IT STAR

Newsletter - Calibrated for Creative Communications

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From the Editor

The standing regional committee on information technology (IT STAR) emanates from a thriving community of individuals, societies and countries with a growing weight in the technological and economic development of our times. It has taken relatively little time for IT STAR to emerge as a leading player on the regional turf and a strong promoter of ICT cooperation internationally.

IT STAR is currently experiencing a new momentum and there is a corresponding need for a stronger information flow related to regional achievements, problems, developments and interactions and their broader international context. The Newsletter is one of the vehicles to achieve a broader info-transparency and our objective is to develop the publication as an internationally recognized authoritative source of news in the ICT domain.

The program of IT STAR activities is intense and there is plenty of reportable material. Members are leading national IT societies from 13 countries and the base is likely to continue growing. There were two momentous anniversaries in October 2003 – the centenaries of John Atanasoff and John von Neumann. The project for a regional database of IT experts is rapidly taking shape. A special session devoted to an exchange of views and experience on IT cooperation within the European Framework Programs was organized by IT STAR and its resiliency to partner with EU institutions would be tested this autumn. This is only a small sample of what's going on. There is more to find in the articles included in this issue.

Happy reading,
Plamen Nedkov ■

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The Newsletter is in a period of establishment. Information about our services will be provided in future issues.

Olympic Games and New Technologies

by Gianna Angelopoulos-Daskalaki
President of the Athens 2004 Olympic Games

Organising the Olympic and Paralympic Games of 2004 is undoubtedly one of the most significant challenges of the modern history of Greece. One of the most critical elements for the success of this project is technology, not only in terms of information technology and telecommunications, but also in terms of television and broadcasting and energy management.

At Athens 2004 we are working towards utilising the potential of such technologies in order to ensure that the athletes will perform their contests in the most positive environment promoting human ability and endeavour. In the same spirit, the International Olympic Committee points that:

"Technology is not the end in itself; we are applying and implementing tried, tested and mature technologies, as we are hosting the Olympic Games, not the Olympic Technologies."

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Hall of Fame

[Two centenary anniversaries were held consecutively in Bulgaria and Hungary in October 2003 to commemorate the life and achievement of two great men – John Atanasoff and John von Neumann. IT STAR is honored to have been associated with these anniversaries. We now proudly present some insights on the pioneers and their anniversaries.]

John Vincent Atanasoff

The Achievement

by Bl. Sendov

[Acad. Blagovest Sendov was President of the Bulgarian Academy of Sciences and of the International Federation for Information Processing. He was Chairman and Vice-Chairman of the Bulgarian Parliament and currently H.E. is the Bulgarian Ambassador to Japan.]

The remarkable technological invention of John Vincent Atanasoff (1903 - 1995), an American mathematician and physicist of Bulgarian origin, is the electronic digital computing. This concise formulation must be deciphered so that we can feel, realize and assess the depth of this invention by elucidating the significance of its influence on contemporary development of humanity. It goes through digital computers, which at the beginning are only instruments for automatic computing, but soon after they expand the field of their application and turn into universal devices for automatic processing of information. John Atanasoff is undoubtedly the first man to step over the boundary between mechanical and electronic processing of information and more particularly, as an illustration of this possibility, he built a working machine for electronic digital computing. He comes to that after a long and profound analysis of the essence of computing or more generally, of automatic processing of digitized information. The daring and the insight of John Atanasoff to exchange the reliable but clumsy mechanical medium for the ethereal and not so stable but very flexible and fast electronic medium, as a carrier of the numbers in the process of computing, are really exceptional. This transition from mechanical to electronic processing of information changed the nature of human civilization only within a few decades.

J. Atanasoff was fully aware of what he had achived. His major historic paper, in which he describes in greatest detail and defends the highest achievement of his life, bears the title "Advent of the Electronic Digital Computing". He does not use in the title the word "computer", but the word "computing", because he realizes that if we go deep into the nature of computing, we would be able to produce fast computers.

We connect the name of John Atanasoff primarily with the first electronic digital computer. This is perfectly deserved but is too narrow because it covers only part of the illustrations of his exceptional technological achievement. This achievement is the use of electronic carriers of information, which allow incredibly high speed in processing information.

The Centenary

by J.V. Atanasoff II

[Son of the Inventor, CEO of MedEfficiency Inc.]

On October 1 - 8, 2003 the country of Bulgaria celebrated the 100th anniversary of John V. Atanasoff's birth. John V. Atanasoff, the inventor of the first electronic digital computer, was born on October 4, 1903 to a Bulgarian father and an English mother. During the twentieth century, significant changes have occurred but no invention has had more impact than the Electronic Digital Computer. The country of Bulgaria recognized this invention of Atanasoff much earlier than even the United States and has been extremely proud of this Bulgarian and his invention.

To celebrate this significant occasion the country of Bulgaria, led by President Parvanov, organized a series of events throughout the country that were attended by twenty family members from the USA including his wife Alice, his son John V. Atanasoff II and his daughter Joanne A. Gathers. Many thousands of Bulgarians also participated in this week long celebration that included:

1. The unveiling of a six meter high statue of John Atanasoff "bringing the world closer together with the computer."
2. A concert and award ceremony sponsored by President Parvanov.
3. A letter from Bill Gates, recognizing Atanasoff as the inventor of the electronic digital computer.
4. The naming of several schools after John V. Atanasoff.
5. Thousands of people and another statue in the village of Boedjik where his father was born and his grandfather died on the battlefield.
6. Many wonderful visits and celebrations with the wonderful people and towns of Bulgaria.

The Atanasoff family was overwhelmed by the enthusiastic response, warmth and generosity of the people and the country. We consider Bulgaria our second home and we want to thank everyone.

Many of the Atanasoff family are involved in computers. I have run several companies that designed computer-controlled equipment, computer graphics and software for medical device applications. In my computergraphic company, Oxberry, we designed the equipment for Terminator II in which Arnold Schwarzenegger starred. I'm currently CEO of a company MedEfficiency Inc. devoted to helping diabetics with their foot and wound care. ■

John von Neumann

by P. Bakonyi

[Peter Bakonyi is the President of the John von Neumann Computer Society in Hungary. An electrical engineer by education, he was involved for several decades in computer research and since the mid 80-ies has been the leader of research networking activity in Hungary. At present, Dr. Bakonyi is Deputy State Secretary at the Ministry of Informatics and Communications.]

Neumann János was born in 1903 in Budapest, he received his secondary education in the capital of Hungary. In 1925 he obtained his degree in chemistry from Zurich University and in 1926 graduated at Budapest University as a mathematician. By 1930, the year he arrived at Princeton University (USA), he was already recognized as one of the outstanding mathematicians of this century. He was appointed as one of the first six permanent professors of the Institute of Advanced Study in Princeton, with which he remained affiliated until the end of his life. From then on he called himself John von Neumann.

He was without doubt one of the scientific geniuses of the 20th Century. The *Financial Times* named him the *Man of the XXth Century*. Von Neumann started his professional life as a mathematician by work on axiomatic set theory. During his relatively short scientific career he made lasting contributions to almost every major classical discipline of pure and applied mathematics, and he had broken new grounds in mathematical and theoretical physics (especially quantum theory), functional analysis, operator algebras, game theory, theoretical computer science and computer design.

The ideas of John von Neumann have had a profound influence on modern mathematics and science. One of the great thinkers of our century, von Neumann initiated major branches of mathematics - from operator algebras to game theory to scientific computing - and had a fundamental impact on such areas as self-adjoint operators, ergodic theory and the foundations of quantum mechanics, and numerical analysis and the design of the modern computer.

In computer theory, von Neumann did much of the pioneering work in logical design, in the problem of obtaining reliable answers from a machine with unreliable components, the function of "memory," machine imitation of "randomness," and the problem of constructing automata that can reproduce their own kind. Participating in the design work on ENIAC, he made essential contributions to the theory and architecture of computers, by designing the concept of 'stored-program" computer and what is known now as "von Neumann architecture" of computers.

John von Neumann also was actively involved in politics, science management, served on a number of commissions and advisory committees and had a major impact on U.S. government decisions during and especially after the Second World War. He received two Presidential Awards, the Medal for Merit in 1947 and the Medal for Freedom in 1956.

To celebrate the 100th anniversary of the birth of John von Neumann, the Hungarian Computer Society (*John von Neumann Computer Society*) held several events in 2003. The highlight of the celebration was the annual conference of the von Neumann Society in October 2003 and a memorial conference of the *János Bolyai Mathematical Society*. The two conferences started with a day of joint celebrations. This event took place in the main building of the Hungarian Academy of Sciences and was opened by the President of Hungary *Ferenc Madl*. Among the distinguished speakers were the Presidents of IFIP and IMU and the daughter of John von Neumann, Marina von Neumann-Whitman.

Three worldwide-known Hungarian computer scientists were given the John von Neumann Award:

Les Belady, University of Austin
Laszlo Lovasz, Microsoft Research
Charles Simonyi, Intentional Software Corp.

Several other conferences, student competitions and further events were organized during 2003 and several books were published on the occasion of John von Neumann's centenary. ■

IT STAR Meets in Chioggia, Italy

by P. Nedkov & N. Schlamberger

Chioggia is a picturesque municipality in the Venetian Lagoon. The locals will tell you that this settlement existed centuries before the foundation of Venice. It is one of the attractions in the immediate proximity of the great city, along with Murano, Burano, Torcello and Lido, proud of its history, churches, canals, alleyways and piazzas with seafood restaurants, pizzerias and gelati kiosks.

In this wonderful corner of Bella Italia, AICA, the Italian member of IT STAR did a splendid job hosting the organization's spring meeting on 8 May. The reunion will remain memorable, not only because of the setting, but also because of the general agreement on the future directions for the development of IT STAR to be included in a Chioggia Statement.

Highlights:

1. All participants conveyed formal endorsements in support of the well-functioning regional contacts and cooperation within the IT STAR framework. A recommendation was made that IT STAR should further develop its identity as a regional organization of national member societies with its specific agenda and activi-

ties. As such, IT STAR would be in a stronger position to interact with inter-governmental organizations and other international NGOs.

2. The meeting commissioned the development of an IT STAR Mission Statement, statutory documents and rules of procedure.

3. The terms and conditions of collaboration under the IT STAR Professional Pool Project (a project for a regional Database of ICT experts) were accepted by many of the represented societies and there are expectations that others will join soon. In Chioggia, the project received further direction with the appointment of the following coordinators:

N. Schlamberger - IT PP DB Proposal Extension, Rules and Guidelines of the Database
S. Katsikas - Legal Issues
G. Dukic - Technical background for the combined database
G. Occhini - Database Model and compatibility of National databases
V. Baltac - Financial Aspects
B. Domolki - Personal Data
I. Privara - Certification Issues
M. Frkovic - Business Plan

4. IT STAR was invited by the FISTERA (Foresight in IT for the European Research Area) Society to organize a meeting of experts in order to identify visions, challenges and bottlenecks specific to Central and Eastern Europe. FISTERA is an EU organization that operates as a thematic network with the aim of preparing proposals for the EU long-term research policies. The invitation was accepted [*see Next Stop "Prague" p. 5*] ■

The Italian ICT Market

by G. Occhini
Director General, AICA

• The "value" of the Italian ICT market in 2002 [60,2 billion EUR] is still notably undersized in a European context, given that Italy's share of the European ICT market (9,2%) is approximately half that of the United Kingdom's (17%) and well below Germany's (21,3%) and France's (14,7%). [1]

A similar assessment can be made by considering indicators such as the ratio of ICT spending to GDP which in Italy was 5,85% in 2002 in comparison with values that were, on average, 1% higher in the other three major countries. ICT expenditure per inhabitant was also quite lower than that of Germany, the UK and France (e.g. 1192 € in Italy compared to 1662 € in Germany).

• The Italian ICT market growth, which in the period 1999-2001 was positive (10,5% on average) and above the European level, fell by 0,5% in 2002. [1]

The negative trend was confirmed in the first half of 2003 and as a consequence is slowing down the much-needed closure of the structural gap in a European context. The macroeconomic outlook shows a reduced aggregate ICT performance, in a context in which ICT spending and investment suffer more than other sectors from the effects of a poor economic year.

The conservative attitude to ICT investment was more pronounced in small size companies, which represent most of Italian enterprises. The investment plans of large companies (whose share of total expenditure is approximately 50%) suffered less from the effects of the poor economic situation.

The industrial sector holds first place in terms of aggregate spending volume; in 2002 it saw a marked fall in ICT expenditure as it was hit by the fall in production and sales of many companies and groups. Banks, the sector with the highest ICT expenditure per company, was affected by a slowdown due principally to rationalization and downsizing processes.

By geographical area, the ICT market is highly concentrated in North Italy (approximately 60% of the total amount) thanks to a greater presence of large and medium-size organizations.

• The recent performance of the ICT market in Italy was quite variable across the different components. Both IT and TLC saw a marked slowdown in growth compared to the previous year (2001) but, while the former recorded a negative result (- 2,2%), the latter continued to grow, albeit weakly (0,4%). In fact the TLC segment recorded in 2002 a value of 40,2 billion € with a 67% share of the total ICT market, quite above that enjoyed by major European countries. [1]

Telecommunication services, particularly the mobile

component, were the major drivers of this market.

The IT market drop (-2,2%) was due to the combined effect of a fall of 13,5% in hardware and a marked slowdown in the growth of software and services (3,3% in 2002 compared to 12% in 2001).

The personal computer segment experienced for the first time in its history a negative performance in terms of units (- 4,2%) and an even greater drop in value (-10%). The sector that suffered the most was the consumer one, owing to the further fall in household spending.

In 2002 the software and services segment held 68% of the total IT market and during the last years was its real driving force. The services market slowdown was due to an economic uncertainty, desire to rationalize and keep down costs, slowdown in projects and need on the part of suppliers to reduce prices. This kept down the growth of such segments as system integration and consultancy, development services and elaboration and caused a renewed interest in outsourcing services.

• Critical figures in the last years show reductions in the training market. The general reduction of IT budgets of business users probably has a significant impact on training, the benefits of which are less directly describable in an economic return. It is still difficult for business users to link good company performance with the growth in the skills of its resources.

In 2002 AICA and the SDA Bocconi University in Milan conducted a study "Cost of ignorance in the Information Society"[2] which shows that Italian workers waste an average of 16 days per year on computer problems, costing the country's economy 15 billion € annually.

The researchers defined "computer ignorance" as the economic impact of a delay in ensuring that a workforce is computer literate. A main objective of the study was to quantitatively assess the cost which computer ignorance can have on companies and the Italian economy. (CEPIS is considering extending the survey to other major European countries in order to have a rough idea of the "computer ignorance" factor in Europe as a whole).

The researchers also discovered that basic IT preparation (ECDL and other programs) can help slash the cost of "computer ignorance" by dramatically increasing the efficiency of staff using computers.

In conclusion, the strong contraction in the training market could seriously affect productivity of work and cause economic losses.

• The number of ICT suppliers in Italy amounts to nearly 80.000 out of which 71% are software and services operators. The number is quite large, well above that of France (54,000) and Germany (69,000), and shows some critical structural features -- very small company dimensions (i.e. 6 employees on average in the software and services suppliers market), low turnover per company and poor investment capability. In 2002 approximately 600,000 persons were employed in the ICT sector. [3]

• As a whole, Italy's innovation capability is quite poor. Several innovation indexes (e.g. European innovation scoreboard, Network readiness index) show a weak Italian position in a ranking of countries by their innovation performance.

In fact, both the Internet penetration in Italian households and the percentage of Italian schools providing Internet access are well below the EU average. In 2002, over 90% of Italian enterprises had access to the Internet but there is still a low diffusion of broadband connectivity; in most of the sectors many of the small companies still use an analogue dial-up modem to connect to the net. This indicates low levels of usage (e.g. e-mail) rather than active use of networks for e-business.

E-commerce is spreading slowly in the Italian market. Only 20% of Internet users use this option in comparison with a European average of 36%; the percentage of companies performing online sales is about 10% (the EU average is 19 %).

In Italy, approximately 50% of the working population use a computer at work and more than 63% are basic ICT users. [4]

According to European Commission data only 18% of the Italian labor force have had basic training and most workers have to learn how to use a computer on their own. This confirms the low priority companies allocate to the training process.

• The recently established Ministry of Innovation has the objective to improve to some extent the Italian innovation performance. Priority goals are:
- Investing in people and skills (e.g. IT literacy programs for public administration employees);
- Infrastructures upgrading (e.g. promote broadband connections);
- Stimulating the diffusion of PC and the Internet (e.g. " Vola con Internet "program, bonuses to 16-year olds to acquire PCs and to enroll in ECDL courses).

[1] Assinform 2002
[2] Camussone-Occhini: Il costo dell'ignoranza nella società dell'informazione ed. Etas Kompass
[3] Occupazione e formazione nell'ICT: 2002 Federcomin, Anasin, Assinform
[4] SDA-Bocconi research ■

Next Stop "Prague"

[CSKI will host the fall 2004 business meeting of IT STAR on October 23, 2004. The meeting will convene in conjunction with a joint IT STAR- FISTERA Society Workshop. Here is the brief…]

The Czech Society for Cybernetics and Informatics (CSKI)

by J. Stuller
CSKI representative to IT STAR
Vice-Director, Institute of Computer Science,
Academy of Sciences of the Czech Republic

The legend

Prague is the birthplace of the famous legend of Golem, an artificial man created by rabbi Loewi in the 16th century to help people accomplish hard jobs. He is said to comes to life when a magic formula (named scheme) is inserted into his head.

Karel Capek used the word ROBOT for the first time in the 1920-ies in his sci-fi drama R.U.R. This expression derived from the Czech word robota meaning regular forced labor of serfs on the land of their lords in a feudal society. A robot then denoted a human-like artificial creature. The title R.U.R. itself is shorthand for the full name of the play, namely Rosum's Universal Robots. The word Rosum does not represent only a name of a person but also denotes reason. R.U.R. points to the danger of potential misuse of obedient robots and it treats the ethical problem of integrity of an active entity, it searches for a tender borderline between a robot and a human being.

The Czech Society for Cybernetics and Informatics (CSKI) was founded in 1966 as the Czechoslovak Society for Cybernetics. CSKI is a direct descendant with a current membership of 300 regular members. It is the largest informatics society in the Czech Republic with the objectives to support and promote cybernetics, informatics and related fields, advance the professional standing of its members, provide services to its members and support of conferences, seminars and other activities.

CSKI is governed by a General Assembly. It elects for a period of 3 years the Society's Executive Board, which oversees the day-to-day work. The Scientific Board, whose members are the Chairs of the Society's working groups, is responsible for the scientific activities.

The Society supports annually several conferences and more than 100 seminars and other events.

The Society publishes two periodicals: "Kybernetika" - an international scientific journal published bimonthly since 1965 by the Institute of Information Theory and Automation of the Czech Academy of Sciences, and "Zpravofaj pro Kybernetiku a Informatiku" - a newsletter published monthly since 1974 with free subscription to CSKI's members and also accessible on the CSKI web-page.

It has 15 working groups on Applied Mathematical Logic, Semiotics, Artificial Intelligence, Theoretical Robotics, Pattern Recognition, Decision & Control under Uncertainty, Intelligent Systems, Neural Networks, Stereology, Mathematical Modeling of Language Communication, Large Scale System Research, Biomedical Informatics and Statistics, Medical and Biological Cybernetics, Informatics and Society and Development of Computer Skills.

CSKI is a member of the European Coordinating Committee for Artificial Intelligence, the European System Science Union, the International Association for Pattern Recognition, the International Association for Semiotic Studies, the International Federation of Automatic Control and the International Federation for Information Processing.

Foresight in Information Technology for the European Research Area - FISTERA

by B. Domolki
Hungarian representative to IT STAR
Past President of the J. von Neumann Computer Society

FISTERA is a Thematic Network established by the EU within the Fifth Framework Program.

"FISTERA's Mission is to strengthen a network of researchers and institutions that fosters the understanding of the key factors that would enable Europe to become the leading area in the innovation and application of IST to achieve sustainable economic growth and improvements in quality of life."

Its aim is to prepare proposals using the methods of technology foresight for the EU's long-term research policies. In 2004, FISTERA will carry out prospective work to analyze paths towards the Lisbon Objectives 2010 for IST.

More information on FISTERA can be found at http://fistera.jrc.es. It is possible to participate actively in FISTERA by visiting http://fistera.telecomitalialab.com/ where users can help to update an interesting Technology Database, and http://les.man.ac.uk/PREST/fistera/ where a large collection of IST scenarios can be seen and a delphi-questionnaire can be answered on future perspectives of the information society.

One of the forthcoming events of FISTERA is a meeting of experts from Central and Eastern Europe. IT STAR was invited to organize this meeting.

This would be a one-day event on "The East European Dimension" and its objectives are to identify visions, challenges and bottlenecks that are specific to CEE and need to be taken into account for the 2010 Vision.

About 15-20 representatives from industry, academia and government would be invited by IT STAR. In addition to the IT STAR representatives a wider group of decision-makers in industry and government would be invited. The meeting is scheduled to take place in conjunction with the regular fall meeting of IT STAR during the period 21 – 24 October in Prague, the Czech Republic.

IT STAR and FISTERA would develop a set of questions to be addressed by the country presentations. This organization would provide an interesting and meaningful task for IT STAR. The FISTERA findings - even at an intermediate stage - contain many useful ideas, data and analysis, which could be of great interest to IT STAR member societies and their members. Moreover, the two organizations could explore other cooperative activities, such as

- Providing information on national technology foresight and policy making activities
- Mobilizing experts to provide inputs to the FISTERA database of technologies and also for scenario-building events (meetings and/or Delphi-like studies)
- Contributing to the dissemination of FISTERA results through the national professional societies. ■

Olympic Games and New Technologies *

contd. from page 1

During the Olympic Games 2004, technology will produce the mechanism through which the performance of the athletes will be measured, evaluated and broadcasted worldwide. Towards this goal, the necessary technological infrastructure (IT, telecommunications, and structural elements for lighting, communications, wiring, etc.) for the Games will be in place.

Technologies such as these will be utilised in Greece for the first time to such extent, and will constitute an important inheritance of the Games to the country and its citizens.

These technologies are:

1. Multichannel System for Radio-communications (TETRA)

This is a secure digital system for radio-communications that will be mainly used for the operations of the Games and will be implemented by the Major National Sponsor of the Olympic Games, OTE (our National Telecommunication Organisation). This system operates independently from the public telecommunication network and caters for the monitoring and secure transmission of data, while it is not affected by the network loading as it is the case with GSM systems.

This system will provide adequate coverage in the interior of buildings as will as ample capacity for all the geographical locations of the Olympic activities. The users of the system will be organised in talk groups, according to their needs.

The post-Olympic usage of this system will be utilised by large private companies whose staff has needs for direct and continuous communication.

2. Cable Television System (CATV)

During the Games, there is a requirement for a multichannel, closed circuit system for television broadcasting, official channel broadcasting (distribution of the official signals) as well as broadcasting of specific commercial channels to selected geographical locations such as the Main Press Centre (MPC), the Olympic Village, the Press Villages and the Hotels where the Olympic family will reside.
The post-Olympic usage of the system will be to constitute the foundation for the development of cable television in Greece.

3. Radio-spectrum Management System

The Olympic Games have a special requirement for extremely high-density radio transmissions. This implies a vast volume of wireless transmissions with usage of many different technologies in a wide range of radio spectrum concentrated in a mall geographical area. The plan implemented by the National Telecommunications and Post Commission (EETT) for the Games aims towards the timely provision of adequate radio-spectrum for the needs of transmissions, the creation of an environment of free of electromagnetic interference, and the fast response at tracing, tracking and catering for interference problems that may also arise during the Games. These efforts will result in smoothing out hertzian transmission and harmonising radio frequencies which has a long-standing requirement in Greece and will be implemented now due to the Olympic Games.

4. Simulation Tool (PLATO)

Athens 2004, in co-operation with members of the academic community, has developed a methodology and a tool to support the functioning design of all venues (competition and non-competition venues) so that using simulation techniques to enable the provision of real-time answers to what-if scenarios.

This tool caters for the calculation of the required resources for the provision of certain levels of service thus ensuring precise cost control for each function offered. This tool will be an important contribution of Athens for future Olympic Games.

5. Wireless Olympics Works

This system, which is implemented for the first time, will be used for the transfer of data relevant to the Games to owners of Samsung mobile phones who are also subscribers of the Cosmote mobile carrier.

For the design and implementation of all these technology systems, Athens 2004 is co-operating with its worldwide sponsors, Schlumberger Sema and Swatch,

its national sponsors OTE and Cosmote, as well as with relevant public sector organisations.

This way, the Olympic Games 2004 become the founding point for extensive modernisation of the existing telecommunications networks, as both OTE and Cosmote are investigating in infrastructure projects, upgrading landline, mobile and internet networks substantially.

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Vienna Calling – OCG and IT STAR

by G. Kotsis
President of OCG

The Austrian Computer Society (OCG) traditionally has strong ties with the Eastern and Southern European countries. Several cooperation agreements with its sister societies (e.g. in Hungary, Czech Republic, Slovakia, Slovenia, Greece, Ukraine) show this close cooperation over the last few decades. Joint conferences and congresses such as the IFIP World Computer Congress in 1998 or the e|GOVdays 2003 and 2004 and events with alternating locations - the CON Conferences and other workshop-like smaller events - are evidence of the close and good relationship with the other IT STAR members.

Our events usually attract many participants from the IT STAR countries who also have good relations to universities and other scientific bodies in Austria. Since many of the Eastern European countries have now joined the EU, OCG's Institutional members have a growing interest to further improve relations within the IT STAR countries and have an increasing ambition to take part in these cross-boarder activities.

Working Group "i-12"

by V. Risak
Past President of OCG and representative to IT STAR

The Working Group "i-12" *(Strategiekreis "i-12")* is an informal group of IT-societies from Austria, Germany and Switzerland. At present, 11 organizations take part in "i-12" and represent nearly 60,000 individual members. "i-12" indicates the number of founding members who operate in IT-related areas such as computer science, medicine, law, agriculture, education and other. The organization is open to all IT-related societies in the German speaking countries.

The mission of "i-12" concerns:

- Strategic issues of all social, political and cultural aspects of information technology.
- Building bridges between the fields of activity of the member societies.
- Building and enhancing networks to foster the communication between these organizations and their individual members.

Its activities include:

- To claim and foster responsibility in using information technology and computer science and its applications.
- To claim and foster equal access to IT at all levels of education.
- To follow and to foster future technologies and their applications.
- To formulate strategies and disseminate them to the public and to decision-makers.
- To utilize the activities and the special knowledge of the member-societies to develop synergies.

"i-12" organizes 4 – 5 yearly meetings and special workshops and promotes communications. It is open to collaborate with other interested European organizations such as IT-STAR. Some strategic papers and further information on "i-12" are available in German at http://www.i-12.org. ■

IT Baltics – Activities and links between the IT Societies of Estonia, Latvia and Lithuania

by E. Telesius, LIKS representative to IT STAR, CEO of ECDL Lithuania and LIKS Past President

The professional informatics societies of the three Baltic States are the Estonian Information Technology Society (EITS), the Latvian Information Technology and Telecommunications Association (LITTA) and the Lithuanian Computer Society (LIKS). The International Annual Forum 'BalticIT&T: eBaltics' in Riga is the main event, held with the objective to promote effective partnership among associations and other IT&T industry related organizations in the Baltic region. An important forum during the BalticIT&T 2004 event, which was held on 21 - 24 April was the Baltic Sea State IT&T Partnership Workshop.

The International Baltic Conference on Databases & Information Systems is another good example of close cooperation between the Baltic States. The 6th Conference was held in Riga earlier this year. This conference continued a series of successful biannual conferences held in Trakai, Lithuania (1994), Tallinn (1996, 2002),

Riga (1998), and Vilnius (2000). The series usually include two main tracks: traditional research track and advanced applications track. To activate and motivate Ph.D. students the conference program also incorporates a Doctoral consortium.

The introduction of the European Computer Driving License (ECDL) in Lithuania and Latvia is another example of regional collaboration. LIKS and LITTA jointly submitted an application for financial assistance to the Baltic Sea IT Fund. The implementation of the ECDL program in Lithuania and Latvia was facilitated by a project also involving the Swedish Information Processing Society, which allowed LITTA to learn and benefit from the experience of Sweden and Lithuania. The majority of Latvian ECDL certificates were issued by ECDL Lithuania. LITTA and LIKS are investigating various funding sources from the EU Commission so as to assist their bilateral and multilateral cooperation. ■

Who's Who in IT STAR

Niko Schlamberger
IT STAR Coordinator

After having worked shortly in the manufacturing industry, Mr. Schlamberger continued in the field of information technology in the areas of programming, application development, consulting, project management and general management in IT industry, business and government. He was head of the software development unit of a major Slovenian bank, IT consultant, assistant to the general manager of the ex-federal Clearing agency and head of a Slovenian government information technology office.

Presently, Mr. Schlamberger is Secretary for special projects at the Statistical Office of the Republic of Slovenia. He is President of the national computer society – *Slovenian Society INFORMATIKA* and member of its Language chapter. He is a member of the editorial board of the Society's journal *Uporabna informatika* (Applied Informatics) and of the journal *Information Technology and Control* of the Bulgarian Academy of Sciences. In 2003, he was elected for a three-year term as Vice-President of the International Federation for Information Processing.

Katarina and Niko Schlamberger

Niko Schlamberger holds a university degree in mechanical engineering. He was a visiting lecturer at the Higher School of Administration at the University of Ljubljana and has authored a textbook on computer programming fundamentals. He is a member of program committees of national and international computing and informatics conferences and has written over forty papers, reports, and reviews on computing, information technology, general management and administrative matters.

Niko and his wife Katarina are the proud parents of two daughters and enjoy hiking and travelling. ■

Events and News in Brief from IT STAR Members

CROATIA – Croatian Information Technology Society (CITS)

On 1 July 2003 CITS entered the ECDL scheme as a national licensee for the ECDL Core program in Croatia. Since then:
- There are 16 ECDL licensed test centers, 70 persons accredited to administer testing and around 800 ECDL certificates issued;
- Negotiations are in progress with the government of Croatia for ECDL certification of employees in the administration, health, education and other sectors.
- CITS introduced the ECDL Advanced program on 8 June 2004.

ITALY – Associazione Italiana per l'Informatica ed il Calcolo Automatico (AICA)

International Olympiad in Informatics (IOI 2004)
September 11-18, 2004, Athens, Greece
olimpiadi@unina.it www.aicanet.it - www.ioi2004.org
(Italian participation)

2004 Annual AICA Convention "Research and Businesses: Knowledge and Development for the Information Society". Benevento, 28-30 September 2004
segreteria@aicanet.it www.aicanet.it
www.aica04.unis annio.it

"Genoa 2004 European Capital of Culture"
During this pan-European cultural event AICA will organize an exhibition on the history of Information and Communication Technology and its Italian protagonists.
October 31 - December 31, 2004, Genoa
aica@aicanet.it - Fax: +39.02-76015717
pgalliena@anteaonline.com
www.aicanet.it www.perfiliepersegni.it

SERBIA and MONTENEGRO - Union of ICT Societies in Serbia and Montenegro (JISA)

JISA was founded in 1994. It is an IT STAR member since June 2003. Later that year it also joined CEPIS. Its main event is the JISA Congress - the most recent one was in Herceg Novi, Montenegro, 14 -19 June 2004 - www.jisa.org.yu

SLOVAKIA – Slovak Society for Computer Science (SSCS)

At its last ExecCom meeting SSCS appointed Mrs. G. Andrejkova as Liaison person for the IT STAR Newsletter.

SLOVENIA – Slovenian Society "Informatika" (SSI)

The SSI National Conference is scheduled for April 2005.

The National Conference on e-Government (INDO 2004) will convene on September 13 - 15, 2004, Portoroz.
Organizer: Government Center of Informatics
e-mail: ingrid.jakse@gov.si, fax.: 00386 1 4788 649
Papers: ana.verbic@gov.si www.gov.si/cvi

LITHUANIA – Lithuanian Computer Society (LIKS)

The LIKS National Conference will convene in September 2005 in the port town of Klaipeda.

LIKS organized a special session on ECDL and EUCIP (and how these programs comply with national requirements for ICT education) during the International Conference "Information Technologies for Business 2004" – www.vukhf.lt/Konferencija/2004/Programa_2004.doc at Vilnius University. ■

UN News

The International Telecommunications Union (ITU) has approved ***a set of global industry standards for Ethernet*** that will extend its flexibility and simplicity to carrier networks. The standards outline a way for Ethernet — a widely used local area network (LAN) — to link any number of endpoints in a wide area network (WAN), or simply as a service delivery mechanism.
The news marks Ethernet's progress from a LAN connectivity technology to a carrier class service delivery technology. The ability to offer Ethernet services means that carriers will be able to offer considerably improved flexibility to customers through a much simpler and lower cost interface. It will allow users to specify exactly how much bandwidth they want between the 10Mbit/s and 1Gbit/s range currently offered. Further, the standards provide reduced operation complexity and improved scalability for carriers. For more check http://www.itu.int/newsroom/press_releases/2004/15.html

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At http://www.itu.int/ITU-D/ict/material/PARTNERSHIP%20e-measurement%2021%20May.pdf there is information on the project for ***Partnership on Measuring ICT for Development***

***

Yearbook of Statistics, Chronological Time Series 1993-2002 - http://www.itu.int/ITU-D/ict/publications/yb/index.html The statistical data have been collected and processed from replies received to ITU questionnaires sent to telecommunication ministries, regulators and operating companies. As such, the ITU statistical yearbook provides the most authoritative source of data about the evolution of the public telecommunications sector available anywhere. The Yearbook is also available in electronic form.

***

Millennium Indicators Database is available at http://millenniumindicators.un.org/unsd/mi/mi.asp

A framework of 8 goals, 18 targets and 48 indicators to measure progress towards the Millennium Development goals was adopted by a consensus of experts from the United Nations Secretariat and IMF, OECD and the World Bank. Each indicator is linked to millennium data series as well as to background series related to the target in question.

■

IT STAR

Supplement

Newsletter - *Calibrated for Creative Communications*

Special reports

National Experiences Related to ICT and the Fifth Framework Program of the EU and Expectations from the Sixth Framework Program

In 2003, IT STAR held its regular business meeting on October 16 in Budapest in conjunction with the John von Neumann centenary celebration. A special session on ICT and the European Union's Fifth and Sixth Framework Programs was organized and the participants had an opportunity to share experience and interesting observations. It was further agreed to publish these reports as IT STAR's contribution to the growing regional consultations and cooperation process.

This special supplement is based on the reports of the representatives of **Bulgaria, Greece, Hungary and Slovenia.** We hope the readers will find it useful, which would certainly encourage the future circulation of other special publications on issues of interest to the regional and international IT community, thereby enhancing communication among the IT STAR membership and internationally.

B. Domolki, P. Nedkov, N. Schlamberger - Editors

GREEK EXPERIENCES

*by **Sokratis Katsikas***
Rector, University of the Aegean, Greece

At the Lisbon summit in March 2000, EU governments called for a better use of European research efforts through the creation of an internal market for science and technology – a European Research Area (ERA). The 6th Framework Programme (FP6) is the financial instrument to help make ERA a reality.

(Report on p. 12)

BULGARIAN EXPERIENCES

*by **Kiril Boyanov***
Regular Member of the Bulgarian Academy of Sciences

The participation of Bulgaria is based on a government decision for research organizations and various companies to participate in the EC calls and for that reason, the full participation fee has been paid.

(Report on p. 13)

HUNGARIAN EXPERIENCES

*by **Sándor Bottka***
ISTC delegate, Hungary

After the political changes in the early1990's Hungary intensified the institutionalisation of the European/international S&T collaboration. Main milestones: 1990: ESF membership; 1991: ESA-HU first agreement, COST membership, OECD Partners in Transition; 1992: EMBO, EUREKA and CERN membership, NATO Co-operation in Science, EU PECO/Copernicus (Let's Go East); 1994: NATO Partnership for Peace.

(Report on p. 16)

SLOVENIAN EXPERIENCES

*by **Andreja Umek Venturini***
National Contact person for IST Program, Ministry of Education, Science and Sport
*comments by **Niko Schlamberger***
President of SSI

The following data show the participation of Slovenian experts in the 5th Framework Programme (5FP). The data comprise 8 periodical tenders of IST Program that have been available during the 5FP (1999 – 2002).

(Report on p. 18)

EXPERIENCES RELATED TO ICT FROM FP5 & EXPECTATIONS FROM FP6

by Sokratis Katsikas
Rector
University of the Aegean, Greece

INTRODUCTION

At the Lisbon summit in March 2000, EU governments called for a better use of European research efforts through the creation of an internal market for science and technology – a European Research Area (ERA). The 6th Framework Programme (FP6) is the financial instrument to help make ERA a reality. FP6 has a total budget of 17 500 million euro that is distributed amongst both RTD and demonstration activities and Nuclear (Euratom) activities. In this report, some facts about the previous EU Framework Programme are given, in particular pertaining to Greek participation in IST projects and conclusions on what issues attention should be given to are derived.

WHAT IS (CLAIMED TO BE) NEW IN FP6?

Several characteristics of FP6 were advertised as being different than the respective ones of FP5; several others were proclaimed as "new developments". Among the most prominent ones, one can identify the shift in the central focal point that FP6 aims to serve, namely the creation of the European Research Area. The structure of FP6, similarly, revolves around the same concept of the European Research Area.

To fulfil the goal of creating the European Research Area, the strategies have changed in FP6. Two new instruments were added to the familiar ones from previous Framework Programmes: Integrated Projects and Networks of Excellence. Both of these instruments pertain to large scale R&D expeditions that facilitate the joint (among the Commission and the programme participants) implementation of the overall programme and allow for collective research to be carried out. In order to be able to play the role they have been devised to play, projects under these instruments require larger number of participants, larger budgets and longer duration than their counterparts within previous Framework Programmes.

Finally, the management of the overall exercise has changed in FP6. The Commission no longer wishes to manage the R&D process at the detail level that they have been doing in the past. They rather adopt a "strategic management" approach, leaving the implementation details to the programme participants and giving greater attention to monitoring the production of results in addition to controlling the consumption of resources.

WHAT HAPPENED IN IST - FP5

Table 1 summarises key results from the past IST Programme within FP5. It depicts the total number of projects that were funded under each Key Action, the number of funded projects that included at least one academic partner, and the respective percentage, per Key Action.
From this table, it is clearly evident that University participation in IST FP5 was strong.

	EU-15	**EU-15 w. ac. part.**	**% acad./ total**
Key Action 1	252	154	61
Key Action 2	269	141	52
Key Action 3	249	179	72
Key Action 4	428	268	63
Cross-Programme Themes	111	85	77
Future & Emerging Technologies	118	113	96
Research Networking	13	10	77
IST support measures	73	43	59
Total	**1513**	**993**	**66**

Table 1: Projects in IST FP5

WHAT HAPPENED IN IST - FP5: GREEK PARTICIPATION

Table 2 summarises key results from the past IST Programme within FP5. It depicts the total number of projects with at least one Greek participant that were funded under each Key Action, the number of these projects that included at least one academic partner from Greece, and the respective percentage, per Key Action.

	Total	**w. ac. part.**	**% acad./ total**
Key Action 1	74	54	73
Key Action 2	74	43	58
Key Action 3	61	54	89
Key Action 4	91	67	74
Cross-Programme Themes	39	34	87
Future & Emerging Technologies	13	11	85
Research Networking	4	3	75
IST support measures	16	14	88
Total	**372**	**280**	**75**

Table 2: Projects with Greek participation in IST FP5

From this table, it is clearly evident that Greek University participation in IST FP5 was strong; moreover, it was considerably stronger than that of the EU-15 average.

WHAT HAPPENED IN IST- FP5: GREEK LEADERSHIP

Table 3 summarises key results from the past IST Programme within FP5. It depicts the total number of projects with at least one Greek participant that were funded under each Key Action, the number of such projects with a Greek prime contractor and the number of such projects whose prime contractor was an academic partner.

	Total	Greek leader-ship	Acade-mic lea-dership
Key Action 1	74	13	7
Key Action 2	74	17	5
Key Action 3	61	14	10
Key Action 4	91	17	5
Cross-Programme Themes	39	13	5
Future & Emerging Technologies	13	6	5
Research Networking	4	0	1
IST support measures	16	3	1
Total	**372**	**83**	**38**

Table 3: Projects with Greek leadership in IST FP5

From this table, it is clearly evident that Greek University leadership in IST FP5 was strong; it constituted more than 45% of the total number of projects led by Greek organisations.

WHAT HAPPENED IN IST - FP5: CONSORTIA SIZES

Table 4 summarises key results from the past IST Programme within FP5. It depicts the size of consortia with at least one Greek participant that carried out projects funded under Key Action 1. This Key Action was taken as an indicative one; similar findings can be found in the remaining Key Actions.

No of projects	No of participants
5	3 - 5
29	6 – 8
18	9 -10
13	11 -12
9	12+
74	**Total**

Table 4: Number of participants per project in KA1 of IST FP5

From this table, it is clearly evident that the dominant consortium size is 6-8 partners, i.e. relatively small with regards to the expected consortium size in FP6. The same trend is observed when looking at projects led by Universities, as shown in Table 5. On the other hand, all projects with more than 6 partners that were led by a non-academic Greek partner included at least one University in the consortium, as is shown in Table 6.

No of projects	No of participants
0	3 - 5
8	6 – 8
5	9 -10
1	11 -12
3	12+
17	**Total**

Table 5: Number of participants per project led by an academic partner in KA1 of IST FP5

No of projects	No of partici-pants	Avg. University participation
5	3 - 5	0,6
21	6 – 8	1
13	9 –10	1,2
12	11 –12	1,3
6	12+	1,8
57	**Total**	

Table 6: Number of participants per project led by a non-academic partner in KA1 of IST FP5

WHAT IS (REALLY) NEW IN FP6?

From what we have seen already in the running of FP6 programmes, in particular IST, several of the characteristics of the Framework Programme are not really new, but derive directly from those of FP5. Specifically, the European Research Area may be a newly formed concept, but certainly FP5 projects did contribute greatly towards its formation. It still remains to be seen whether the new instruments of FP6 will make a equally significant or even more significant contribution. Some of the strategies associated with FP6 are indeed new, however the conventional instruments (e.g. STREPS) still exist. The sizes of the consortia do tend to grow for the new instruments, but remain the same for the "conventional" ones. Budgets, unfortunately, do not seem to grow proportionally to the size of the consortia or to the anticipated complexity of the funded projects or to their increased duration. Finally, the management process is indeed fundamentally changed; the Commission services still need time to adjust to the new situation and to overcome all the difficulties that every change brings about.

WHAT IS HAPPENING IN IST – FP6?

At the time that this report was written, statistics on the results of the first IST FP6 call had not yet been widely available. As Greek participation seems to be largely due to University participation, one of the key questions that needs to be answered is what is the University participation rate in FP6, as compared to that of FP5. European Universities have long ago expressed their concerns about their anticipated participation in FP6 projects, emphasising the fact that the new structure and the new management principles make it increasingly difficult for them to take part in project consortia. If these concerns come true, and University participation rates in EU funded projects is indeed decreased in FP6, the main reasons hindering this participation must be identified and remedial action must take place with an eye towards safeguarding academic participation in the Programme. ■

THE IST PARTICIPATION OF BULGARIA IN THE 5th And 6th FRAMEWORK PROGRAMS

Kiril Boyanov
Regular Member of the Bulgarian Academy of Sciences

The participation of Bulgaria is based on a government decision for research organizations and various compa-

nies to participate in the EC calls and for that reason, the full participation fee has been paid.

Participation in the IST within the 5th Framework Program

Bulgaria was allowed to participate in the 5th Framework Program as a full member along with other candidate countries. One of the most important areas for participation was Information Technology. A number of projects were submitted by various organizations, including universities, the Bulgarian Academy of Sciences, private companies, etc.

The total number of submitted projects is given in Table 1. The distribution of approved projects among the Bulgarian participants is given in Table 2.

Call	Total number of participants	Approved projects
1	97	7
2	43	13
3	67	13
4	35	6
5	18	7
6	64	23
7	48	4
8	146	18
Others		7
Total:	518	98

Table 1

Organizations	Total number of participants	Approved projects
BAS	88	12
Universities	116	24
SME	189	34
Enterprises	15	4
Others	110	24
Total:	518	98

Table 2

The pie chart in Figure 1 illustrates the distribution of Bulgarian participants which is based on data in Table 2. Better involvement of private companies and SME's is desired. The universities and the Bulgarian Academy of Sciences have a very good participation.

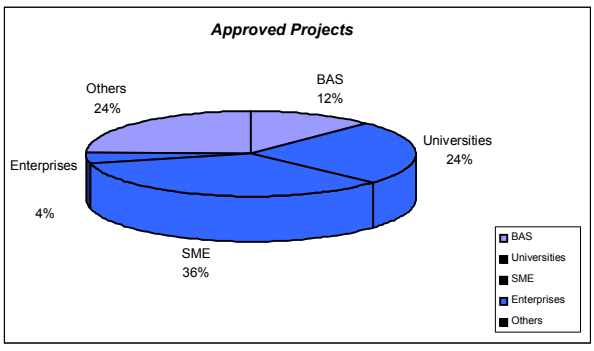

Figure 1

A comparison with other candidate countries is given in Figures 2 and 3:

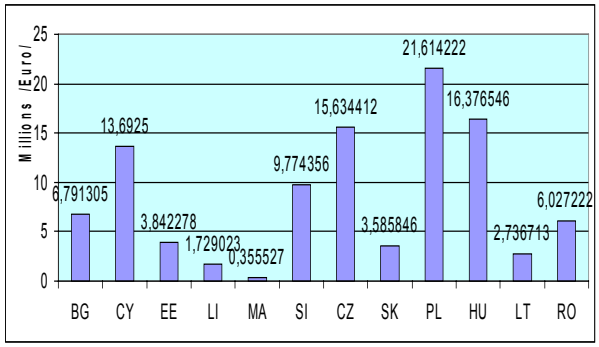

Figure 2

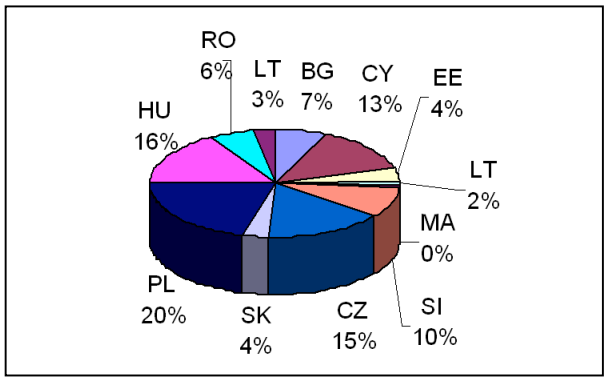

Figure 3

The distribution of Bulgarian participants in proposals and negotiated projects for each FP5 Call is shown in Figure 4.

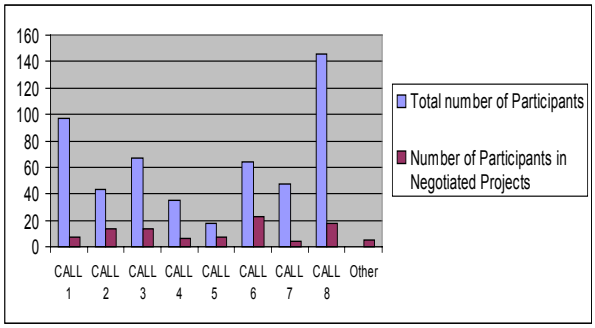

Figure 4

The distribution of participants and EU funding between candidate countries in the 5th Framework Program is shown in Figure 5.

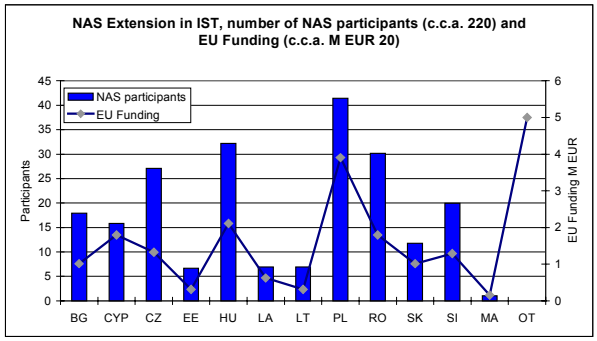

Figure 5

Participation in the IST within the 6th Framework Program

The first call for projects by IST subject priority in FP6 was opened for participation on December 17th, 2002 and ended on April 24th, 2003.

The main instruments of FP6 are: Integrated projects – IPs, Networks of Excellence – NoEs, Specific Targeted Research Projects – STREPs, Coordination Actions – CAs, Specific Support Actions – SSA. The emphasis of the program is on new, specially created for this program instruments – IP and NoEs. As it has been foreseen, 2/3 of the program's budget is to be used for their financing. The new instruments are the basic means for extending the integration and coordination of research in Europe and consolidating the research potential in several priority areas.

Two hundred and one organizations with 132 project proposals from Bulgaria took part in the1st call. Although the expectations were that a small country as Bulgaria will have difficulties to exploit the new instruments, it turned out that they were favored by the Bulgarian participants – 113 participations in the new instruments and 88 in the old. What is more - from the retained for financing 8 projects with Bulgarian participation 5 are IPs and 3 – NoEs. The best presented Bulgarian participant with 3 retained projects is the software firm "Sirma AI" Ltd, followed by The Center for ITS at SU "Kliment Ohridski". The conclusion is that it is not important how big you are, but how innovative you are and what you could offer.

Key data for Bulgarian FP6 participation is summarized in Table 3. Approved projects are 6% from the total number of projects with Bulgarian participation.

Total number of participants – 9502	Total number of Bulgarian participants – 201
Total number of projects – 1396	Total number of Bulgarian projects – 132
Total number of approved projects - 225	Total number of approved Bulgarian projects – 8

Table 3

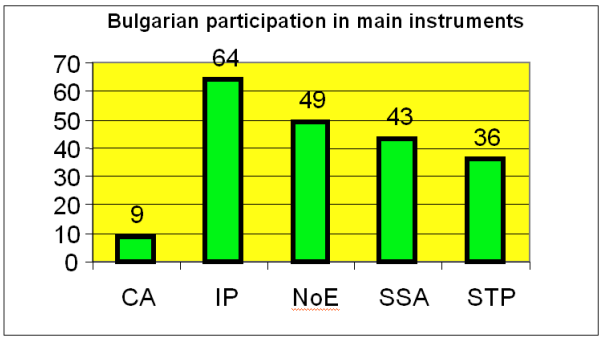

Figure 6

The distribution of usage of FP6 instruments in projects with Bulgarian participation is shown in Figure 6.
The distribution of retained funding of FP6 - 1st Call is shown in Table 4. Graphical presentation of the same data is in Figure 7. The funding of Bulgarian participants amounts to 2.96 % from all NACC funding and 0.19% from the entire EU funding.

BG	1.656.730
CY	4.801.894
CZ	8.655.546
EE	197.158
HU	**10.157.323**
LA	267.516
LT	744.565
MT	756.158
PL	11.925.534
RO	4.343.908
SK	283.368
SI	5.923.427
TR	6.210.956
NACC	**55.924.083**

Table 4

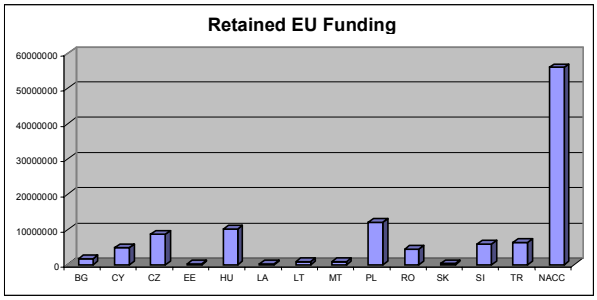

Figure 7

The results of the 2nd Call of FP6 are not yet completely available and only data on the submitted proposals could be discussed. The distribution of requested grants and proposals amongst Bulgarian organizations in the 2nd Call of FP6 is shown in Figure 8 and Figure 9.

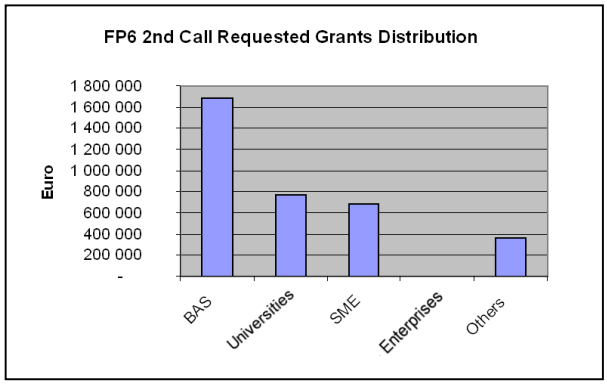

Figure 8

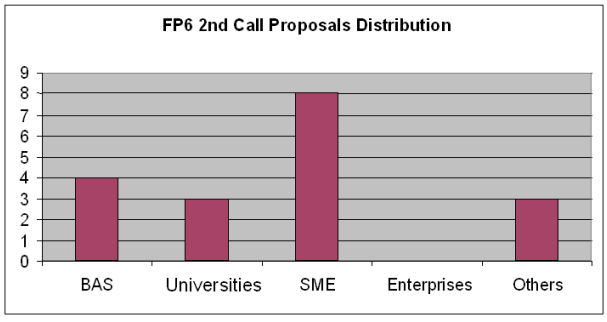

Figure 9

Conclusions

- From the data mentioned above we can consider that the participation of Bulgaria in FP5 is relatively good. In comparison with other NACC, one can conclude that Bulgaria is among the first of the NAS countries.
- Approved Bulgarian projects in the 1st IST call of FP6 are:

  5 Integrated Projects;

  3 Network of Excellence;

  which was worse than expected
- In the 2nd IST call of FP6 the results are not yet entirely available.
- The main conclusion is that the country should be more active in IST FP6 in comparison with other candidate members.

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Galja Angelova, The Results of IST Priority of 6th Frame work Program, Workshop "Information Technology and Euro Integration", BAIT, October 2003, Sofia

Sonia Spasova, IST thematic Priority of the 6th Framework Program of the EU, Workshop "Information Technology and Euro Integration", BAIT, October 2003, Sofia, e-mail: sspasova@mtc.government.bg ■

HUNGARY IN EU IST/FP – EXPERIENCES AND EXPECTATIONS

by Sándor Bottka
ISTC delegate, Hungary

Experiences in European S&T collaboration:
After the political changes in the early1990's Hungary intensified the institutionalisation of the European/international S&T collaboration. Main milestones: 1990: ESF membership; 1991: ESA-HU first agreement, COST membership, OECD Partners in Transition; 1992: EMBO, EUREKA and CERN membership, NATO Co-operation in Science, EU PECO/Copernicus (Let's Go East); 1994: NATO Partnership for Peace. From 1995 to 1998, following a unilateral EC decision the Central and Eastern European Countries (CEECs) were given the opportunity to participate in the FP4 programmes on a project-by-project basis, essentially funding their own participation costs. In 1999 Hungary reached an agreement with the EC and associated to the Fifth Framework Programme (FP5) on programme level, as a "paying member". The Hungarian researchers were entitled to the same rights as those from the Member States, while the NAS (NAS: Newly Associated State) government representatives were delegated to the programme committees as observers, without voting rights. Four years later the association agreement – with the same rights and responsibilities as for the FP5 - was repeated for the FP6 (2003-2006) under which Hungary was considered an Associated Candidate Country (ACC). Hungary is becoming a Member State of the European Union in May 2004.

This collaboration process, its environment, agreements, memorandums of understanding, "comitology", transparent rules, and the traditional bilateral S&T agreements provided the experiences for collaboration and partnership in the Framework Programmes. National policy and measures were created in coupe with these steps: in spite of the budgetary situation efforts were made to increase the GERD/GDP ratio; the share of the project funding was increased in the national S&T financing system; the research infrastructure was improved; a matching fund for co-financing the FP projects was introduced. The National Committee for Technological Development (OMFB) introduced FP-related information services and networks, opened up consultations on EU funding schemes and offered assistance on project preparation and proposal writing, as well. Liaison offices were opened in Budapest, in the countryside, and in Brussels, as well. These steps were to increase the competitiveness and the absorption capacity of the Hungarian research teams.

Hungarian R&D teams obtained the highest EU funding from FP4 among the CEECs, M€ 15.5, of which M€ 5.2 was for IST-related projects (ESPRIT, Race). Under the FP5 IST programme Hungary tripled the EU funding, and took the second position among the NAS countries by the volume of the EU funding. This represented 162 participants in 117 projects. In the FP6/IST two calls have been evaluated, in which 65 Hungarian participants received M€ 11.85 funding in 52 projects.

The EU funding level in relative terms mostly correlates with the GDP, ICT spending or GERD per capita, which in case of ACC is at a lower level than the EU average. In the FP5/IST comparing the Member and Associated States' different indicators, we see the following results: the share of the NAS population represented 22%, their GDP 10%, while their IST funding 2,8% from the total. In the FP6 (Call 1&2), while the AC-10 group's GDP/capita is 2,15 times less than the EU-15 average GDP, their EU/IST funding level 5,6 times less than the EU average. These figures for the AC-13 are: 3 and 10,6 respectively. (The EU-25 average figures are nice: 1,09 and 1,1, the difference is disappearing on the average.) According to the FP5/IST figures the IST funding/researcher is 2,85 fold higher in EU-15, than in Hungary, while the GERD/capita difference is 3,6 fold. The Accession Countries that score above the AC average in EU funding/capita terms both in FP5/IST and FP6/IST Call 1&2 are: CY, SI, HU, EE and CZ. From the other side: LT, MT, PL, RO, and SK have EU FP5/IST funding shares less than their GDP share.

In the case of Hungary the IST/FP5 payment-funding balance is positive. The theoretical payment was calculated by the given country's GDP compared to the programme member's total GDP. The NAS countries effectively paid 1/3 of this theoretical payment, the PHARE Fund covered the other 1/3-rd and the re-

maining 1/3 was deducted. Between 1999-2002 the Hungarian Budget paid M€ 7,7, the PHARE covered M€ 6,1 (proportional figures calculated by the share of the IST/FP5), and the EU funding for HU participants was M€ 15. The indirect funding for HU subcontractors from IST resources is calculated to be about M€ 5. With this taken into consideration, even the theoretical payment/funding balance is not negative. This trend is continuing for Hungary in the first two Calls of the FP6/IST programme: according to the Implementation Plans of Call 1&2 we reached 0,75% of the Budget of Call 1&2, as planned funding for the HU participants.

In the FP5/IST programme international co-operation increased dramatically: in 117 projects 162 Hungarian participants began collaborations with 1406 partners from 42 countries. These projects represent 7.5% of the total IST funding. 55% of the partners are based in the following five countries: DE (195), IT (192), UK (139), ES (127), FR (126).

In contrast, the regional pattern in Hungary is unbalanced: 96% of the EU funding for HU goes to the Central Region of Hungary. The poorest participation is exhibited in the south-west and the north-east Regions, 1 participant each, during the four years of the FP5/IST. Generally, the universities in the rural areas of Hungary were underrepresented in the FP5/IST.

The FP5/IST programme – in comparison to the FP6 – preferred SMEs and innovation. The funding share of SMEs for the EU-15 countries was about 22%, for the NAS 32% and for Hungary 35%. Of course these figures depend on the internal structure of the research institutions too. In the end, you can express the European competitiveness of the research sectors by comparing their EU funding volume, won in transparent bidding systems. By this indicator in Hungary SMEs are the first, research institutes the second, and higher education establishments the third. By the participation success rate (contracted/submitted) large companies are the most successful, research institutes are next – their success rate is not lower than the EU-15 average – and SMEs the third. By this indicator higher education is the last. In the FP6/IST Call 1 the ranking was opposite: the higher education establishments were the most successful participants. Looking at the type of activities in FP5, research and technology development represented for EU-15: 81%, for NAS: 70% and for HU: 68%; while innovative take-up activity represented: for EU-15: 5%, for NAS: 12% and for HU: 17%.

The facilitation of NAS participation appeared as an objective in the FP5/IST Work-programmes, where the certain Action Lines were composed specifically for this reason, and these ALs had a dedicated budget. In the FP6 programme only an instrument (Specific Support Action – SSA) is available to facilitate ACC participation, promoting mostly consultancy-, training- and networking-like activities and funding the service-providers. In the FP5/IST beginning with the 6th Call, running projects were opened up for additional NAS participation. During the last three calls 220 new NAS participants joined running projects in this way, obtaining M€ 15 funding, while the project co-ordinators got an additional M€ 5 EU funding for the extra work due to the extension. Through this scheme, HU reached an extra M€ 2.1 funding, and 33 new HU partners joined the FP5/IST. This meant a 13% increase in funding and a 20% increase in participation figures by the result of the extension. This instrument served the facilitation of new participation, not simply "paying back" some money. The lessons for the newcomers were useful, they could improve their knowledge and skills on real existing projects, and they found new partners for future collaboration, as well. Most of these 33 HU partners are participants in the FP6/IST programme too. Through the above mentioned dedicated NAS Action Lines Hungary in FP5/IST increased the participation by 17% and the EU funding by 23%.

In the FP5/IST programme among the 8 Key Actions in funding terms the most popular for EU-15 were: KA4 (Essential Technologies and Infrastructures), KA1 (Systems and services for the citizen), KA3 (Multimedia contents and tools); for NAS: KA4, CPA (Cross-Programme Actions), KA1; for HU: CPA, KA4, KA1. By Action Line for the NAS the e-Health, for HU the secure mobile payment subject was the most successful. By calls, except for the 5th, Hungary is more successful, than the NAS, and in the last three calls is more successful than the programme average (measured by the projects retained for negotiation compared to the projects submitted).

To reach such results, the national support background, policy and infrastructure, and co-financing schemes is of utmost importance. It is also important for the national scientific classification systems to recognise the importance of international project collaboration. Normally the academy-industry collaboration, the public-private-partnership increases the international scientific competitiveness of the academic sector. The continuous harmonisation of the national R&D funding schemes and the FP funding practice plays an important role, as sometimes the access to the national "easy money" discourages participation in competitive international schemes. SME participation is especially important, because during the transition from socialism to capitalism most of the branch (sector) research institutes were forced to transform into limited companies, actually SMEs. We have a macro-economic interest to sustain the research capabilities of these SMEs, who have to earn their income primarily from the market. Recently more spin-off SMEs, or high-tech SMEs, created by international companies are competing in the FP.

Early lessons from the implementation of the FP6/IST programme and expectations:

The ERA-FP6 is more policy oriented, as it gives preference on the one side to big industry, and on the other, to science/university research. In comparison to the FP5/IST, there is more financial and hierarchical "red tape", lower success rates and generally, less innovation, less SME participation.

The new instruments are not preferred by the ACCs. Integrated projects (IP) are specifically designed for the big industries, which are almost missing from the ACCs. In Call 1 after the negotiation of the contracts the share of the new instruments of the funding are: total: 75%, ACC-13: 72%, AC-10: 71%, HU: 58%. In Call 2 these shares according to the indicative funding status are: EU: 66%, ACC-13: 48%, HU: 25%.

For the FP6 the values, evaluation criteria and their weighting have been changed. The Consortium-Management-Resources issue became an individual criterion in the FP6. Meanwhile, the ACCs lose less projects than the EU-15 by failing the criteria of S&T merit, but lose more by the criteria of Consortium, Management and Resources. What is the meaning of this? By the traditional scientific classification the ACC researchers are good, but they cannot manage the consortium well, and their own resources are hardly available at home. This is one of the reasons why one can find less co-ordinators from the ACC region. In the case of Hungary, the percentage of projects with weak overall scores is relatively (2-3%) higher, than that for the EU or ACC.

When evaluating the EU funding for ACCs by strategic objectives, one can recognise some "capacity concentrations" in certain subjects. E.g. CY: e-Health, CZ: multimodal interfaces, HU: broadband technologies and cross-media content, PL: micro-, opto- and nano-technologies, SI: knowledge management and cognitive systems, TR: e-Learning/Culture or cross-media. Are these fields the strengths of these countries? Can one build open co-ordination or technology platforms on the basis of this? Certainly, these "seeds" still need some "watering and care" and in line with their national S&T policies, priorities and national programmes they can become strong capacities and they can contribute to the improvement of the competitiveness in Europe.

I tried to show you that ACCs need more efforts to move towards becoming fully integrated into the IST programme. This is a process, which can be promoted by a joint EU-ACC action plan on the facilitation of full integration. Some assistance measures can improve capacity building and the public-private-partnership. These are necessary, however, the old and the new Member States should focus on joint research activities in those fields, where the need for changes exists on both sides. I assume, the e-Government is a challenge for the enlarged Europe. The Structural Funds can improve the research ability if they are not simply replacing the tight or missing national R&D funds, but operating according to the functions of the structural/regional developments. In my opinion, IST research and technologies are horizontal by their nature, and for this reason sometimes they cannot fit into the hierarchical structure of the FP6. Certainly the principle of subsidiarity could be employed for the FP6 priorities as well. Certainly variable geometry is a nice idea, but if the system is too complex, the abstraction becomes so general on the horizontal level, that it ignores the real aspects of the given technologies. The big projects and the high level of funding can be attractive not only for the R&D people, as it can introduce some distortion into the working environment. In the end, the Framework programme has to serve the competitiveness of the enlarged Europe, as it was expressed in the Lisbon decision. ■

[A PowerPoint Presentation is available at: http://www.starbus.org/download/nl_9_04-bottka-slides.ppt]

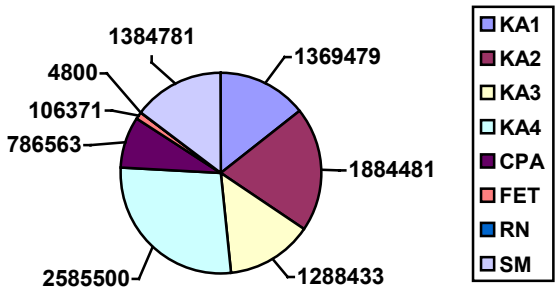
STATISTICS OF SLOVENIAN ACTIVITY IN THE 5TH FRAMEWORK PROGRAMME – PROGRAM IST

by Andreja Umek Venturini
National Contact person for IST Program, Ministry of Education, Science and Sport
comments by Niko Schlamberger
President of SSI

The following data show the participation of Slovenian experts in the 5th Framework Programme (5FP). The data comprise 8 periodical tenders of IST Program that have been available during the 5FP (1999 – 2002).

The diagram below presents the financing that was made available by the European Commission in support of support of Slovenian responses by Key Actions. Cumulative finance intended by EC for Slovenian responses to IST Program amounts according to presently available data to 9.410.408 EUR.

Distribution of co-financing of Slovenian responses by Key Actions by European Commission (in EUR)



Abbreviations:

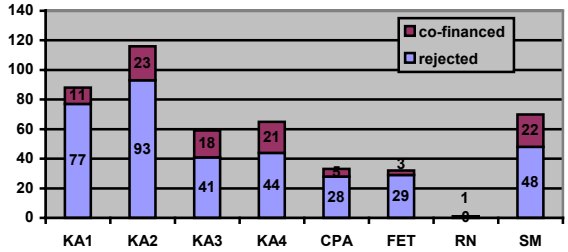
KA1: Services for Citizens
KA2: New Methods of Work and e-business
KA3: Multimedia Technologies
KA4: Key Technologies and Infrastructure
CPA: Cross-Programme Theme
FET: Future and Emerging Technologies
RN: Research Networks
SM: Support Measures

The effectiveness of the Slovenian response to IST Programme tenders is represented in two diagrams be-

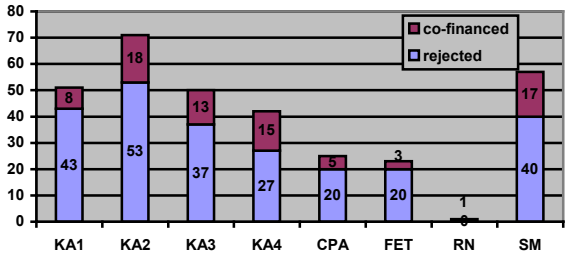
low. Among the successful bidders are some that have acted as coordinators for KA 2, KA3, KA4, FET, and SM, one for each field. Additionally, in Slovenia the EC has co-financed five conferences on technologies for the information society. The overall success of Slovenian responses is 22,3%, of which 12,5% relate to KA1, 19,8% to KA2, 30,5% to KA3, 23,3% to KA4, 12,5% to CPA, 34,4% to SM, and 9,4% to FET. One successful response was related to RN (project of joining European national academic networks – Géant).

The success measured by the number of projects with Slovenian participation is 24,8%, of which belongs to fields as follows: 15,7% KA1, 25% KA2, 26% KA3, 37,5% KA4, 20% CPA, 13% FET, 29,8% SM, and one successful response for Géant.

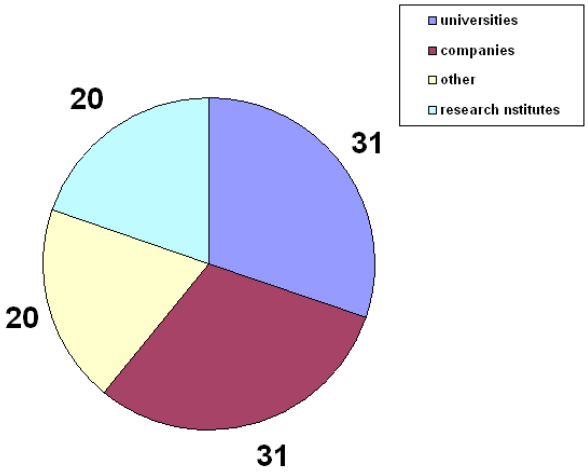
Distribution of Slovenian responses by Key Actions



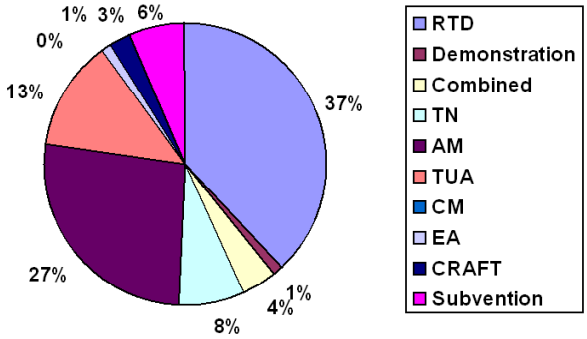
Distribution of Slovenian proposals by Key Actions



Distribution of successful Slovenian responses by organisation type

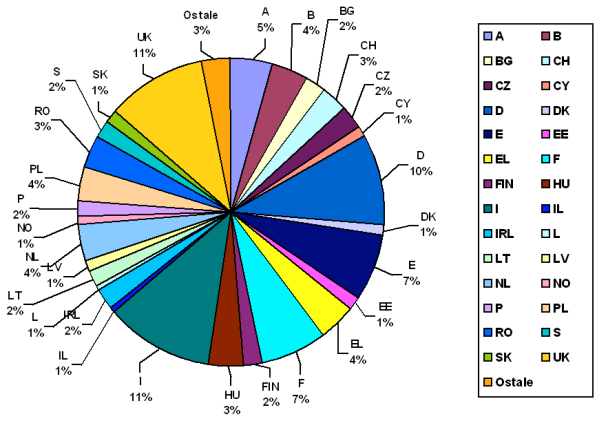


Distribution of successful Slovenian responses by response type



RTD: Research and technology development projects
Demonstration: demonstration projects
Combined: combined research and demonstration projects
TN: thematic networks
AM: ancillary measures
TUA: technology actions
CM: common measures
EA: support of preparation for research and technology development projects
CR: cooperative research projects
Subvention: financing of meetings

Partners of successful Slovenian participants



Comments

The statistics show that most successful key actions to have been co-financed were key technologies and infrastructure, electronic commerce, and support measures which is a somewhat different distribution of co-financing than the one expected. It can also be seen that universities were most successful in accessing EC finance. This can be explained by the fact that the Slovenian economy and science are rather developed in the fields of technology and electronic commerce. The diagram representing the partnership of successful Slovenian respondents to tenders shows an expected bias towards the countries of traditional economic partnership with an unexpectedly high participation of the United Kingdom. ■

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