



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 19.5.2006
COM(2006) 215 final

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

**i2010 – First Annual Report
on the European Information Society**

{SEC(2006)604}

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1. INTRODUCTION

The European Commission's i2010 initiative¹ is at the heart of the renewed Lisbon strategy for growth and jobs. i2010 addresses the key challenges of a modern information society and promotes a partnership between the Commission, the Member States and all relevant stakeholders to harness the digital economy for Europe. i2010 has identified a number of key actions to be implemented during 2005-2010. The present communication updates the actions under information society and media policies for the period 2006-2007. It is based on the associated Commission staff working paper, which reviews the i2010 key actions against the background of information and communication technology developments in the EU.

i2010 has been endorsed by the EU. Member States have committed themselves to implementing the i2010 initiative and to contributing to review policy strategies within the i2010 High Level Group². The European Parliament strongly supports an information society focusing on the citizen and the public interest. The European Spring Council 2006 asked the Member States and the Commission to implement the i2010 strategy vigorously. The present communication is the first follow-up to the Spring Council, confirming i2010's key role for the achievement of the Lisbon targets.

2. IMPLEMENTING i2010 UNDER THE RENEWED LISBON PERSPECTIVE

2.1. Recent trends

Economic growth in the EU improved in 2005 and forecasts predict growth to be around 2% in 2006.³ But this is well below the annual GDP growth of 2.7% in the US between 2000 and 2005. Europe still has a mediocre productivity performance and a low investment in R&D, representing only 1.9% of GDP in 2004.⁴ It is well-established that information and communication technologies (ICT) are a key element for productivity growth and that their use contributes to the prosperity of modern economies. However, this finding has not been translated into appropriate action.

Against the worsening of the global competitive position of the EU, ICT are a source of growth and competitiveness. The ICT sector has continued to experience a higher than average growth rate, with estimated revenue increases of 3.6%⁵ in 2005. It is the most

¹ COM(2005) 229

² Decision 2006/215/EC

³ COM(2006) 30

⁴ COM(2006) 30

⁵ If not otherwise mentioned, see annexed staff working document for sources.

innovative and research intensive sector in the EU, representing 25% of the total research effort and 5.6% of the GDP between 2000 and 2003. ICT also generated at least 45% of EU productivity gains over the period 2000-2004.

But the contribution of ICT is not enough to improve the EU's global position. Recent figures show EU investment in ICT research still lagging behind our competitors. The US has consistently invested almost twice as much as the EU in ICT since 2000. China has become the biggest exporter of ICT goods, overtaking Japan and the EU in 2003 and the US in 2004.⁶ The take-up of ICT by businesses in the EU remains sluggish. Finally, the contribution of ICT to productivity has decreased significantly compared to the second half of the 1990s and is still about half that in the US. **Overall no indicator points to a change in the trend or an acceleration in ICT developments which would put the EU onto a sustainable path of growth and competitiveness.**

However, there are some positive trends. Digital convergence is finally becoming a reality. Investments in networks resumed in 2004 and 2005 and broadband subscriptions grew by 60% in 2005. Telecom and cable operators are offering converged services, such as 'triple-play' services⁷ or TV over IP. But revenues from these services do not compensate for the loss of voice revenues, and overall growth in the revenues of electronic communications is slowing down. Faster progress in convergence is needed to sustain the leadership of the European electronic communication sector.

The EU needs to shift up a gear if we are not to see a slowdown in the transition to the knowledge economy.

2.2. i2010 at the heart of the Lisbon Agenda for growth and jobs

The i2010 initiative is part of the renewed Lisbon strategy. The new partnership approach of the renewed Lisbon agenda is being put to the test and is working: At EU level, significant progress has been made on the Community Lisbon programme and at the national level, October 2005 saw the Member States present their National Reform Programmes (NRPs) for the next three years.

All Member States have identified research and innovation policies as a key priority and refer to ICT in their NRPs⁸, addressing mostly eGovernment, broadband and digital literacy. Half of the Member States also mention ICT uptake by firms and households, implementation of the electronic communications regulatory framework and network security. The NRPs generally identify ICT issues as challenges and thus support the wider adoption of ICT, although the proposed measures do not include more forward-looking elements like digital convergence or ICT research and innovation. Many NRPs also refer to the EU i2010 framework, therefore recognising common objectives.

The Annual Progress Report for Growth and Jobs published by the Commission in January 2006 identifies four priority actions to be addressed by Member States and the Commission alike: i) Investing more in knowledge and innovation; ii) Unlocking the business potential, especially of SMEs; iii) Responding to globalisation and ageing; and iv) Moving towards an

⁶ OECD Information Technology Outlook 2006, forthcoming

⁷ Voice, data and video services offered by a single operator/service provider

⁸ According to e.g. Integrated Guideline N°9: "To facilitate the spread and effective use of ICT and build a fully inclusive information society "

efficient and integrated EU energy policy.⁹ ICT have a crucial role to play in all these priorities, and i2010 with its three pillars – the single information space; innovation and investment in research; inclusion - can accommodate them. The Aho Report¹⁰ makes several proposals that are relevant for research and innovation in the ICT sector: Europe must support pervasive technologies and promote the development of innovative and creative markets. The Aho Report identifies, among other things, eHealth and digital content as examples for such markets. Research partnerships involving institutions, Member States and industry are needed, and European Technology Platforms play a key role in this respect. Finally, a market for innovative products and services should be created by harmonising regulatory environments, making the best use of standard settings, using public procurement to drive the demand for innovative goods and to foster an innovation culture. Some of these proposals have been taken up under the first priority action of the Commission's Annual Progress Report.

For the second and third priority actions, 'Unlocking the business potential' and 'Responding to globalisation and ageing', the Member States' measures on eGovernment are relevant. Member States recognise eGovernment as a potential instrument for better regulation and simplification of procedures and for meeting the increasing demand for social and health services that will inevitably accompany an ageing European society. But very few Member States establish an explicit link between their ICT priorities and the overall Lisbon objectives.

3. POLICY PRIORITIES FOR THE FUTURE

3.1. The Single European Information Space

i2010 identifies digital convergence as the main driver of change and aims at ensuring that the EU will fully benefit from the opportunities and prospects for strengthening the Single Market. i2010 sees four challenges for convergence: speed, rich and diverse multilingual content, interoperability and security. It calls for a consistent framework for information society and media services to promote investment and competition, while preserving public interest objectives and ensuring the protection of consumer interests.

In 2005, the Commission has launched the **review of the regulatory framework for electronic communications** to ensure a competitive environment to increase consumer benefit and to stimulate investment and innovation. This review will be concluded in 2006. As part of it, the Commission will review the recommendation on relevant markets. It is also preparing a regulation that aims to cut the high cost of international roaming in mobile networks and enhance the Single Market.

The Commission will also present proposals for a reform of spectrum management to facilitate access to radio frequencies. A coherent approach at European level will have a direct impact on European growth and jobs, e.g. through the release of spectrum from the analogue TV switch off. This in turn could stimulate wireless broadband and the development of new pan-European services. The Commission will also assess standardisation and interoperability developments with regard to mobile TV.

⁹ COM(2006) 30

¹⁰ "Creating an Innovative Europe", Report of the Independent Expert Group on R&D and Innovation appointed following the Hampton Court Summit and chaired by Mr. Esko Aho, January 2006

In 2005, the Commission has adopted a proposal for a **modernised Television without Frontiers Directive** to create a level playing field for all companies that offer TV-like services, irrespective of the technology used to deliver these services. This proposal will now go through the co-decision procedure with the Council and European Parliament.

With the emergence of new devices, networks and services, the **EU will have to address increasingly new challenges**, like the provision of digital copyright protected material at European level, the deployment of digital rights management (DRM) solutions, the need to update consumer and data protection rules or the fight against online distribution of illegal content. The Recommendation on EU-wide management of copyright for online music services¹¹ is a first step to demonstrate the Commission's commitment to develop a Single Information Space by progressively removing obstacles to pan-European services that rely on copyright in the online environment.

European citizens and consumers can derive a wide range of benefits from convergence, from easier access to a greater variety of information to a greater capacity to create and distribute their own content. In 2006 the communication on Content Online, building upon the Commission's Film Online initiative launched in 2005, will address these issues. However, many people are still reluctant to use information society and media services, due to security and privacy concerns. The communication on Spam and Malware, the communication on cybercrime addressing new forms of criminal activities on the Internet and the new security strategy will provide a response to security concerns at large.

In 2006-2007, the Commission will:

- Make proposals for the review of the eCommunications regulatory framework, including a proposal to review the recommendation on relevant markets and a regulation on international roaming;
- Promote an efficient management of spectrum;
- Assess the developments in standardisation and interoperability with regard to mobile TV services;
- Extend the Film Online initiative to Content Online and present proposals in a communication by late 2006;
- Address trust, privacy and security issues in the forthcoming communication on an EU security strategy (early 2006) and in the communications on cybercrime and on Spam and malware;
- Review the consumer protection regulatory framework, taking into account new technical developments;
- Pursue its analysis of the policy implications of convergence in cooperation with the Member States through the i2010 High Level Group.

¹¹ Recommendation 2005/737/EC

3.2. Innovation and Investment in Research

Research and Innovation

The 2006 Lisbon Annual Progress Report on growth and jobs has made it clear that the **EU is likely to fall short of its R&D expenditure target of 3% of GDP**. Nevertheless, research remains a top priority in the Financial Perspective and the priorities for ICT research proposed by the Commission in the 7th Framework Programme for R&D (FP7) have received wide support in the Council and the Parliament. The Lisbon Annual Progress Report has launched concrete proposals to increase investment in knowledge and innovation, taking up in particular the Aho report. The Annual Progress Report identifies for example public procurement as an area with considerable potential for innovation.

In 2005, the Commission took a number of steps in the field of ICT that went in the direction of the Aho proposals:

- The partnership for research activities was strengthened by setting up nine European Technology Platforms relating to ICT, two¹² of which are working with the Commission and the Member States to create Joint Technology Initiatives¹³. First steps were taken to achieve closer coordination between the Commission and the Member State R&D programmes.
- The Commission organised consultations on ICT-related innovation systems and ways to strengthen their link with research. These covered areas such as standardisation: with the 2006 ICT standardisation work programme, ICT also are acknowledged as an important item in the European Standardisation Action Plan which will review standardisation policy in 2006 and 2007. Member States have launched a discussion on pre-commercial public procurement of innovation at EU level to promote research and innovation in ICT. Some of these issues might be addressed in the forthcoming communication on ICT research and innovation.
- The Commission launched initiatives (INNOVA and PRO-INNO) to improve innovation policies and implementation in fields such as standards, procurement, access to finance, clustering, technology transfer, IPR and innovation management.

In addition, the Competitiveness and Innovation Programme (CIP) has been adopted by the Commission. It includes the ICT policy support programme for the take-up of ICT, which is directly linked to the i2010 priorities. The Commission has also created an ICT Task Force, as planned in the Commission's Communication on industrial policy from October 2005¹⁴, composed of a cross-section of stakeholders to review the competitiveness of the ICT sector.

¹² Nanoelectronics and embedded systems.

¹³ Joint Technology Initiatives (JTIs) are a new type of public-private partnerships envisaged under FP7. They will be established to implement the Strategic Research Agendas defined by certain Technology Platforms, which are of such an ambitious scale that they require the mobilisation of substantial public and private investments and research resources.

¹⁴ COM(2005) 474

In 2006-2007, the Commission will:

- Adopt the FP7 work programme;
- Propose two Joint Technology Initiatives (Nanoelectronics and Embedded Systems);
- Issue a communication on research and innovation in ICT;
- Analyse the possible application of the public procurement directives to pre-commercial procurement and the procurement of innovation for the uptake of R&D;
- Review standardisation for ICT;
- Adopt the work programme for the ICT policy support programme;
- Review the competitiveness of the sector within the ICT Task Force and subsequently the i2010 High Level Group.

Adoption of ICT

Europe has invested less and later in ICT than the US. The US is also more efficient in the use of ICT and is quicker to reap the benefits of ICT investment. The development of eBusiness could benefit from the important changes that are taking place in the software industry with a shift from the sales of products towards the provision of on-demand services. This is driving significant changes in innovative and competitive segments of the global economy and has contributed to the recovery of IT markets, which grew by 4.1% in the EU and by 4.8% in the world in 2005¹⁵.

New software and service architectures allow not only the integration of business processes within companies but also the networking of companies, creating new collaborative environments. Key enabling technologies behind these advances are Grid technologies¹⁶ and service-oriented architectures, areas where Europe is leading the research. ICT can have a disruptive impact on companies and markets, as is already evident in manufacturing or retailing with the diffusion of Radio Frequency Identification (RFID). The Commission is consulting on issues such as standardisation, interoperability, spectrum needs, and privacy and data protection concerns with regard to RFID, and will make policy proposals in the course of 2006.

These developments will translate into efficiency gains if businesses match their investment in ICT with moves to reorganise business processes. In this respect skills and competencies remain a major constraint and this is addressed by the European eSkills Forum. The eBSN (European eBusiness Support Network for SMEs) aims to improve synergies among existing eBusiness policy initiatives in Europe and to promote competitiveness of SMEs through the use of ICT. The Annual Progress Report identifies “Unlocking the business potential,

¹⁵ EITO 2006

¹⁶ The Grid provides immense computing and knowledge power on demand by using the resources of many separate computers connected by a network (usually the Internet).

particularly of SMEs” as a second priority action for more growth and jobs in the EU. i2010 in turn addresses the need to remove technological, organisational and legal barriers to ICT adoption by businesses. In 2006, the priority will be to identify and analyse new trends and to assess the need for policy measures. Work in these areas can build on initiatives such as GRIDs, interoperability or digital ecosystems and on the better integration of research results in business processes.

In 2006-2007, the Commission will:

- Complete a public debate on RFID and issue a communication at the end of 2006;
- Review eBusiness policies and trends (2006) and define the necessary policy measures (2007)

3.3. Inclusion, better public services and quality of life

Inclusion

With the third pillar of i2010, the i2010 initiative **incorporates the diverse eInclusion policies into a coherent and coordinated framework**, in support of sustainable growth and the European social model. The scope of eInclusion policies as defined in i2010 covers ageing, accessibility, digital divides, eGovernment, digital literacy and culture. While geographical divides, accessibility and digital literacy come under well-established EU policies with a strong information society dimension, the forthcoming eInclusion initiative will be broader. In 2005 and early 2006, major progress was made with the communications on ‘Bridging the broadband gap’¹⁷ and on ‘eAccessibility’¹⁸. The 2006 Ministerial Conference on eInclusion in Riga will be the starting point for the 2008 European initiative on eInclusion.

In 2006-2007, the Commission will:

- Follow up the commitments of the eAccessibility communication;
- Support the creation of an information platform for the exchange of best practices on broadband and organise a major conference on broadband for rural communities;
- Prepare with the Member States the Ministerial Declaration of the Riga Conference on eInclusion;
- Follow up the work on digital literacy: eLearning conference, communication on ICT for education and training to support lifelong learning and innovation.

Better public services

The renewed Lisbon strategy emphasises the role of public services in achieving the objective of growth and competitiveness. The use of ICT in public services can help meet the overall EU priorities highlighted in the Annual Progress Report on Growth and Jobs - to make public

¹⁷ COM(2006) 129

¹⁸ COM(2005) 425

finances sustainable and to simplify administrative procedures. These priorities are shared by all Member States in their approach to eGovernment and other public services, including the European Commission with its e-Commission initiative¹⁹. Progress has been made in making these objectives concrete, in particular by agreeing on key enablers and targets for a coordinated implementation of ICT-enabled public services.

The Ministerial Declaration on eGovernment adopted in November 2005 sets the **EU priorities for ICT-enabled public services**. The adoption of the **e-Health Action Plan** in 2004 and its implementation are significant achievements in speeding up the reform of the health systems. Work in these strands is relevant to the two Lisbon objectives ‘Responding to globalisation and ageing’ and ‘Unlocking the business potential’. In February 2006, the Commission has adopted a communication on the interoperability of Pan-European eGovernment services²⁰, which identifies the different aspects of interoperability needed for these services and calls upon Member States to collaborate in order to realise interoperability at the European level. The eGovernment Action Plan adopted in April 2006 lays out a road map for achieving for a range of targets for eGovernment by 2010, and the Commission has issued a Staff Working Paper on eHealth interoperability in March 2006, which will be followed by a Recommendation in 2007.

Electronic procurement is a key element of the strategy for better public services and interoperability, identity and authentication are common themes developed in the fields of eGovernment and eHealth. While efficient and user-centric services are mainly developed at national level, pilot projects at EU level address the pan-European dimension and the role of public online services as key enablers, focusing on identity management, interoperability and security. Experience has shown that projects need to have a critical mass to achieve the best impact and to ensure some degree of cross-border interoperability. Preparatory actions were included in the 2005 IDABC work-programme and are being implemented. For 2006, parts of the eTEN efforts will concentrate on the preparation of large-scale pilots to be implemented under the CIP from 2007 onwards.

In 2006/2007, the Commission will:

- Launch the eGovernment Action Plan and propose strategic orientations for ICT-enabled public services;
- Set up the European Union public health portal and prepare a Recommendation on eHealth interoperability;
- Launch pilot projects to test, at an operational scale, technological, legal and organisational solutions to bringing public services online (2007)

Quality of Life

The contribution of ICT to quality of life and to sustainable development often goes unrecognised. This is why i2010 aims to raise the visibility of this issue by launching flagship initiatives on key social challenges: the ageing society, safe and clean transport, and cultural diversity. An ICT flagship initiative has been proposed for each of these areas.

¹⁹ Decision C(2005) 4473

²⁰ COM(2006) 45

The digital libraries and intelligent car initiatives were launched in 2005. In 2006, a proposal for a Recommendation on digitisation and digital preservation will be presented. The significant impact of digital libraries and ICT networks on scientific peer review, publication patterns and the European Research Area will be addressed in a communication in 2006. A High Level Group on the European Digital Library has been launched and is bringing together major stakeholders from industry and cultural institutions and will address issues such as public-private collaboration for digitisation and copyrights. The third initiative "ICT for independent living in an ageing society" will be launched in 2006.

In addition, ICT can play an active role in reducing the environmental impact of industry and society, and in developing major tools to achieve EU objectives for sustainable development. Therefore, the Commission will propose a fourth ICT flagship for 2007 to use the potential of ICT for sustainable growth, focusing on energy efficiency and waste reduction.

In 2006-2007, the Commission will:

- Launch the ICT flagship “ICT for Independent living in an ageing society”;
- Implement the "Intelligent Cars" flagship;
- Implement the "Digital Libraries" flagship, propose a Recommendation on digitisation and digital preservation as well as a communication on digital libraries of scientific information;
- Propose a fourth ICT flagship initiative “ICT for sustainable growth”.

4. CONCLUSION

The challenges identified in the i2010 initiative remain valid but need to be addressed more vigorously. Policy makers need not just to be more aware of the need to accelerate ICT developments; they should also build policies to enhance the positive trends in the ICT sector. Particular priorities are implementation of broadband strategies, coherent approaches to content and spectrum, integrated research and innovation strategies and more ambitious public services. Today there is a greater need than ever to get Europe’s ICT policies right to catch up with our major global competitors.

Three messages will therefore continue to underpin i2010 in 2006-2007:

- **Urgency:** the increasing recognition of the role of ICT in growth and jobs should be converted into action, through a strategic approach to the opportunities of digital convergence in National Reform Programmes that combines macro and micro policy levels. There is also a need for expeditious treatment of legislative proposals under i2010 so that Europe can benefit fully from the fast moving effects of digital convergence on growth and competitiveness.
- **Partnership:** Joint action and responsibility between the Commission, the Member States and stakeholders under the Lisbon Agenda and i2010 not only to identify bottlenecks hampering innovation but also to take affirmative steps to coordinate policies across Europe in order to establish a single information space of 25 EU Member States.

- **Action:** The EU must move from consensus on the importance of ICT for growth, jobs and the quality of life to action by vigorously implementing regulations and policies that assist competitiveness and by using the economic weight of public administrations in order to promote the emergence of innovative services for the benefits of citizens and for growth and jobs.