

## **BACKGROUND INFORMATION**

### **1. THE EXISTING (ICT) STANDARDISATION POLICY AND ITS LEGAL FRAMEWORK**

In the Internal Market domain the use of standards, especially in support of the New Approach legislation, has proven to be a successful tool to achieve the objectives set. The success was confirmed by the Council which then invited the Commission to evaluate whether EU standardisation could be extended to new policy areas beyond the Internal Market policy objectives.

Regarding the standardisation in the ICT domain, the relevant policy was initiated by the general standardisation principles established by Directive 83/189, and complemented by Council Decision 87/95, which provided the overall objective of “end-to-end data and systems interoperability”. The Communication on “Standardisation and the Global Information Society: the European approach” provided an in-depth reflection on the changing role of formal standardisation due to the emergence of the Global Information Society. The Communication focussed on interoperability aspects, the need for global co-operation and a flexible approach to standards deliverables while, at the same time, underlined the need to protect public interest aspects through standardisation.

The Council Resolution of 28 October 1999 and the Council conclusions of 1 March 2002 on the role of standardisation in Europe pointed out the necessity of tackling the specificities of standardisation in the ICT domain, recommended the provision by European Standards Organisations of deliverables other than formal standards, and requested the Commission to study the conditions for their usage within Community policies.

COM (2004)674 final, which was welcomed by the Council in its conclusions of 21-22.12.2004, highlighted the role of standards as an instrument for interoperability in the ICT environment and stressed the need to update standardisation policy in a complex environment of short-product development, fragmentation, and globalisation.

The current European standardisation policy, including the ICT domain, is framed by the Council Directive 98/34. In the European arena, the main element of this policy is the formal recognition of three European Standards Organisations, CEN, CENELEC and ETSI, active in different degrees in the ICT domain. This recognition entails an institutional and financial support at the European level, aiming at improvements in responsiveness, efficiency and visibility and at providing the possibility for the Commission to financially support specific standardisation activities in support of EU legislation or policies.

The EU standardisation policy supports the WTO principles for the development of international standards such as openness, transparency, impartiality, consensus, effectiveness, relevance and coherence. IPR policies are based on FRAND or RAND principles.

The traditional deliverables of the EU standardisation process in support of legislation are harmonised standards (ENs) as defined in the Directive 98/34, although “new deliverables” such as European Technical Specifications (ETS) and CEN/CENELEC Workshop Agreements (CWA) have been developed in response to the Council’s request

to better respond to evolving market requirements. Harmonised standards remain the main tool in support of the New Approach legislation. The “new deliverables” are mainly considered in support of non New Approach legislation on a case-by-case basis.

Examples of legal acts with the New Approach characteristics using harmonised standards are the Radio and Telecommunication Terminal Equipment Directive 9(R&TTE) 1999/5/EC, the Low Voltage Directive (LVD) 73/22/EC and the Electromagnetic Compatibility Directive (EMC) 89/336/EC. The standards in this case have a “co-regulatory” function, i.e. the legal acts set the policy objectives; they are complemented by a list of standards -technical agreements- that provide a means to comply with the policy objectives.

Examples of legal acts with non New Approach characteristics but using standards, are the Electronic Signatures Directive 1999/93/EC and the Telecommunication Framework Package Directive: 2002/21/EC. Whilst for New Approach legal acts the standards referenced are harmonised standards (ENs), this is not necessarily the case for the non-New Approach legal acts. These legal acts do not require ENs and allow the use of “new deliverables” such as ETS, CWA, TS or guides.

Standards are also developed in support of EU policies such as e-Europe, e-Accessibility, consumer policy, security etc. The most known example is the eEurope Standards Action Plan (eSAP), by which the ESOs provide a common work programme to foster consensus building in the various domains covered by the eEurope 2002 Action Plan and 2005 Action Plan. As these initiatives do not require a legal recognition of the provided standards, the status of ENs is rarely a prerequisite. Thus, most of the deliverables will be “new deliverables” or any consensus based deliverables such as interoperability testing, implementation guidelines, observatories, etc. that stakeholders may consider the most appropriate to respond to the market needs, provided that they are in compliance with the EU competition rules.

In all cases described above, the standards and standards deliverables referred to are those issued by the European Standards Organisations. However, in recent years the emergence has been noted of new EU policies and EU R&D projects which support the implementation of standards set by other organisations; examples are the policy initiatives and subsequent actions in support of IPv6 and the Recommendations concerning the implementation of WAI guidelines.

## **2. THE NEW ICT LANDSCAPE AND ITS IMPACT ON STANDARDISATION**

Europe needs a standardisation structure that fits the current global and liberalised market. Over the last decade, the ICT market place has fundamentally changed and the changes seem to be lasting: indeed, the liberalisation of the market has brought competition within and between sectors; the globalisation of markets combined with the rapid technological developments led companies to follow global strategic partnerships, resulting in an ever decreasing role of governments. The most striking evolution is perhaps the shift from hardware to software that has a major impact on the traditional standardisation processes and rules which were based on hardware. Among the new ICT landscapes main characteristics are the following:

- The ICT market is in constant evolution, it is characterised by the liberalisation of telecommunication, convergence between telecommunication and information technologies and, more recently, with media and broadcasting services. Moreover, ICT technologies are pervasive; all industries become ICT users. As a consequence, the ICT standardisation community is in a constant change. In the ICT sector there is no stable (standardisation) community, the

way it still exists in other more traditional sectors such as construction, machinery or pharmaceuticals.

- The ICT market is global and so its standardisation dimension; the needs for regional anchoring of standards has steadily decreased; the EU standardisation process must support stakeholders to have a better impact in the international standardisation scene; the final objective must be to reach a global acceptance for standards. Moreover, the evolution of a European ICT standards policy has to be seen in a global framework .
- The setting-up of consortia and fora has become an increasing practice in the ICT sector: many successful standards have been developed outside the remit of the ESO's or ISO/ IEC, often by the same industries that are members of these organisations. Industry wants standards and standardisation structures that offer solution driven standards available in time and in a flexible manner; the solution for industry can therefore range from the full formal standard, best practices, guidelines and ultimately the proprietary standard. The choice will depend on the market requirements. It is, however clear that the more open democratic and inclusive the process of standardisation is, the longer the period required in the creation of a standard.
- The link between R&D and standardisation is of particular importance in the ICT domain; standardisation is a means to leverage, at EU and at global level, the consensus reached within EU R&D project. However, due to the complexity of the issue, the high technical expertise required in a particular domain, the fast technology evolution and the specialised user community, formal standardisation may not be the best option. More restricted groupings would have an advantage, especially with respect to IPR issues. In addition, the formal standardisation process would benefit from pre-standardisation efforts such as dedicated and focussed R&D initiatives. The COPRAS project (<http://www.copras.org>) is an excellent demonstration of the bilateral relation between R&D and standardisation. Building on the results of COPRAS; the study should analyse the need for more institutional and operational relations between standardisation and R&D
- From a more general point of view, ICT standardisation should be integral part of an Industrial policy; starting with R&D, encompassing various manners of consensus building including standardisation, regulation, testing and the innovative deployment of new (ICT) services ,technologies and applications based on the implementation of standards. The challenge is to provide an overall coherent and co-ordinated strategy based on the integration of the various initiatives towards market deployment of new services, products, applications.

### **3. ISSUES OF PARTICULAR POLICY RELEVANCE TO BE ADDRESSED**

While executing the study as described in this specification; particular attention shall be given to following issues:

## **Interoperability**

Interoperability is a critical issue to support the further deployment of Information Society services and applications. It could have many components as technical interoperability, semantic interoperability and regulatory interoperability. Each of these components could require a different solution. Standardisation is an essential tool to foster interoperability but it is insufficient to achieve network interconnection and interoperability of services at international level. Furthermore, achieving a sufficient level of interoperability at the network/device/service/application level is a complex matter involving various types of actions and various types of actors.

It is suggested to use, in the context of the study, the following definition of Interoperability: “Interoperability is the ability of two or more systems to exchange information and to use the information that has been exchanged” (IEEE 90)

Questions to be addressed by the study could include:

- Can the ESOs play a co-ordinating role in this context?
- How can fora/consortia be integrated in an overall interoperability concept?
- To what extent can interoperability test beds offer a solution in solving interoperability problems?
- Would an interoperability labelling system provide an added value to users? If yes, under which conditions?
- Should public authorities, relating to their responsibility for public interest, provide a dedicated support to interoperability issues?
- Should infrastructure interoperability be covered in a different way, e.g. by ENs whilst the service level could be covered by less strict standards?
- In addition to Interoperability, the study should identify whether standardisation should address other “functionalities” such as reliability, usability, efficiency, maintainability and portability. The possible relevance of those characteristics for standardisation should be subject to policy considerations.

## **Global standards**

Information Society standardisation has by definition a global dimension. The global character of ICT will, in order to foster implementation of new services and applications, require consensus on standards.

Questions to be addressed by the study could include:

- How can consensus on, preferably, global standards and on the specific EU needs be achieved?
- How to respond to the legitimate expectation to increase the impact of EU standardisation, formal and in fora/consortia, at global level with the objective to leverage EU consensus at international level?

## **Participation in standardisation**

One of the objectives of the eEurope Standardisation Action Plan was to increase the commitment to implement standards through an increased participation of all stakeholders in the standardisation process. However, participation of SME's in standardisation may still be a reason for concern.

Questions to be addressed by the study could include:

- How is the participation of SME's in standardisation evolving?
- What are the obstacles that SME's face when implementing standards?
- Which action may be taken to further improve SME's participation in standardisation and subsequently their commitment to implementation of standards?

### **Taking into account societal needs**

While the market responsiveness of standards is a well established principle, the responsiveness of standards to societal issues, such as environment, increase of employment, security, privacy, is less evident. But the increasing importance of Internet in working and private life raises awareness on the role that these new technologies are playing. Today the Internet opens new doors to financial services, healthcare, government operations, learning etc. In the latter domains, functional security of systems, products and services should be dealt with. Implementing harmonised and widely accepted standards covering security aspects is certainly a means to build confidence in ICT security

Question to be addressed by the study could include:

- What role, if any, should social responsibility play in ICT standards setting?
- How can the participation of societal groups in the EU standardisation system be increased?

### **Consortia and fora**

The "new ICT standards landscape" has been the subject for an analysis by the ESOs. ETSI launched its High Level review with the objective to re-design the organisation to respond to the new needs. An ICT-SB Focus group has also analysed the new situation and recommended some further actions. Clearly the ESO's are trying to find ways to respond to new market needs and the increasing role that consortia and fora are playing.

In addition, the ESOs have developed various types of relations permitting to co-operate with consortia under certain conditions. Obviously the public interest is best served by the development of the most robust, open and efficient standards setting possible. In order to achieve that, all existing tools should be used in the most effective and co-ordinated fashion possible. As a consequence, the ESOs and consortia should not merely co-exist, but rethink on how to work actively together to achieve the best results and to avoid overlap.

Questions to be addressed could include:

- Is there a role for standardisation in relation to the emergence of new technologies, for instance such as Skype?

- How could the EU system present a better integration of the existing standardisation structures, considering the fact that the borders between IT and multimedia are blurring?
- If there is a need for EU standardisation to closely co-operate with Global or international fora and consortia, the study should identify the organisations with whom and on which basis co-operation should be established.
- How can these processes be integrated into a larger picture taking into account policy, market and societal needs and what would be the impact of an integration on the role the national standardisation organisations and their Responsible Authorities in the European standardisation process.
- How can the co-operation between the ESOs and the consortia/fora be improved to ensure the achievement of the political objectives and to best respond to the market needs?
- Should the EU standardisation policy interfere in these questions or leave it open to market decision?

### **New deliverables**

Further to the “standards” definition provided by the Directive 98/34 and responding to the Council Resolution of March 2002, the ESO’s have extended the catalogue of deliverables by the production of “new deliverables” to better respond to the changing market requirements. Further analysis is, however, required in view of using the “new deliverables” in support of EU legislation.

### **Consensus related to processes and deliverables**

IPR policies applicable within usually closed fora and consortia seem to be more attractive for industry than the RAND policy applied by the ESO’s.

Questions to be addressed by the study could include:

- Which is the IPR policy of standardisation processes which is best adapted to the needs of European policies and/or EU legislation?
- Can a combination of the two approaches become a reality, even in successive phases?
- Is there any possible scenario for the integration of consortia/fora in the EU system? If yes, what would be the conditions, for instance in terms of processes, IPRs, availability and use of deliverables?

### **Availability of standards**

Free availability of standardisation deliverables seems to be a critical issue for its further acceptance by industry. Except for the eEurope standards action plan, where the ESO’s concluded an agreement on free availability for download of eEurope standards, the European standards deliverables produced by CEN and CENELEC are subject to copyright and sold by the National standards bodies. ETSI standards, on the contrary, are freely available for download on the ETSI web site, and subject to copyright meaning that there is no right to modify them.

Questions to be addressed by the study could include:

- Taking into account the public interest in standards, especially in the ICT domain, to what extent can the free availability of standards contribute to raise the awareness of standards and the subsequent commitment to the implementation?
- Would it be possible for National Standards Bodies to consider the provision of additional value added services on the basis of freely available standards?

### **Open standards**

The concept of “open standards” as well as an associated definition has been suggested within the European Interoperability Framework (EIF) and IDABC policy. The objective for the concept is to provide governments with a tool to achieve interoperability within eGovernment applications. However, the concept as well as its definition, especially the IPR related aspects, are raising concerns within the various communities such as industry, standardisation organisations (formal and *de facto*), the open software community etc.

Questions to be addressed by the study could include:

- Do “open standards”, as defined in the EIF, constitute a unique solution for interoperability issues? How could the concept of open standards be integrated in the overall EU standardisation policy?
- Should the new EU ICT standardisation legal framework include the concept of open standards? If yes, a consensus should be established amongst the interested communities.
- What should be the definition and how should it relate to other non-ICT domains?

#### 4. OTHER ISSUES TO BE TAKEN INTO CONSIDERATION

Further to the issues described above which are of particular political interest, the study should also take into account some external initiatives such as:

- The upcoming review of the **US national standards strategy**. The US Federal government acknowledges that federal facilitation, creation and utilisation of voluntary consensus standards are very important for the US economy. Although, in the past, the US government policy was not to be involved in standards development, this attitude may have changed over the last years. With the globalisation of trade, the use of national or European standards was perceived as a barrier to trade for US industry and has subsequently become an issue for the US government. The US technology leadership had an impact on the US standards policy as well as the intention to make American industry more international. In addition, the events of 9/11 have led to the Homeland Security Initiative with the need for a dedicated US standards strategy.
- The recent initiatives taken by the Chinese public authorities concerning, e.g. the WiFi and technologies and the national related standards, indicate a tendency to establish Chinese regulatory standards. This initiative may have a particular importance for the EU due to the potential growth of the Chinese market and the subsequent impact of the Chinese standards on the world market.
- The national standards strategies pursued by other regions such as Canada and Australia.
- The analysis performed by the ETSI HLRG and the set of related recommendations

The questions to be addressed by the study could include:

- Taking into account the fact that the US as well as the Chinese, Japanese and other standardisation policies implement a specific promotion policy towards the national standards; what is the difference between these approaches and the EU promotion for standards policy?
- What are possible measures to improve the promotion and/or awareness of EU standardisation results to increase their impact on the global scene and to increase the commitment to implementation of those standards?