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An Information Society For All

Draft Action Plan

prepared by the European Commission for the European Council in Feira

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The Lisbon Extraordinary Summit

The European Council 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 and in particular the Internet.

To achieve this, the Heads of State and Government invited the Council and the Commission to draw up "*...a comprehensive eEurope Action Plan using an open method of co-ordination based on the benchmarking of national initiatives, combined with the Commission's recent eEurope initiative as well as its Communication 'Strategies for jobs in the Information Society'.*"

This Draft Action Plan is the Commission's response to this request.

The context

The eEurope initiative¹ was launched by the European Commission in December 1999 with the objective to bring Europe on-line. Complementary to eEurope, the Commission also presented a Communication on "Job Strategies in the Information Society" in January 2000². The Broad Economic Policy Guidelines³ provide the economic policy context, stressing the need for well functioning capital markets and more competition in product markets in order to foster innovation.

Following a positive reception for eEurope from Member States, the European Parliament and key actors the Commission submitted a Progress Report to the Lisbon Summit of March 2000. At this Summit, the Heads of State and Government committed themselves to a number of measures, including target dates, to bring eEurope forward⁴.

A revised set of targets

The aim of this Action Plan is to ensure that the targets set by the Lisbon Summit are reached by defining the necessary measures. eEurope initially identified 10 areas where action at European level will add value. For this Action Plan, the key target areas have been revised in the light of the Lisbon Summit conclusions and the numerous reactions the Commission has received, especially from the European Parliament and Member States and during the Informal Ministerial Conference on the Information and Knowledge Society held in Lisbon on 10-11 April.

The issue of risk capital for high tech SMEs was included in eEurope in order to address the problem of lack of funding for innovative start-ups. In recent months major progress has been made in new capital markets in Europe and two relevant Action Plans, one on financial services (to be completed by 2005), the other on risk capital (to be completed by 2003), have been endorsed by the Lisbon Summit and are

¹ For key documentation see
http://europa.eu.int/comm/information_society/europe/documentation/index_en.htm
² http://europa.eu.int/comm/commissioners/diamantopoulou/infosoc_en.htm
³ http://europa.eu.int/comm/economy_finance/document/econeur/beg/begidxen.htm
⁴ <http://ue.eu.int/en/Info/eurocouncil/index.htm>

now underway. Therefore the aims of eEurope in this area will be dealt with in these contexts.

Member States and the European Parliament have requested several extensions of eEurope.

- i. the new requirements for **information society skills** and the problem of **skills shortages**.
- ii. the need to ensure a **socially inclusive information society**. This had been partly addressed in eEurope in the eParticipation for disabled action, hence this action has been extended to include access for all disadvantaged groups.
- iii. ensuring adequate supply of **quality digital content** for Internet.

In addition they requested that the Commission undertake a **benchmarking** exercise in this context. All of these issues were further underlined in discussions during the informal Ministerial Conference on the Information and Knowledge Society held in Lisbon on 10-11 April 2000. Finally, in order to ensure a more precise focusing of action lines, the action lines have been clustered around three key objectives.

1. A cheaper, faster and secure Internet

a) Cheaper and faster Internet access

b) Faster Internet for researchers and students

c) Secure networks and smart cards

2. Investing in people and skills

a) European youth into the digital age

b) Working in the knowledge-based economy

c) Participation for all in the knowledge-based economy

3. Stimulate the use of the Internet

a) Accelerating e-commerce

b) Government online: electronic access to public services

c) Health online

d) Digital content for global networks

e) Intelligent transport systems

An operational Action Plan

This Action Plan focuses on precisely identifiable actions. The analysis of the development of the 'new economy' and its impact, detailed in the previous documents

and largely confirmed by the Lisbon Summit, is taken as given. The Action Plan is focused on solutions and concentrates on **what should be done, who should undertake action and by when**.

There are three main methods by which the eEurope targets will be achieved:

Accelerating the setting up of an appropriate legal environment – On a European level, a range of legislative proposals is being prepared and discussed. eEurope aims to speed up their adoption through setting tight deadlines for all the actors.

Supporting new infrastructure and services across Europe – Developments here depend mainly on private sector funding. Such activity may be supported with European funding, but much depends on action by Member States. This action should, of course, not compromise budgetary discipline.

Applying the open method of co-ordination and benchmarking – This aims to ensure that actions are carried out efficiently, have the intended impact and achieve the required high profile in all Member States. This process will be fully co-ordinated with the general benchmarking linked to the special European Council each spring.

With regard to benchmarking, data collection will be a crucial task. There are several ongoing statistical data gathering initiatives at national and international level related to the new knowledge based economy. Data from Eurostat and Member States' statistical offices will be used where available. Industry associations and private consultants also produce statistics related to the new economy. However, these statistics do not cover all relevant indicators, it is sometimes difficult to assess their quality and they are not always comparable. In such cases, specific surveys or studies will be used to supplement the data⁵. The results of this data gathering and the monitoring of the specific targets of eEurope will be presented on the eEurope web page⁶.

The timeframe

The need to undertake urgent actions against tight deadlines in critical areas for the new economy is one of the key driving forces of the eEurope initiative. The philosophy of this Action Plan is to focus on such actions and thus ensure the quick removal of the remaining barriers. This is why the Action Plan focuses on a key date - 2002 - by which all of the targets should be achieved. If Europe cannot ensure change quickly it will be too late to achieve the ambitious Lisbon objectives. There will undoubtedly be remaining issues to be resolved after 2002, but if the following targets were achieved Europe would have made significant progress that would soon begin to pay dividends.

The need for political commitment

The eEurope targets can only be achieved if Member States, the European Parliament and the European Commission are ready to commit themselves to this Action Plan and to the reassessment of priorities which it will imply. None can afford to relax, no

⁵ Under the Promise and IST programmes.

⁶ http://europa.eu.int/comm/information_society/eeurope/index_en.htm

matter how advanced they may be relative to others. Each Member State must be ready to set new priorities and to remove obstacles to achieve the targets. Each will have to draw the attention of citizens to the emerging possibilities of digital technologies.

Objective 1. A cheaper, faster, secure Internet

a) Cheaper and faster Internet access

The **Lisbon summit** requested

- *the conclusion 'as early as possible in 2001' of work on the legislative proposals following the Telecom Review*
- *greater competition in local access networks by the end of 2000 and the unbundling of the local loop*
- *that frequency requirements for future mobile communication systems should be met in a timely and efficient manner*
- *availability of low-cost, high-speed networks for Internet access*
- *fully integrated and liberalised telecommunications markets by the end of 2001*

The challenge

Since the liberalisation of telecommunications services on 1 January 1998 tariffs for long-distance and international calls have decreased substantially. However, most customers access the Internet via local lines, where prices have decreased much less, due to insufficient competition. So far, the market has been relatively slow in producing much needed new tariff models such as flat-rate or free access. Lower prices are especially important for a quick take-up of the high-speed multimedia Internet access made available by new technologies, such as xDSL, cable, optical fibre and radio technologies. The Lisbon Summit has shown strong political will to ensure that a reduction in costs is assured. Implementation of the Commission Recommendation on local loop unbundling is the fastest way to advance high-speed Internet.

Its leadership in mobile networks is one of Europe's biggest assets. Soon the number of mobile subscriptions in Europe will overtake fixed lines. An increasing number of customers will have mobile access to the Internet. Fast mobile Internet access, will only be possible through upgraded 2nd generation networks (specifically using GPRS and EDGE technologies⁷) and through 3rd generation networks. Such high speed access will inevitably be very price sensitive and will require the highest possible level of competition.

The market is already heavily investing in new networks on a competitive basis. Nevertheless, several Member States and the European Parliament have expressed concern about remote and less developed areas. It is vital that citizens living in these regions enjoy equal access to the modern communication networks.

⁷ General Packet Radio Service and Enhanced Data GSM Environment.

With regard to the next generation Internet, including mobile Internet, the need for vastly increased Internet IP addresses has made the transition to Internet Protocol version 6 (IPv6), which provides far more addresses than current version 4, a matter of urgency. Furthermore the projected hundred-fold increase in Internet traffic will require much more efficient networks and packet switching technology.

The eEurope response

As a response to convergence and to the changing market and technological conditions, a new pro-competitive regulatory framework, which reinforces competition and takes account of the increasing speed of developments in this sector, is being put forward by the Commission. All possible efforts should be made to ensure that it is adopted before the end of 2001. Meanwhile competition in the local loop must be developed as a matter of priority. The Commission has therefore recommended the unbundling of the local loop by the end of 2000. In addition, the necessary frequencies for multimedia wireless systems should be made available. The Commission will draw appropriate conclusions from the sector enquiry on excessive pricing of leased lines conducted under EC Competition Law.

Ensuring that less-favoured regions can fully participate in the information society is a priority for the Union. Projects encouraging up-take of new technologies must therefore become a key element in regional development agendas. Public investment in information society infrastructure in less favoured regions may be justified in cases of market failures, where private investment alone cannot be profitable. These investments must be made in a way that does not distort competition and is technologically neutral. Investments must be determined by each region and on the basis of their particular economic and social structure. The Commission has undertaken to increase priority of information society related projects within the structural funds. A similar revision of priorities has been announced by the European Investment Bank (EIB).

In relation to the next generation Internet, the Commission will launch an initiative aimed at mobilising telecommunications operators and equipment manufacturers to work together with service providers and users to ensure the rapid deployment and use of IPv6.

Action	Actor (s)	Deadline
Adopt the five directives ⁸ for the new framework for electronic communications and associated services; and, adopt the new Commission Directive on Competition in Communication Services ⁹ .	Council, European Parliament, European Commission	end 2001
Implement the Commission Recommendation	Member States	end 2000

⁸ These Directives concern the overall framework, access and interconnection, authorisation and licences, universal service and data protection.

⁹ Full title: *Commission Directive amending and consolidating Directive 90/388 on Competition in the Markets for Electronic Communication Services.*

on unbundled access to the local loop.		
Adoption of a Decision to establish a co-ordinated European frequency policy framework.	Council European Parliament	end 2001
Co-ordinated allocation of frequencies for multimedia wireless systems ¹⁰ .	Member States European Commission	mid 2001
Public financing instruments will give increased priority to information society related projects.	Member States, European Investment Bank, European Commission	end 2000
Move towards full conversion to IPv6 through pilot implementation in Europe. Key telecom and manufacturer industries will be mobilised together with service providers and users.	European Commission, Private Sector	end 2001
Reduce prices for leased lines by increasing competition and ensuring implementation of the Commission Recommendation.	Member States	end 2000

b) Faster Internet for researchers and students

The Lisbon Summit requested:

- *the creation of a very high speed trans-European network for electronic scientific communications by end of 2001 linking research institutions and universities, as well as scientific libraries, scientific centres and, progressively, schools.*

The challenge

High-speed networks will open up new possibilities for collaborative learning and researching. Applications developed in academia today are often the basis for the commercial applications of tomorrow. The Member States and Commission must ensure that this potential for innovation is fully exploited.

With faster Internet a new concept in computing is emerging - distributed computing over networks. This is ultimately conceptualised in the idea of the 'World Wide Grid' - WWG. The concept is to facilitate collaboration between geographically dispersed teams in all scientific disciplines and industrial areas by enabling them to share data and computing infrastructure, working together in real time. WWG calls for further development, integration and validation of technology which enables the seamless integration of networks, computers and storage into a unified system.

¹⁰ in the 40.5 to 43.6 GHz band according to the decision of the European Radio Conference (ERC) of 1.6.99

The eEurope response

The Commission has recently launched the research networking activity under the 5th Framework Programme, which will provide €80m. to ensure the upgrading of trans-European capacity to 2.5 Gbit/s. Europe needs to invest more to provide both a truly 'state-of-the-art' infrastructure and the technologies required to fully exploit it.

In January 2000 the Commission published a Communication entitled "Towards a European Research Area" in which a better use of electronic networks by European scientific communities and the creation of virtual centres of excellence are set as strategic priorities.

Already the IST Programme is supporting projects in distributed computing, but a major effort is needed to roll this technology out to all researchers. Thus adequate resources will be secured to support the development of the WWG.

Faster Internet backbones will not significantly improve performance for researchers and students if they do not have access to high speed connections and quality applications, supported by user-friendly and network independent interfaces. This means major improvements in internal campus networks to enable collaborative working and innovative forms of learning and working together at a local level.

Action	Actors	Deadline
Adequate funds (in addition to the €80m. already allocated to the upgrade of the trans-European backbone interconnecting the National Research and Education Networks) will be earmarked for the research networking aspects of the IST Programme, with the objective of establishing Europe as a global connectivity leader and initiating the evolution towards a fully optical backbone with improved capacities in terms of bandwidth and services.	European Commission	end 2001
National research networks should be upgraded to ensure that all researchers and students across Europe benefit from equally powerful networks, where appropriate, using structural funds and EIB support.	Member States, European Investment Bank	end 2001
High speed Internet access and intranets should be established in universities, where appropriate using structural funds and EIB support.	Member States, European Investment Bank	end 2001
Foster World Wide Grid (WWG) technology through development of middleware and the deployment of testbeds driven by the requirements of a wide range of scientific communities and aimed at the integration and validation of the relevant technology. Adequate funding will be provided for this activity	European Commission	end 2002

within the IST Programme.		
Through its research programmes, the Commission will support the uptake of Grid technologies for scientific work and collaboration in all research areas.	European Commission	end 2002

c) Secure networks and smart cards

The Lisbon Summit considered

- *consumer confidence is a key factor in the development of electronic commerce.*

The challenge

Secure networks and secure access using smart cards are vital elements in building trust and confidence in electronic commerce. Concerns have often been expressed, amongst others by the European Parliament¹¹, about the potential for invasion of the privacy of network users. In addition, new forms of crime are emerging using the tools of the information society. As the Internet becomes ubiquitous for all business and personal communications, the sensitivity and economic value of the content of information transmitted is increasing. The economic damage caused by disruptions (e.g. by virus, denial of service attacks) in Internet functioning is increasing.

Protecting security can be costly and slow down the speed of the network. Therefore arbitrary solutions cannot be imposed, but the market should, as far as possible, be left to define the adequate security level for user needs. However, many users are unaware of both the relative lack of privacy of their transactions and the means with which to protect themselves. In particular there is not enough reliable information available on the trust-worthiness of products.

On the supply side many high quality European security products are on the market. New technologies are being developed and the industry is constantly developing. There are problems, however, in relation to the integration of these products into dominant operating systems and applications software and regarding their overall interoperability.

In Europe, widespread deployment of smart cards is already a strength of the Union, but the market is fragmented both between countries and sectorally. Further efforts are needed to accelerate, consolidate and harmonise use across the Union, as well as in the accession countries.

The eEurope response

The eEurope initiative proposes to undertake focused action in three main areas:

¹¹ The Read report on eEurope stressed that '...the development of secure identification systems, systems to preserve the confidentiality of messages and methods to prevent changes in them are paramount to develop a digitalised, competitive and mobile eEurope.'

- Increased security of access to electronic services by encouraging the use of smart cards - in all forms

Smart-cards is a multifunctional technology which protects privacy and confidentiality, where the potential is not yet fully exploited. This activity has already been launched at the 'Smart-Card Summit' in Lisbon on 11 April 2000 and industry has shown strong willingness to pursue common efforts. A Smart Card Charter, containing a detailed work-plan, was adopted and the participants agreed to set up a high level Task Force to initiate and support common developments in the deployment of smart cards in the European Union.

- Improved availability of solutions for Internet security.

Smart-cards are one of the solutions to secure electronic services, particularly the Internet. However, given the complexity and increasing importance of security issues on the Internet, a broader response is required. The main responsibility for ensuring wider awareness and take-up of security products clearly lies with industry. However there are areas where this nascent industry could benefit from public-sector efforts to support its development. In addition, to prevent Internet disruptions the public sector has to play a catalysing role. The proposed actions are therefore mainly aimed at stimulating and re-enforcing private initiatives.

- Better co-ordination to fight cybercrime

A G-8 Conference on safety and confidence in cyberspace was organised in Paris on 15-17 May 2000. A Council of Europe Convention on cybercrime is being discussed and the European Commission is currently preparing a Communication on this issue. eEurope should ensure that a better co-ordination mechanism is established to ensure greater discussion and co-operation on this key issue.

Action	Actor (s)	Deadline
Availability of a core of common specifications for smart-cards interoperability and security	Private sector, Standards organisations, European Commission	end 2000
Improve human interface of smart card terminals including better usability for disabled people and support for multiple languages	Private sector, standards organisations, European Commission	end 2001
Availability of cost-effective smart card solutions to enable secure electronic transactions.	Private and public sector	end 2002
Improve the overall security of on-line transactions by: <ul style="list-style-type: none"> • Ensuring the availability of products (in 	Private sector, European Commission, Member States	end 2001

<p>particular network cards, software and routers) capable of supporting secure transmissions based on IPsec and Ipv6</p> <ul style="list-style-type: none"> • Supporting industry-led security certifications through co-ordination of efforts and mutual recognition, including information security professional certification. • Promoting privacy-enhancing technologies and supporting their deployment, including proper codes and the consolidation of practice. • Stimulating public/private co-operation on dependability of information infrastructures (including the development of early warning systems) and improve co-operation amongst national 'computer emergency response teams'. 		
<p>Promote the development and deployment of open source software security platforms for effective "plug and play".</p>	<p>Private Sector, Member States, European Commission</p>	<p>end 2002</p>
<p>Establish a co-ordinated and coherent European approach to cybercrime.</p>	<p>Member States European Commission,</p>	<p>end 2002</p>

Objective 2: Investing in people and skills

a) European youth into the digital age

The Lisbon Summit requested that:

- *Every citizen be equipped with the skills needed to live and work in the new information society*
- *Member States ensure that all schools in the Union have access to the Internet and multimedia resources by the end of 2001*
- *Member States ensure that all the teachers needed are skilled in the use of the Internet and multimedia resources by the end of 2002*
- *Schools are progressively linked to the very high-speed trans-European network for electronic scientific communications to be created by the end of 2001*
- *Europe's education and training systems must adapt to the knowledge society*

The challenge

Member States are making visible progress in connecting schools to the Internet. More needs to be done, in particular:

- i. there must be a sufficient number of computers and fast Internet connections.
- ii. the installed equipment and available software, content and services must correspond to educational needs.
- iii. the actual usage of these new tools must be assured by well-trained teachers and the adaptation of both teacher and pupil curricula.

The eEurope response

The main responsibility for achieving the targets lies with the Member States. The role of the Commission is to support Member States by providing an overall impetus, by helping to co-ordinate their efforts, by promoting the relevant use of new technologies and applications, as well as financing dissemination of best practice and cross-border school networking. An important European added value is the assurance that technological solutions, software and contents are not developed at national level in isolation. Member States should be able to learn from each others' experiences and build upon each other's achievements.

Adapting schools to the requirements of the digital age should not occur at the expense of other priorities. The Internet will not solve existing day-to-day problems, for instance regarding availability of teachers, budgets and infrastructure. Therefore additional financial resources will need to be made available to achieve the ambitious

objective of ensuring that all pupils are digitally literate by the time they leave school. Industry must also be encouraged to play a more active role through innovative and effective public-private partnerships.

The Commission will bring specific educational actions together in a complementary eLearning initiative that is being launched. eLearning will encompass eEurope targets in an educationally oriented framework and will address the request of the Lisbon Council to adapt Europe's education and training systems to the knowledge society.

Actions	Actor (s)	Deadline
Provide all schools with access to the Internet and multimedia resources, where appropriate using the Structural Funds.	Member States	end 2001
Provide all pupils with access to the Internet and multimedia resources in their classroom, where appropriate using the Structural Funds.	Member States	end 2002
Connect schools progressively to the research networks, where appropriate using the Structural Funds.	Member States	end 2002
Ensure availability of support services and educational resources on the Internet, as well as e-learning platforms, for teachers, pupils and parents (e.g. access for disadvantaged children, access to digitised cultural heritage, multilingual multimedia learning materials, European open source software initiative, collection of best practice). European Commission to support these efforts via the education, training and culture programmes and to provide adequate funding within the IST Programme.	Member States European Commission	end 2002
Provide training, using Structural Funds where appropriate, to all teachers, in particular adapt teacher curricula and offer incentives to teachers to actually use digital technologies in teaching. European Commission will ensure exchange of best practice and co-ordinate research efforts through its education, training and IST programmes.	Member States	end 2002
Adapt school curricula to enable new ways of learning and to ensure that all pupils are digitally literate by the time they leave school. European Commission to support pilot projects, exchange of best practice and co-ordinate research efforts, via its IST and education programmes.	Member States European Commission	end 2002

b) Working in the knowledge-based economy

The Lisbon Summit concluded:

- *There is a widening skills gap, especially in information technology where increasing numbers of jobs remain unfilled.*
- *Europe's training systems need to adapt to the demands of the knowledge society to offer training opportunities tailored to target groups and those in employment who are at risk of seeing their skills overtaken by rapid change.*
- *Life-long learning should be given higher priority as a basic component of the European social model.*
- *The need for a substantial increase in per capita investment in human resources.*
- *A European framework should define new basic skills to be provided through life long learning and a European diploma for basic IT skills should be established.*
- *The need for adaptability through flexible management of working time and...through making it easier to reconcile working and family life.*

The Challenge

In Lisbon, it was made clear that achieving full employment would require a radical transformation of the economy and skills to match the opportunities of the new economy.

The first challenge is education and training. Education will make a major contribution to developing new skills but its results will inevitably only be realised in the longer term. More needs to be done. First of all concerning jobs for information technology professionals, where studies on the skills gap indicate that Europe currently has around 800,000 vacancies, expected to grow to around 1.7 million by 2003 unless action is taken.¹² However, the challenge is wider than just meeting the demand for information technology professionals. Digital literacy is an essential element of the adaptability of the workforce and the employability of all citizens.

The second challenge is to raise employment rates to as close as possible to 70% by 2010. This requires action to improve the employment prospects of those groups with low employment rates, especially women and older workers. Work can be made more attractive through more attractive and accessible through flexible work arrangements such as telework.

The third challenge lies in the modernisation of work organisation. Greater flexibility brings the technological benefits of variable time and place of work to people in work. Social Partners should be encouraged to contribute by supporting agreements on flexible working to the benefit of both employers and employees.

¹² *Europe's Growing IT Skills Crisis A Special Report by IDC.*

The eEurope response

The primary responsibility for ensuring employability and adaptability in the new economy, particularly by providing skills and transforming work organisation, lies with the Member States and the Social Partners. The Commission plays a key co-ordinating role within the European Employment Process, which is based on drawing up employment guidelines at European level and translating them into National Employment Action Plans. Following-up Lisbon, information society objectives will be further enhanced across the Employment Guidelines.

The High Level Group on the Employment and Social Dimension of the Information Society (ESDIS), composed of Member State representatives, will annually evaluate progress by monitoring the actions listed below and will contribute to the overall assessment of the employment impact of the eEurope Action Plan.

Action	Actor (s)	Deadline
Give all workers the chance to become digitally literate through life-long learning.	Social Partners, Member States, Private Sector	end 2002
50% increase of information technology training places and courses (both in work and in educational institutions) using European Social funds where appropriate.	Member States, Social Partners	end 2002
Establish a European certificate for basic information technology skills, taking into account the European Computer Driving Licence (ECDL).	Member States, European Commission	end 2000
Support greater flexibility in the workplace, e.g. teleworking, where appropriate through agreements by Social Partners and backed up by Member States.	Social Partners, Member States Private sector	end 2000
Promotion of a network of corporate 'in house universities' for demand-driven training and retraining of postgraduates.	Social Partners, European Commission.	end 2002

c) Participation for all in the knowledge-based economy

The Lisbon Summit recognised:

- *that special attention should be given to disabled people and the fight against "info-exclusion".*
- *that the new economy creates the potential to reduce social exclusion, both through higher levels of growth and employment and by opening new ways of participating in society.*

- *Every citizen be equipped with the skills needed to live and work in the new information society*

The challenge

The implication of the Lisbon conclusions is that eEurope should extend the focus of its eParticipation action. The benefits of the information society must be accessible, not only to those persons who have disabilities, but also to those outside the labour market and the educational system. Action in this area will contribute to the new Community initiative to promote social inclusion, also called for by the Lisbon Summit. The key issues were debated extensively in the recent ministerial conference in Lisbon.

As government services and important public information become increasingly available on-line, ensuring access to government websites for all citizens becomes as important as ensuring access to public buildings. In the context of citizens with disabilities, the challenge consists of ensuring the widest possible accessibility to information technologies in general as well as their compatibility with assistive technologies. In addition, new technologies can often be easier for everyone to use if the usability requirements of all potential consumers are considered from the beginning of the design process.

The eEurope response

In relation to access for people with disabilities, the High Level Group on the Employment and Social Dimension of the Information Society (ESDIS), in co-operation with the Commission will examine and monitor legislation and standards relevant to the information society to ensure their conformity with accessibility principles.

Public sector web sites and their content in Member States and in the European Institutions must be designed to be accessible to ensure that citizens with disabilities can access information and take full advantage of the potential for e-government.

In relation to 'designing-in' accessibility to all information society technologies, training for designers in this area is relatively new and therefore fragmented across Europe. There remains much scope for mutual learning between centres of excellence to build a co-ordinated and high quality approach.

In addition to these actions, further efforts will be required to address the problems of those who fail to fully benefit from the information society for other reasons - poverty or lack of awareness and training. Availability and accessibility of Internet terminals in public spaces - libraries, unemployment offices, schools - combined with on-site training opportunities could secure access for all.

Action	Actor (s)	Deadline
Publication of "Design for all" standards for accessibility of information technology products, in particular to improve the employability of people with disabilities.	European Commission, Private Sector	end 2002

Review relevant legislation and standards to ensure conformity with accessibility principles.	Member States, European Commission	end 2002
Adoption of the Web Accessibility Initiative (WAI) guidelines for public websites.	European Commission, Member States	end 2001
Set up public Internet access points in public spaces and establish tele-centres in all communities providing access to training and e-work facilities, where appropriate using the Structural Funds.	Member States	end 2001
Ensure the establishment and networking of national centres of excellence in design-for-all and create a European curriculum for designers and engineers.	European Commission, Member States	end 2002

Objective 3: Stimulate the use of the Internet

a) Accelerating e-commerce

The Lisbon Summit came to the following conclusions:

- *the Council and European Parliament should adopt all pending legislation on electronic commerce by the end of 2000; Member States should accelerate their implementation into national law, which should be finalised by 2001*
- *the Commission and Council should consider how to promote consumer confidence in electronic commerce, in particular through alternative dispute resolution systems*
- *the Commission, the Council and the Member States should ensure that it is possible for Community and government procurement to take place on-line by 2003*
- *the speed of technological change may require new and more flexible regulatory approaches in the future.*

The challenge

Electronic commerce is already developing dynamically in inter-business trading (so called business to business or B2B e-commerce) , with companies undertaking major restructuring of their operations in many sectors - banking, insurance, automobile manufacturing etc. This is bringing about fundamental change in the way companies operate in all sectors of the economy 'old' and 'new'. It is important for SMEs not to be left behind in this process and to become active across national borders.

The area of business to consumer interactions (B2C e-commerce), growth has been slower, although the imminent advent of mobile e-commerce should help to increase its potential. B2C e-commerce poses some regulatory challenges:

- i. Variations persist in the legal situation which causes difficulties for companies, especially SMEs conducting business throughout the Union.
- ii. Consumer confidence needs to be enhanced if e-commerce is to achieve its full potential.

Electronic commerce provides the potential to improve the efficiency of government procurement. It also increases the opportunities for SMEs to become involved in this market throughout the Union. Electronic procurement is not yet widespread in public administrations. Efforts are needed to clarify the legal situation and to restructure the administrative system.

The eEurope response

To ensure the establishment of the Internal Market for e-commerce, the Commission has already proposed a number of legislative measures. The imminent adoption by Council of the "Dual Use Regulation", providing, inter alia, an Internal Market for security products and the rapid adoption of the e-commerce Directive are very positive signs. The remaining proposals must be adopted as soon as possible and Member States must accelerate transposition at national level. The establishment of the .eu domain name will further contribute to the development of an Internal Market for e-Commerce.

With regard to consumer confidence, the private sector is developing a variety of initiatives - trustmarks, privacy policy statements etc - but these are difficult for business and consumers to evaluate. There is therefore a need for common criteria and transparency. In addition, businesses are required to invest quite substantial efforts to develop self-regulation and alternative dispute resolution. Such efforts will only be undertaken in the presence of sufficient incentives.

The public sector must expand e-procurement. Any required legislative changes will be assured at European level and the European Commission will both monitor developments in Member States and make major efforts to bring substantial elements of its procurement on line.

Action	Actor (s)	Deadline
Adoption of outstanding EU legislation on: <ul style="list-style-type: none"> • copyright, • distance marketing of financial services, • e-money • jurisdiction. 	Council, European Parliament	end 2000
Boost consumer confidence in e-commerce in partnership with consumer groups, industry and Member states. Promote alternative dispute resolution, trust marks and effective codes of conduct by working with stakeholders to develop general principles and by creating appropriate incentives. An 'online e-confidence forum' managed by the Commission will engage as many stakeholders as possible in this process. Commission and Member States to further develop EEJ-net ¹³ linking alternative dispute resolution systems and launch pilot projects at European level through the IST programme.	Private Sector, European Commission, Member States	end 2000

¹³

EEJ-net stands for European Extra-Judicial network.

Increase flexibility in e-commerce regulation by building more on self-regulation, inter alia through co-operation with relevant business groups such as the Global Business Dialogue ¹⁴ .	European Commission, Member States, Private sector	end 2000
Improve legal certainty for SMEs offering e-commerce services across the Union through an on-line information service and awareness actions.	European Commission	end 2000
Encourage SME's to 'Go Digital' through co-ordinated networking activities for the exchange of knowledge on, best practices, e-commerce readiness and benchmarking.	Private Sector, European Commission, Member States	end 2002
Establish a .eu top level domain name.	European Commission, Council, European Parliament,	end 2000
Adoption of two Directives regarding Public Procurement incorporating provisions to remove legal obstacles to electronic procurement.	Council, European Parliament	mid 2001
Adoption of a Directive on VAT on certain services supplied by electronic means to ensure compatibility of the EU VAT system with e-commerce, in particular to provide a level playing field for European content providers.	European Commission, Council, European Parliament	end 2000

b) Government on-line: electronic access to public services

The Lisbon Summit conclusions call for:

- *efforts by public administrations at all levels to exploit new technologies to make information as accessible as possible.*
- *Member States should provide generalised electronic access to main basic public services by 2003.*

The challenge

Digital technologies provide the opportunity to more easily access and re-use the wealth of information held in the public sector. eGovernment could transform old public sector organisation and provide faster, more responsive services. It can increase efficiency, cut costs and speed up standard administrative processes for citizens and

¹⁴ www.gbde.org

business. Electronic access would also make a major contribution to accelerating the transition to the information society by stimulating Internet services that are more relevant to Europeans. The challenge for administrations is to adapt quickly to the new methods of working and enable new innovative ways of working, including partnerships with the private sector.

However this potential is not being realised. The changeover to electronic interaction involves major changes to the internal workings of administrations which can be complex to manage. In addition, different rules on access across the Union restrict the development of pan-European services.

The eEurope response

The outcome of the consultation carried out in relation to the Green Paper on "Public Sector Information in the Information society" indicated a need to improve access, dissemination and exploitation of public sector information in Europe. In response, the eEurope initiative aims to ensure that citizens have easy access to essential public data, as well as promoting online interaction between citizens and government.

The challenge of improving efficiency in the public sector will require a re-thinking of internal organisation and of electronic exchanges between institutions. Member States and the Commission have been co-operating in this area through the IDA (Interchange of Data between Administrations) Programme which will be used as a basis to develop pan-European services and exchange best practices. In addition, new applications have been developed through the EU framework programme, which have the potential to support innovative solutions. Finally, the Commission itself will address the need to revise its procedures to better exploit digital technologies in the context of its reform.

Action	Actor (s)	Deadline
Essential public data online including legal, administrative cultural, environmental and traffic information.	Member States, supported by European Commission	end 2002
Simplified online administrative procedures for business e.g. fast track procedures to set up a company.	Member States, European Commission	end 2002
Develop a co-ordinated approach for public sector information, including at European level	European Commission	end 2000
Set up pan-European portals of interactive public services (implementation through IDA programme).	European Commission, Member States	mid 2001
Promote the use of open source software in the public sector and e-government best practice through exchange of experiences across the Union (through the IST and IDA programmes).	European Commission, Member States	during 2001

All basic transactions with the European Commission must be online (e.g. funding, research contracts, recruitment, procurement).	European Commission	end 2001
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c) Health online

The Lisbon Summit indicated that *real efforts must be made by public administrations at all levels to exploit new technologies to make information as accessible as possible.*

The challenge

Health services in all Member States are large, expensive and complex sectors to administrate. The prime objective of this action is to develop an infrastructure of user friendly, validated and interoperable systems for health education, disease prevention and medical care. Many of the tools for the building of such an infrastructure exist, however efforts are needed at Member State level to move towards the implementation of the infrastructure in a coherent way which enables them to use technology to achieve their health objectives.

As well as requiring an infrastructure which can connect citizens, practitioners and authorities on-line, four key challenges remain for the full exploitation of Health online:

- i. Electronic health services are growing across Europe and the world. Accordingly best practices must be identified and disseminated. In parallel European bench-marking criteria should be developed.
- ii. Health related information is amongst the most frequently accessed information on the Internet. Yet at present the European citizen has very few resources with which to assess the quality and authenticity of this vital information.
- iii. Public expenditure on health telematics tools and devices is a significant item in health budgets. Yet currently very little independent technology assessment exists to guide the purchaser's decision-making. Similarly, medical practitioners need access to up-to-date, networked public health data guidelines in order to assist their disease management decision-making.
- iv. Europe currently holds a strong position in the nascent eHealth industry, which represents approximately 6% of the IT market. Yet particular uncertainty persists in the health telematics related industry about responsibility and data protection, the legality of providing on-line medical opinions, as well as on-line pharmaceutical information and product supply.

The eEurope response

Management and operation of the health services are a Member State competence, yet there is a role for the Community complementing their activities with the aim of

improving public health, preventing human illness and diseases, and obviating sources of danger to human health (Art 152 Amsterdam Treaty).

An action will be launched through the IST programme to identify and disseminate best practices in eHealth and develop benchmarking criteria. Furthermore, in collaboration with key experts, a series of quality criteria will be established for health-related websites, which would form the basis for a European level trustmark.

The Commission will publish a Communication on "Legal Aspects of eHealth in 2001". The objective would be to review current legislation which has a bearing on the area, clarifying the existing legislation and building industrial confidence to enter the market. The eEurope response will aim to accelerate market development.

In-depth European wide technology assessments of key health telematics applications will be undertaken to assess their feasibility in terms of interoperability and cost-and effectiveness. In addition, specific data assessment networks will be established, including a pharmaceutical relative effectiveness network which would help Member State health systems to make informed purchasing decisions and networked databanks on communicable disease incidence in the Member States. The Commission will facilitate the setting-up of the networks by Member States at a European level, while offering a European level quality assurance.

Action	Actor (s)	Deadline
Ensure that primary and secondary healthcare providers have health telematics infrastructure in place including regional networks.	Member States	end 2002
Best practice in electronic health services in Europe identified and disseminated, benchmarking criteria set.	Member States, European Commission, Private Sector	end 2001
Establish a set of quality criteria for health related websites.	European Commission, Member States, Private Sector,	end 2001
Establish health technology and data assessment networks.	European Commission Member States, Private Sector	end 2002

d) European digital content for global networks.

The Lisbon Summit concluded that :

- *Content industries create added value by exploiting and networking European cultural diversity*

- *Member States and the Commission should ensure the availability of content for high speed networks.*

The challenge

The content industries are a fast growing segment of the European economy. Europe has a strong base on which it can build a dynamic digital content industry - a long established print publishing sector and extensive cultural heritage and linguistic diversity which can be exploited as well as a significant, growing audio-visual sector. A key challenge to the European content industries is to fully exploit the opportunities created by the advent of digital technologies. Support for digitisation of production and distribution of European digital content is, therefore, essential. Moreover, Europe has 100,000 cultural institutions (museums, libraries and archives) employing over 1 million people. They contain a wealth of information which can be made more accessible and more effectively exploited.

The main challenges are the uptake of new technologies for the creation of new content, the digitisation of materials, ensuring lasting accessibility and the development of new services. Other important objectives include stronger support and closer co-operation between educational communities and the content industry, with consequent mobilisation of material and immaterial resources

However, several factors contribute to the risk that Europe's potential in this area will not be realised.

- i. The digitalisation of cultural goods is uneven, limiting industry's ability to develop European products. A fragmented European market hampers faster growth.
- ii. Lack of clarity and homogeneity in rules on access and exploitation of public sector information is a prime example.
- iii. Insufficient linguistic and cultural customisation of digital content. Such customisation could help European companies to establish a global presence and exploit new markets.
- iv. Insufficient co-operation between educational and cultural institutions and communities and the content industry.
- v. The nature of content is changing - Europe shows weakness in the online distribution of content and information on global networks. Content is an essential ingredient in stimulating on-line sales. At the same time, developments in mobile Internet access and the increasing importance of mobile e-commerce, mean that content providers will have adapt their products to new access devices.

The eEurope response

In response to the request from the Lisbon Summit, the Commission is currently reinforcing and renewing initiatives which provide support to the content industries in the digital era. From the perspective of the creation of cultural content these are MEDIA plus for the audio-visual sector and the new framework programme

CULTURE 2000. As a follow-on to the INFO2000 and Multilingualism in the Information Society (MLIS) programmes, the Commission is launching a programme which will support of European digital content on global networks and promote linguistic diversity in the information society.

Special attention will be given to supporting the creation of a framework supportive of the commercial exploitation of public sector information and the development of multilingual services, encouraging the development, distribution and promotion of European audio-visual works and multimedia products and promoting the dissemination of live cultural events over the Internet. Greater co-ordination of digitisation programmes across Europe will be assured to ensure wider access to Europe's common heritage.

Action	Actor (s)	Deadline
Launch a programme to stimulate the development and use of European digital content on the global networks and to promote the linguistic diversity in the information society, including action to support exploitation of public sector information and establish European digital collections of key datasets. ¹⁵	European Commission, Member States, Private sector	end 2000
Create a co-ordination mechanism for digitisation programmes across Member States - define common themes, catalogue available resources, ensure interoperability.	European Commission, Member States	end 2000

e) Intelligent Transport Systems

The Lisbon Summit requested :

- *to speed up liberalisation of transport with the aim of achieving a fully operational internal market.*
- *the Commission to put forward its proposals regarding the use and management of airspace as soon as possible.*

The Challenge

The key challenge for Europe is to meet the growing demand for mobility within finite transport infrastructure networks. All transport networks are faced with three key challenges: congestion, safety and the shortage of new services.

Congestion is a major problem in both road and air transport. Air traffic delays are partly due to structural inefficiencies of the system (Airspace Management) but also

¹⁵ Draft Proposal for a COUNCIL DECISION adopting a Multiannual Community programme to stimulate the development and use of European digital content on the global networks and to promote the linguistic diversity in the Information Society.

to the heterogeneous nature of the various Air Traffic Management Systems, which have not always kept pace with technology development. There is a need to introduce automation tools to aid controllers coupled with the introduction of aircraft information transfer by datalink.

Congestion on the roads is especially acute in urban areas and on trans-European corridors, with consequent negative environmental effects. Intelligent Systems and services for road transport can alleviate bottlenecks but they are often developed in a too fragmented manner and the end-user may experience excessive delays before services are fully operational. Member States need to work together and with the private sector to speed up the deployment of intelligent transport systems in cities and regions and to enable the development of traffic and travel information services.

Concerns over safety have been highlighted by major accidents on the railways and at sea. Road safety continues to be a major issue. Although there have been no recent air disasters in Europe, the number of reported near misses is growing. Maritime transport safety is hampered by lack of information and requires closer identification and monitoring of traffic along the coasts of Member States, in particular, of ships carrying polluting goods.

For drivers and other road users the systems to enhance safety are the number one concern followed closely by convenience (assistance/warning) systems. The challenge is to introduce active safety systems in all new vehicles. Location determination of wireless callers through 112 number and subsequent access to full range of emergency services would be a major factor contributing towards public safety and comfort.

A key explanation for the shortage of new services and technological solutions to the problems of congestion and safety is the fragmentation of transport infrastructure management between Member States. This creates a barrier to service providers who cannot exploit the economies of scale of the single market. In the case of railway transport, strict national technical and operational requirements hamper the development of the rail business in a trans-European perspective.

The eEurope response

Technologies solutions have been developed both in Member States and in European research programmes that can alleviate the problems noted above. There are promising signs that these technologies are beginning to be deployed. The role of eEurope will be to kick start new solutions and accelerate their deployment.

Major policy decisions have still to be taken regarding intelligent transport. This is especially the case regarding the establishment of the Single European Sky, the deployment of Galileo, the deployment of intelligent systems in road, rail and maritime transport and the future of urban transport. Europe needs to invest more to make sure that the overall performance of intelligent transport systems will be sufficient to manage the demand arising from the expected traffic growth.

The private sector has a key role in the development of intelligent transport services. In implementing the actions of eEurope, Member States should ensure that barriers to the development of private services are removed.

Action	Actor(s)	Deadline
Adoption of a Directive on rights of users and obligations of providers of communications services to provide location information available to Emergency Services through 112.	European Parliament, Council	end 2001
Adoption of new Directives for the establishment of the Single European Sky.	European Parliament, Council,	end 2001
Implementation of Recommendation on “Participation of the private sector in deploying traveller information services in Europe”.	Member States, Private Sector	end 2000
Deployment plan for Intelligent Transport Systems for road transport. Foster development of in-vehicle active safety systems and their introduction to new vehicles through a Commission Recommendation and support for research activities.	European Commission, European Parliament, Council European Commission, Private Sector, Member States	end 2001 end 2002
Implementation of the EC Recommendation on Human-Machine Interface.	Member States Private Sector	mid 2002
Commission decision on adoption of specifications for wireless communication for high speed trains.	European Commission, Member States	end 2000
Adoption of a Directive for a European maritime reporting and information system.	European Commission, European Parliament, Council	end 2001
Adoption of Decision to deploy the Galileo infrastructure.	European Commission, European Parliament, Council	end 2000

Annex - Indicative list of eEurope Indicators

1. A cheaper faster and secure Internet

a) Cheaper and faster Internet access

- Internet penetration (households connected, Internet users, high speed access)
- Internet access costs

b) Faster Internet for researchers and students

- speed of interconnections and services available between and within national research networks (within EU and World-wide)
- number of high speed internal campus networks established

c) Secure networks and smart cards

- percentage of population using smart-cards for access and/or transactions
- market penetration of IPSec

2. Investing in skills and people

a) European Youth into the digital age

- number of computers per 100 pupils
- percentage of primary and secondary schools on the Internet

- percentage of schools with broadband Internet connections (including satellite)

- number of visits to web servers run by schools and the public education system

b) Working in the knowledge-based economy

- percentage of workforce with basic computing skills
- proportion of the workforce engaged in telework

c) Participation for all in the knowledge based economy

- number of public internet access terminals per 1.000 people

- number of centres of excellence connected to the design-for-all network

Stimulating the use of the Internet

a) Accelerating e-commerce

- percentage of e-commerce websites with trust marks, security labels or other certifications

- consumer awareness of ADRs
- percentage of enterprises that carry out more than 10% of their business electronically
- number of public internet access terminals per 1.000 people
- number of centres of excellence connected to the design-for-all network

b) Government on-line: electronic access to public services

- percentage of basic public service interactions carried out on-line
- percentage of public procurement carried out on-line

c) Health on-line

- percentage of primary and secondary healthcare service providers networked at a regional level
- number of European peer reviewed health-related websites established

d) Digital content for global networks

- percentage of EU web sites in the national top 20 visited
- number of European multilingual portals

e) Intelligent transport systems

- percentage of 112 calls with location information in Europe
- percentage of large European cities with traffic and travel planning information services
- percentage of European motorway networks (vs. total length of the network) equipped with congestion information and management systems