Information Society Directorate-General

Towards an Information Society for all

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1. Introduction by Erkki Liikanen,

European Commissioner for Enterprise and Information Society

In Europe, information is fast becoming our main economic resource, and the key to growth, competitiveness and job creation . It also plays a vital role in improving our quality of life. To reap the full benefits available to us in this new Information Society, we need to promote computer literacy for everyone, and give people access to affordable, good quality communications infrastructure and services.

It is therefore important that we continue to liberalise the European telecommunications market, helping to bring Internet access prices down, and improving services – notably by rolling-out broadband, creating a clear and predictable legal framework for e-commerce, helping users feel more confident in Internet security, and working with Member States to ensure that everyone has the necessary skills to benefit from new technology.

Research also plays a key role in the Information Society. Research on Information Society Technologies (IST) is one of the main priorities of the 6th European Union Framework Programme for Research . The importance given to IST research by the EU's Research Council and the European Parliament is reflected also in budgetary terms: the IST budget currently amounts to 3.8 billion Euro.

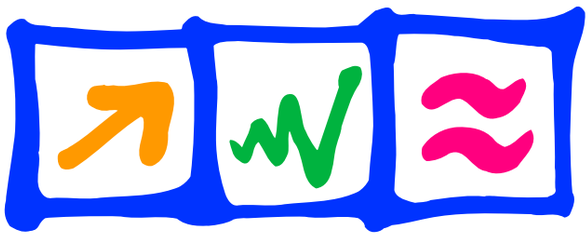
We know though that, at present, we are far from taking full advantage of the possibilities that IST has to offer. Research in IST should aim at extending the scope, functionality and efficiency of IST applications and services, and making them available, in the most natural and reliable way, to businesses and citizens - anywhere and at any time. Technology should be unobtrusive. It should be accessible whenever we need it. Interaction with technology should be simple and effortless.

Research funded under the 6th Framework Programme aims to place the user at the centre of the development of future IST – the intention is to "design technologies for people, not make people adapt to technologies."

There is a clear opportunity in this for European industry to strengthen its leading position in areas such as mobile communications, consumer electronics, home appliances and microelectronics. And we can help reinforce the competitiveness of all industrial sectors by making access to IST easier, and by providing new business applications, for example to help make process integration more efficient.

In Europe, we have developed a key asset, which helps us maintain our industrial and technological leadership in many IST fields. That asset is the ability to collaborate and build partnerships, so that together we can overcome the obstacles we face . The EU IST programmes have played a key role in forging such partnerships. The 6th Framework Programme should help us further in mobilising resources and aggregating our efforts across Europe. We need to build on such opportunities, and prepare for the future.

Erkki Liikanen.



Information Society

Development Stimulati

2. The Mission Statement of DG INFSO

The Information Society Directorate General of the European Commission (DG INFSO) plays a key role in working towards the goal set by Europe's Heads of State and government at Lisbon in 2000: to make Europe the world's most competitive and dynamic economy, characterised by sustainable growth, more and better jobs and greater social cohesion, by 2010.

For this vision to be realised, advanced and easily accessible Information Society Technologies must be available throughout European business and society.

The role of DG INFSO is therefore:

- To stimulate research into Information Society Technologies which can become part of the citizen's everyday environment, as well as being integrated into business and government administration;
- To establish and maintain a framework of regulation designed to generate competition and stimulate the development of new applications and services;
- To support initiatives that encourage and enable all European citizens to benefit from, and participate in, the Information Society.

Stimulation ***Regulation***

3. Building Synergies between EU policies and research

"A key element of the strategy was the recognition of information and communication technologies and, in particular, the Internet as an important source of increased productivity and growth."

In the year 2000, the European Union put together a strategy to prepare the EU economy for the challenges of the new century. This was launched at the meeting of Heads of State and Government in Lisbon, and has become known as the "Lisbon strategy". A key element of the strategy was the recognition of information and communication technologies and, in particular, the Internet as an important source of increased productivity and growth.

The targets set at Lisbon - higher growth, more and better jobs and greater social inclusion - were ambitious, and information and communication technologies (ICT) play a key role in achieving them. These technologies contribute to higher productivity and higher growth, they can improve the efficiency and quality of public services, and they can improve quality of life by offering access to goods and services previously unavailable.

In this context the policy of DG Information Society is based on three pillars:

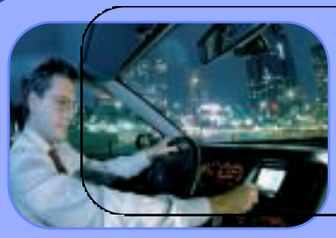
- *The eEurope initiative*. A new eEurope Action Plan for 2003-2005 has been launched, which focuses on a limited number of areas where government action can make a genuine difference. For example, the modernisation of public services to make them more productive, accessible and equitable, the further promotion of a favourable environment for e-business, and a secure broadband and multi-platform information infrastructure.
- *Legislation* plays an essential role in ensuring that there is a fair and competitive market place. A new framework for electronic communication services has been adopted at European level and is now being incorporated into national law.
- *Research* is the key to future innovation and competitiveness. Europe's spending in research in ICT has not kept pace with that of our competitors. In 2002 the Commission launched the 6th Framework Programme for Research and Technological Development, with a budget of €17.5 bn, which will help address this problem. This programme is already open to participants from the Accession States.

One could summarise this threefold strategy as follows. The legal conditions need to be in place to make it possible for companies to get into the electronic communications business in the first place. Demand needs to be stimulated so that the ongoing business can flourish and deliver the full benefits of ICT to customers. And investment in R&D is essential for companies and other organisations to be able to innovate and thrive in the long run.

The role of eEurope is to help organisations and individuals respond quickly to developments in legislation and research. It also helps to co-ordinate the Information Society strategies of European institutions and Member States.

eEurope 2005 aims at a wider deployment of IST, for example in further modernising public services in areas such as eGovernment, eHealth and eLearning, and in helping to create a dynamic business environment. It also aims to ensure greater security for the information infrastructure and a wider availability of broadband access.

eEurope will help accelerate the practical application of research results. It will also provide feedback about this application and the problems it may give rise to. **This close co-ordination between research and policy initiatives is a key component of the EU strategy to achieve the Lisbon goals.**



4. The IST Programme

Information Society Technologies

The Lisbon vision.

The strategy adopted at Lisbon in 2000 is for an accelerated transition to a competitive and dynamic knowledge economy capable of sustainable growth, with more and better jobs and greater social cohesion. This requires the wider adoption and broader availability of IST applications and services in the public and private sectors, and in society as a whole. Information Society Technologies allow easier and more efficient knowledge creation, sharing and exploitation.

IST objectives under the Sixth Framework Programme.

The objectives for IST in the Sixth Framework Programme (FP6) are to ensure that Europe maintains its lead in the technologies that lie at the heart of the knowledge economy. This IST Programme aims to help increase the innovativeness and competitiveness of European businesses and industry, and to provide greater benefits for all European citizens.

The focus for IST in FP6 is the future generation of technologies, characterised by computers and networks that are integrated into the everyday environment, rendering accessible a multitude of services and applications through easy-to-use human interfaces. This vision of "ambient intelligence" places the individual user at the centre.

This research effort will reinforce and complement the eEurope 2005 objectives, and look beyond them to the Lisbon goal of bringing IST applications and services to every individual, every home, every school and every business.

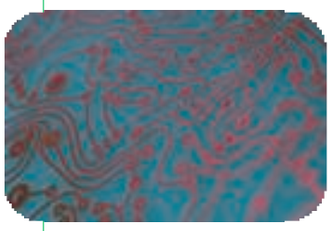
First results of this research effort can be found at the following web address: **http://www.istresults.info/**

Coverage and main targets.

Realising this vision requires a massive and integrated research effort that looks at technology components, their integration into systems and the development of innovative applications. It should ensure the co-ordinated development of technologies and their applications in the main areas of society and the economy.

FP6 funding will enable the integration of various research activities, from knowledge generation and technology development through to their application and transfer. FP6 provides an opportunity to combine, as appropriate, applied and generic technology research from various disciplines, including biotechnology, chemistry and social sciences as well as ICT.

"This IST Programme aims to help increase the innovativeness and competitiveness of European businesses and industry, and to provide greater benefits for all European citizens."



Further information can be found at the following European Commission web address:

http://europa.eu.int/information_society/programmes/research/index_en.htm

To achieve the Lisbon vision, progress is necessary in three main technological areas:

- Pushing the limits of miniaturisation and minimising the costs and power consumption of microelectronic components and micro-systems. This includes breaking new barriers with current technology below the 10 nano-meter scale. It also includes the exploration of alternative materials allowing further miniaturisation, as well as organic flexible materials for displays, sensors and actuators that can be placed anywhere, even in the human body, and take any shape.
- Developing mobile, wireless, optical and broadband communication infrastructures as well as software and computing technologies that are reliable, compatible with each other, and able to accommodate new applications and services. Europe's strengths both in communication technologies and in embedded software (software which is included in products, rather than running on a PC) and systems provide a clear opportunity to lead and contribute to the development of the next generation of products and services. The development of common standards and open source software (software that the user can customise) will be encouraged when appropriate, to ensure that new technologies work together and to further innovation.
- Developing user-friendly interfaces which are intuitive and that can interpret our speech, gaze and touch, as well as our gestures and various languages. This should be coupled with more powerful and flexible knowledge technologies that deal with semantics and linguistic context. They should prepare for the next generation Web, and should make access to and creation of digital content more effective and more creative.

Progress is also required to integrate technologies into innovative applications that help address major social and economic challenges. These include:

- Solving "trust and confidence" problems so as to improve the dependability of technologies, infrastructure and applications. These should provide security and privacy, and protect property and individual rights. Improving trust in the knowledge society is a key requirement for its development.
- Strengthening social cohesion by providing efficient, intelligent and easy to use systems for accessing information on health, transport, learning and cultural heritage, for example.
- Enabling sustainable growth and improving the competitiveness both of large and small businesses, as well as the efficiency and transparency of governments. This includes the development of mobile eCommerce and eBusiness and eWork processes, and will help provide more and better jobs.
- Supporting complex problem-solving in science, society, industry and business. The aim is to harness computing and knowledge management resources across Europe and bring them to the desktop of any researcher, engineer or other end-user.

IST today		The IST in FP6 vision
PC based	⇨	"Our surroundings" are the interface
"Writing and reading"	⇨	Use all senses, intuitively
"Word" based information search	⇨	Context-based knowledge handling
Low bandwidth, separate networks	⇨	Infinite bandwidth, convergence
Mobile telephony (voice)	⇨	Mobile/Wireless full multimedia
Micro scale	⇨	Nano-scale
Silicon-based	⇨	New materials
eServices just emerging	⇨	Wide adoption (of eHealth, eLearning etc)
Less than 10% of world population online	⇨	World-wide adoption

5. The *e*Europe 2005 Action Plan

The eEurope initiative was first proposed by DG INFSO at the end of 1999 and endorsed by the European Council in Feira in June 2000 as part of the Lisbon Strategy to modernise the European economy. The initiative was launched with the aim of accelerating Europe's transition towards a knowledge-based economy and to realise the potential benefits of higher growth, more jobs and better access for all citizens to the new services of the information age.

The main objective of eEurope is an ambitious one: to bring every citizen, school and business online and to exploit the potential of the new economy for growth, employment, and inclusion. The first eEurope Action Plan, 2000-2002, had three aims: a cheaper, faster, more secure Internet; investment in people and skills, and greater use of the Internet. It consisted of 64 objectives and nearly all were successfully reached by the end of 2002.

The second stage is the eEurope 2005 Action Plan, which was endorsed by the European Council in Seville, 2002. The eEurope 2005 objective is that Europe should have modern online public services (e.g. eGovernment, eLearning, eHealth) and a dynamic eBusiness environment. As an enabler for these, there needs to be widespread availability of broadband access at competitive prices and a secure information infrastructure.

"To bring every citizen, school and business online and to exploit the potential of the new economy for growth, employment, and inclusion."

"Europe should have modern online public services and a dynamic eBusiness environment."

eEurope 2005 objectives.

The objective of the new Action Plan is to provide a favourable environment for private investment and for the creation of new jobs, to boost productivity, to modernise public services, and to give everyone the opportunity to play a role in a global Information Society.

eEurope 2005, therefore, aims to **stimulate secure services, applications and content based on a widely available broadband infrastructure.**

eEurope is not a public expenditure programme and does not make new funds available. It aims to provide a policy framework within which existing expenditure programmes, such as the 6th Framework programme for research, the eTEN (Trans-European Networks) initiative, and the Structural Funds, can be better focused. It also aims to accelerate the adoption of relevant legislation.

The success of eEurope 2002.

eEurope 2002, with the joint effort of all stakeholders, has already delivered major improvements and has increased the number of citizens and businesses connected to the Internet. It has reshaped the regulatory environment for communications networks and services and for e-commerce and has opened the door to new generations of mobile and multimedia services.

It is providing opportunities for people to play a role in the Information Society and is helping the workforce to acquire the skills needed in a knowledge-driven economy. It is bringing computers and the Internet into schools across the EU, bringing governments on-line and focusing attention on the need to ensure a safer online world.

Three figures can best summarise this progress:

- Internet connectivity has more than doubled, with 43% of households connected to the Internet by November 2002.
- In 2002, more than 90% of schools and business were online.
- Europe has now the strongest research backbone in the world, with a geographical coverage of 32 countries.

However, the effective use of the Internet has not increased as quickly as connectivity. Policy attention has therefore shifted towards supporting the effective use of ICT through the increased availability of high quality infrastructure, the availability of attractive services and applications and encouragement for organisational change.

The challenges of *e*Europe 2005.

The Information Society has a vast untapped potential for improving productivity and quality of life. This potential is growing due to the technological developments of broadband and multi-platform access, i.e. the possibility of connecting to the Internet via other means than the PC, such as digital TV and 3G mobile phones. These developments are creating significant economic and social opportunities. New services, applications and content will create new markets and provide the means to increase productivity and, as a direct result, growth and employment throughout the economy. They will also provide citizens with more convenient access to information and communication tools.

Stimulating the effective use of the Internet is now the challenge:

- for *eLearning*. Connectivity in schools has been achieved. Greater emphasis now has to be placed on the quality of e-learning products and services and on the pedagogical context for their use. We need to address broadband content, teacher training and organisational implications. This includes new social interactions inside and beyond schools.
- For *SMEs*. SMEs need to integrate e-business technologies into normal business practices to realise their full potential. Large firms already involved in e-business will demand this increasingly from their smaller business partners.
- For *government services*. There is an important untapped potential for the development of eGovernment services, although remarkable progress has been achieved by public administrations in the Member States. Basic government services are online. Now they need an increasing degree of interactivity and require back-office reorganisation to achieve the greatest efficiencies.

Most services are provided by the market. Developing new services needs significant investment, most of it from the private sector. But there is a problem: funding more advanced multimedia services depends on the availability of broadband for these services to run on, while funding broadband infrastructure depends on the availability of new services to use it.

Action is therefore needed to stimulate services and infrastructure to create the dynamic where one side develops from the growth of the other. The

development of services and the building of infrastructure are mainly tasks for the private sector, and eEurope will create a favourable environment for private investment. This means not only developing an investment-friendly legal framework but also taking action that stimulates demand and so reduces uncertainty for private investors.

The targets of *e*Europe 2005.

eEurope 2005 applies a number of measures to address both sides of the equation simultaneously. On the demand side, actions on eGovernment, eHealth, eLearning and eBusiness are designed to foster the development of new services. In addition to providing better and cheaper services to citizens, public authorities can use their purchasing power to aggregate demand and provide a crucial pull for new networks. On the supply side, actions on broadband and security should advance the roll-out of infrastructure.

The Lisbon strategy is not just about productivity and growth but also about employment, social cohesion and stability. eEurope 2005 puts users at the centre. It will improve participation, create opportunities for everyone, and enhance skills. eEurope contains measures regarding eInclusion. One important tool for achieving this is to ensure the multi-platform provision of services. It is generally accepted that not everyone will want to have a PC. To ensure that services, especially online public services, are available over a variety of different platforms, such as TV sets or mobile phones, is crucial for the participation of all citizens in a global Information Society.

The key areas covered by eEurope 2005.

Broadband: Currently, the most common way to access the Internet is through dial-up connections, a narrowband service, which uses the existing local telephone network and is mostly charged on the basis of time. The main challenge ahead is to accelerate the transition from communications based on narrowband networks to communications based on broadband networks, providing high-speed and always-on access to the Internet. While large corporations have completed their transition to broadband, the focus must now be on the mass market to ensure that broadband becomes available to all homes and SMEs.

Broadband stimulates the use of the Internet and enables the usage of rich applications and services. Its benefits spill over to the areas of e-business, e-learning, e-health and e-government, improving the functionality and performance of those services, and further extending the use of the Internet. As such, it is considered the crucial infrastructure for realising the productivity gains that a more effective use of the Internet can deliver.

To reach everybody, broadband policy must also take into account the potential of the emerging alternative communication platforms such as 3G and digital TV. This multiplies the channels through which people can access broadband and benefit from it, contributing to the achievement of an Information Society for all.

Secure information infrastructure: Network and information security is a prerequisite for a well-functioning Information Society. As network and information security has become a core policy issue, the European Commission together with the Member States have launched a comprehensive strategy in this area, as described in the eEurope 2005 action plan.

In order to achieve a high level of information security, it is necessary for all relevant stakeholders to take action. The eEurope 2005 action plan sets out measures that are available to all the major stakeholders in this area: Governments and Community institutions, citizens, industry and public administrations.

The Cyber Security Task Force has developed a proposal for a Regulation establishing the European Network and Information Security Agency (ENISA). The Agency will help co-ordination and information exchange between different stakeholders in the EU, and will become a centre of expertise. It will help Member States in addressing security problems, and tailor information to different user groups in order to increase awareness. The beginning of 2004 is the target date set for the establishment of the Agency.

A Council Resolution, meanwhile, sets out a European approach towards a culture of network and information security. This Resolution also calls upon industry to strive towards a culture of security in the deployment of information and communication technologies.

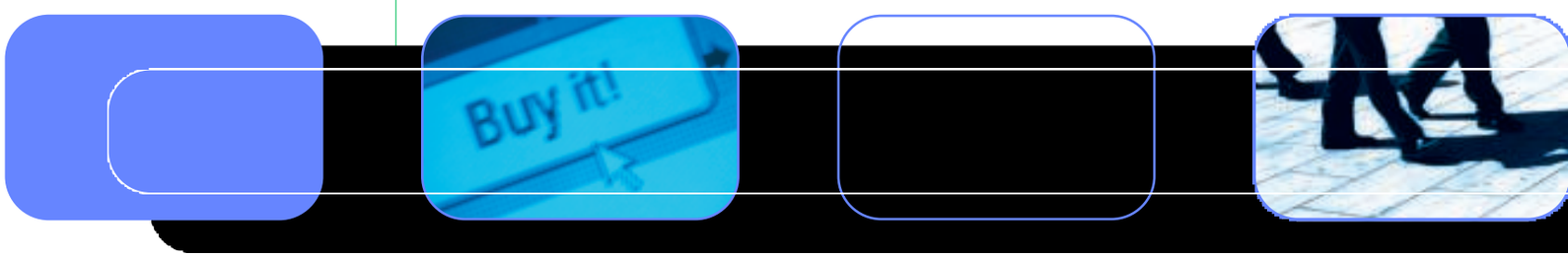
In April 2002, the Commission proposed a Framework Decision on attacks against information systems. The Framework Decision addresses the most significant forms of criminal activity against information systems, such as hacking, spread of viruses and other malicious code and denial-of-service attacks. It seeks to provide a comprehensive and effective framework of common definitions and criminal sanctions. It encourages and promotes information security, while ensuring that Europe's law enforcement authorities can take action against this new form of crime.

More secure electronic communications will allow for better and faster communications between public administrations , and will also facilitate contact with citizens and ensure that information is processed in a trustworthy manner. The TESTA-network that has been rolled out in the Member States represents a major step towards such secure communication and it will also be easy Accession States' administrations to use.

e-Government, e-Government aims to deliver better quality public services that are accessible to all. It aims to increase productivity in the public sector, so that services can be provided at a lower cost and time is freed up for more personal interaction. It can also enhance participation in public policy development and thus reinforce democracy, as well as help to increase the transparency and accountability of the public sector. In short, e-Government is a means to achieve a more productive, inclusive, and open public sector in Europe.

e-Government can only deliver its full benefits if investment in ICT is accompanied by re-organisation of administrative processes and improvement of skills in the public sector. These changes can be profound and will often encounter obstacles. Therefore e-Government can only succeed with strong political leadership. Progress can be accelerated if there is a willingness to start small, learn fast in partnership with users (citizens and companies) and from best practice elsewhere, and then to move to wider deployment.

The European Commission has several contributions to make to e-Government in Europe in terms of promotion/support, R&D and innovation and regulation. First, by providing a strategic overview and direction. Secondly, by providing guidelines and frameworks for public service delivery, notably across borders, and monitoring developments through indicators and benchmarking as defined in the eEurope action plan. Thirdly, by supporting the leveraging of best practice and dissemination of innovative technology across borders. Finally, by reducing legal barriers for pan-European services and the modernisation of public services.



e-Health, Health is a very information-intensive sector. Health professionals spend a large proportion of their time sorting through patient records, pharmaceutical registers, professional publications and the administrative information essential for them to provide high quality healthcare efficiently. If eEurope can lead to improved efficiency in access to and management of information it can bring new and better services, higher productivity and improved quality of life for Europeans.

As part of eEurope 2002 the European Commission proposed a Communication on quality criteria for health related web sites to assist the rapidly growing number of users of Internet-based health services. This will be taken forward through the Public Health Programme initiative on Quality Seals for Health-related information on the Internet.

eEurope actions on e-health will establish a basis for further development of health services in the future. The launching of the European health insurance card will be accompanied by Commission proposals for a common approach to patient identifiers and electronic health record architecture in order to pave the way for the possible adoption of a European electronic health card. As well as providing a secure means of access to personal health information, these will create opportunities for further elements to be included, e.g. medical emergency data. These developments could bring greater efficiency to health information management and give the user security and control over their own health data.

e-Learning, e-learning is an important catalyst for change, with organisations using ICT to transform the way they learn, interact and support the essential processes of creativity, innovation and change.

Modern e-learning solutions recognise the importance of learning as a social process and offer possibilities for collaboration with other learners, for interaction with the learning content and for guidance from teachers, trainers and tutors. These learner-centred approaches have put the learners back in command, with a wealth of learning resources at their fingertips. Teachers and trainers once more play a central role, using virtual and traditional face-to-face interactions with their students in a 'blended' approach. There is a growing body of experience in this area, and a major challenge is to understand the strengths and weaknesses of e-learning, to identify the factors that make its use a success and to help disseminate good practice.

Technology continues to advance, however, and the environment is constantly changing, so there is a need for further research, which explores the new possibilities offered by technology to enhance learning. The 6th Framework Programme will focus on improving individual and organisational learning, using broadband technologies to support collaboration, access to learning resources and the transfer of knowledge.

One of the major successes of eEurope 2002 has been the development of the concept of 'virtual campuses' offering virtual services to university students, in conjunction with pilot projects to research this idea. We are now entering a phase of deployment, and work will continue to examine the factors needed to make such virtual services sustainable.

Further work is required to support adults in acquiring the key skills needed to live and work in a knowledge society, if we are to avoid creating a 'digital divide' between those citizens able to benefit from ICT and the internet, and those who are not. Steps will be taken to support Member States' initiatives to re-skill the workforce using e-learning, and to understand important factors such as accessibility, digital literacy and special needs. Investment in e-Learning is the basis of the acquisition of new skills in the workforce. These skills are essential to the reorganisation of working methods that enhance productivity. Thus, investment in e-Learning is a prerequisite for exploiting the productivity

potential of ICT, and a source of innovation and long-term competitiveness. This re-skilling initiative aims to encourage enterprises to adopt innovative work practices.

e-Businness, e-Business has been defined as comprising both e-commerce (buying and selling on-line) and the restructuring of business processes to make best use of digital technologies. This definition reflects the current need to take a more holistic view of e-business, with a stronger emphasis on the productive use of Information Communication Technologies.

The enhanced use of ICT has a strong impact on business-to-business and business-to-consumer relationships, as well as on the way key business processes are designed It can save costs and time, and enable businesses to reach a wider market and to respond more quickly to customer demands. These benefits open the way towards fundamentally new ways of doing business. The policy objective is to encourage the integration of e-business into normal business by promoting the take-up of e-business services. This is a key element of the wider eEurope and Lisbon Strategy objective of improving the competitiveness of European enterprises and raising their levels of productivity and growth.

To take advantage of e-business to compete in a modern global economy, SMEs require support to overcome the reservations that they have towards 'going digital'. The lessons of the Go Digital initiative and the subsequent Communication Adapting e-business policies in a changing environment (adopted 27 March 2003) constituted a solid base on which the Competitiveness Council of 13 May 2003 presented its conclusions. The barriers are well-known: lack of time, lack of resources, lack of skilled employees, lack of easily employable technology adapted to SMEs, and also lack of awareness of the potential benefits for them.

e-Inclusion: eEurope 2005 has the ambitious objective of achieving "an Information Society for All". This means not only overcoming geographical and social differences, but also ensuring an inclusive digital society that provides opportunities for all.

The Council Resolution of December 2002, "eAccessibility - improving the access of people with disabilities to the Knowledge-based society" - calls upon Member States and invites the Commission to "tap the Information Society's potential for people with disabilities and, in particular, tackle the removal of technical, legal and other barriers to their effective participation in the Knowledge Based Economy and Society".

Measures taken under the eEurope 2005 Action Plan.

The eEurope action plan is based on two groups of measures which reinforce each other. On the one hand, it aims to stimulate **services**, **applications and content**, covering both online public services and e-business. On the other hand it addresses underlying **broadband infrastructure and security matters**.

The action plan involves the use of **four separate but interlinked tools**:

Firstly, **policy measures** to review and adapt legislation at national and European level; to ensure legislation does not unnecessarily hamper new services; to strengthen competition and interoperability; to improve access to a variety of networks, and to demonstrate political leadership. eEurope 2005 identifies those

areas where public policy can provide added value and, therefore, focuses on a limited set of actions in priority areas. Some key targets are:

- Connecting public administrations, schools, and health care providers to broadband,
- Interactive public services, accessible for all, and offered on multiple platforms,
- Provision of online health services,
- Removal of obstacles to the deployment of broadband networks,
- Review of legislation affecting e-business,
- Creation of a Cyber Security Task Force.

Further information can be found at the following European Commission web address:

http://europa.eu.int/information_society/eeurope/index_en.htm

Secondly, eEurope will facilitate the exchange of experience, of **good practice** and demonstration projects, while also sharing the lessons of failures. Projects will be launched to accelerate the roll-out of leading-edge applications and infrastructure.

Thirdly, policy measures will be monitored and better focused by **benchmarking** the progress made in achieving their objectives.

Fourthly, **an overall co-ordination of existing policies** will bring out synergies between proposed activities. A Steering Group will provide a better overview of policy developments and ensure the exchange of information between national and European policymakers, and the private sector. This Steering Group would also make the early participation of Candidate countries possible.

By 2005, Europe should have in place:

- modern online public services: eGovernment, eLearning services, eHealth services,
- a dynamic eBusiness environment,

and, as an enabler for these

- widespread availability of broadband access at competitive prices,
- a secure information infrastructure.

6. The Regulatory Framework

"... to encourage competition in the electronic communications markets, to improve the functioning of the internal market and to guarantee basic user interests that would not be guaranteed by market forces alone."

Rationale and successes so far.

Since their inception, the objective of the EU's telecommunications policies has been to encourage the provision of high quality services at low prices for European citizens. Throughout the 1990s segments of the telecoms market were gradually liberalised, culminating with the full liberalisation of services and infrastructures in all Member States in January 1998. The European Commission has used liberalisation and harmonisation rules to create the conditions for a competitive and dynamic internal market in which new entrants are able to develop services and push prices down, and as a result we have seen substantial growth and increasing competition.

Thanks to liberalisation, telecoms services is one of the fastest growing sectors of the European economy - in 2001 the growth rate was 9.5%. Carrier services are still expected to have grown by a healthy 6.7% in 2002, despite the economic slowdown. Competition keeps intensifying, leading to lower prices, more choice, better quality of service and innovation.

Allied to the development of new technologies and markets, this means that there has been a fundamental shift in the environment in which EU policies operate. There has also been a radical change in thinking on the part of governments concerning the role of communications technologies in social and economic development. The EU is now embarked on a drive to become a dynamic and competitive knowledge-based economy.

To this end, in July 2000 DG INFSO submitted a package of legislative proposals which were subsequently adopted by the Council and the European Parliament, aimed at a substantial reform of the regulatory framework for the telecommunications sector. The new legal framework for e-communications applies from July 2003.

Major features of the new framework are:

- it covers all communications networks used to deliver e-Communications services, not just traditional telecommunications networks. This technological neutrality meets the requirements of the Internet-driven convergence between telecommunications, information systems and the media.
- it provides for regulation to be rolled back, by ensuring that regulatory obligations on market players are lifted as soon as markets become competitive;
- it drastically cuts unnecessary red tape which obstructs entry to national markets by replacing individual licences by general authorisations to provide services.

The objectives for the regulatory framework.

The goals of the regulatory framework are to encourage competition in the electronic communications markets, to improve the functioning of the internal market and to guarantee basic user interests that would not be guaranteed by market forces alone.

The EU framework has **three main objective**s:

1. To create a stable and predictable regulatory environment.

New entrants and incumbents need to know when they draw up their business plans that the rules of the game are not going to change overnight: they need legal certainty and stability. Operators need to feel confident that, if they make new investments, the value of those investments is not going to be downgraded by inappropriate imposition of price controls or access obligations.

The new regulatory framework aims at ensuring regulatory harmonisation across the single market and providing legal certainty, by clearly identifying the market segments that may justify regulatory intervention. Regulatory authorities have the flexibility to address the specific situations in different countries and can, with the European Commission's agreement, make adjustments to pre-identified markets.

The aim is to remove regulation where competition is effective, and to allow normal market forces to work freely, subject to some social criteria (e.g. universal service safeguards, to make sure that vulnerable people are not suddenly left without means of communication) and respect for competition law.

2. To encourage innovation.

Innovation flourishes best in a competitive market. Promoting fair competition is one of the main tasks of national regulatory authorities. In the medium to long term, that means competition between competing infrastructures.

The new regulatory framework will promote sustainable facilities-based competition as a medium term objective, leading to a situation where there is full infrastructure competition between a number of different infrastructures. Competition will occur within and between different technology platforms, and will grow over time as existing networks are upgraded to compete with each other (as with the cable and telecoms networks) and new networks are built.

In the short term, companies that were privileged in installing infrastructure facilities under monopoly conditions continue to benefit from those earlier investments, in particular those relating to long-lived facilities in the local access network. This can give them an unfair advantage over new entrants.

The regulator has to find ways to compensate for such market power especially where consumers do not have a choice between different networks. By granting new entrants access to these facilities in a way that promotes fair competition and "levels the paying field", regulators can ensure that users enjoy choice and competition during the transition to a fully competitive market. But regulation should not be so heavy that it removes incentives for companies to invest in new infrastructure.

3. To stimulate new investment in communications networks and services, both by new entrants and existing operators. Generally, new and emerging services markets will not be candidates for regulation. Firms that take risks in making new investments deserve to be able to profit from those investments.

Regulators still need to pay attention to potential leveraging into new markets of those with market power in existing markets.

The main regulatory and legislative measures.

The new regulatory framework consists of the following measures:

- A Framework Directive setting out the main harmonising principles, objectives and procedures for an EU regulatory policy regarding the provision of electronic communications services and networks.
- An Access and Interconnection Directive stipulating procedures and principles for imposing pro-competitive obligations regarding access to and interconnection of networks.
- An Authorisation Directive introducing a system of general authorisations, instead of individual licences, to facilitate entry to the market and reduce administrative burdens on operators.
- A Universal Service Directive requiring a minimum level of availability and affordability of basic electronic communications services and guaranteeing a set of basic rights for users and consumers of electronic communications services.
- An Electronic Communications Privacy Directive setting out rules for the protection of privacy and of personal data processed in relation to communications over public communication networks.
- A Radio Spectrum Decision which establishes principles and procedures for the development and implementation of an internal and external EU radio spectrum policy applicable to all sectors using radio spectrum, including the communications sector.
- A European Commission Competition Directive consolidating the legal measures based on Article 86 of the Treaty that have underpinned liberalisation of the telecommunications sector over the years.

In addition to these basic instruments, the European Commission has adopted additional measures that will play an important role in the functioning of the new framework:

- Commission guidelines on market analysis and the assessment of significant market power, setting out a common methodology and principles for the national regulatory authorities charged with these tasks..
- Commission recommendation on relevant product and service markets within the electronic communications sector susceptible to prior regulation.

The committees and policy groups.

The following committees and groups play an important role in the management, implementation and further development of the new framework:

- Communications Committee (Chair and secretariat: DG INFSO; Members: representatives of national ministries and regulatory authorities) with regulatory and advisory functions regarding implementation issues arising from the five Directives.
- European Regulators Group (Chair: Elected from and by Members; Members: Heads of the independent national regulatory authorities; Secretariat: DG INFSO) to contribute to a consistent application of the new regulatory framework in all Member States.

The original texts of the directives and guidelines can be found on the DG INFSO web site:

http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/index_en.htm#reg

Further information can be found at the following European Commission web address:

http://europa.eu.int/information_society/topics/telecoms/regulatory/new_rf/index_en.htm

- Radio Spectrum Committee (Chair and secretariat: DG INFSO; Members: representatives of national ministries and regulatory authorities) to deal with technical implementing measures aimed at harmonisation of frequency allocation in the Community and within the international context.
- Radio Spectrum Policy Group (Chair: elected from and by members; Members: High level governmental experts from Member States and high level DG INFSO representatives; Secretariat: DG INFSO) providing a platform for Member States, DG INFSO and stakeholders to co-ordinate approches to radio spectrum policy and to offer advice to the Commission.

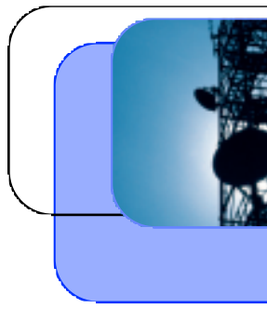
Meetings of these groups and committees are also attended by experts from countries of the European Economic Area and by Accession countries. Moreover, other experts and representatives from stakeholder associations may be invited to attend non-restricted parts of meetings.

Summary and challenges.

To summarise: the EU regulatory framework is intended to provide a coherent, reliable and flexible approach to the regulation of electronic communication networks and services in fast moving markets. The new rules provide for a lighter regulatory touch where markets have become more competitive, yet ensure that a minimum of services are available to all users at an affordable price and that the basic rights of consumers continue to be protected.

The major challenges ahead are :

- Surveillance of timely and correct implementation of the new regulations by the Member States;
- Assisting the Accession countries in incorporating and applying the new rules by the date of accession in May 2004;
- Establishing a smoothly running procedure to handle Member States' notifications of national measures to be imposed on operators with significant market power ("Article 7 procedure");
- Developing a European regulatory culture to facilitate the harmonised application of EU rules throughout the single market, partly via the newly established groups and committees;
- Promoting work towards the various goals of the new framework via targeted implementation measures, recommendations, guidelines, working documents and other actions where appropriate.



7. Next Steps

DG INFSO is supporting and implementing a wide range of activities with the overall aim of encouraging innovation and ensuring access and participation for all in the emerging Information Society.

The overall strategy, seen in the context of the Lisbon agenda, is to promote a wide range of different IST applications and services, which, when implemented together, will increase productivity and improve the competitiveness of the European economy and bring benefits to society as a whole.

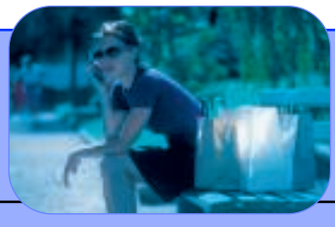
The economic benefits will be felt most widely through the use of IST by businesses, in the online supply of government services, and by citizens, not only using electronic services to make purchases and access services online, but also more significantly using them for a wide range of personal everyday activities, aided by the wide availability of compatible networks, devices, and services.

In particular, new digital technologies can foster open markets, information plurality, freedom of choice and social inclusion. Public authorities can play an important role here.

In the first place, they can ensure that technological and business initiative is deployed under fair market conditions, and with the legal certainty that investments require. The Information Society is driven first and foremost by market forces.

Secondly, Government action is necessary where the market cannot sufficiently achieve certain general interest objectives, such as ensuring social inclusion, or delivering eGovernment, eLearning, eHealth, etc.

Ultimately, digital convergence and new technologies are a means to an end: an engine for social and economic growth. To use the motto of the e-Europe Action Plan, they must contribute towards "an Information Society for all" - that is, an inclusive and democratic society.



"... supporting and implementing a wide range of activities with the overall aims of encouraging innovation and ensuring access and participation for all in the emerging Information Society."