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SPANISH PROPOSAL FOR A DIGITAL EUROPE: THE GRANADA STRATEGY

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EXECUTIVE SUMMARY

The European Union is experiencing a profound transformation towards a society based on knowledge. This requires a new, modern and efficient strategy to continue this evolution, which started in 2005 with the strategy "i2010: A European Information Society for growth and employment".

This document defines the Spanish contribution to ***For a Digital Europe: The Granada Strategy.*** With this strategy Europe will continue to promote the development of the Information Society (IS) from 2010 to 2015, in order to position citizens, companies and the public sector in the center of the digital revolution.

The concepts forming the backbone of the Spanish Presidency, **Equality** and **Innovation**[1], are fully aligned with the recommendations articulated by the new digital strategy.

With regards to **citizens**, the principle of equality does not only imply putting a definitive end to the digital gap and main factors that affect it (age, location, education and gender), but more importantly overcome a new gap that is becoming increasingly relevant. This second gap differentiates *basic users* of new technologies from those making a more sophisticated use of ICT that maximize the advantages offered by the digital economy. This challenge can only be overcome through training, e-Inclusion and rollout of new technologies.

The Information Society improves the quality of life of citizens both in the private environment of their homes and social relations and in business or interacting with the public sector. It is therefore fundamental to reinforce the existing legal confidence through a **Charter of Citizen Rights** as ICT users to strengthen their security and trust in the digital environment.

1 Innovating Europe. Program of the Spanish Presidency, EU Council

With regards to **companies**, the main objective of this new strategy must be to create a Digital Single Market (DSM), taking into account a suitable balance between consumer rights and online content distribution services.

In order to create a Digital Single Market that is real, we must guarantee equal access of companies, eliminating the barriers that still exist in each country that prevent the consolidation of the so called "fifth freedom". Some of these barriers include, due to their relevance, the lack of a sufficiently harmonized regulatory framework regarding intellectual property rights (IPRs) in the digital environment, and a shortage of transparency to support, for example, cross-border transactions. Only an ambitious plan, combining effective regulatory measures and resources to promote demand, will encourage the development of the content industry and digital services making DSM a reality. Promoting demand will largely depend on future investment in next generation access networks (NGAs), necessary for new digital content and services.

In terms of innovation, it is critical that European companies, especially SMEs due to their relative weight in the sector, are given the tools to compete in an increasingly globalized world. The existing European, national and regional ICT research and innovation instruments and programs must be qualitatively and quantitatively reinforced, focusing on a horizontal perspective, encompassing all economy areas and with a clear international projection.

Finally, the use of ICT by **governments** and the **public sector** in general, must be the cornerstone for the development of this digital and knowledge society. This means that all citizens must have access to public digital services; especially education and healthcare services. e-Government and o-Government may be the initiatives that promote the definitive transformation of the public sector. Their relation with citizens in the upcoming years must be based on transparency, citizen involvement and the collaboration of all players (governments, citizens and companies).

Therefore, we have prepared a document describing the Spanish proposal for the new strategy ***For a Digital Europe: The Granada Strategy.*** This document identifies the most important steps the European Union must take in terms of Telecoms and Information Society between 2010 and 2015, which are:

1. Infrastructure (NGAs, spectrum and network neutrality).
2. Advanced use of Internet, security and trust.
3. European charter of rights of users of electronic communications.
4. Digital content and services (DSM).
5. Strengthening of the ICT sector and its contribution to sustainable development.

INTRODUCTION

In recent years, Information and Communication Technologies (ICT) have proven to be a useful and efficient tool for economic growth, creating employment and improving the quality of life of society. Moreover, ICTs are becoming a key element to building an open, inclusive knowledge society based on the respect for human rights.

The European Commission's i2010 initiative represents a major step forward and has achieved considerable results, especially in terms of broadband coverage, which has provided companies and citizens access to the Information Society, as highlighted by the European Commission in its August 2009 report.[2]

However, in order to continue maximizing the advantages offered by ICT and continue to rollout the Knowledge Society, Europe must renew and adapt its strategy to new challenges. Some of these immediate challenges include, foremost, the contribution of ICT to economic recovery and job creation. In this sense, ICT, as a transversal strategic element, must impregnate each productive sector of the economy.

The concepts forming the backbone of the Spanish Presidency, **Equality** and **Innovation**[3], are fully applicable to the recommendations articulated by the new digital strategy. Therefore, favouring equal opportunities in the Information Society, encouraging the creation of infrastructures, promoting innovation in the ICT sector, using networks and digital services safely, are some of the concepts raised throughout this document.

2 i2010, Annual Information Society Report 2009. Benchmarking i2010: Trends and main achievements, page 5

3 Innovating Europe. Program of the Spanish Presidency, EU Council

1. INFRASTRUCTURE

1.1. Incentives for investing in Next Generation Access Networks

The rollout of next generation access networks (NGA) will be one of the pillars leading to modernization and increasing competitiveness of the European economy.

A consistent regulation that encourages investment

The current regulation of NGA networks is the result of analyzing the relevant markets defined by the European Commission. These markets have been initially defined from traditional services and networks, and the analysis is revised every two years. However, NGA networks are networks of new construction with extended rollout periods that facilitate the provision of an entire series of new services, representing a change in the paradigm.

We should therefore ask ourselves if the regulation of relevant markets originally associated to traditional networks and services have evolved enough to become the most suitable regulatory regime to favour the rollout of NGA networks.

On one hand, the inclusion of NGA networks in market analyses has not helped their rollout. Incumbent operators fear that the existing or future regulatory obligations allow access of other operators to infrastructures rolled out without having to assume the investment risk and notably reducing competitive advantages linked to these investments.

On the other hand, it is clear that the regulatory measures imposed on NGA networks (for example, channel access, shared rollout in buildings, etc.) has not favoured the rollout of new fibre optic infrastructures by alternative operators. The result is that the competition faced by dominant operators in access networks is basically limited to cable networks.

The application of the regulatory framework adopted in 2002[4] may have lacked sufficient regulatory certainty, necessary for operators to execute investments in NGA.

The new regulatory framework approved at the end of 2009[5] included various objectives and principles applicable to the rollout of new infrastructures, specifically NGA networks. This framework introduces positive aspects for NGA networks, but their effects may be delayed by the time required to transpose the new directives. Therefore, the European Commission must adopt the necessary measures to advance the transposition of the new regulatory framework in member States.

The Spanish Presidency proposes that the European Commission promotes the execution of the following aspects of the regulatory framework with regards to NGAs:

- **A consistent and predictable regulatory approach, with suitable revision periods.**
- **Recognition of investor risk, especially in new projects.**
- **Flexible access conditions that allow sharing investor risk, such as for example, different conditions depending on volume or duration of wholesale services.**
- **Suitable awareness by NRA (National Regulatory Authorities) of new network and service rollout projects by operators.**
- **Promotion of agreements between operators to share network rollouts.**

4 Directive 2002/21/CE, regarding a common regulatory framework for electronic communication networks and services

5 Directive 2009/136/CE

Reassessment of financial support measures to NGA networks

The Commission approved in 2009 several guidelines for the application of State rules for supporting the rollout of NGA networks, which allow for public investment in areas where there will not be a commercial rollout within a period of three years.

These guidelines, suitable for optimistic investment estimates of operators, should be adapted to the scenario created by the existing economic crisis, which has increased investor uncertainty by operators and led to delays or reduction in NGA network investments. In this scenario, it seems unlikely that commercial NGA rollouts will reach the majority of cities within three years.

Given this new situation, it may be necessary to adjust the Commission's guidelines, while waiting for an improvement in economic climate, in order to prevent that a large part of NGA network rollouts in the medium term are exclusively a result of public sector activities.

Until the commercial rollouts of NGA networks are reactivated, the Spanish Presidency proposes that activities by the public sector, without necessarily involving direct financial support, are linked in the medium term to achieving the following objectives:

- **A reduction in digital gap by including broadband access as a universal service obligation**
- **General increase in access and backbone network capacity, without restricting activities in rural and isolated areas.**
- **Stimulate high speed service demand, to accelerate the future rollout of NGA networks.**

1.2. Spectrum

The RF spectrum is a limited resource, indispensable to provide all kinds of wireless communication services, whose contribution to the economy increases constantly. Therefore, an efficient management of the spectrum constitutes a critical factor for achieving the following general objectives: Promote innovation, competition, employment and investment, development of the internal market, improving

competitivity within the European Union, development of the digital economy and reduction of the digital gap.

The new regulatory framework approved at the end of 2009 has introduced several mechanisms to increase the efficiency in managing the spectrum. On one hand, it introduces the principles of technological neutrality (usage of any technology in a frequency) and service neutrality (provision of any service in a frequency). On the other hand, the secondary market allows operators with spectrum, to transfer to third parties any frequencies they are not using or do so inefficiently.

In order to ensure that regulatory decisions adopted on a community level advance towards a more efficient management of the spectrum, the Spanish Presidency proposes the immediate implementation of the following measures:

- **Greater flexibility in the use of the spectrum by:**
  - The progressive implementation of technology and service neutrality principles, guaranteeing general interest objectives (audiovisual policy, security, information plurality, etc.) and avoiding distortions of competition.
  - Implementation of a secondary market of the spectrum, establishing basic rules to regulate it on a European level. This market facilitates fast access to the spectrum by new operators and contributes to the development of new services.

- **Greater amount of the spectrum available to the telecoms sector**
  - Identify frequency bands with optimal technical conditions for the provision of electronic communication services.
  - Analyze the flexibility and shared use of the spectrum and establish the technical parameters to ensure it.
  - Complete the refarming process of 900 and 1800 MHz bands.
  - Complete the processes for making available 2.5 GHz and 3.5 GHz frequencies throughout the European Union, under conditions already approved by EC Decision.
  - Availability of the 790-862 MHz band under harmonized technical conditions, no later than 2015. This requires completing the analogue TV switch-off in the European Union by 2012 and approving the EC Decision that establishes harmonized technical conditions for the use of the 790-862 MHz band.

- **Spectrum usage optimization**
  There are parts of the spectrum that are not used efficiently, but with the use of equipment based on technologies such as "Software Defined Radio" and "Cognitive Radio" we will achieve a more efficient use of the spectrum. We propose to promote the study of these technologies and their applications, as well as the bands in which they could be used.

1.3. Network neutrality

Today, there are different regulations for electronic communication network and services and for Information Society services, which includes Internet services. Electronic communication networks and services are subject to a regulatory framework that includes instruments such as market regulation, interconnection and interoperability requirements, universal service obligations and requirements in terms of privacy, security and confidentiality of communications.

However, the extension of the IP technology and the convergence between networks and services has caused several effects that must be considered in communications policies and regulations:

- Greater range of services, content and applications available through electronic communication networks, representing the extended use of these networks by users.
- Increase in traffic supported by the networks, which involves increasing their capacity modernizing infrastructures through strong investments.
- Emergence of new agents in the supply chain (VoIP, TVoIP, portals, search engines, storage service providers or cloud computing).
- Electronic communication operators are currently integrating information services in their networks and therefore are becoming integrated providers.

The debate regarding "network neutrality" has been largely driven by an effort to reconcile the network convergence process and maintenance of existing regulatory approaches, different for Internet services and electronic communication networks and services. The discussion usually mixes market regulation with interconnection

and interoperability regulations, assuming certain principles or regulatory approaches cannot be modified.

In the case of Europe, the discussion on neutrality was considered in the recent revision of the electronic communications regulatory framework, especially with regards to regulating interconnection and interoperability. The new regulatory framework does not expressly refer to "network neutrality" as an objective, although it does state that NRAs must promote the "right of end users to access and distribute information or use the applications and services of their choice".

In this new framework, the instruments required by NRAs to fulfil this objective are:

- Reinforcing **guarantees of transparency**, related to potential limitations of portfolio of products and services to access certain contents and applications, so that users are entitled to make the right choice.

- Granting NRAs the right to establish **minimum quality requirements,** in order to avoid network congestion and/or traffic slowdown.

With regard to market regulation, the new regulatory framework focuses on electronic communication networks and services and therefore may not take into account the whole set of implications on investment, innovation and benefit for citizens.

On the other hand, new electronic communication networks are a necessary element for the development of a sustained competition that continues in time. The services using these new networks will contribute to improve the economy and wellbeing of citizens.

In light of this situation, the Spanish Presidency proposes adopting a scenario of network neutrality that, seeking a comprehensive perspective, adapts to the circumstances of the European Union and supports achieving the following objectives:

- **Monitor the market to ensure that the principles defined in the current regulatory framework, regarding "guarantees of transparency" towards**

users and "minimum quality requirements" of network services, are fulfilled and adapted to technology evolution.

- **Ensure effective competition in the market of converging networks, services and applications beyond the scope of electronic communications. Any possible abuse that may arise in the value chain of those services and applications, outside the electronic communication networks, must be analysed, in any case, in the light of Competition law.**

- **Encourage efficient investment and innovation in all links of the supply chain.**

2. ADVANCED USE OF INTERNET, SECURITY AND TRUST

2.1. Accessibility, empowerment and e-Inclusion of EU citizens

The usage percentage of ICT in Europe is among the highest in the world; 65% of EU-27 use Internet regularly, second only to North America, where the degree of penetration is 71.3%.

Citizen age is one of the variables that most affects the use of Internet. Practically all young people access Internet, while only a very reduced percentage of persons above 65 years of age do so.

Population size is another conditioning factor, although the differences of access between rural areas and cities are disappearing.

Over recent years, Europe has experienced a significant reduction of the so called "first digital gap". As it narrows down, the focus moves onto the "second digital gap". This gap differentiates between basic users (Internet browsing and e-mail) and those that perform more sophisticated activities (for example purchase online, interact with the public sector through electronic identification and participate in social networks).

In order to promote the use of Internet and facilitate citizen **equality** in accessing and using the Information Society, **the Spanish Presidency proposes the following actions:**

- **Promote activities to publicise the advantages of the Information Society among all population sectors, in order to significantly increase the number of Internet users, the number of current transactions and the intensive use of services offered by the network.**

- **Promote actions from the Information Society to encourage job creation, telework and self employment.**

- **Involve all administration levels in:**
  - Maintaining a network of public and free Internet access points available for all citizens
  - Providing free telephone support service for electronic procedures
  - Promoting and publicise the use and advantages of electronic procedures

- **Reduce Internet access cost, levelling prices in Europe to those of countries that are more advanced in the use of ICT.**

- **Encourage usability in all programs and activities within the EU framework and involve the ICT sector on the development of easy to use products.**

- **Promote the execution of accessibility regulations.**

- **Promote the development of usability indicators.**

- **Promote measures that encourage the use of electronic services, such as:**
  - Elimination of additional costs in electronic processes
  - VAT reduction in remote processes
  - Obligation to include access solutions based on digital certificates

2.2. SME innovation

There is a high degree of consensus around the impact that Internet and Information Society related services have on company productivity and the level of competitivity in countries. Therefore, the use of ICT in SMEs is a good indicator of their level of modernization and capacity to compete in a global environment. The inclusion of ICT within the scope of companies is, undoubtedly, one of the basic pillars, not only for the development of the Information Society, but also for

economic and social development, as these technologies favour the creation of new business models and organizational processes in companies.

Internet is already a reality for all European companies with more than 10 employees (93% in EU-27). Practically all companies with more than 250 employees in Europe are connected to the Internet, and the differences between countries in terms of connection levels occur in small and medium size companies.

However, the differences in the use of ICT by European companies compared to other countries are evidenced in more sophisticated use of ICT, such as e-commerce and in general, the inclusion of ICT in business processes.

In Europe, ICT investment has increased considerably and represents an increasingly higher percentage of gross fixed capital in industrial sectors. But these investments on their own have not been sufficient for the increase in productivity.

In an economy that is increasingly more competitive and globalized, the only companies that will be successful in the medium and long term are that consider innovation as a central pillar of their activities. This environment is viewed as especially complex for SMEs, which will have to implement more efficient innovation and technology processes.

Basically, the use of ICT on their own is not enough. It must be accompanied by innovative processes, a modification in organizational structure, suitable employee training and other changes in the process for producing new products and services in order to have a favourable impact on company productivity.

Finally, it is clear that innovation is easier for SMEs integrated in associations/clusters than for isolated SMEs, as there is a better exchange of information, greater flow of employees and greater ease to finance innovative activities.

In order to improve innovation processes in SMEs, the Spanish Presidency proposes the following objectives for 2015:

- **Increase promotion activities on the use of ICT in SMEs and aids for financing their acquisition.**

- **Increase intensive ICT training at all levels[6]. The educational system must favour the appearance of professionals in the employment market that are required by the knowledge economy, in addition to promoting training and ongoing recycling of staff that offer or use them.**

- **Promote associations and clusters.**

2.3. Privacy, security, trust and data protection in ICT

The infrastructure and communication services (including Internet) currently perform a vital role in society. Their interruption can lead to enormous economic damage; it is therefore necessary to implement measures that guarantee their continuity. Furthermore, everyday problems run the risk of eroding public trust in technology, networks and services. In this sense, trust and security are key tools in the Information Society and will be increasingly more important as we move towards a digital environment based on the interaction of objects, devices and systems (called "Internet of things").

In summary, a high level of network and information security will attempt to ensure:

a. Freedom and rights of citizens, including the right to privacy;
b. An efficient society in terms of quality in information handling;
c. Business and industrial profitability and growth;
d. Trust of citizens and organizations in the use of information and ICT systems.

Network and information security is a combined responsibility of all interested parties, including operators, service providers, hardware and software suppliers, end users, public entities and national governments. Therefore a comprehensive European strategy for network security and information is of utmost importance to tackle existing and future challenges.

6 It is estimated that around 4% of total employment corresponds to ICT specialized functions and 20% demand persons that use ICT intensively.

Therefore, the Spanish Presidency proposes the implementation of the following activities:

- **Perform awareness and training campaigns on network and information security targeted at end users and companies.**

- **Strengthen network and information security support services[7].**

- **Promote research and development initiatives, as well as education and training in terms of security, in order to guarantee the development of a vibrant and competitive market in security solutions.**

- **Promote electronic identification initiatives (such as electronic identity cards), guarantee data protection and privacy of citizens as well as respect and better control of personal information online and in the new "Internet of things" environment.**

- **Organize national and European excercises in the area of Network and Information Security and, especially, with regards to critical information infrastructures.**

- **Revise the regulations that currently govern the European Network and Information Security Agency to adapt its functions to the needs of society.**

7 Specifically, we propose the start or reinforcing of computer emergency response teams (CERT), in order to publicise pertinent information regarding existing vulnerabilities and risks. In addition, we must increase cooperation between national CERTs on a European level.

3. EUROPEAN CHARTER OF RIGHTS OF USERS OF ELECTRONIC COMMUNICATIONS

In terms of community law, there are two regulatory frameworks that protect end users of electronic communication services. On one hand, the general protection of consumers and users (Directives 93/13/EEC and 97/7/EC) and, on the other, specific and sector protection of end users in this sector (Directive 2002/21/EC and Directive 2002/22/EC).

Therefore, end users of electronic communication services enjoy a high level of legal protection within the European Union, but there is still a considerable amount of misunderstanding because the Directives that regulate these rights also include regulations on other telecom aspects and use a language that is difficult to understand for citizens.

On the other hand, although end users of electronic communication services have guaranteed basic rights in their relations with operators, it is advisable to increase the level of protection of certain aspects.

In this sense, we propose to produce a document of "Charter of Rights" that exclusively contains the regulation of user rights in this area. The Charter will include the rights that all electronic communication service users are entitled to, regardless of the operator they engage. Furthermore, the Charter will not regulate provisions that are part of the universal service, nor include specific rights in terms of personal data protection and privacy in the electronic communications sector.

The rights recognized in this Charter shall be considered as in addition to those corresponding to users of electronic communication services as consumers, as per regulations in national and community general protection provisions for consumers and users.

This Charter shall consider the opinions of all affected parties, i.e.: consumer associations, operators and Administrations with competences in consumer matters.

In summary, the Spanish Presidency, which considers user right protection in the ICT sector as one of its priorities, proposes the approval of a "Charter of rights of users of electronic communication services" accessible and drafted in a language that is easily understandable by users.

4. DIGITAL CONTENTS AND SERVICES

4.1. Digital Single Market

One of the main objectives of the i2010 initiative has been the development of the European Single Information Space, also known as "Digital Single Market" (DSM). However, experience in recent years with regards to the development of this single market has not been very promising. This is mainly due to the existence of national barriers in Member States that prevent the establishing of a single ICT product and services market.

The development of an authentic DSM represents therefore a major challenge for the upcoming years, considering its impact on economic growth, job creation and capacity to stimulate innovation in the ICT sector. We should highlight that 40% of the EU's productivity originates from the ICT sector, as well as 25% of total R&D investment.

Within the framework of the new European Digital Strategy for the period from 2010 to 2015, it is time to combine strengths a develop a real DSM both from the demand point of view and in terms of supply, taking into account a suitable balance between consumer rights and online content distribution services.

In order to achieve this real DSM, we must eliminate national barriers to allow companies and users to offer and engage cross-border services without limitations. Basically, a modern legal framework is required that favours competition and can be easily understood by consumers, regulating consumer protection, tax aspects and payment systems. Simultaneously and considering that citizens will play a very important role in this single Market, we must reinforce their skills and trust in the use of cross-border online services.

From the supply point of view, we must develop a global ICT product and services market organized in different layers, which are:

- Infrastructures: Telecom networks and services, including physical transmission media and corresponding hardware and software equipment.
- Online services and applications, such as e-Health, e-Learning and e-Inclusion (soft infrastructure).
- Digital content interoperability between different platforms.
- Elimination of barriers that hinder the development of the digital content and services industry.
- Actions to promote the supply of legal products online at prices aligned with consumers.

The DSM seeks to achieve a harmonized regulatory framework for each one of the aforementioned layers, in order to provide citizens and companies a unified framework that ensures a more efficient and sustainable economy. This objective must not be interpreted as part of the centralization-decentralization debate (or subordination versus internal market) but in the sense of removing national barriers that hinder the development of a digital single market and, therefore, open it to all member States.

The achieving of a single online market, called "Fifth Freedom", will be a key element in the sustainable recovery of the European economy and social development. The associated increase in productivity will stimulate innovation and creativity, resulting in more efficient and easier to use public services, while also increasing opportunities for democratic participation.

Therefore, the Spanish Presidency proposes the implementation of the following public initiatives:

- **Promotion and publicising of DSM advantages for ICTs, with relevant economic figures that support the benefits inherent for all players that are involved.**

- **Preparation of deregulation measures for each layer.**

- **Harmonization and convergence of intellectual and industrial rights protection systems between member States in accordance with provisions made in section 118 of the Lisbon Treaty.**

- **Support for pan-European initiatives that member States cannot execute independently; for example "global services in a single public services market".**

- **EU fund assignment for pan-European online services (soft infrastructure type) including projects that are difficult to implement individually by member States.**

- **Execution of major infrastructure projects with a sustainable dimension in terms of design and execution.**

- **Use of public contracts for the acquisition of ICT products and services.**

- **Use of open software and standards to promote common environmental regulation for ICT products and services.**

4.2. Development of the European Digital Content Industry

The increase in number of Internet users is stimulating the creation of digital content, which has a direct impact on a rapid increase in the use of Internet.

An important part of the income obtained by the content industry is through Internet. Online publicity is one of the top segments in terms of growth, increasing 30% per year. Another segment experiencing rapid growth is content creation by the users, which was inline with the growth in number of communities and social networks.

Although there have been some content developments related to public services (healthcare, geographic location services, etc.), these contents represent a very small percentage compared to entertainment contents.

Digital content plays an increasingly important role in the promotion and development of modern economies and societies due to its double instrument aspects that stimulate the creation of wealth in a context of knowledge economy and Information Society drivers. In addition, the trend towards a digital contents

industry represents a major opportunity for the future, with highly significant growth possibilities.

The keys for the future development of the Digital Content industry involve digitization, industry internationalization, adaptation to new online business models and training of professionals.

Therefore, member States must make an effort to ensure accessibility of digital content developed by the industry, encouraging an increase in demand in society.

In order to achieve these objectives, the Spanish Presidency proposes the implementation of the following measures:

- **Creation of knowledge centers: social spaces for developing citizen innovation, technology exposure and knowledge maintenance, involving creative, innovative and entrepreneurial activities.**

- **Financing for companies, especially SMEs, that develop services and produce digital contents for citizens.**

- **Financing of projects for the creation of e-Learning courses, specific for employees in the Digital Content sector.**

- **Financing of projects for the definition of new business models in the digital content industry.**

- **Creation of micro-SME networks for the production of digital content.**

- **Promote the digitization of cultural heritage that guarantees content accessibility.**

4.3. Intellectual Property Rights in the new digital context

An aspect that also deserves special attention is Internet's impact on the exploitation of intellectual property rights. As a result of the rapid social penetration of information technologies, we are witnessing the birth of a new technology paradigm, which establishes a digital scenario in which intellectual creations are separated from classic support. This new digital scenario emphasizes the nature of intellectual creation as an intangible commodity, which enjoys enormous potential thanks to the ease of distribution in a global digital market.

This context, however, although facilitates the distribution and copying of digital contents, introduces new challenges in a creation market based mostly on past business rules and models when these new technology possibilities did not exist.

The current challenges in the exercising of intellectual property rights within a digital environment must be tackled seeking a just balance between the various rights; specifically, personal data protection, freedom of speech and information as well as the protection of intellectual and industrial property.

Moreover, Internet has also encouraged new ways of creating content, specifically Web 2.0. In fact, the increasing availability, versatility and use of new creation, editing and transformation tools for musical and audiovisual contents support the creation and sharing of content created for non professional purposes. It is also necessary to analyze the impact of these new realities within the framework of using intellectual property rights.

In this context it is very convenient to have a constructive dialog between the various parties interested in the creation and provision of digital contents. This dialog must lead to reaching collaboration solutions that extract maximum benefit from new technology opportunities, resulting in greater benefit for citizens overall.

In light of the above, the Spanish Presidency proposes the following measures:

- **Initiate actions to achieve greater protection of intellectual property in the Internet, fully respecting citizens' rights.** In this sense, any action

adopted should fully consider citizen rights to intimacy, data protection and freedom of speech, among others. Furthermore, the actions for intellectual property right protection must focus on web pages that facilitate mass violation of intellectual property rights and must be adopted under control of court authorities when they may affect freedom of speech or information.

- **Ensure the existence of a legal offer portfolio of Internet-based contents that cover existing demand and technological reality. Without this possibility, any intellectual property right protection measures adopted will not be feasible.**

4.4. "OGov and eGov: Open Government and e-Government"

The of ICT by the public sector must represent the cornerstone in the development of a more participative society, reinforcing the single market and construction of more efficient public offices. The main objective of e-Administration is to introduce transparency and responsibility to achieve better e-Governance within organizations.

In this regard, the development of the priorities identified in the Malmö Declaration would require more legislative efforts in the area of e-Government in the EU. If there is no enough action in this regard, it will be more difficult to develop cross-border services in a timely and cost-efficient manner, or to guarantee uniformity in the rights of European citizens regarding the electronic relationship with their Governments.

Open Government, based on the principles of transparency, participation and collaboration and characterized by the establishing of communication channels and direct contact between the public sector and citizens, may be the initiative that promotes their transformation in coming years.

The objective is to establish an on-going conversation with citizens in order to understand their requirements and take decisions based on these. This requires the cooperation of citizens and civil servants in the development of services and communicate everything that is decided and done openly and transparently.

Cultural changes must be made in order to ensure that the public sector becomes an open organization, simplifying these for citizens; in the organization, focusing it on new requirements; and in communication channels, converting them into electronic.

In this sense, the Spanish Presidency has identified four key objectives:

- **Develop an Open Government Action Plan**

  The necessary actions to achieve these objectives are:

  - Publicising of open Government initiatives that promote citizen collaboration and involvement, promoting the use of social resources between citizens and government.
  - Encourage measures that contribute and promote transparency.
  - Facilitate and simplify the reuse of information in the public sector adopting free reuse policies, in the sense of reuse at no cost and reuse free of unnecessary conditions.
  - Promote the reuse of public information by third parties to develop services that maximize their value.

- **Promote organizational, legal and technical mechanisms in Europe that ensure the implementation of e-Government strategies**

  This will require:

  - Develop eAdministration cooperation powers enabled by the Lisbon Treaty section 197.
  - Preparation of a citizen rights framework in electronic relations with the public sector.
  - Development of a common interoperability infrastructure on a European scale (HW and SW) to reduce rollout costs of cross-border eAdministration services.
  - Definition of a European identification and digital signature interoperability framework.

- **Develop digital services that favour citizen mobility between the various EU countries**

  The following actions are required:

  - Creation of cross-border eAdministration services, that facilitate mobility of citizens in studies, work, residence or retirement and in

particular, based on the electronic exchange of information that prevent citizens from providing information already available to the public sector.

- Creation of cross-border eAdministration services that facilitate the incorporation of companies and the provision of their products and services (eInvoice and implementation of electronic tenders).
- Definition of indicators and measurement systems that help assessing the development of digital services favouring citizen mobility between EU countries and specifically:
  - Intra-community electronic invoicing
  - The use of intra-community digital services

- **Develop e-Government solutions in order to improve efficiency, effectiveness and sustainability in the provision of public services.**

  Starting the following actions:

  - Promotion of innovation and training of civil servants as the means to increase efficiency and effectiveness of services and relations with citizens.
  - Promotion of innovation of administrative management
  - Adoption of measures to increase security and trust in eAdministration services
  - Adoption of measures to publicise and encourage the use of public digital services.
  - Promotion of measures to reduce the effects of climate change (reduction in consumption and energy saving).
  - Definition of new indicators and measurement systems to assess the impact and user satisfaction in the use of e-Government services.

4.5. e-Health

The European Council under the Swedish Presidency adopted on December 1, 2009 the conclusions on "safe and efficient healthcare service through e-Health" during its sessions on employment, social policy, healthcare and consumption. The Council recognizes the need to have political leadership and integrate e-Health in healthcare policies to develop e-Health services that cover public healthcare services.

The Spanish Presidency has set four strategic objectives: introduce a global vision for a Digital Healthcare policy integrated in the post 2010 European Digital Agenda; promote a new e-Health action plan that responds to European challenges; promote and encourage agreements between ministries that specifically support the integration of Digital Healthcare in community policies; implement reinforced government mechanisms for these initiatives; contribute with our experience, sharing results and future vision.

More specifically, the Spanish Presidency proposes the following objectives:

- **Digital Healthcare for a healthier Europe:** Guaranteeing quality and continuity of citizens in the European Health Space.

- **Digital Healthcare for sustainable growth and cohesion:** the Digital Healthcare sector as generator of social cohesion and richness in terms of employment, innovation and economic development.

- **Digital Healthcare as industrial sector:** Generate favourable conditions to facilitate the rollout of the European e-Health market in areas with greatest growth potential.

- **Digital Healthcare for innovation and social change:** technology innovation and creativity to transform healthcare service processes, improve quality of life, work and ageing conditions, focusing on disease prevention and chronicity management.
- **Digital Healthcare for training of citizens:** Digital Healthcare can play a key role to increase involvement of citizens in caring for their health.

- **Use of technology to identify efficiencies and areas of improvement in terms of healthcare policy and measure results in health.**

5. STRENGTHENING OF THE ICT SECTOR AND ITS CONTRIBUTION TO SUSTAINABLE DEVELOPMENT

5.1. Research and development in the ICT sector

The ICT industry in OECD countries dedicates to R&D almost double what the automobile sector and triple that of the pharmaceutical sector. However, this distribution in R&D expense in the ICT sector is not uniform in all countries. For example, in the United States they represent almost 40% of business R&D expense, 25% in the EU-15 and finally 9% in Korea.

There is also a trend in increase of expense in innovation related with ICT in other sectors of economy, especially in the automobile sector, financial services and defence.

Due to their transversal nature, the ICT sector and audiovisual services sector have a significant impact on the European economy and serve as a platform and facilitator of transformation processes in all areas of economy and creation of innovative enterprises.

The ICT sector has displayed greater resistance than other sectors to the economic crisis we are currently experiencing. However, it has not been alien to it and therefore, we must continue to support the sector's activity, as well as encourage its role as a replacement of the EU's economic model.

Based on the current situation, and future perspectives that have been discussed in previous paragraphs, the challenges for 2015 **proposed by the Spanish Presidency, are:**

- **Put Europe at the forefront of knowledge in the ICT sector.**

- **Promote a highly competitive ICT business structure.**

- **Make innovation in the ICT sector more interrelated with other sectors and more international.**

- **Implement more effective innovation and development programs for the ICT sector.**

- **Promote the development of the ICT sector as a horizontal element for other business sectors.**

- **Integrate R&D with innovation and putting into the market.**

5.2. Green ICT

The exhaustion of natural resources, demographic growth and climate change require a sustainable economic growth strategy. A more efficient economy in terms of energy require reducing the carbon footprint.

The European Union is a privileged position to lead this new economy reducing the use of traditional energy sources, which result in important CO_2 emissions. The importance of the European economy on a global level, education and innovation capacity are crucial aspects that will allow the EU to head this change.

The ICT sector as a source of pollution, must also improve its energy efficiency. In addition, ICT, as a transversal business, plays a key role in increasing energy efficiency in all sectors.

The fundamental points to evolve towards an eco-efficient economy based on sustainability are:

a. Promote the use of ICT in the top industrial sectors in order to obtain greater energy efficiency.
b. Establish policies to improve corporate and citizen behaviour in terms of sustainable growth.

Based on the above, the Spanish Presidency proposes the following measures:

- **Produce a globally accepted definition of sustainable growth. Likewise, a commonly accepted system is required to measure and assess the changes achieved.**

- **Create an environment that contributes to achieve long term environmental and economic growth objectives.** Specifically:
  - Creation of a suitable legal framework that encourages energy efficiency
  - Promote financing of energy efficiency activities
  - Establish tax incentives that accelerate the process towards sustainable economy.
- **Promote telework and use of videoconference.**

- **Reduce energy consumption in buildings (up to 17%) through the use of intelligent networks and sensors.**

- **Promote public transportation and improve efficiency.**

5.3. Revision of ICT and Information Society indicators

Both the persons responsible for public policies and private agents need updated ICT and Information Society indicators that are homogenous and adaptable to a ever changing reality.

These indicators must provide a suitable comparison framework to measure, both ICT adoption differences between member States and their actual situation and growth rate.

Having reliable indicators is crucial. Heterogeneous, obsolete or incomplete data may lead to incorrect conclusions on the short term effects of economy development policies based on OCT and distort the perception of citizens and companies regarding the Information Society.

The reality today is that the indicators do not reflect, in some cases, the specific dynamics of the ICT sector, either because they are based on parameters that are

obsolete, because they do not consider certain emerging areas, such as next generation networks or the proper definition of risks caused by the digital gap.

In order to more accurately reflect reality, we must ensure that:

- Raise the frequency of availability and publication to guarantee data precision and updating.
- Increase the frequency of revision, on an international level, of measurement methodologies (ensuring at least one annual revision).
- Quality of service and user perception have their own set of indicators.
- Clearly established connection between ICT and sustainable growth that can be followed systematically.
- The weighing of indicators (by number of users, population, etc.) better reflect reality.
- The packaging of services, promotions, subsidies and new price schemes that form part of market dynamics taken into account to calculate international price indicators.
- Countries with more mature markets can have a series of indicators although these may not be applicable - still - in emerging countries.
- Mobile technologies are suitably characterized with regards to land telephony by measuring global bandwidth coverage and their degree of adoption.
- Sorted lists of countries and quantitative analyses are complemented with a qualitative characterization of market conditions and determining social, geographic, policy and regulatory indicators.

In any case, in order for this new comparison framework to be effective, an effort of consensus must be made to increase comparability and reliability of sources, data and methodologies, not only within the European Union but also with institutions such as the OECD and UIT. We must therefore promote an agreement and international commitment on this matter, involving all stakeholders.

In order to overcome these challenges, the Spanish Presidency proposes a triple strategy:

- **Governments must recognize the importance of having more flexible IS methodologies and indicators, frequently updated and available.**

- **Governments must agree on the need to dedicate suitable efforts to this task, including efficient financing and provision of resources by national entities to analyze and produce IS indicators.**

- **International entities must reinforce the generation of more homogenous and comparable indicators and methodologies, based on consensus, flexible and official whenever possible.**

5.4. International dimension of the EU (Internet governance)

The European Union considers that the Internet Governance Forum (IGF) model has successfully identified the challenges and found possible solutions to make Internet continue evolving in a truly open and inclusive manner. Therefore, the European Union has repeatedly supported this non binding and multistakeholder platform, and values this unique place of interchange between all Internet governance stakeholders.

The EU must increase its efforts on being a key player in the definition of discussions and operation of the IGF, continuing, among other things, in its leadership role in the stablishment of national IGFs and the emergence of a pan-European IGF.

Regarding ICANN (Internet Corporation for Assigned Names and Numbers), the European Union considers that its model, characterized by private sector leadership and multistakeholder management and technical coordination of certain key Internet functions, has proven to be effective, and should be maintained, supported and where necessary further developed. In addition, the EU believes that the new "Affirmation of Commitments", signed between ICANN and the US Government on October 1, 2009, is a significant step forward in the process of internationalisation and in formally recognising ICANN's global public interest role.

The new "Affirmation of Commitments" reinforces ICANN's global public interest mission and highlights the increased role for governments and the GAC (Government Advisory Committee of ICANN), which should allow public policy issues to be addressed within ICANN even more effectively.

Hence, the Spanish Presidency proposes the promotion of the following public policy objectives, which are fundamental to establish the course to be followed:

- **To continued security and stability of the Internet.**

- **Respect for the principles of Internet architecture, including global interoperability, openness and the "end-to-end" principle.**

- **The need to promote effective competition in the global domain names market.**

- **The need to guarantee the principle of freedom of speech.**

- **The increased internationalisation of Internet governance as a whole, and of ICANN's coordination and management of the domain name system in particular. It is key to implement the provisions of the new "Affirmation of Commitments" in a spirit of further internationalisation of the domain name system coordination.The need to ensure that the overall framework of Internet Governance will continue to evolve in line with the WSIS (World Summit on Information Society) principles of a transparency, multilateralism and democracy, and, in particular, allowing for a proper involvement of Governments in the development of globally applicable public policy principles.**

- **The maintenance and development of the Internet Governance Forum model on a global, regional and national level, as open places for meeting, dialog and exchange of best practices between governments, civil society and the private sector.**

CONCLUSIONS

Europe needs to extend the Information Society to the entire society: citizens, companies and the public sector. Only by making use of new technologies in all areas will we be able to guarantee the development of a prosperous, competitive, integrating economy that is respectful with the environment, as well as societies that are increasingly participative and open.

Only an **inclusive Information Society** will allow answering new challenges, especially economic recovery, job creation and full realization of the Knowledge Society and Economy. No sector can be left excluded from the digital era. It is especially important to reach digital alphabetization, especially less favoured sectors, highlighting usability as a fundamental criteria to facilitate the encounter between citizens and the Web, especially in their relations with the public sector. This will only be possible with the existence of faster, more robust and interoperable infrastructures in an open and competitive environment.

Access to ICT by everyone is as important as security and trust of citizens in their relation with new technologies. The approval of a Charter of Rights of Users of Electronic Communications on a community level will decisively contribute to create this environment of trust necessary for citizens.

The aforementioned activities will allow citizens, companies, services and payments contribute to overcome the currently existing national barriers. This will facilitate the consolidation of the Digital Single Market, the authentic "Fifth Freedom" in the European information space.

The digital scope is characterized precisely for its speed in rendering traditional author rights protection instruments obsolete on their works and contents. We need to reconsider these rights on a community level, with decisions that offer solutions that prevent market fragmentation, and that increase legal certainty of protected works and those that may be used by creators of online contents.

Only an **innovative Information Society** will allow maximizing the possibilities of a digital economy. It is necessary to promote company innovation, with new public-

private R&D financing instruments adapted to the requirements of a sector. Furthermore, innovation is necessary in the ICT sector, as it facilitates transformation processes in the rest of sectors and the economy as a whole; therefore it is fundamental to transform the economic growth model. It is basically to stop considering the ICT sector as a specific environment to implement ICT in all sectors.

Finally, the Spanish Presidency recommends reinforcing the European leadership in the development of a sustainable and eco-efficient economy through ICT. A sector with economic value in itself and which acts as a driver of a new culture of sustainability applicable to all sectors, starting by major industries and culminating with citizens.

Europe must combine efforts to converge in the Knowledge Society, and it must be lead by governments and institutions, acting as catalysts for the rest of players. This is the challenge for Europe in upcoming years and for which Spain wants to collaborate with this document as its contribution to the new strategy ***For a Digital Europe: The Granada Strategy***.