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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

i2010 - Annual Information Society Report 2007

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1. INTRODUCTION

i2010 is the Commission's initiative for information society and media policies. It ensures coherence across the Commission's information society and media policies and seeks to reinforce the important contribution of information and communication technologies (ICT) to the performance of our economies and the renewed Lisbon Strategy. i2010 operates in a fast changing environment and therefore requires regular up-dating and fine-tuning. The present report represents the second such up-dating and prepares the ground for a more extensive mid-term review in 2008.

The overall balance sheet for 2006 is positive.[1] The main indicators are moving in the right direction, with ICT remaining a major factor in driving growth and innovation. The scepticism that held back ICT investments four or five years ago has been replaced by greater confidence in our ability to develop and deploy ICT applications to our economic and social advantage. As regards policy actions, the different EU level initiatives announced at the launch of i2010 in June 2005 are well on track. At Member State level, all the 2006 National Reform Programmes put more emphasis on mainstreaming ICT policies.

The Commission implements i2010 in close co-operation with the Member States through the i2010 High Level Group. In 2006, as part of its industrial policy, it launched an ICT Task Force[2] representing industry and civil society to check whether its current policies are favourable to the competitiveness of the ICT sector or whether some adjustments are needed. This work and the report of the Task Force in particular lead the Commission to conclude that the present policy framework is broadly right. The Commission will follow up the Task Force recommendations, where not already in line with existing policies, with proposals for specific actions.

2. DEVELOPMENTS IN THE INFORMATION SOCIETY DURING 2006

Six years after the burst of the Internet bubble, the information society is on a steady growth path. A decade of investment in ICT is bearing fruit, fuelling innovation in ICT areas and transforming the EU into a knowledge-based economy. Since 2005, the ICT sector has become increasingly driven by the expansion in the software market and relatively less by the electronic communication segment. This reflects innovation trends requiring more pervasive software products. Large sales in systems software and eBusiness applications indicate that businesses are adopting new and more mature eBusiness solutions, even if these new investments may still be limited to large companies or early adopters of advanced eBusiness solutions.

Users are quickly embracing new services brought about by convergence. Many Member States now have high levels of broadband adoption, which in turn stimulates the development of innovative advanced services. The transformation of the content market is already apparent in the growth of online music sales and new digital devices. Movie distribution and online TV are also advancing. The move from traditional content distribution to online availability is accompanied by an explosion of user-created content.

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[1]   This assessment is based on EU25. Data on EU27 will be available from 2007.
[2]   http://ec.europa.eu/enterprise/ict/taskforce.htm

The public sector is not lagging behind. Online public services are getting more mature and producing visible efficiency gains: more services have been put online, the available services have become more sophisticated and more Europeans deal with the public sector online. Public administration is leading the way and health and education are closing in.

The EU can build on these achievements to pursue its growth and innovation policies and all Member States recognise the key role of ICT in achieving the Lisbon goals. Compared to 2005, the Member States' 2006 National Reform Programmes put more emphasis on mainstreaming ICT policies.[3] ICT are identified as drivers of innovation, as tools for transforming government and business models and as instruments for improving our quality of life. Broadband, eGovernment and digital literacy - the priority areas identified in 2005 - show good if somewhat uneven progress among the Member States. ICT research and development, trust and security issues, and measures to reduce administrative costs for businesses and administrations emerge as new priorities in a number of countries. There are still disparities between the Member States, but in some areas, for instance broadband take-up, emergence of new services or eGovernment, the leading EU countries are also world leaders.

3. i2010 IMPLEMENTATION IN 2006 AND ACTIONS FOR 2007/2008

3.1. Information space

Digital convergence is finally coming of age. Although the process is by no means completed, convergence is now very much a reality. Policy makers need to ensure that the legislation impacting on converging sectors provides the legal certainty needed for stakeholders to innovate. The aim is to respond to technological changes in a way that promotes competition, consolidates the internal market and benefits users. A review of the main policy issues at stake indicates that the overall legal and regulatory framework is favourable for the further development of convergence.[4]

The majority of actions planned in the first pillar of i2010, to create a single European information space, have been launched. In 2006 the **regulatory framework for electronic communications** has been reviewed and amendments will be tabled by mid 2007. The discussion will continue in 2007 with a green paper on the future of universal service in electronic communications. Better and efficient use of radio spectrum as an important element of the regulatory review has been promoted, including by introducing more flexibility[5]. This will continue with proposals on common approaches to collective use of spectrum and to the digital dividend. The Commission will also address the concerns and threats to privacy revealed by its 2006 public consultation on **radio spectrum identification (RFID)**.

The Commission will add further building blocks to European **audiovisual policy,** advancing the debate on media pluralism and media literacy. The new MEDIA 2007 programme, covering the period 2007-2013, will continue financial support for the European audiovisual sector. Furthermore, the Commission will outline measures to support the introduction and take-up of **mobile TV** across the EU.

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[3]   Implementing the renewed Lisbon agenda – A year of delivery, COM(2006) 816, 12.12.2006
[4]   "The challenges of convergence", working paper for the i2010 High Level Group, 12.12.2006
[5]   Rapid access to spectrum for wireless electronic communications services through more flexibility, COM(2007) 50, 8.2.2007

With the arrival of new online services, market players are entering a learning process to develop **new, multilingual and innovative content**. The Film Online Charter, initiated by the Commission and agreed by business leaders in 2006, is a first milestone in this respect. The Commission is now exploring how the Charter can pave the way for a broader policy on online content to encourage the development of high quality and innovative online content.

On the policy side, the next challenge is to ensure that **users** are confident in the use of new services. In 2006 the Commission proposed a regulation to limit international roaming tariffs for the users of mobile services and in February 2007 it has launched a public consultation on the review of the consumer protection acquis at the European level.[6]

Finally, the Commission complemented its new strategy for a **secure information society** by a communication on fighting spam, spyware and malicious software and will address cybercrime in 2007. It will evaluate the functioning of the European Network and Information Security Agency (ENISA) to decide if the agency's mandate should be extended and monitor the implementation of security measures to assess the need for additional action by 2008.

In 2007-2008, the Commission will:

- Make proposals for the review of the regulatory framework for electronic communications, launch a debate on the future of universal service and continue to develop a coordinated framework for a flexible and efficient management of spectrum, in particular with respect to collective use of spectrum and the digital dividend;

- Assess policy needs for media literacy and propose comprehensive approaches to RFID and to mobile TV;

- Promote a comprehensive approach to the development of high quality innovative content;

- Follow up on the security strategy with a communication on cybercrime, evaluate ENISA to decide on a prolongation of its mandate and assess the need for additional action in the security field (2008).

3.2.   Innovation and ICT R&D

Boosting research and innovation is at the centre of the Commission's strategy for growth and jobs. The EU has a target of 3% of its GDP dedicated to R&D, 2% of which should come from the private sector. The EU is still far from this target, with some 1.9% of GDP spent in R&D. The 2006 Annual Progress Report on Lisbon stresses that all Member States have set a national R&D investment target and that if all of these targets are met, the EU will reach a R&D level of 2.6% of GDP in 2010.

ICT industries account for a large share of aggregate business R&D spending (26% in 2003[7]). As emphasised by the ICT Task Force, increasing ICT R&D expenditure is key if the EU is to reach the 3% objective. European research and innovation receive a major boost with the launch of the **Seventh Framework Programme for Research (FP7)** that will run from 2007-2013. The EU will invest over €9 billion in ICT, the largest single item in FP7. The

[6]   Green Paper on the Review of the Consumer Acquis, COM(2006) 744, 8.2.2007, http://ec.europa.eu/consumers/cons_int/safe_shop/acquis/index_en.htm
[7]   Commission Services estimate based on OECD/Eurostat survey of R&D expenditure 2003

Commission will continue to cooperate with the nine European ICT Technology Platforms set up to strengthen partnership with industry and achieve a critical mass of research in strategic fields. Two of the platforms will provide the basis for **Joint Technology Initiatives (JTIs)**, a new type of initiative that will pool EU, Member State and industry funds into public-private research partnerships to boost European cutting-edge research.

The EU is also committed to improving the framework conditions for innovation[8], and has identified 10 key actions to this end.[9] The Commission is working on identifying relevant policy gaps to ensure that the EU's **standardisation policy** for the ICT sector meets the challenges of today's fast moving markets. It will also encourage public authorities to cooperate and reinforce the role of the EU public sector as a first buyer of **innovation and/or pre-commercial products and services**, thereby opening up new lead market opportunities for among others ICT-based products and services.

Innovation does not only arise from research but is increasingly driven by users of technologies or organisational change. The ICT policy support programme (ICT PSP) in the **Competitiveness and Innovation Programme (CIP)** stimulates innovation and competitiveness through promoting wider uptake and best use of ICT by citizens, governments and businesses, in particular SMEs. In 2007 the ICT PSP will focus on the role of the public sector as a user and will address three main themes: efficient and interoperable eGovernment services; ICT for accessibility, ageing and social integration; and, ICT for sustainable and interoperable health services. In 2007 the Commission will continue the review of the policy needs to promote and facilitate **eBusiness** in the framework of *eBusiness W@tch* and eBSN[10]). It will respond to the call of the ICT Task Force to design a long-term **eSkills** strategy, including the link with education and training.

Member States and regions are encouraged to support the spread of ICT according to their needs both for the development of ICT products and services and of infrastructure. Under the Structural Funds the EU devoted about €7 billion during 2000-2006 on ICT-related projects. ICT are also one of the priorities in the 2007-2013 Community Strategic Guidelines on cohesion.[11]

In 2007-2008, the Commission will:

- Propose JTIs on nanoelectronics (ENIAC) and on embedded systems (ARTEMIS) for decision by the Council;

- Review standardisation for ICT;

- Address the potential of pre-commercial procurement for improving the quality of public services and Europe's innovation performance;

- Continue policy coordination for ICT uptake, review eBusiness policies and trends and define any necessary policy measures;

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[8]   An innovation-friendly, modern Europe, COM(2006) 589, 12.10.2006

[9]   Putting knowledge into practice: A broad-based innovation strategy for the EU, COM(2006) 502, 13.9.2006

[10]   http://www.ebusiness-watch.org/ and http://ec.europa.eu/enterprise/e-bsn/index_en.html

[11]   COM (2006) 386, 13.7.2006

- Address the need for action in the field of eSkills and employability as part of the follow-up to the ICT Task Force.

3.3. Inclusion, better public services and quality of life

Inclusion

As innovation transforms the role of users, there is a growing need to keep all users are on board. The eInclusion conference in Riga initiated this reflection process, with a Ministerial Declaration laying out political guidance for further action. As a next step the Commission will outline its vision for the **2008 eInclusion initiative**, building on extensive consultations. It will review progress in the field of **eAccessibility** and consider the need for further action, including proposals for legal measures.[12]

The Commission will continue its support for bringing high-speed **broadband access** to all Europeans. This will feed the ambitious Commission initiative on "Regions of economic change" launched under the Structural Funds.[13] As a further delivery on the commitments in the Riga Declaration, the Commission will review measurements and policies on **digital literacy,** in close relationship with education and training.

In 2007-2008, the Commission will:

- Set out a vision for a comprehensive policy on eInclusion (2007) and prepare the European initiative on eInclusion for 2008;

- Review progress in eAccessibility and propose further actions, if needed;

- Support awareness raising (major event on broadband for rural communities in 2007) and exchange of best practice (website) on bringing high-speed broadband access to all Europeans;

- Launch the regional networks "Better ICT connections between regions" and "Bringing eGovernment to regions and businesses " as part of the initiative of regions for economic change;

- Review digital literacy measurement and policies.

Better public services

In 2006, online public services grew more mature most visibly in the areas of eGovernment and eHealth. Member States are making progress in their national **eGovernment** initiatives and are cooperating on common EU level activities to reach the ambitious goals of the eGovernment action plan by 2010. In 2006, the EU eHealth portal was launched. All Member States have completed their eHealth strategies and a compilation of national good practice in the field of **eHealth** will be made available.

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[12] The Commission will for example include a provision aiming at making audiovisual media services accessible to people with visual or hearing disability in its amended proposals for the Audiovisual Media Services (AVMS) directive.

[13] Regions for economic change, COM(2006) 675, 8.11.2006

Member States acknowledge the European dimension of public ICT-enabled services and have identified key enablers to reach cross-border interoperability. In the framework of the IDABC programme, the Commission will revise the European Interoperability Framework in 2007.[14] The Commission will also issue a recommendation on eHealth interoperability and will launch measures in support of an innovation-friendly eHealth market in the area of personal health monitoring and management. By 2008 the objective is to put in place health information networks based on fixed and wireless broadband, as well as mobile infrastructures and Grid technologies.

During 2007-2008, **large-scale pilots under the ICT policy support programme** will continue to support better public services in areas such as eID, secure document transmission between administrations, eProcurement, eParticipation, emergency patient data and electronic prescribing. The large-scale pilots in the area of eProcurement and eID will also be supported by the ongoing work of the IDABC programme in these fields.

In 2007-2008, the Commission will:

- Continue to support the implementation of the eGovernment action plan, including by pursuing its efforts to integrate and transform its own administration, and revise the European Interoperability Framework;

- Issue a recommendation on eHealth interoperability, promote an innovation-friendly eHealth market and establish an interoperable health information network (2008);

- Launch large-scale pilot projects under the CIP.

Quality of life

ICT are not only a driver of innovation and competitiveness, but also change the way people live and communicate. i2010 responds by focusing on areas where technological innovations could significantly improve quality of life: ageing, cultural diversity, intelligent cars, and climate change.

In 2007, the Commission will launch a flagship initiative on **Ageing well in the information society**. This will comprise a research initiative on Ambient Assisted Living (AAL), based on Article 169 of the EU Treaty, integrating technologies into products and services to ensure a continuum from advanced research to deployment. This will be complemented by longer-term research in FP6 and FP7 and deployment activities under the CIP, such as home care for elderly.

The **Digital Libraries and the Intelligent Car flagship initiatives** are being implemented. The Commission issued guidance on digitisation, online accessibility of cultural material and digital preservation, and on scientific resources. The Member States were asked to bring eCall back on track. In 2007 the Commission will assess progress on the Intelligent Car and on negotiations on the voluntary introduction of eCall in vehicles.

New ICT-based technologies are essential not only for greater resource efficiency but also to achieve qualitative shifts towards radically different, more sustainable economic and social

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[14]   http://ec.europa.eu/idabc/en/document/6227

consumption patterns. In 2007, an i2010 flagship initiative will be developed to address priorities such as **energy efficiency and environmental sustainability**.

In 2007-2008, the Commission will:

- Launch the flagship initiative on "Ageing well in the information society", propose the Article 169 AAL initative and launch pilots under the CIP focusing on independent living and chronic disease monitoring;

- Review the implementation of the recommendation on digitisation and online accessibility of cultural material and digital preservation (2008)

- Assess implementation of the Intelligent Car flagship and of eCall;

- Develop a flagship initiative on ICT for sustainable growth.

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4. IDENTIFYING FUTURE TRENDS

The Lisbon strategy has made innovation a top priority and the EU has developed a comprehensive policy agenda for this purpose. ICT are widely recognised as a key enabler for innovation. To build on the achievements of i2010 in 2005 and 2006, the EU has to take a more forward-looking approach and tighten the link between ICT policies and Lisbon priorities. Policy makers also have to understand how new economic and societal developments can extend the benefits of the information society to new groups and foster competition and European industrial leadership while including society at large. Therefore the following three issues should be addressed in the i2010 mid-term review 2008.

A new wave of innovation in networks and Internet

The information society is becoming a reality. Low cost networks, extended by mobile or wireless networks, allow seamless connection and use of applications and services integrated in the network and these are becoming more widely used in society.

This move is supported by emerging technological trends such as the migration towards very high-speed networks, ubiquitous wireless technologies, web 2.0, the Internet of Things, Grids, new network architectures, web-based services, user interfaces, user-created content and social networking. These trends will affect the business and working environment, providing new industrial opportunities and new solutions for eBusiness and employment, thus improving the work-life balance. They will also extend the role of users as innovators. This is already visible in the explosion of user-created content.

Even though many aspects of future networks and the Internet will not be realised for some time, obstacles to the development of the information society can already be identified. These concern issues from investment in higher bandwidth, net neutrality, through spectrum availability to security. An early debate with stakeholders on longer term developments ought to look at the need for possible policy action.

A user's perspective on innovation

With the emergence of new services, the next challenge is the user. The rise of user-created content is opening further perspectives for a more creative and innovative Information

Society. In the same way that users exploited open source software to develop new collaborative processes, they are now using ICT to create and exchange their own content in innovative ways. This is raising new challenges, notably with regard to legal liability for content distribution, the re-use of copyright protected material and the protection of privacy.

Consequently, the traditional vision of the users will change in the information society. Nevertheless policies aiming at lifting the obstacles to wider use of ICT - as defined in i2010 - will not become obsolete. With the 2008 eInclusion initiative, i2010 has an inbuilt focus on users and the interest of consumers is already present in the Commission's ICT policies. One recent example is the Commission proposal on roaming to eliminate unjustified charges on consumers.

New segments of the population are using ICT services and products. Users are increasingly concerned with privacy, lack of interoperability, lack of transparency on contractual terms and pricing, excessive complexity of applications and inefficiencies of litigation. Policy makers now have to respond to these concerns.

Improving framework conditions

The EU innovation strategy sees the completion of the internal market as the way forward to ensure effective competition and provide sufficient scale to help large companies and many SMEs to compete globally. Therefore the Commission has planned a revision of the internal market strategy aiming at enhancing innovation and implementing better regulation.

One of i2010's main objectives is to create a single information space. Up to now, the emphasis has been on networks and content regulation. The EU – even if progress has been made – with its 27 separate markets is still far away from a single information space. Markets for online services are already global but many EU consumers avoid buying goods and services via the Internet from another Member State. Legal concerns are still an obstacle for enterprises to engage in eBusiness and in some areas regulatory barriers generating potential obstacles to competitiveness have been identified.[15]

We need a broader perspective taking into account new trends. For instance, the Internet enables patients to look around for treatment anywhere in the EU or beyond, and similarly doctors to provide services at a distance. This impacts on the organisation of services and has implications for public finances. Reflection on the internal market should therefore go beyond the assessment of legal obstacles addressed in the review of the regulatory framework on electronic communications and the Audiovisual Media Services Directive. Building on the work of the ICT Task Force, the reflection must tackle barriers that hinder the provision of pan-European online services, explore how ICT can reinforce the internal market and try to assess the cost and risks of fragmentation of the European information society.

5.   ROADMAP FOR FUTURE ACTIONS IN VIEW OF THE I2010 MID-TERM REVIEW

To prepare the discussions on the i2010 mid-term review of 2008, the Commission proposes to involve the Member States, the i2010 High Level Group, industry, civil society and other stakeholders more closely in the development of the different topics. The Commission will:

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[15]   http://ec.europa.eu/enterprise/ict/taskforce.htm

- Develop the topics identified in chapter 4 above in cooperation with the i2010 High Level Group.

- Launch a public consultation involving all stakeholders to validate the approaches proposed for developing the key topics.

- Address the main issues for the mid-term review at a high level i2010 event in 2008.

The outcome of these discussions will inspire the European Spring Council 2008, which is to address the issues of the next generation of networks and the Internet. The i2010 mid-term review should ensure that i2010 continues to be a valid reference framework for Europe's information society and media policies, enabling Europe to reap the full benefits of developments to implement the Lisbon Growth and Jobs agenda.