

The link between policy for the accession to EU and policy for the access to IS (Hungary, Poland, Czech Republic, Slovakia)

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e-Europe is a political initiative to ensure the European Union fully benefits for generations to come from the changes the Information Society is bringing. The world economy is moving from a predominantly industrial society to a new set of rules - the information society. What is emerging is often referred to as the new economy. Managing this transformation represents the central economic and social challenge for the Union. It will impact profoundly on European employment, growth and productivity for the next five years and for decades afterwards. Europe needs to build on its strengths. It has a leading role in mobile communications and digital TV. Yet the uptake of the Internet has been relatively slow. By combining digital literacy with strength in mobile communications, Europe can lead the next great leap to a wireless Internet world. CEECs have traditionally a very high R&D potential in the fields related to the Information Society. Currently, - I think - there is a need to describe CEECs R&D potential to EU. This is a crucial time and a unique opportunity for the Union. Acting together in partnership, Information Society can be shaped towards our values, principles and strengths. Such chances are rare. They must be seized.

EU-CEEC co-operation on information society

The European Commission cannot achieve these targets alone. A joint effort of the Member States, the European Commission, industry and citizens is required. The European Union takes special efforts to associate the candidate countries for EU membership more closely with Community Information Society activities. Dialogue is being developed with the CEECs and also with some other Eastern European countries to promote the EU model of the information society outside the EU mainly in the context of the Enlargement process and the economic co-operation with non-accessing European countries. A regional dialogue has been launched in June 1995 with the setting up of the EU/CEEC Information Society Forum.

Information Society applications will help the integration process itself by providing efficient tools services and management methods to smooth the political, administrative, social, and economic problems that the accession raises.

The CEECs have in the past not been able to profit from the benefits of the information society to the same extent as most of the EU member states. Furthermore, the take up of ICTs among CEECs varies considerably from one country to another.

However, many applicant countries are liberalising their telecommunication markets ahead of actual accession, but as with EU member states, liberalisation will only yield all its potential benefits if the requirements of the regulation are implemented fully and supported by an independent Regulation Agency.

For applicant countries, coming in line with the "acquis communautaire" is not just part of the negotiation process but as an essential step in stimulating their economies ahead of accession.

This has been recognised by the Commission and the EU together with the CEECs have been engaged in continuous efforts to facilitate the development of information society in these countries, following the action lines of the European way of Information Society.

It will be actually interesting for both parties (EU and CEECs):

First, to assess the progress to-date regarding the implementation of these recommendations and to update these, second, to discuss and to work out a common understanding at the highest political level on new recommendations together with a timetable: this could represent an updated Action Plan towards IS development in the CEECs.

The European Ministerial Conference on Information Society maintains the necessary momentum of IS development process in the CEECs through an increased co-operation between EU and CEECs.

At the invitation of the European Commission, ministers from the CEECs, representatives of industry, research organisations and financial institutions reached common conclusions for the necessary steps for development of Information Society in these countries.

Some basic common activities could be noted:

- ?? development of a national strategy or action plan for Information Society;
- ?? setting up of a national co-ordination mechanism for Information Society development;
- ?? regulatory and technological development in telecommunications;
- ?? introduction of Information Society applications in the field of state administration, science, education, culture, health care, etc.;
- ?? introduction of special measures to mobilise industry and to involve small and medium-sized enterprises (SMEs).

Targets of e-Europe:

By the end of 2001:

- ?? All schools should have access to the Internet and multimedia resources.
- ?? Support services, including web-based information and educational resources, should be made available to all teachers and pupils.
- ?? Access to Internet and multimedia resources in public centres should be made available to all youngsters, including in less-favoured areas.
- ?? The allocation of frequencies for multimedia wireless systems should be established.

By the end of 2002:

- ?? All teachers should be individually equipped and skilled in the use of Internet and multimedia resources.
- ?? All pupils should have access to high-speed Internet and multimedia resources in their classroom.

By the end of 2003:

- ?? All pupils should be "digitally literate" by the time they leave school.

Member States can through their own decisions speed up liberalisation and urgently address issues that would give consumers more choice and lower prices for high-speed access to the Internet.

The *e-Europe 2002* initiative launched by the EU and the subsequent launching of a similar initiative *e-Europe+*, for the CEEC countries was fundamental in channelling the overall efforts in the right direction.

CURRENT AND PAST IST PROJECTS

In 1993 the European Council requested that a report be prepared which would make recommendations on specific measures to be taken into consideration by the European Union and its Member States. This report, the *Bangemann Report*, called for the establishment of a Board composed of eminent figures from all sectors concerned, including social partners, to work on the framework for implementing the information society.

The CAPE project (Coordinated Action for Pan-European Transport and Environment Telematics Implementation Support, June 1998 – December 1999) has examined the status of Information Society development in the European Union (EU) accession countries as part

of a larger survey looking to determine the needs and priorities for Information Society Technologies in the environment and transport sectors. As a result, based on the findings of the country report chapters, the following summary table has been prepared for the main policy initiatives or concepts for information society development, progress in implementing environmental information systems, and corresponding legal frameworks.

Country	Policy/Concept(s)	(Environmental) information system	Legal Framework
Czech Republic	National Policy on the Information Society, 1998	Environment Monitoring Concept, 1993 Concept for an Integrated Environmental Information System, 1992	Act on Environmental Right to Know, 1998 International Convention on Access to Information signed, ratification expected 1999
Hungary	Intelligent Cities and Regions Programme, 1997	GIS Development Programme, implemented within the National Inspectorate for Environmental Protection, and 12 Regional Inspectorates	Law LIII on the General rules for Environmental Protection, 1995 International Convention on Access to Information signed, ratification expected 2000

Country	Policy/Concept(s)	(Environmental) information system	Legal Framework
Poland	Global Information Society Strategy, including: Objectives and Directions of the Information Society in Poland Both currently being finalised	National monitoring system based on the Act on the Environmental Protection Inspectorate, 1991	Polish Constitution, Article 74 Act on the Environmental Protection Inspectorate, 1991 International Convention on Access to Information signed, ratification expected 1999
Slovakia	Strategy for the Implementation of the Information Society Policy, 1998	Environment Monitoring Concept, 1993 Concept for an Integrated Environmental Information System, 1992	Access to Environmental Information Act, 1998 Slovak Constitution, Section VII International Convention on Access to Information signed yet to be signed

The results of this survey on the Requirements and Framework for Environment and Transport Telematics Implementation shows that nearly all EU accession countries appear to have developed informational "concepts" within the last years, supported usually by a corresponding information legal framework and (environmental) information system. The objective being, to smooth electronic information exchange, in some cases to agree on standard and compatible data formats, and overall to improve information flow, access and transparency. It can be said that EU accession and the general need to improve informational efficiency in the light of current technological advances (particularly Internet growth) are among the driving forces. This in stark contrast to the policy of previous decades where until the political changes of the late 1980's, information was maintained secretively and was not readily accessible and for many areas not even collected.

The e-Europe initiative was launched by the European Commission in December 1999 with the objective to bring Europe on-line. Complementary to e-Europe, the Commission also presented a Communication on "Job Strategies in the Information Society" in January 2000. The Broad Economic Policy Guidelines provide the economic policy context, stressing the need for well functioning capital markets and more competition in product markets in order to foster innovation. The Conference Conclusions adopted during the European Ministerial Conference on Information Society held in Warsaw on 11-12 May 2000 recognised the

strategic goals agreed at the Special European Council held in Lisbon and adopted a number of recommendations and actions.

The European Council meeting held in *Lisbon on 23-24 March 2000* set the ambitious objective for Europe to become the most competitive and dynamic economy in the world. It recognised an urgent need for Europe to quickly exploit the opportunities of the new economy (in particular the Internet) and to bridge the digital divide in the emerging information society and to strengthen social cohesion. The European Council in Lisbon specifically recognised the role of the content industries in creating added value by exploiting and networking European cultural diversity.

European Ministerial Conference on IS (Warsaw, 11-12 May 2000)

The main objectives of the Conference was to build a consensus between Ministers from the Accessing Countries and the EU on the deployment of the European Model of Information Society for Enlargement through

- ?? a political and socio-economic assessment of achievements to-date,
- ?? and a common understanding at the highest level on a policy action plan to tackle short,
- ?? and medium terms IS aspects of the European Integration process.

Furthermore, although the discussions primarily concerned the "accessing" countries, but it was foreseen to invite representatives from "non-accessing" CEECs and other eastern European countries, since the current dialogues with these countries address the Information Society issues as a priority co-operation theme.

The Conference recognised:

- ?? the conclusions of, and new strategic goal agreed at, the Special European Council of Lisbon, 23rd-24th March 2000, and that these are relevant also to non-EU countries.
- ?? that the use of ICT in all relevant sectors will have great impacts in accelerating the process of European integration.
- ?? the significance of the e-Europe initiative in seeking to bring the benefits of the 'Information Society' within reach of all Europeans.
- ?? the effectiveness of the collaboration between the EC and Central and East European Countries (CEECs) on IS issues that has continued since *the first EU-CEEC IS Forum in Brussels in June 1995*.
- ?? the work performed by the EU-CEEC Joint High Level Committee (JHLC) and the progress made by the CEECs in implementing the recommendations and conclusions of the *Third EU-CEEC Information Society Forum (Brussels, October 1997)*. This progress is documented in two reports produced by the JHLC: a 'Summary Progress Report', and the consolidated 'CEEC Progress Report'.
- ?? that all of the PHARE countries have grasped the importance of the Information Society and are making significant efforts to put in place national policies and action plans. However, even when bearing in mind the difficulties that some of the countries are experiencing in the reform process, the lack of progress in developing national action plans will be a restraining factor in future economic development.
- ?? the progress made in the telecommunications regulatory framework in the EU and in some CEECs. Especially the liberalisation that took place in the EU in 1998.
- ?? that the rapid growth of the mobile communications market has exceeded expectations and that use of the Internet is growing at an accelerating rate.
- ?? that accession negotiations with twelve EU candidate countries are now in progress.

European survey of the Information Society (ESIS)

At the beginning of 1997, ISPO, the Information Society Promotion Office of the European Commission has launched a project called ESIS (for European Survey of Information Society), with the objective to build an Inventory of projects as well as to assemble European data concerning promotional activities undertaken by public authorities and private actors, be they European, national, regional or local. Other aims were to monitor and to analyse new regulatory developments in the field of telecommunications and Information Society as well as to present a mapping of the actors, notably the public or private network facilities offering Information Society infrastructure, services and applications.

Due to the success of this project and following several requests from local actors, it has been decided to extend ESIS to Central and Eastern European and Mediterranean countries and areas. This phase of the project started in March 1999 and will last until 2001. It is called **ESIS II** and concerns 25 countries and areas of the Central, Eastern and Mediterranean countries. The work is performed in a decentralised manner by contractors who have been selected by the Commission following an open call for tender.

Information Society Technologies (ISTs), formerly "Telematics," describes the application of telecommunication technologies to the growing world of informatics. Products and services are intended ultimately for the benefit of the decision-maker and society, and help contribute primarily to Commission proposals for the Creation of a User-friendly Information Society. Secondary goals of ISTs are to facilitate the integration and convergence of information processing, communication and media, and furthermore, to assist in the globalisation of research and technical development (RTD) cooperation under the European Union's 5th Framework Programme (VFP). Between 1999 and 2002, EUR 3.6bn is being made available for IST research and this represents a significant part of the European Union's funding for the development of the European Information Society.

ISTs are primarily developed and targeted for use by local, regional and national authority decision-makers and the European citizen. Essentially their role is to support the decision-making process by providing valuable and timely information, while disseminating public interest information in a variety of sectors to European society.

Sustainable development is a cornerstone of the European Union's environmental policy.

Early in 1999, the European Union launched the 5th Research and Technical Development Framework Programme (1998-2002) which has already provided opportunities for the participation of Central and East European countries.

Hungary

As per the draft e-Europe Action Plan prepared by the Council and the European Commission for the Feira European Council held on 19-20 June, the actions which have been identified for action by the CEECs are clustered around three main objectives (30th March 2001):

1. Accelerate the putting in place of the basic building blocks for Information Society

- ?? Accelerate and complete the liberalisation of the telecommunication sector
- ?? Transpose and implement the acquis relevant to the Information Society

2. A cheaper, faster, secure Internet

- ?? Cheaper and faster Internet access
- ?? Faster Internet for researchers and students
- ?? Secure networks and smart cards

3. Investing in people and skills

- ?? European youth into the digital age
- ?? Working in the knowledge-based economy
- ?? Participation for all in the knowledge-based economy

4. Stimulate the use of the Internet

- ?? Accelerating e-commerce
- ?? Government online: electronic access to public services
- ?? Health online
- ?? European digital content for global networks
- ?? Intelligent transport systems

During the year 2000, an overall plan for economic development called **Szechenyi Plan** was developed and approved **covering a period of six years until 2006**. The plan has a chapter especially dedicated to the development of the Information Society (Information Society and Information Economy Development Programme) which sets the main corner stones of the Government's information society and economics strategy. The responsible body for the implementation of this programme is the Office of the Government Commissioner for IT.

Besides these subprograms and measures financed from the budget of the Office of the Government Commissioner for IT as the principal responsible for information society, there are a number of on-going efforts initiated and supervised by the different ministries and public bodies in the different areas of business and civil life. Among them, some of the most important projects are

- ?? support to the start-up IT ventures
- ?? inclusion of the SMEs into the e-economy
- ?? information and communication technology research
- ?? development of IT systems for tourism
- ?? support to the regional IT developments

For this purpose, and in line with the practice and expectation of the European Union, the Office of the Government Commissioner for IT is in the process of setting up a monitoring

system to follow each project from the initial need identification through public procurement, implementation until the finalisation with a cost-benefit analysis in order to assess the socio-economic impact of each project.

As a forerunner to the monitoring system, a feasibility study is being prepared to define the most appropriate indicators to measure both the current state of the information society in Hungary as well as the change – if any – caused by each individual project and the government's information society effort as a whole. The intention of the Office of the Government Commissioner for IT is at one hand to ensure that public money is spent in a cost effective manner and not squandered on futile, albeit showy projects and, on the other hand, to be in the position able to identify the public acceptance (or rejection) of the government's IST strategy and to rectify and modify the strategy as needed to avoid the pitfalls presented by this unique challenge.

The Ministry of Economic Affairs has a separate organisation for managing and handling project applications. The monitoring system is continuously adjusted according to EU-expectations, securing the efficiency and transparency of the system of project applications.

All fundamental targets of the „e-Europe 2002 action plan” and all the core actions required were included either explicitly or implicitly in the IT part of the Szechenyi Plan and funding has been allocated for them for the first two years of the Plan's duration. This will ensure that all main areas are addressed within these two years. The priority projects revolving around the key elements of the development of the information society will be completed before January 2003, assuring that Hungary is ready for the planned date for Hungary's accession. Naturally, information society for all will not become a reality within this time frame and there will undoubtedly remain issues to be resolved beyond this date. Hungary has much to accomplish during the pre-accession period which will raise matters that are not apparent yet. Therefore, the Szechenyi Plan has a longer term vision and the measures taken by Hungary will have an impact for the years to come.

Szechenyi Plan

Information Society and Information Economy Development Program

Integration in the e-society Hungary has favorable conditions for developing an information economy due to the developed mobile and landline telecommunications system, constant improvements in the availability of modern information and communication devices in the business sector, and the availability of intellectual capital. Further facilitating factors are the following:

- ?? the rate of GDP growth and the expansion of the market of up-to-date information and communication devices are higher in Hungary than the European Union average;
- ?? regarding the most important indicators in telecommunications services, Hungary has reached the middle zone of the European Union as a result of infrastructure developments over the past ten years. Now landline telephones are available in nearly 40% of homes, and mobile telephone services are used by 20% of the population. An interesting feature is that the Hungarian service providers were among the first in the world to use "Internet Protocol" voice transmission services in long distance and international connections;
- ?? in Hungary the presence of leading multinational companies operating in the information technology sector has increased in recent years, causing an acceleration in export-oriented production. These large-scale companies have also begun to move gradually their research and development centres to Hungary.

Despite rapid bridging of the gap between Hungary and the nations of Europe, there is significant backlog in several areas.

- ?? The Hungarian population is not well equipped with modern information and communication devices.
- ?? Hungary is still far behind most countries in the European Union in terms of technological and economic development, the number of applications, the market environment for information technology, the level of preparedness for the information society, the indicators of Internet use and Internet access, and electronic business solutions.
- ?? The legal/regulatory environment, which facilitates the development of the information society and information economy, and also safeguards the security of participants, needs development in many areas.

A rather ambiguous picture develops when the favourable developments and the underdeveloped areas are seen together. Despite the attempts to close ranks, there is a significant backlog in Hungary. This is felt primarily in the establishment of the information society and information economy, and the rate of, availability of and access to up-to-date information and communication devices within the population.

Concentrated and limited participation of the state

Two primary aspects have to be taken into consideration when the objectives of the information society and information economy development program are defined.

- ?? The development program should only concentrate on a few important issues out of the many complex and comprehensive tasks in information society and information economy development.
- ?? The participation of the state should be restricted and indirect; it should only focus on establishing frameworks for market processes, and on accelerating processes which do not or only very slowly progress in the market environment.

Objectives of the program

With regard to the need to set priorities between the complex development tasks and the restricted and indirect role of the state, the most important practical objectives of the information society and information economy development program are the following:

- ?? to promote the establishment of the electronic public administration - with cooperation between the state, local governments, companies;
- ?? to create the legal and regulatory background of the information society and information economy;
- ?? to improve the availability of up-to-date information and communication equipment in public administration, the economy and homes;
- ?? to enhance the availability of communication equipment for the population with solutions at a private or community level; to increase Internet access;
- ?? to contribute to developing the Hungarian information economy into a leading segment; to accelerate the penetration of the devices of the "New Economy" into traditional sectors of the Hungarian economy;
- ?? to promote the spread of up-to-date information and communication devices; - to support Hungarian language content provision and information services produced either commercially, privately, or by a public service institution; and
- ?? to contribute to increasing equal opportunities in this area, as well.

The government development subprogram

Overview

There have been significant information technology developments at a government level.

- ?? The most important basic systems have been established. The ministries and most public administration institutions are available through open networks.
- ?? The government has launched "second generation" developments, creating appropriate programs not only for the management of infrastructure but also for the management of data.

At the same time, the regular assessment of public administration data is still missing. Also lacking is an institutional system, which forwards the data to the market and relevant institutions. Similarly important tasks await in respect to the legal framework.

Objectives of the subprogram

Based on the above situation, the most important objectives of the subprogram are:

- ?? ensuring the conditions of a separate national information strategy, creating the strategy and embedding the strategy in society, and the establishment of a monitoring system to constantly monitor the realization of the strategy;
- ?? the coordinated development of the electronic government, the application of the principle of service-providing in practice as extensively as possible;
- ?? the coordinated development of the government information infrastructure, the establishment of the institutional conditions of the "electronic democracy" in the long term; and
- ?? the establishment of the legal and regulatory environment indispensable for the development of the information society and information economy, and the diffusion of the necessary standards.

Means of the subprogram

In order to achieve the above-mentioned goals, the subprogram is based on three main pillars:

- ?? preparing a complex information strategy (strategy, research, and monitoring);
- ?? developing electronic government, service-providing state and electronic democracy; and
- ?? establishing the legal and regulatory environment and the diffusion of the necessary standards.

Subprogram for improving the availability of and access to up-to-date information and communication devices

Overview

Although according to statistical estimates nearly 2.5 million people in Hungary use up-to-date information technology and communication devices either at the office, at friends', at school or at any other available access point, several conditions of mass Internet use remain to be fulfilled. Nearly half of all Hungarian Internet users do not have a PC in their home. The excessively high number of applicants to the government's "PC and Internet access for families" campaign, launched as a pilot campaign in late 2000, clearly demonstrated that there is a huge demand for up-to-date information and technology.

International findings show that various forms of public access may compensate for a lack of Internet access at home. A positive development in this area is that Hungary is among the global leaders (proportionately to the population) in the **Tele-House Movement**, which gives people in small villages an opportunity to learn about informatics. Tele-houses are communal telecommunication service-providing establishments that offer the people of small communities access to information, office technology equipment, computers, the Internet, and other related services.

Objectives of the subprogram

The subprogram endeavors:

- ?? to increase the number of individuals with private access to information technology, to increase the number of families with computers and Internet access;
- ?? to support the expansion of communal and institutional access networks;
- ?? with the introduction of special projects, to increase the number of opportunities for individuals and communities to purchase hardware and software at a discounted price;

Means of the subprogram

There are four closely interrelated target areas of the subprogram:

- ?? improving the accessibility of modern communal and institutional tools of communication and information;
- ?? improving the availability and accessibility of modern tools of communication and information technology for private individuals, families, households;
- ?? developing electronic local governments, "intelligent communities" (region, city, village);
- ?? improving software availability.

Subprogram for laying down the foundations of an electronic economy

Overview

In Hungary today, digital data transfers, electronic business operations and electronic commerce are all present in both business-to-business and business-to-consumer communication. The process of development, however, is slow. Participants in the economy are affected to varying degrees, according to the type and size of their businesses.

The majority of large-scale enterprises have modern electronic communication systems, but the presence of these tools at small and medium-sized companies is minimal.

Objectives of the subprogram

The subprogram has set the following goals:

- ?? facilitating the widespread diffusion of e-commerce and e-business, which is expected to increase the competitiveness of enterprises related to domestic supply, retail, freight-forwarding, and commercial chains;
- ?? reducing existing differences and inequalities - defined by the activities, dimensions, and locations of businesses - in the adoption and application of e-business solutions; and
- ?? promoting the creation of employment policies which can facilitate the widespread employment of telecommuting.

Means of the subprogram

On the basis of the above objectives, the subprogram rests on two pillars:

- ?? supporting the diffusion of e-business; and
- ?? facilitating the spread of telecommuting.

The information culture and content-development subprogram

Overview

The relative underdevelopment - compared to the US - of the information society and information economy of Europe, including Hungary, manifests itself mostly in the availability

of tools and the efficiency of the media and IT industries. There is also a significant lag in new processes of social adaptation, the widespread adaptation and everyday use of information culture, and information "literacy."

Objectives of the subprogram

In view of the deficiencies in the dissemination of information culture and in the field of content provision, the main objectives of the subprogram are as follows:

- ?? improving social readiness, receptivity, information "literacy," motivation and interests;
- ?? elaborating new training and knowledge transfer methods, adopting solutions used in the European Union, and ensuring the free availability of these solutions;
- ?? introducing the information society to the workplace, including paying attention to opportunities in the labour market for older generations with no skills in information technology;
- ?? making training and information "packages" and electronic teaching materials available;
- ?? promoting mass access to the tools necessary for training.

Means of the subprogram

The subprogram rests on two fundamental pillars:

- developing out-of-school training, information "literacy" and continuing further education;
- supporting content provision, digital (mass) culture and the digitalization of culture.

The quality of life and awareness-raising subprogram

Overview

International experiences relating to the emergence of global information societies and information economies indicate that only those countries remain competitive that pay attention to the social challenges of the new era. These challenges are connected to the fate of sectors only partially affected by market conditions. These tasks are part of developing an information infrastructure and content. Therefore, raising awareness is a precondition to the success of the program.

Objectives of the subprogram

The quality of life and awareness-raising subprogram has set the following aims:

- ?? to give as many people as possible an opportunity to get direct experience of the tools of information technology and communication;
- ?? to present the concept of an information society through the press, radio and to local television;
- ?? to involve as many households as possible as regular users of the new tools, with the convincing power of presenting the "best practices";
- ?? to reduce the "digital divide" that is manifesting itself in the stratification of society with respect to the application of modern information technology and communication tools;
- ?? to make disadvantaged social groups digitally "literate" through a series of specially designed projects catering for individual needs.

Means of the subprogram

The quality of life and awareness-raising subprogram rests on the following measures:

- ?? the involvement and support of civil social organizations and movements;
- ?? the involvement of the disadvantaged; and

?? raising social awareness - communication and media strategies.

Developing the information society and the information economy has good chances in Hungary, thanks, among other things, to the high standard of intellectual capital.

Hungary, which ten years ago lagged way behind in regard to telecommunications, today can be found in the middle zone of the EU in this respect.

The presence of leading multinational companies operating in Hungary in the field of information technology has increased in the past years. As a result, they have also gradually started to move their R&D centres into Hungary.

It is the duty of the state to create the legal and regulatory background of the information society and information economy - an example is the use of electronic signatures, with preparing to be one of the world's pioneers in this practice.

Internet usership will rise 50pc this year

850,000 Hungarians had access to the internet at the end of 2000, the research company GKI, Webigen and Sun Microsystems Hungary found in a joint survey of internet providers.

Providers expect this number to grow 50pc this year, and predict that the increase of internet accounts will beat even that. Respondents said that cutting phone tariffs could give a massive boost to the number of internet user accounts. Other factors they assume could add new impetus include lower equipment costs and higher living standards. Those queried do not expect a comprehensive government programme or increasing of general computer literacy to be a major incentive for the market.

Advertising accounted for 5.3pc of the revenues of internet providers in 2000, but this is expected to grow in 2001. The providers spent 6.8pc of their expenditures on internet advertising, and they said this is likely to double this year. Also expected to double in 2001, internet advertising revenues were estimated to total HUF 735m last year. Few cable companies queried by GKI said they provide internet access on their network, but 80pc indicated they will introduce the service in the next few years.

Poland

Since the publication of the Bangemann report, "Europe and the global information society" (May 1994), a lot of governmental and non-governmental documents and declarations concerning the Polish strategy for building the Information Society have been developed. Accessibility to modern telecommunication and information technologies has a direct influence on the evolution of the society in all its aspects.

Following the First Congress of the Polish ICT in December 1994, the Polish report was compiled and focused on the most important issues of IT development in Poland.

The Second Congress, 30 November- 2 December 1998, revealed that the majority of the postulates in the Polish report are up to date, and many new challenges have arisen.

The objectives of the telecommunications development policy are included in the "Telecommunications Development Policy", approved by the decision of the Council of Ministers in 1996; "Strategies of Telecommunications Development in Poland until the Year 2000", approved by the Government at the turn of 1993; "Directions of Structural Changes in the Polish Telecommunications", and "Guidelines to the Telecommunications Development Policy in Rural Areas until the Year 2000", approved in 1995.

The governmental document prepared in September 1998 by the Ministry of Posts and Telecommunications "A draft of telecommunications market development for 1998-2001" includes the estimates of telecommunications development.

The resolution of the Polish Parliament on Building Basis for Information Society in Poland was passed on July 14, 2000. The resolution stresses the necessity of national strategy for Information Society in Poland to be presented by the Polish Government. It includes the following issues: universal access to Internet, computer education for youths, long-live computer education, IST in central, regional and local administration, defence and security issues, information systems for research and university centres, thread of illegal use of telecommunication networks and the Internet, action plan of implementation of IS services in Poland Polish representation in international activities for e-economy regulations.

The Polish Parliament required the Polish Government to prepare urgently regulations concerning e-economy development including electronic signature, electronic document, information safety, cryptography, consumer protection, information protection, any matters related to e-business.

The Council of Ministers on the Meeting on 28 November, 2000 in its statement concerning parliamentary resolution underlined the importance of transition processes in Poland from industrial to information society. The programme document entitled "Aims and Directions of Information Society in Poland" prepared by Ministry of Telecom was accepted and presented to the Polish Parliament. "Aims and Directions of Information Society in Poland" is a comprehensive document including chapters corresponding with topics mentioned in the parliamentary resolution, with defined aims and recommendations for responsible ministers and central administration.

An action plan to elaborate the document "Strategy of IS Development in Poland in 2001–2006 – e-Poland" is as follows:

all the Ministers are responsible for IS development agendas in their ministries including timetables, preliminary budget and financial resources – before 31 January 2001. Minister of Internal Affairs and Administration is responsible for summary agenda of IS and telecommunications development in governmental administration – before 30 April 2001. Ministers are asked to prepare sector strategies for IS development in 2001-2006 – before 31 March 2001. Minister of Telecom will prepare a summary document "Strategy of IS Development in Poland in 2001–2006 – e-Poland" following e-Europe initiative – before 31 May 2001. Minister of Science – is responsible for organising an inter-sector advisory body for IS initiatives and assessment of sector strategies – before 31 December 2000. Minister of

Science – will be monitoring above tasks and submitting quarterly reports to the Council of Ministers.

The new project of IT infrastructure for research and academic environment in Poland for 2001-2005 "PIONIER: Polish Optical Internet – Advanced applications, Services and Technologies for Information Society":

The idea of the new programme PIONIER relies on forming an advanced infrastructure along with tools, services and applications available for the scientific community, government and local administrations and citizens. This programme will ensure wide access to the Internet and its services for education sector, create a national infrastructure of a broad-band government and self-government administration network, provide scientific environment with access to advanced network infrastructure and specialised infrastructure (including computers with large computational HPC systems), enable Polish teams partnership participation in the 5th and the 6th Framework Programs and other international programs.

Services and applications are expected to appear as selected pilot realisations by which the verification of deployed technologies will be possible. The investment necessary for the development of the new PIONIER computer infrastructure based on optical network project for research community in Poland for 2001-2005 is estimated at 180 million Euro.

The first step to this programme was made in 2000 year, by building Polish Optical Internet Test bed (POIT). The test bed was presented at ISThmus 2000 and EUNIS 2000 conferences in April 2000, parallel to 'Infosystem" and POLMAN, in Poznan, to demonstrate a heterogeneous network which can serve different applications demands. The activities related to computer and Internet education at schools started with the "Internet for Schools" Programme developed in 1996-1999. Under a project entitled "Internet Classrooms in Each Commune." (April 1998-March 1999) 2480 primary and high schools have been equipped with computers providing Internet access and containing education software. Appropriate training for teachers was provided.

As a follow-up to this project, a project called "Internet classrooms in Each High School" (April 1999-September 2000) was established. In this project 3200 high schools have been equipped with computers classrooms providing Internet access and containing educational in November 2000, is aimed to Internet access provision in all the Polish schools before software.

For now in over 6000 schools in Poland Internet classes are installed. The new project "E-School" presented during the conference year 2005.

In parallel with these two projects is a project called "Interkl@sa", which has been implemented by the Ministry of National Education, the Parliamentary Commission for Education, Science and Youth, NGOs, private companies and media. One of its goals is to find non-budgetary financing-sources for education in this field. At present, there are 5000 Internet classes at Polish schools. The process of establishing new ones, especially in remote rural areas, will be continued.

In October 1998 four Polish representatives joined the Information Society Forum (ISF), an advisory body of European Commission. They are representatives of research and business computer and telecommunication organisations.

In June 1999, during the conference – "Cities in Internet", Tarnów – The Polish Information Society Forum, SPIN, was established. This is a joint initiative of local and regional governmental associations, "Cities in Internet Association", "Information Society Journalists Club".

Poland is a member of the Central and Eastern Europe Networking Association.

From October 1998 Poznan Supercomputing and Networking Centre became an associated member of TERENA (Tans-European Research and Education Networking Association).

The Self-governmental Agreement for Information Society on 16 June 2000 during the "Cities in Internet" Conference was signed by 6 nationwide self-governmental organisations and "Cities in Internet" Association.

The Polish Society of Medical Internet stimulates development of medical consultations in the Internet, promotes Internet as a tool for medical education and health promotion. Training for implementation of the Internet and computer science systems in the newest health care system in Poland, patient diagnostics and medical information services on the Internet are provided.

The Foundation for Helping Physically Disabled Mathematicians and Computer Scientists is working for the disabled community, especially in the field of the Internet access to employment, education and information. The Foundation is aimed to promote teleworking for handicapped people.

The International Fairs "Komputer Expo," which take place in Warsaw in January are aimed to present Polish and international companies that are leaders in the computer software and hardware industry. The best computer products presented during the "Computer Expo 2000" are awarded.

The Ministerial Conference entitled "Information Society: Accelerating European Integration", organised by the Polish Government and the European Commission took place in Warsaw on 11-12 May 2000. The main subject of the conference was the significance of the Information Society as a factor in accelerating and facilitating European integration. The Conference gathered the high-level representatives of governments and key experts from area of policy, economy and social affairs, dealing with Information Society Technologies implications on European and wide-world future. Influence of all these processes on European integration and enlargement is evident, so Warsaw Conference results are of great importance for accession countries.

The state of art and development plans in sector of computer and telecommunications industry and in IS related services for citizen were presented. Accelerating European Integration" in Warsaw on 11-12 May 2000. Progress report of EU-CEEC High Level Committee since the Third EU/CEEC Information Society Forum presented a comprehensive overview of governmental contribution to IS development in Poland.

The plenary sessions were accompanying by three workshops. The subject of discussion during the parallel session "Regulatory Framework for Telecommunications and Information Society" were expected regulatory changes and their harmonisation in international scale. The next session was dedicated to research and industry collaboration, with special attention to small and media enterprises. The third - "Services for Citizens in the Information Society" - was an opportunity to discuss IST implications on social life.

The Declaration of Global Cities Dialogue was signed by the presidents of ten CEEC cities during accompanying event organised by "Cities in Internet" Association on 12 May 2000 in Warsaw.

During the Conference examples of success stories of IS ideas implementation were promoted. The Information Processing Centre OPI was responsible for the "Best Practice Gallery" exhibition, when practical solutions of modern computer and telecommunication technologies were presented.

Regional IS strategies and other issues related to IS regional development have been presented during the First Conference "Information Society Problems in Provincial Development Strategies", which took place in Warsaw on 18 January 2000. The conference was organised by the Polish Agency of Regional Development, MINICIPIUM S.A., Federation of Communes and Administrative Districts, and Association "Cities in Internet". The main targets included representatives of provincial government, district and commune authorities, and professionals interested in strategic planning. The objective of the conference was to introduce European experiences to audience so as to allow them to incorporate these experiences into provincial development strategies in Poland.

Development strategies of Information Society for different regions were discussed. The regional projects were presented by experts of the European Commission, European Regional Information Society Association, European Local Authorities Network and representatives of the Polish Government.

There were a lot of other events: conferences, seminars, workshops combined with fairs and exhibitions related to Information Society Technologies issues. Events dealing with information services management in the Internet and e-business including problems related to fast and secure Internet access, legal aspects and security of electronic transactions on the Internet; new regulations on telecommunications with regard to e-business solutions; legal regulations on electronic signature; information protection in the Internet

The Teleinfo weekly issues monthly and yearly reports as well.

Other important magazines are as follows: "Computerworld" and "Internet". More advanced services such as electronic commerce are at the primary stage. A number of portals is still growing. Electronic banking has already started.

ALTERNATIVE NETWORKS

Since the political changes in 1989, the general telecom policy has focused on the liberalisation of the telecommunications market and the extension and integration of existing regulations. The governmental change in 1997 has led to further liberalisation of the telecommunications market.

The mobile sector is competitive.

From 2001, under the new Telecommunications Law, licences are replaced by authorisations. The Office of Telecommunications Regulation (OTR) is established.

According to privatisation agreement with France Telecom, a strategic partner of TP S.A., the dominant operator, the new authorisations for public voice telecommunication services will be issued starting from year 2002.

Czech Republic

Governmental Council for State Information Policy

Established on October 19, 1998. The Governmental Council for State Information Policy has a permanent working group to implement the decisions and evaluate and measure achieved results. In March 2000 the Governmental Council for State Information Policy significantly increased its competencies in the area of IT procurement - it now oversees (together with the Ministry of Finance) the IT procurements of all state authorities.

It has also formed the Czech Information Forum (an advisory body of the Governmental Council, consisting of 57 representatives of the relevant parts of the society) in order to provide necessary dialogue with the public and discuss various issues related to the Information society. The first meeting took place in February 2000.

In 1996 the State Information System Office (USIS) was established. The office was involved in several activities covering the area of Information Society. It hosted the National Coordination Centre for Y2K and played an important role in forming the expert group for developing the act on electronic signatures. As the main goal of USIS in last years has changed to coordinating the interconnection of various independent information systems of the state authorities, the office has been recently renamed to the Public Information Systems Office (UVIS).

The mission of the Czech Telecommunication Office (CTU) comprises, above all, of providing of the observation of the Telecommunications Act along with legal regulations issued to execute the Act and regulations related, i.e. to decide on the rights and duties of physical and legal persons within the telecommunications sector. CTU is a constituent part of the system, which regulates telecommunications in the Czech Republic.

In June 2000 the Personal Data Protection Office was established as required by the newly enacted Personal Data Protection Act. The major task is supervision of the institutions that collect and process citizen personal data, supervision and authorisation of certification authorities.

Associations and professional organisations

Since 1994 Czech Society for System Integration (CSSI) has been associating providers of information technologies and informatic services, organizations that are utilizing such information technologies, consulting companies and universities and colleges.

The consortium of legal persons NIX associates Internet Service Providers in the Czech Republic with the objective of interconnecting their networks.

The Consortium for Information Society (SPIS) is a professional association of the top ICT companies (by turnover), the aim of which is promoting of the Information Society. It has existed since March 1998 and it represents the Czech Republic in EUROBIT - European Association of Manufacturers of Business Machines and Information Technology Industry. SPIS organizes discussion clubs, to which

representatives of the Government and Parliament are invited. SPIS initiated creating of the Electronic Signature Act that was approved last year by the Parliament.

The Centre for Electronic Commerce (CEO) was founded in November 1998 as an independent professional platform allowing closer cooperation of individuals and organizations from the commercial sphere, state administration and university institutions, involved in information economy. CEO represents the Czech Republic in European Telemarketing Development Initiative and, in cooperation with similar centers abroad, it provides information support for Internet and E-commerce projects within the framework of the 5th Framework Program of the EU project, CEO is a professional partner of the First Tuesday initiative (connects venture capital with promising Internet projects). In November 2000 it organised the ESIS conference "Information society and new economy in the Czech Republic".

The Electronic Commerce Association (APEK) associates particularly operators of Internet shops, with the aim of promoting their services as well as the whole field of e-commerce.

In the late August 2000 the Association for Internet Advertising (SPIR) has been founded.

Individual companies

The public telecommunications operator is Cesky Telecom (changed from SPT Telecom in the beginning of 2000). Its monopoly for providing of long-distance and international voice telephony services ends on January 1, 2001.

Two GSM mobile networks are operated by Eurotel, Radiomobil and Cesky Mobil. The number of mobile phone users has reached 3 millions in middle August 2000. That represents almost 30% penetration.

CESNET is historically the first provider of Internet connection.

The Czech Republic will thus become the first of the EU-candidate countries, that will have full access to the high-speed pan-European network

In April 2000 Czech On Line (the Czech largest network Video On Line operator) has been acquired by Austria Telekom. It was the biggest venture capital transaction in the Central and Eastern Europe.

Its e-City project attracted tens of thousands Net users to play a game teaching them E-commerce principles.

There are number of other entities contributing to the Information Society development. These are, particularly, the BMI consortium, organizer of the annual national campaign "March – The Internet Month".

The political situation and its consequences for creating of the legislative framework of the IS

The actual efforts to implement the mission statement have been starting up rather slowly in the recent years, particularly due to political. The efforts had been rather formal at first, i.e. when the Governmental Council for the State Information Policy

had been established in December 1998 and the document, called The State Information Policy – The Way to the Information Society, which has been approved by the Government during its session on May 31, 1999.

Greater development in activities of the Czech Government in the field of development of the Information Society has occurred only when the new Minister without portfolio, Mr. Karel Brezina, Head of the Governmental Office. Mr. Brezina has also taken over the function of Chairman of the Governmental Office for the State Information Policy from the Economic Vice-Chairman and Minister of Finance, Mr. Pavel Mertlík.

This particular change contributed also to increased governmental support to development of the Information Society in the following months. Already during the session of the Government on April 24, 2000, the Concept of the State Information Policy in Education has been approved, which expects every single school in the Czech Republic to be connected to the Internet until the end of 2001. During one of the later sessions on April 27, 2000, complete **Action Plan** for Implementation of the State Information Policy until 2002 has been approved.

The outlined steps taken by the Czech Government have had a positive influence on the successful accomplishment of an approval process of the Electronic Signature Bill, which has been approved on June 10, 2000.

Minister Brezina has actually started collecting suggestions for practical activities of the Public Private Partnership in the following months also by taking part in press and other conferences, such as the press conference of the ESIS II project in the Czech Republic, which took place on October 3, 2000 in the EU Prague Information Centre, the Information Society and the New Economy of the Czech Republic program, which took place on November 21, 2000 or the informal debates with free lance specialists, known as e-breakfast.

However, activity, which had a great media attention but failed at the end of 2000 due to different views of the minority Cabinet and the majority opposition, was amending of several laws, the purpose of which was to provide tax relieves for citizens buying computers. A rather controversial activity of the Government, which found support of the Parliament, has been approval of the Telecommunications Act, which enables the incumbent telecommunication operator, Cesky Telecom, not to provide their customers with the option of call-by-call selection of operator, despite the long awaited liberalisation of the Czech telecommunication market as of January 1, 2001 and despite the fact that the relevant EU Directive No. 98/61/EC does not allow such postponement.

Slovakia

Since 1995 (after the first Ministerial EU/CEEC Forum on Information Society) the Slovak Republic has been involved on an international level into CEEC activities in Information Society. In March 1996, the Ministry of Transport, Post and Telecommunications of the Slovak Republic in co-operation with the EC, organised an international panel conference of Central and Eastern European countries and EU member states on the topic of "Legislative and Institutional Framework of the Information Society".

During the 1997 a co-ordination committee involving representatives of relevant ministries begun to co-ordinate activities and support participation of the Slovak Republic in various activities at national and international levels which were related to the conclusions of the 1st and 2nd EU/CEEC Forum on the information society. Additionally, several ministries have begun supporting participation of the Slovak Republic in pilot projects of the Action Plan, adopted at the 2nd Forum of EU and CEEC on the information society.

The Ministry of Transport, Post and Telecommunications in 1997 started implementing the problems of the Information Society to the telecommunication policy of the Slovak Republic (document "Concept of the Information Society Policy in the Telecommunication Sector of the Slovak Republic"). During the 1998-2000 period a governmental grant "Telecommunication Infrastructure Support for Transformation to Multimedia Services of the Information Society" has been realised by the Research Institute of the Posts and Telecommunications.

In 1998 a special project was launched called INFOVEK on internet access for basic and secondary schools with the support of the Open Society Fund and later with the direct support of the Ministry of Education. During 2000 the Ministry of Education started to prepare a document on procedure and implementation stages of the most important governmental documents related to the information society. In January 2001 there is expectation to submit it to the government.

In December 2000 a draft law on electronic signatures was submitted to Parliament. The law is expected to boost trading and business in Slovakia by allowing 'electronic signatures' to be used to verify all kinds of documents, thus speeding communication between institutions, companies, banks and individuals through Internet and e-mail. The legislation has been in preparation at the Ministry of Economy for almost two years. While both government and parliament have been trying to push forward this law, the 2001 budget indicates that there won't be enough money to begin with this project in 2001 as was originally planned, and it will probably start in 2002.

The Government of Slovakia has recently started to look at Information Society issues and is currently preparing a National Strategy on Information Society. No surveys have been conducted in Slovakia regarding Information Society, however, an Internet site named "Information Society Slovakia" has been developed and is being administrated by The Research Institute of Posts and Telecommunications. Its main goal is to support development of Information Society issues in the country. The site started as a platform for the exchange of information among experts and now operates as a point of contact for companies interested in establishing an Action Plan and for the preparation of a National Strategy of Information Society in Slovakia.

Latest Developments in Information Society

INFOSEM 2000 - an international seminar on information society development took place in Bratislava from November 7-9 and was organized by Infostat Bratislava in co-operation with the Council of Government for informatics and the Slovak association for informatics. The major topics discussed at the seminar were: Information society development – present status and perspectives; Information systems in the state administration; E-business; and the use of progressive IT in the 2000 population census in the Slovak Republic. The seminar was attended by approximately 110 participants mostly from the Office of the Government of the

Slovak Republic, Ministries and other government level organisations. ITC companies dealers and application software developers were also present at the seminar. At the closure there were several recommendations adopted aiming at the promotion of the activities in the parliament of the Slovak Republic on information society development (ie. creation of a parliamentary committee for information society development), to speed up the process of adoption of relevant legislation for e-commerce etc.

According to the Slovak Spectator (Oct. 2-8, 2000), at the end of September beginning of October 2000, Nextra a subsidiary of Norway's Telenor finalized the acquisition of an eastern region Slovakian ISP - Vadium company.

Vadium is a typical local player, focused on the Internet access business. The Slovakian ISP market is consolidating and has seen in the last two years nine purchases by three firms – Nextra, Slovanet, and EuroWeb.

The interaction between business and regulatory constraints

The regulatory background

For more than 36 years, the telecommunication sector within Slovakia was regulated by the Telecom Law 1964 (with amendments in 1992, 1993 and 1995) and with several Ministerial Decrees and regulations. The previous legislations did not conveniently help in the dynamic development of telecommunications and information technologies.

Since 1993, the Ministry of Transport, Posts and Telecommunication started to prepare a new telecommunication legislation framework, which encompasses the preparation of a new Telecoms Law and Ministerial Decrees. The main objective of the new telecommunication legislation is to harmonize the European Union legislation within the Slovak Republic's laws to correlate with technological development. In July 2000, the Slovak Republic adopted a new Telecom Act. The adoption of the new Telecom Law has been directly related to the privatization process of Slovak Telecom (the main Telecom provider of Slovakia). This new legislation brought with it the creation of new institutional bodies (a single regulatory body for technical and price regulation, called the Telecommunications Office) and regulatory framework (licensing regime, tender procedures, limited resources, monopoly timing, interconnection, universal service, price regulation, new legal base for relationship between operators and customers, etc.). At the beginning of October 2000, the new Telecom Act was amended to encompass broadcasting and re-transmission issues. The EC continues to monitor and advise, through regular reports, on the accession status of the Slovak Republic. The latest EC report recommends the Slovak Republic should further improve and better harmonize its new telecommunication legislation to EU standards and trends. Currently, the telecommunication sector within the Slovak Republic is going through a transitional period as the new Telecom Law is being adapted with the old one. The two Laws vary in some certain aspects and as the new Law is being instigated, the cohesion of the two Laws is slowly being done in order to have a smooth transition from one to the other. Still, there are a few legislative issues that need to be adopted within the new Telecom Law for the complete adoption of all the telecommunications sectors within Slovakia.

Business constraints and entry barriers

In June 1997, the government passed a bill liberalizing the telecommunication networks and services. This meant, that as of January 1998, alternative infrastructure networks were also liberalized to offer telecom services to third parties. Prior to this, for many years, incumbent operators (which were state owned) were allowed to develop their own telecommunication infrastructure and services. However, it was to be used internally (for their own personal use). They were not permitted to offer these services to operators outside their organization. Then in 1998, they were able to expand outside their internal realm. Since 1998, five licenses for leased lines have been issued.

The only operators who have not been allowed to be included to the public telecommunication network were Cable TV operators. Cable TV is regulated by both the National Council for Broadcasting and Retransmission (content regulation), and the Telecommunication Office (technical and price regulation). Cable TV operators are not obliged to apply for a license in case they are using their networks only for one-way distribution of radio and TV signals.

Local, long-distance and international telephony is still a monopoly, run by Slovak Telecom. This situation will exist until the end of 2002.

Attitude of the incumbent operator towards alternative network providers

Even though the telecoms market has been liberalized since January of 1998, only five licenses for leased lines services have been issued. No further development has resulted.

Slovak Telecom has maintained its high market share within the telecom services. It was a monopoly regarding to telephony for some time, however, with the passing of the 438/1997 Law, this changed the state of the market. The Antimonopoly Office has received several requests (mainly from ISPs) regarding pricing on local leased lines. Previously, Slovak Telecom was the sole provider and therefore, set the prices for local leased lines.

Long-distance leased lines are offered by Slovak telecom and by those operators who have licenses (four energy companies forming the group known as ENERGOTEL and Transtel, a subsidiary of the state petrol company Transpetrol). Slovak Telecom still holds the majority of the market share within this sector. In December 2000, The Ministry of Economy proposed the creation of a new telecom operator, based on the existing consortium group of ENERGOTEL and Transtel. However, this is still under advisement.

On-going regulatory developments concerning alternative networks

The telecommunication sector is going through a transitional period where the old Telecom Law is being diffused with the new Telecom Law. Efforts are also being made in adopting EU standards and trends to improve and harmonize both EU telecom standards and the Slovak Republic's Telecom legislation. Developments are being discussed in offering licenses for services other than leased lines.

Eastern Europe: E-readiness

COUNTRY BRIEFING

Eastern Europe would appear to be on the brink of a digital revolution, what with all the fuss about IT stocks and start-ups. But it is not there yet. According to the "e-business-readiness rankings", most of the region is middling when it comes to preparedness for the new electronic era. Countries at the top of the league--those that combine good connectivity with a favourable business environment--stand to reap the benefits from the new networked economy, while those at the bottom will struggle to compete in the digital age. Reform-minded East European countries have the potential to catch up if they put the right policies in place, but there is much work to be done.

Pyramid Research, the EIU's (Economics Intelligence Unit) communications division, has grouped the 60 countries included in the e-business-readiness rankings into three categories--the leaders; the adopters, which could be ready to take full advantage of the Internet's potential within the next three to five years; and the latecomers, which are severely hindered by a lack of basic communications infrastructure. Eastern Europe straddles the latter two categories, though as always, prospects vary widely from country to country. Poland, Hungary and the Czech Republic, ranked 28, 29 and 30 respectively, are well positioned to improve their standing. Adopters and latecomers must come to grips with three basic priorities if they want to be players in the new digital economy:

Connectivity is the goal. A critical precursor to the Internet revolution is basic connectivity, regardless of the technology being used. As alternative Internet access devices and new applications are developed, basic connectivity will become even more decisive. Eastern Europe, which can boast buoyant mobile-phone growth, is well-poised to improve its standing on this criterion. However, telecoms deregulation is urgently needed.

Competition is the vehicle. Experience shows time and again that competition promotes greater investment, lower prices, growth in Internet subscriptions and technological innovation. The real challenge is to protect competition--something that requires political will as well as credible and autonomous regulatory bodies. Eastern Europe is lagging here, though Poland has plans to set up an Internet watchdog soon.

Education is the enabler. The Internet has higher social entry barriers, requiring literacy and IT knowledge at a minimum. This means education is all the more important. Eastern Europe, which has no shortage of tech-savvy and highly qualified workers, is in good shape in this department.

EIU e-business-readiness rankings (60 countries surveyed)

Rankings				
Rank	Countries	Business environment (a)	Connectivity(b)	e-business-readiness(c)
1	US	8.67	9.00	8.84
2	Sweden	8.33	9.00	8.67
3	Finland	8.28	9.00	8.64
4	Norway	8.00	9.00	8.50
5	Netherlands	8.85	8.00	8.43
.				
28	Poland	7.13	5.00	6.07
29	Hungary	7.11	5.00	6.06
30	Czech Republic	7.07	5.00	6.04
37	Slovakia	6.13	5.00	5.57
40	Bulgaria	5.64	5.00	5.32
42	Romania	5.54	5.00	5.27
44	Russia	4.95	5.00	4.98
45	Ukraine	4.67	5.00	4.84

(a) score out of 10: more than 8=very good; 6.5-8=good; 5.5-6.4=moderate; 5-5.4=poor; less than 5=very poor.

(b) out of 10.

(c) Average of business-environment rating and connectivity rating, out of 10.

Sources: EIU Country Forecast; Pyramid Research.

Companies looking to invest in e-business in the region should keep in mind that while there are opportunities, they run the risk of finding their efforts thwarted by structural problems. Lobbying for infrastructure spending to promote Internet use is key. Without government commitment to liberalisation, improving telecoms infrastructure and supporting new technologies, the region's potential could, unfortunately, remain just that.

The Economist Intelligence Unit/Pyramid Research e-readiness rankings		
E-readiness ranking (of 60)	Country	E-readiness score (of 10)
<u>E-business leaders</u>		
1	US	8,73
2	Australia	8,29
3	UK	8,10
4	Canada	8,09
5	Norway	8,07
6	Sweden	7,98
7	Singapore	7,87
8	Finland	7,83
9	Denmark	7,70
10	Netherlands	7,69
11	Switzerland	7,67
12	Germany	7,51
13	Hong Kong	7,45
<u>E-business contenders</u>		
14	Ireland	7,28
15	France	7,26
16 (tie)	Austria	7,22
16 (tie)	Taiwan	7,22
18	Japan	7,18
19	Belgium	7,10
20	New Zealand	7,00
21	South Korea	6,97
22	Italy	6,74
23	Israel	6,71
24	Spain	6,43
25	Portugal	6,21
<u>E-business followers</u>		
26	Greece	5,85
27	Czech Republic	5,71
28	Hungary	5,49
29	Chile	5,28
30	Poland	5,05
31	Argentina	5,01
32	Slovakia	4,88
33	Malaysia	4,83
34	Mexico	4,78
35	South Africa	4,74
36	Brazil	4,64
37	Turkey	4,51
38	Colombia	4,24
39	Philippines	3,98
40 (tie)	Egypt	3,88
40 (tie)	Peru	3,88
42	Russia	3,84
43	Sri Lanka	3,82
44	Saudi Arabia	3,80
45	India	3,79
46	Thailand	3,75
47	Venezuela	3,62
<u>E-business laggards</u>		
48	Bulgaria	3,38
49	China	3,36
50 (tie)	Ecuador	3,30
50 (tie)	Iran	3,30
52 (tie)	Romania	3,20
52 (tie)	Ukraine	3,20
54 (tie)	Algeria	3,16
54 (tie)	Indonesia	3,16
56	Nigeria	2,91
57	Kazakhstan	2,76
58	Vietnam	2,76
59	Azergaijan	2,72
60	Pakistan	2,66

Hungary**Objective 1: Accelerate the putting in place of the basic building blocks for Information Society**

Action	Deadline
Accelerate and complete full liberalisation of the telecommunications sector as soon as possible and ensure that authorisations are available where needed. Ensure that carrier selection facilities are available from the same date as liberalisation and number portability as soon as possible thereafter	November 2 nd 2002.
Transpose and implement the new EU regulatory package for Communications Services as soon as possible once it has been adopted	Januar 1 st 2003.
eSignature law	2001
Transpose and implement all those parts of the acquis that are relevant to the Information Society and are not temporarily blocked by continuing exclusive rights.	Continuously

Objective 2: A cheaper, faster, secure Internet

Action	Deadline
Legal environment, standardisation: establishment of the legal and regulatory environment indispensable for the development of the information society and information economy, and the diffusion of the necessary standards. This will include but is not restricted to the draft of Act on e-Signature and the draft of Act on Telecommunications (Szechenyi Plan, Information Society and Information Economy Development Programme, Subprogramme1, Measure 3)	
Low-cost high-speed networks for Internet access serving the higher education, research and public collection communities (piloting also the general low-cost high-speed networking in Hungary)	2000/2001
Partial unbundling of the local loop by amending the Telecommunications Act in force at present.	end of 2 nd quarter, 2001
Liberalisation of local access network with the expiry of the monopoly period of the local switched telephony concessions by the end of 2002. The new Communications Act will contain provisions for the open local access networks.	end of 2002
Provision of frequency spectrum for the 3G UMTS services by auction or by tender.	end of 1 st quarter, 2002

Full liberalisation of the telecommunications market by the end of 2002, with the expiry of the monopoly period of the last of the local switched telephony concessions. The new Communications Act will contain the provisions for the fully liberalised market.	end of 2002
Develop high-speed Internet access for National Cultural Institution	end of 2002
Exploiting the cheap services for the advantage of Social Welfare System by making accessible as many social services through Internet as it is possible.	
<p>Szechenyi Plan, Information Society and Information Economy Development Programme, Subprogram 2 (Improving the availability of and access to up-to-date information and communication devices)</p> <p>Improvement of IT availability and access:</p> <p>Measure 4. Improvement of community and institutional access by supporting telehouses and other suitable public institutions</p> <p>Measure 5. Individual & family / home availability and access, aiming at increasing penetration ratio of computers and Internet access</p> <p>Measure 6. Supporting local e-governments, intelligent settlements (regions, towns, villages) aiming at acceleration of the administrative work</p> <p>Measure 7. Project for the dissemination of free software</p>	
Support to the regional IT developments, including support for the development of regional portals and support for the development of regional electronic model markets (Szechenyi Plan, Regional Development programme)	
Concerning the security of IS, Hungary took part in the Working Group for electronic commerce of the Committee for Consumer Policy of the OECD. In the framework of the WG a recommendation has been developed which shall contribute to the safer use of Internet and efficient consumer protection. Hungary participated in the process of development of Recommendation of the OECD Council Concerning Guidelines for consumer Protection in the Context of Electronic Commerce, adopted by the Council in December 1999. Enforcement of the guidelines is equally important as adoption of regulation. Consequently the Government shall ensure that goals and possibilities determined in the Recommendation will be achieved. In order to fulfil this governmental task the MoJ emphasised the importance of informing of consumers and users in several fora and prepared the official translation of the guidelines into Hungarian so the recommendation is also available in Hungarian which ensures the availability in wider circle.	

Action	Deadline
Ensure leased-line Internet access for Museums and Public Libraries	2002
Participation in the very high speed Trans-European network development within the framework of the GEANT Project for electronic scientific communications, and linking research institutions and universities, as well as libraries, and schools	2001/2003
Improvement of the country-wide high-speed network of the research, higher education, and public collection communities and adapting it to the high speed Trans-European network	2001/2003
Develop secure mail system and Internet access for Hungarian Cultural Institutes abroad (in EU member states and other countries)	end of 2001
Support by budgetary and legislative tools the easy access to the Internet for the researchers on social issues, security, family affairs etc.	

Action	Deadline
Introducing students' special chip-cards within the entire education system (all levels of schools, high-schools and universities), serving as ID cards and also for making any kinds of on-line transactions	2000/2003
Making use of the citizen (smart) card for the Social Welfare System	
<p>The citizen (smart) card in line with the relevant laws and the strategy of the Office of the Government Commissioner for IT will be used within the Social Welfare System</p> <p>Social identification number or electronic / digital signature on the planned citizen (smart) card;</p> <p>Supporting the integration via the Internet / Web / e-Government Facilities between the central and local government social branches and services. As a side effect, it will make the financial side of the Social Welfare activities more transparent, whereby the use of the EU funds can be more easily tracked and monitored, the financial resources from the Hungarian and EU sources can be used more effectively and efficiently.</p> <p>Disseminating the information related to the Social Welfare for the public and for the specific groups. Exploiting the readily available communication techniques through the Internet / Web / e-Government facilities. Targeting some social groups, that are not easily accessible for the Social Welfare System, by making use the combined technologies as: one-stop-shop, social-kiosks, telehouses (telecommunication / Internet centres in the countryside in Hungary) etc. that are wired and networked into the e-government facilities.</p>	
The Ministry will join to the electronic (centralised) procurement and tendering system of the Hungarian Government as soon as it will be	

available. The Ministry will update the business and financial processes, the internal control and audit mechanism (on finance and IT) and codify to make use of the services provided by the electronic procurement (electronic commerce for the government), including smart card and digital signatures for the public servants, authenticated electronic document exchange. The Ministry will join to the Certification Authority (CA) system dedicated to the ministries, offices, agencies of the Hungarian Government	
Supporting the widespread use of electronic business solutions as well as use of smart cards (Information Society and Information Economy Development Programme of the Szechenyi Plan, Subprogram 2, Measure 4.)	

Objective 3: Investing in people and skills

Actions	Deadline
Enhancing all levels of education by introducing new elements related to skills needed to live and work in the new information society	2001/2003
Ensuring that all schools in Hungary have access to the Internet and basic elements of multimedia resources	2001/2003
Ensuring that all teachers needed in Hungary are skilled in the use of the Internet and basic elements of multimedia resources	2002/2004
Linking of schools to the very high-speed Trans-European network for electronic scientific communications to be created by the end of 2001	2001/2003
Joining the efforts/projects of Europe's education and training community devoted to adapting the education and training systems to the knowledge society	Continuous
Provide all researchers (e.g. museologists, librarians, archivists etc.) convenient access to the Internet and multimedia resources.	end of 2002
Regional Youth Service: provide information and training services helping the municipals and NGOs	
Development of out-of-school training, information "literacy" and continuing further education (Szechenyi Plan, Information Society and Information Economy Development Programme, Subprogram 4, Measure 10)	
Network for the Youth	
Provide basic knowledge and training about using personal computer, office applications and Internet for young soldiers - enlisted personnel - of Hungarian Defence Forces"	Continuous

Action	Deadline
Introduction of special education and training programs in order to eliminate the skills gap in information technology, with the aim of decreasing the number of unfilled jobs	2001/ 2003
Joining the efforts/projects of Europe's education and training community devoted to adapting the training systems to the demands of the knowledge society by offering training opportunities tailored to target groups and those in employment who are at risk of seeing their skills overtaken by rapid change	Continuous
Establishment/improvement of the system of life-long learning, among others by widening the opportunities provided by tele-teaching	Continuous
Substantial increase in per capita investment in human resources (Szechenyi Plan)	2001/ 2003
Spreading of computer literacy with the European Computer Driving Licence (ECDL) Program Action Plans by the end of 2001 <ul style="list-style-type: none"> ?? Certification about computer literacy at least for the 3% of the employees. ?? introduction of ECDL Start (subset of the 7 ECDL modules): European standards of minimum level of computer skills: ?? Availability of ECDL for disabled people. ?? Update of national and international Quality Assurance ?? Hungary to become the Centre of the Central-Eastern European region of the ECDL Program ?? Growth of the role of ECDL in the Public Education; ?? Suggestion: Instead of taking into consideration the ECDL - as it is in the Action Plan -, we suggest to use officially the term "ECDL, or any subsets of it".[?] 	end of 2001

[?]Results of the ECDL Program in Hungary by the end of 2000:

The John von Neumann Computer Society (NJSZT) has joined the ECDL Foundation in 1997;

In Hungary - and out of the borders - there are more than 150 accredited Test Centres, co-ordinated and controlled by NJSZT;

More than 30.000 candidates and more than 16.000 completed ECDLs;

The Hungarian Quality Assurance System is recognised as the standard of the international QA System;

Hungary is member of the Board of Directors of the ECDL Foundation;

Government Resolution about ECDL for public officers (N.1035/1999)

ECDL Program accredited by the Ministry of Education for the Further Education Program for Teachers;

Help the proliferation of tele-working for the socially handicapped people. The ministry will allocate financial resources, try to gather the interested parties in profit and non-profit sectors to support this goal. The Ministry will initiate the necessary legislative processes to assist the utilisation of IS and Internet for the benefit of families and socially handicapped specific groups.	
Development of out-of-school training, information "literacy" and continuing further education (Szechenyi Plan, Information Society and Information Economy Development Programme, Subprogram 4, Measure 10)	
Facilitating the spread of telecommuting by pilot projects and supporting training and retraining of teleworkers and a project of work of public use. (Szechenyi Plan, Information Society and Information Economy Development Programme, Subprogram 3, Measure 9)	

Action	Deadline
Provide free access to the Internet in the public libraries	end of 2001
ICT for the dialogue between our country and young people belonging to Hungarian minority living in the neighbouring countries	
Pay attention to the socially handicapped people and avoid the "info-exclusion" by financially supporting a non-profit organisation dedicated for the proliferation of tele-working for socially and physically disabled people.	
Involvement of unprivileged groups by setting up a "problem map" that will enable to collect and to disseminate experiences. (Szechenyi Plan, Information Society and Information Economy Development Programme, Subprogram 5, Measure 13)	

Objective 4: Stimulate the use of the Internet

Action	Deadline
Support the development of theatres' on-line services (e.g. Internet ticket service)	2002
Supporting the widespread use of electronic business solutions as well as smart cards (Szechenyi Plan, Information Society and Information Economy Development Programme Subprogram 3, Measure 8)	
Legal environment, standardisation: establishment of the legal and regulatory environment indispensable for the development of the information society and information economy, and the diffusion of the necessary standards. This will include but is not restricted to the bill on digital signatures and the unified telecommunications Act. (Szechenyi Plan, Information Society and Information Economy Development Programme Subprogram 1, Measure 3)	
Subprogram for the support of fledgling information technology companies (Szechenyi Plan, Enterprise Development Program,)	

Action	Deadline
<p>Programmes of environment to raise awareness of IS (re. General public, industry, public admin)</p> <ul style="list-style-type: none"> ?? Access to environmental database (licences, data on environmental load) through the Internet ?? Tasks deriving from the Aarhus convention (Public participation in environmental decision making) ?? The wider objectives of the conception are fully operational environment monitoring and implementation control structures and capacities in Hungary ?? The conception's immediate objective is a fully operational network for the collection, processing and monitoring of environmental data in Hungary that will be fully compatible with the European Environment Information and Observation Network (EIONET). (The European Environment Information and Observation Network (EIONET) is the main instrument of the European Environment Agency (EEA) for the collection of data, information and knowledge on the state of environment). 	
Sport Information System	2001
<p>Realisation of a Governmental Portal</p> <p>The project has evolved substantially since the last report had been submitted. The feasibility study was accomplished, and the preparations for implementation are underway, with planned completion to the end of this year.</p>	2001.Dec.
<p>KIKERES- cadastre of Public Sector Information on Internet</p> <p>The pilot phase of the project came successfully to an end last year. A Governmental Resolution dated from December 2000. ordered its application within the central governmental administration with an obligation to provide the agency's metadata for loading into the system. As for the initial metadata loading, a 1,5 year's deadline has been prescribed. Local governments have also been invited to join the system. The same Governmental Resolution dealt with a terminological database on Internet as well.</p>	2000.Dec
<p>Governmental Directory System</p> <p>The feasibility study of a Governmental Directory System was prepared with the aim to make possible the interconnection of the directories of agencies to the planned Governmental Directory</p>	2002.Jan.
<p>Governmental Network</p> <p>The realisation of a high-speed cost efficient network is underway. The capacity of the governmental backbone will surpass that of the present day system by about fifty times.</p>	2001.Sept
<p>Cabinet's session Infosystem</p> <p>With an objective to modernise the working processes of the executive decision making, an information system supporting the permanent state secretary's and government meetings is in the phase of elaboration. The permanent secretary's system should be operational to the end of this year.</p>	2001.Dec

<p>Governmental document handling System</p> <p>Based on the lessons learned from the pilot system launched last year, a general standard for government-wide document handling will be elaborated</p>	2001.Sept
<p>Realisation of a Governmental PKI</p> <p>A governmental PKI infrastructure is in the planning phase. As an important precondition for it, the law on electronic signature having been passed by the government is going to be submitted to the Parliament with a final acceptance awaited for the second half of the year.</p>	2002.Dec
<p>Disseminating the information related to the Social Welfare for the public and for the specific groups. Exploiting the readily available communication techniques through the Internet / Web / e-Government facilities. Targeting some social groups that are not easily accessible for the Social Welfare System, by making use the combined technologies as: one-stop-shop, social-kiosks, tele-houses (telecommunication / Internet centres in the countryside in Hungary) etc. That are wired and networked into the e-government facilities.</p>	
<p>Supporting the integration via the Internet / Web / e-Government Facilities between the central and local government social branches and services.</p>	
<p>Introduction of a new administration system in educational institutes (schools, high-schools, universities) and in the related public administrations at all levels to exploit new technologies to make administration more efficient and public information as accessible as possible.</p>	2001/ 2003
<p>An Inter-ministerial Committee for governmental IT has been established in the framework of the Prime Minister's Office (ICI) to support the co-ordination task. The Committee has formed a working party on IDA with the aim to facilitate IDA projects within the Hungarian Administration. The country has been expressing its willingness to join the IDA programme for a long time, at least in the observer's status even before the accession. The IDA unit has recently invited Hungary to take up "observer" status in the working group of the IDA management Committee, the TAC Working Group on Horizontal Actions and Measures (the TAC WHAM).</p>	
<p>Parliamentary Information System:</p> <p>Developing the Parliamentary Information System is a running task and project for the IT Department of the Parliament. It makes possible to follow the activities and actions of the Parliamentary work on Internet.</p> <p>- Implementation of a multimedia server for archiving and searching the existing videos and for real-time Internet broadcasting of the parliamentary sessions.</p>	2003. June

Action	Deadline
<p>Telematics Development</p> <p>Establishment of permanent Internet connections for the health provider institutes co-operating with the Hungarian National Information Infrastructure Development Programme. Provide gateways for further developments to enable using Internet technology platforms in health care projects.</p>	end of 2001
<p>Health Database project</p> <p>Establishment of a virtual private database network based on the Hungarian health providers. Collecting, assessing, publishing health data among the Hungarian governmental sector and health institutes. Using Internet technologies to provide more usable high quality, and valid databases, processing instant on-line data update.</p>	end of 2002
<p>Health-governmental thesaurus system</p> <p>Establishment of a public information centre on the Internet. Publishing executive and civil service information for citizens. Provide clear thesaurus dictionary for everybody, improve connection between the civil services and citizens.</p>	first half of 2001
<p>Health Informatics Portal</p> <p>Creation of a portal website for the Hungarian health sector, provide usable information about health providers, health civil services, health institutes, health business sector.</p>	first half of 2001
<p>Clearinghouse of Knowledge, data warehouse system of the health administration</p> <p>Collection and organization of information describing health status generated in the health sector into a unified system. Incorporating data files collected by the individual major data collectors into a unified system that lends itself for processing and presentation. Establishment of data links between principal data collectors in the health sector.</p>	
<p>Developing hospital information systems</p> <p>Creation of an institutional local network system that is integrated into the information system of the health sector</p>	
<p>Health card (Social Insurance Identification Number – ‘TAJ’) program</p> <p>Establishment of a card system to clearly identify, capture and store the players’ data in the central database system of the healthcare delivery system (including the patient and the doctors’identification). This system will connect all endpoints of the delivery system into a network (hospitals, ambulatory clinics in hospitals, polyclinics, family practitioners, retail pharmacies, emergency ambulance services, endpoints of the reimbursement system, health insurance funds)</p>	

Action	Deadline
Establish the National Audio-visual Archive	2002
Hungary intends to participate in Community programmes promoting cultural diversity (CULTURE 2000, MEDIA Plus)	as soon as possible
Supporting contents development in Hungarian, and digitisation of cultural values (libraries, public collections) - Szechenyi Plan, Information Society and Information Economy Development Programme Subprogram 4, Measure 11	
Development of IT systems for tourism	
Establishment of a Digital Catalogue for the Hungarian WEB based contents (Webkat)	2001
Creation of high value content within the research, education and public collection community of Hungary, for making the widest national cultural and scientific information available both on national and international level, with special emphasis on national content accumulated in electronic libraries, and on providing information about accessing of library and museum collections/catalogues	continuous
Ensuring the nation-wide and global availability of high value national cultural and scientific content through high speed networks	continuous
Establishing special www portals in order to make the high value national cultural and scientific content easily accessible	2001/2003

Action	
In connection with the Establishment of the 'Single European Sky': As Hungary is a member state of the Eurocontrol, so we intend to take part in the activities of the Air Traffic Management (ATM) Strategy for 2000+.	end 2003
Referring to the eEurope action: Implementation of Recommendation on "Participation of the private sector in deploying traveller information services in Europe". The key role of private sector in the development of intelligent transport services increases in Hungary as well. The ministry is taking great efforts in order to eliminate barriers to the development and use of private and/or public services.	end 2003
Deployment plan for Intelligent Transport Systems for road transport: The Directorate of Road Management and Co-ordination (UKIG) had a study made: Intelligent Road Information System (IRIS) in 1998. The leadership of the Ministry of Transport received a report about the study at the end of that year. They accepted the IRIS as the conception of Road-transport Telematics to be developed in Hungary. The national ITS strategy and implementation plan is under preparations. Detailed description on actions is at the end.	end 2003

<p>Referring to the Commission decision on adoption of specifications for wireless communication for high speed trains:</p> <p>Development of new European Train Control System. Experimental operation of the equipment is in progress on the Budapest – Hegyeshalom line of the Hungarian State Railways (MÁV)</p>	<p>end 2003</p>
<p>We support the Adoption of a Directive for a European maritime and inland shipping reporting and information system.</p> <p>We are planning to participate in the EU 5th Framework Program under the COMPRIS (Consortium for an Operational Management Platform for River Information Services) to put into experimental operation the intelligent shipping information system of the Hungarian Danube section by 2004.</p>	<p>end 2003</p>
<p>In connection with the Decision on the further development of the Galileo infrastructure:</p> <p>The ministry is fully aware of the huge importance of the use and management of airspace. Our strong intention is to join the European efforts.</p>	<p>end 2003</p>
<p>Deployment of Intelligent Transport Systems on the Road-transport</p> <p>1. Traffic Management and Control:</p> <p><i>Fostering the adoption of appropriate traffic management measures and plans on the motorways:</i></p> <p>The first Traffic Management and Control System is the MAESTRO on the M3 motorway. Further improvement on using Traffic Management and Control systems on motorways to be made.</p> <p>Our strong intention coincides with the Lisbon European Council request to speed up liberalisation of transport through appropriate regulations with the aim of:meeting the requirements to joining the EU and achieving a fully operational internal market in the long run.</p> <p>The MTWM is a member of ERTICO. Our plan is more co-operation with the EU and ERTICO, TEM .</p>	<p>continuing</p>
<p>2. Monitoring infrastructure:</p> <p><i>Fostering development and use of wireless application on the monitoring of infrastructure:</i></p> <p>As an experiment -at two road-maintaining companies in two counties- the road-patrol and salt-spreading vehicles were supplied with Automatic Vehicle Location System, which are able to collect and control the traffic and weather situations on spot. Further activity: National ITS R&D programme to test wireless concepts and real time monitoring system.</p> <p>In the frame of Intelligent Road Information System (IRIS) the implementation of a Road-weather information system (ÚTMET) started in 2000.</p> <p>Some 260 sensors will be installed with their information devices along the main and the most trafficked secondary roads, and the information centres on national and local levels. During the next year –with the traditionally collected traffic data- the most important traffic and weather data will be on Internet.</p>	<p>continuing</p>

<p>3. Traffic Centres:</p> <p><i>Deployment of regional and national traffic centre:</i></p> <p>Since 1998 –at a very slow pace- traffic-information and traffic-management system has been being built around the capital (Motorway Around Budapest, MARABU). In case of completing, it will be able to inform the on-going road-users by Variable Message Signs.</p> <p>From the above-mentioned sensors some 50-60 will have traffic-counting panels. Now a study is under elaboration by the Budapest Technical University to establish a traffic-counting centre to collect automatically these traffic data. If that is ready the most relevant traffic data will be available on Internet, as well.</p>	<p>continuing</p>
<p>4. Traveller Information Services:</p> <p><i>Fostering the deployment of advanced road, pre-and on-trip information and navigation services (VMS, RDS-TMC, GSM, GPS, GNSS, Internet):</i></p> <p>Services in use: information via national radio stations, “info-touch” information system in Budapest, text-TV. Priorities: Internet and mobile wireless services.</p> <p>As for giving information for all the on-going road-users we consider the RDS-TMC system to be the most practical solution. The most of the preconditions seem to be available, but the co-operation and the interests of the several participants are lacking now. National ITS R&D programme will address a co-ordination activity to launch a pilot project on RDS-TMS on-trip information service in Hungary.</p> <p>Stimulating the setting up of PPPs for the development of pre- and on-trip information services</p>	<p>continuing</p>
<p>5. Horizontal issues:</p> <p><i>Co-ordination of elaboration of the national ITS strategy and implementation plan:</i></p> <p>The concept of Road-transport Telematics. (study). The elaboration and acceptance of the strategy up to the end of 2002.</p> <p><i>Organisational issues, such as public-private partnerships:</i></p> <p>New framework is under elaboration. Our plan is to set up the ITS-Hungary organisation in order to establish a co-ordination forum for PPP on the improvement of the Intelligent Transport Systems.</p> <p><i>Technical and operational interoperability:</i></p> <p>The ministry takes part in the work of international technical committees. In the frame of a National ITS R&D programme new activities will start on these issues.</p>	<p>continuing</p>