
- Its share of total Indian exports (merchandise plus services) increased from less than 4 per cent in FY1998 to almost 26 per cent in 2010.
- During this period, direct employment is expected to reach nearly 2.3 million, an addition of 90,000 employees, while indirect job creation is estimated at 8.2 million. Apart from direct employment, the ICT sector is credited with booming of first generation of entrepreneurs and growth of venture capital industry in India.

According to the latest available official data at national level[7], the contribution of the ICT sector to GDP is more modest than the one claimed by NASSCOM[8] with 3.42% in 2004 (see Table 2)

Table 2: Indian ICT Industry economic profile (2004)

GDP	555.4 Bill. Euros
ICT VA	19 Bill Euros
ICT VA/GDP	3.42%
ICT Manufacturing VA	1 Bill Euros
ICT Services VA	18 Bill Euros
ICT Employment in CSS sub sector	830 000 persons
ICT employment in CSS sub sector (2007)	1 630 000 persons

Source: Adapted from data in: Malik P., Vigneswara Ilavarasan P., 2010 (forthcoming). Employement data from NASSCOM, quoted by Mita Bhattacharya, Graham Vickery, (2010).

The industry is dominated by the larger players with top two hundred firms contributing to 86% of the total revenues. Services sector, composed of computer related services and telecommunications has been growing at a steady rate when compared to manufacturing sector. India has adopted 'walking on one leg' strategy in ICT sector, concentrating more on the services exports than the manufacturing.
ICT firms are prominently located in major six clusters, Bangalore (Karanataka), Mumbai & Pune (Maharastra), Chennai (Tamil Nadu), Hyderabad (Andra Pradesh), and

5 **BPO: business process outsourcing.**

6 National Association of Software and Services Companies (Nasscom), Nasscom Industry Trends, 2008 data, accessed September 2010.

7 Barnjee P. (Ed.) (2009). India. Science and Technology, 2008. National Institute of Science, Technology and Development Studies, CSIR. New Delhi p.138. "*The latest available report by the Department of Scientific and Industrial research (...) captures industrial R&D expenditure data up to 2002-03*."

8 As it is calculated in official statistics on Value added and not on revenues contribution to GDP, in line with international statistical standards

the National Capital Region which composes of New Delhi (Delhi), Noida (Uttar Pradesh) and Gurgaon (Haryana), almost 93% of the revenue came from these regions in exports. A comparison of the major ICT clusters shows that Bangalore cluster presents a more mature ecosystem for the ICT industry when compared to other ones. Due to its historical lead advantages, it has deep labour market, proximity of repute research institutes, government research labs, presence of venture capital, healthy mix of large domestic firms, multinationals and other supplementary firms.

According to the OECD: "***India has become the global front office, handling customer service calls, and back office, helping to process payments and run accounting and other computer systems.*** *However, the current 'lift and shift' model will not continue in the long run. India needs to become one of the head offices –innovating new products and techniques or shaping major corporate strategies – and a provider of higher value added services in this changing environment, including in growth areas such as cloud computing, security and privacy*".[9] As also stressed by the recent Science 2010 Unesco report, improving the quality and quantity of science and technology personnel is the main challenge, otherwise the country is likely to face a shortage of scientists and engineers.

The interested reader will find much more data and analysis about the rise of ICT industry in China, but also in India, Taiwan, South Korea and other countries at: http://is.jrc.ec.europa.eu/pages/ISG/PREDICT/AsiaICT.html.

■

Reputation-based Governance

Lucio Picci

Lucio Picci is Professor of Economics at the University of Bologna. Between 2007 and 2009 he served as Senior Scientist at the Institute for Prospective Technological Studies (IPTS—part of the European Commission's Joint Research Centre) in Seville, Spain. His research interests are at the intersection between political economy, public governance and the economics of innovation. His home page is: http://www2.dse.unibo.it/picci/

It would be easy to cheat someone on eBay. However, an essential characteristic of the site prevents this from happening: buyer and seller reviews form what amounts to an "index of reputation." The availability of such an index provides a strong incentive to be an honest trader.

Reputation-based Governance melds concepts from businesses like eBay with politics. The intelligent use of widely available Internet technologies can strengthen reputational mechanisms and significantly improve public governance. Based on this notion, a governance model could be built that leans on the concept of reputational incentives while discussing the pivotal role of reputation in politics today. A continuous, distributed process of assessing policy outcomes, enabled by an appropriate information system, could contribute to a governance model characterized by effectiveness, efficiency, and a minimum amount of rent-seeking activity. Moreover, if citizens were also allowed to express their views on prospective policies, then reputation-based governance would provide a platform on which to develop advanced forms of participative democracy.

Individuals assess policies, and these assessments aggregate to form a summary measure of reputation. There are however many ways of computing this measure, and a given set of assessments of policy outputs could give rise to many alternative types of reputation indicators each one of them characterised by properties that would have an impact on the characteristics of governance. Two alternative measures of reputation can be considered and compared – a reputation index, and reputational budget. These, with their differing characteristics and properties, give an insight into the multiplicity of reputation indicators that could be computed in principle.

The set of procedures that would allow for the computation and use of such reputation measures would, in turn, provide a coherent framework for the processing of a host of policy-related information. An important distinction between "ad hoc" and "integrated" statistics can be drawn, the former being the ones that we are most familiar with, and the latter the result of views of the underlying quantitative information on policies that are available. Such a distinction allows

9 Bhattacharya M., Vickery G., (2010). The ICT sector in India: Performance, growth and Key challenges. OECD, June 2010.

to place into perspective the current open government data movement, and sheds light on its implications.

The resulting governance model is one characterized by a strong project-oriented approach, where the set of actions by a public administration is partitioned into distinct projects and programmes. The resulting policy landscape is scattered with a high number of policy objects. In this sense, reputation-based governance naturally leads to a modularization of the policy landscape, with important consequences. Among these consequences, there is the presence of a high degree of personal and organizational accountability of the actors of governance, with implications on rent-seeking behaviour, and particularly on its most nefarious manifestation, corruption. The data-rich environment brought about by reputation-based governance would be particularly effective in limiting this phenomenon.

Reputation-based governance also provides a direct route for citizens to influence the choice of policies, by directly attributing them a role in their selection so as to establish forms of participative democracy. The focus is on the procedural aspects of democratic practices: within a governance process, every chance of democratic participation rests on the presence of procedures of some types. The presence of complex and nuanced relationships between forms of governance and the technologies available to support them should be a constant preoccupation: While ICT technologies have a great potentiality to enable forms of reputation-based governance, we ought to avoid those over-optimistic technocratic views that often have plagued the literature on e-government.

Anyone interested in the detailed issues of reputation-based governance could refer to my new book on the subject published in 2011 by Stanford University Press, Stanford, CA – http://www.sup.org/book.cgi?id=20267. ■

Member Society News

Italy

Congratulations on the occasion of AICA's 50th Anniversary

AICA was founded in February 1961 as a not-for-profit association whose primary focus is the development and promotion of values and issues related to the scientific, technical, economic and social aspects of Information and Communication Technology. It brings together and facilitates cooperation between the three main institutional areas dedicated to ICT: universities and scientific research centers, public and private organizations making use of IT, and manufacturers and providers of related products and services. It provides the ideal setting for debate on professional improvement of IT specialists and for the advancement of the ability to use ICT technology and relevant skills by an ever-growing number of Italian citizens.

AICA, jointly with the Ministry of Education, will organize the **International Olympiads in Informatics** in August 2012 - IT STAR is dedicated to assist this effort.

Slovenia

The Slovenian Society INFORMATIKA will host IT STAR's 10th Anniversary Celebration on 15 and 16 April 2011 in Portoroz. The annual conference "Days of Slovenian Informatics will also convene in Portoroz from 18 to 20 April. ■

Obituary – Mladen Glasenhardt

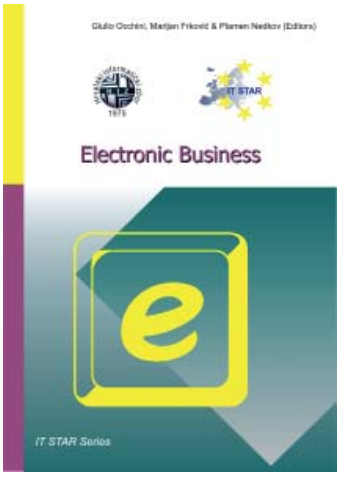
As this issue was being finalized for publication we received the sad news of the passing of Mladen Glasenhardt, the President of the Croatian Information Technology Association (CITA), who passed on 25 February 2011 due to heart failure.

Our remembrances of President Glasenhardt are fresh and vivid. We recently kept very close contact regarding the 5th IT STAR Conference, convened on 12 November 2010 in Zagreb, at which Mladen delivered the Opening Address and hosted the Conference Dinner. He was full of energy, entertaining and vastly experienced in many areas of the ICT Industry and Business, international technological cooperation, sports and other. His personality and support made these moments in Zagreb an unforgettable experience for the conference participants.

Mladen was a good friend and supporter of IT STAR, and we join his family, friends and CITA colleagues in this period of grief.

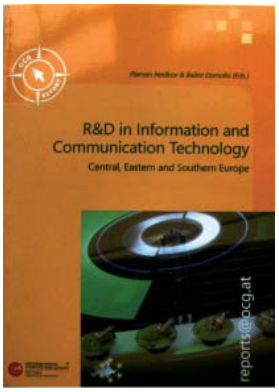
IT STAR

IT STAR Publications

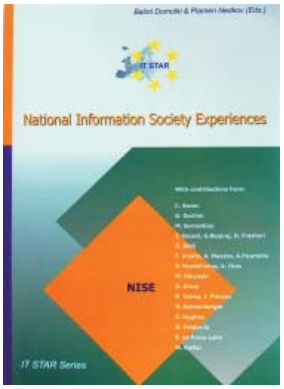


IT STAR's latest publication *Electronic Business* (ISBN 9788890540615) - Proceedings of the 5th IT STAR WS on e-Business, 12 November 2010, Zagreb, was published in February 2011. Editors: Giulio Occhini, Marijan Frkovic & Plamen Nedkov, with contributions from Bruno Lamborghini, Mladen Glasenhardt, Vasile Baltac, Diana Simic, Dudley Dolan and others. It focuses on important aspects related to e-Business including challenges and opportunities in a period of crisis, policies and practices in Southeast Europe, national and international programs, e-Signature, e-Invoicing, Internet presence and security, customer protection, standardization, e-Business skills and other.

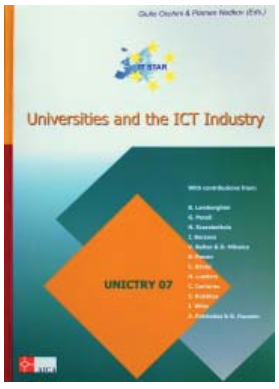
The book highlights the findings of a multi-stakeholder forum of academic, business and government representatives and is intended to facilitate further research and policy making within the IT STAR region and the European Union.



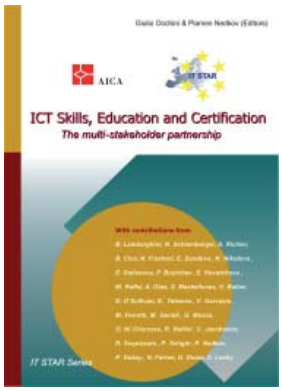
Proceedings of the 1st IT STAR WS on R&D in ICT,
11 November 2006, Bratislava, Slovakia
Editors: Plamen Nedkov & Balint Domolki
© IT STAR, 116 p.
ISBN 978-3-902580-02-3



Proceedings of the 3rd IT STAR WS on
National Information Society Experiences (NISE' 08),
Godollo, Hungary
Editors: Balint Domolki & Plamen Nedkov
© IT STAR, 118 p
ISBN 88-901620-2-3



Proceedings of the 2nd IT STAR WS on
Universities and the ICT Industry (UNICTRY' 07),
26 May 2007, Genzano di Roma, Italy
Editors: Giulio Occhini & Plamen Nedkov
© IT STAR, 104 p.
ISBN 88-901620-1-5



Proceedings of the 4th IT STAR Workshop on
ICT Skills, Education and Certification: the Multi-stakeholder Partnership,
27-28 November 2009, Rome, Italy
Editors: Giulio Occhini & Plamen Nedkov
© IT STAR, 165 p
ISBN 88-901620-5-8

Further information about these and other IT STAR books is posted at http://starbus.org/publications.htm.

SNAPSHOT

REGIONAL ICT ASSOCIATION IN CENTRAL, EASTERN & SOUTHERN EUROPE

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, E. Mühlvenzl
- 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 communi-cation technology organization in Central, Eastern and Southern Europe which promotes, assists and increases the activities of its members and encourages and pro-motes regional and international cooperation for the benefit of its constituency, the region and the interna-tional ICT community."

Governance

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

2010 Zagreb, **Croatia** (November)
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

2010 – Igor Privara
2006 – 2010 Giulio Occhini
2003 – 2006 Niko Schlamberger
2001 – 2003 Plamen Nedkov
(currently Chief Executive)

Major Activities

- 5th IT STAR WS and publication on Electronic Business - http://starbus.org/ws5/ws5.htm
- 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%20REPOR-Trevised.pdf
- Support to Member Society initiatives and events

Periodicals

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

Web-site

www.itstar.eu ■

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www.pti.org.pl

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www.drustvo-informatika.si

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