



eEurope

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The rolling action plan is the explicitly expressed support by the European Standards Organizations CEN, CENELEC and ETSI to support the eEurope 2002 – An Information society for All.

The Annex of the document can be considered as a living document with a regular update of current standardization and other related activities. The current version has been updated as far as possible, but in this fast-moving field, details may be subject to alteration: The relevant organization can provide any necessary supplementary information.

Contributions from the ICTSB partner organizations are also included in this document.

The contribution of European standardization to the eEurope Initiative

A rolling Action Plan

Version 5.3.0 (July 2002)

Introduction

"eEurope 2002 – An Information Society For All" is a political initiative aimed at ensuring that Europe can reap the benefits of the Information Society in a cohesive and non-divisive way. It intends to ensure equal access by Europe's citizens, to promote computer literacy and crucially to create a partnership environment between the users and providers of the systems based on trust and enterprise. Its ultimate objective is to bring everyone in Europe - every citizen, every school, and every company - online as quickly as possible.

The original list of eEurope objectives, proposed in December 1999 at the launch of the Initiative, was further developed on proposals of Member States and the European Parliament, and refined at the March 2000 Lisbon Extraordinary Summit. An Action Plan was approved at the European Council in Feira, Portugal, 19-20 June 2000 ¹.

The Action Plan clusters the individual action lines around three key objectives:

- 1 A cheaper, faster and secure Internet
 - a) Cheaper and faster Internet access
 - b) Faster Internet for researchers and students
 - c) Secure networks and smart cards
- 2 Investing in people and skills
 - a) European youth into the digital age
 - b) Working in the knowledge-based economy
 - c) Participation for all in the knowledge-based economy
- 3 Stimulate the use of the Internet
 - a) Accelerating e-commerce
 - b) Government online: electronic access to public services
 - c) Health online
 - d) European digital content for global networks
 - e) Intelligent transport systems

The Member States and Parliament have also requested that the Commission undertake a benchmarking exercise in the context of the action areas.

Actions are well under way to work to implement the eEurope objectives. There are political actions by the European Commission and Member States, and practical actions involving a wide circle of the actors in society. Also, European standardization has an important role to play to avoid unintended and non-interoperable sets of technical solutions. Standardization can create trust and confidence in the products and increase the market relevance.

The European Standards Organizations (ESOs) CEN, CENELEC and ETSI have the major asset of being entirely open and thus free from the pressures of competing commercial interests. Their core values are the creation of products of economic value, based on voluntary consensus of the participants and taking full

¹ CEC: eEurope 2002; an information society for all; action plan; 14/06/2000

account of the views of all interested parties. Participants in the three ESOs cover almost the entire spectrum of economic activity.

The ESOs are thus unique institutions for building consensus – other collective organizations do not have such a wide constituency. Their products are automatically available throughout the European Union and EFTA, and indeed on a wider basis. They also have a special relationship with the European community, and have proved an invaluable means of supplementing legislation with additional material.

In the field of information and communications technologies, all three ESOs have extensive current interests, existing products and programmes, including many topics that are highly relevant to the subject matter of the eEurope Initiative. Additional activities can thus be undertaken, according to the usual rules for starting such activities in the ESOs, or existing activities adjusted as far as appropriate and necessary in the light of eEurope requirements, again subject to the appropriate processes.

The three ESOs also collaborate extensively in this field, either bilaterally, or, including with certain partner consortia, if appropriate coordinated by the ICT Standards Board (ICTSB). The ICTSB members comprise the three ESOs and the [ATM Forum](#), the Digital Video Broadcasting ([DVB](#)) Project, the European Broadcasting Union ([EBU](#)), the European Committee for Banking Standards ([ECBS](#)), [ECMA](#), Intelligent Transport Systems - Europe ([ERTICO](#)), the [TeleManagement Forum](#) (formerly the NMF), [The Open Group](#), the Object Management Group ([OMG](#)), the World Wide Web Consortium ([W3C](#)), the Internet Society ([ISOC-ECC](#)) and the Global Initiative for Wireless e-Commerce ([Radicchio](#)).

Their links with both formal and informal international standardization processes are an additional asset in relation to the achievement of an eEurope that is compatible as far as possible with the requirements of the global information society.

The ESOs have welcomed the recommendation by the Ministers for Telecommunications and the Information Society to extend the eEurope 2002 Action Plan and integrate it into a new eEurope 2005 Action Plan, taken at their meeting on 22-23 February in Vitoria, Spain. It is noted that the ESOs activities already cover many of the action areas for 2005 such as digital television, 3rd generation mobile communications, e-business, e-learning electronic signatures and accessibility to all kind of electronic services (e-government, e-learning, e-business, e-health, etc.).

The ESOs have a common understanding on the following principles in support of the eEurope objectives as set down by the Action Plan agreed by the European Council in Portugal:

General principles

- 1 The ESOs collaborate with the European Commission, to identify and expand upon the aims of the e-Europe objectives, their rationale, the deliverables, and the resources needed and available.
- 2 The ESOs make every endeavour to ensure that standards work of relevance to the eEurope Initiative takes due account of the overall eEurope objectives.
- 3 The ESOs continue their traditional role of close collaboration with the European Commission on matters relating to standardization in support of European legislation. In particular, they shall seek to provide standards and specifications enabling relevant Directives to be implemented by industry in a cost-effective manner.
- 4 The ESOs request the European Commission to ensure that full account will be taken of existing and proposed activities within the ESOs in the further development of the eEurope Initiative, in order that standardization can make the most effective contribution possible, in a co-ordinated manner avoiding duplication of effort.
- 5 The ESOs maintain an overview of the relevant activities and to provide that information on web sites and/or by printed material to promote full involvement of all relevant market sectors. Regular progress reports shall be provided to the ICTSB. Other promotional activities such as conferences and seminars will be organized as necessary.
- 6 The execution of the actions is, in general, a matter for the individual ESOs except where joint activities take place. Matters arising of common impact are considered in the first instance by the relevant representatives of the three ESOs.

- 7 The activities to be carried out by the ESOs will be first and foremost open consensus-building activities, with published deliverables as the output and pan-EU implementation as a consequence.
Additional support activities may also be envisaged, including seminars, pilot implementation projects, implementation support or validation and testing activities, to feed into the open consensus-building process and enhance the quality of the deliverables.
- 8 The ESOs continue their efforts to provide full information on their products and services, as well as the necessary links to global standards organizations and fora and consortia producing relevant specifications for eEurope.
- 9 The ESOs consider with the European Commission any potential financial support, if required, towards activities related to the effective implementation of the eEurope initiative.
- 10 Annex A to the present Action Plan of CEN, CENELEC and ETSI contains the major activities to be undertaken in respect of specific subjects Further information is provided on the web sites of the participating organizations and will be updated regularly. These can be linked through the [e-Europe standards website](#).

Detailed activities

Introduction

This document represents the response of the European Standards Organizations (ESOs), CEN, CENELEC and ETSI and other ICTSB members to the [European Commission's eEurope initiative](#).

As the objectives of the eEurope initiative are not new, it should be recognized that standardization already covers most of these areas. However, the eEurope initiative allows standardization to focus on the objectives and to accelerate the effort to improve the timeliness and consistency of standardization, subject to the necessary human and financial resources being available, and to the commitment of the participants in the standardization process.

The present rolling action plan constitutes a "state of the art" on the standardization community's activities in the key areas of the initiative. These activities include not only formal, traditional European Standards, but in the ICT arena above all, other consensus deliverables, provided rapidly on an open, voluntary basis and with the full participation of all interested parties.

This rolling action plan contains a brief outline of existing or proposed activities, together with an indication of timescales. However, it should be seen as a "living document", as many of the areas of activity are under development or discussions with the market players. The ESOs will regularly update this rolling action plan as the activities progress.

It should not be assumed that standardization can play a role in every aspect of these activities, but the open consensus platforms provided by the recognized ESOs provide the means to ensure that the market is in its widest sense: Industry as providers and users of technology, service and content providers, consumers, educational institutions, national and European regulatory authorities, etc. are able to deliver practical solutions of value. Furthermore, the ESOs are present in the international arena. They are in the position to uniquely federate and co-ordinate the outputs of other consensus organizations.

The following detailed information on standards of relevance and activities underway follows the structure of the Commission's action plan with its key areas and objectives.

Detailed information on the actual work programmes can be obtained from the CEN, CENELEC and ETSI web-sites. ETSI has specifically identified the items of eEurope-relevance as on web-page <http://www.etsi.org/eeurope/home.htm>. Information on CEN/ISSS activities may be obtained from <http://www.cenorm.be/issss>.

Most of the standards documents produced in support of the eEurope initiative can be downloaded directly from the websites of the members of the ICTSB. European Standards from CEN and CENELEC may be purchased through their respective national members.

ECBS is the European Committee for Banking Standards. The organisational structure of ECBS comprises four Technical Committees (TCs):

TC1 Payment Cards and Related Devices

TC1 aims at representing the European banking interest in the payment cards' domain. It works closely with the major card schemes to avoid duplication of effort and monitors and participates in the work of other relevant standardisation bodies.

TC2 Automated Cross Border Payments

TC2 is responsible for facilitating the automation of cross-border means of payments other than card based. Their work is designed to enhance the business opportunities presented to banks as a consequence of the single market and the European Monetary Union. Their primary aim is to facilitate STP transactions.

TC4 Security

TC4 focuses mainly on information security aiming to provide guidelines on security matters for the banking industry and to act as advisory body for the other Technical Committees.

TC6 Electronic Services

TC6 was established at the beginning of 2000 and takes a business view of electronic services representing the European banking requirements in this domain and establishing working relationships with relevant groups and national banking organisations.

In 2002, ECBS is focusing on the further development of electronic services like mobile payments, electronic Payment Initiator and bank trust services. ECBS co-operates with the ICTSB partners with a specific interest in smart cards and other security aspects and is in active liaison with ETSI and other bodies to monitor activities and to ensure that the interests of the banking community are sufficiently recognised. More information about ECBS is available at <http://www.ecbs.org/>.

ECMA, *Standardizing Information and Communication Systems*, directly and indirectly contributes to eEurope with work on several international ICT standardization projects. All ECMA Standards and Technical Reports have been made publicly available free of any charge and freely copyable, since the establishment of ECMA in 1961. Most ECMA publications are also available as ISO/IEC and/or European publications.

The World Wide Web Consortium (**W3C**) develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential. W3C is an international consortium with organisations [3] from over 34 countries contributing to define and promote universal languages and protocols, which ensure interoperability and the homogenous, decentralised and standardised development of the Web. W3C's numerous activities range from Web architecture (XML family of technologies), Universal Access (Device Independence, Internationalisation, etc.), Technological and Societal issues, Web Accessibility and Usability, to Web Services and Semantic Web technologies.

1 Objective 1 A cheaper, faster and secure Internet

1 a) Cheaper and faster Internet access

CENELEC contributes to the action line with three major infrastructure technologies:

- With the digitalisation of Cable TV networks and the introduction of the return channel, these networks can provide high-speed Internet access. Most of these standards are already available in the EN-series 50083.
- Power Line Communication is still a relatively new activity within CENELEC/SC 205A. The technology can be used in the access network as well as in-house to support Internet access.
- CENELEC/TC 86A activities relate to optical fibre and optical fibre cables.

The standardization for these technologies require close co-operation with ETSI. CENELEC focuses on the physical layer while ETSI deals with the layers above this. There is also a need to consider radio aspects such as EMC and spectrum management together.

Amongst the portfolio of ETSI deliverables, there already exists a number of ENs and specifications (including conformance testing) related to telecommunications networks (fixed and mobile) covering the PSTN, ISDN, Broadband ISDN, ADSL, XDSL, ATM, satellite, mobile/radio networks (e.g. GSM, UMTS, Third Generation, DECT, TETRA, BRAN, TIPHON, TM, AT, PLT, SPAN, Broadcast) and cable TV. ETSI Technical Bodies continue to work in these areas.

Market-driven standardization activity continues and is performed in a partnership between Network Operators, Service Providers, Manufacturers, Administrations and Users. Work on technical specifications is underway in various Technical Bodies. In addition, partnership projects for a global approach, such as the 3GPP for the mobile area (IMT 2000), have been adopted. The specifications in this latter area are produced in quarterly releases to allow speedy maintenance and to enable the deliverables to be strongly influenced by those players providing products and services in new fields. The 3GPP Release 2000 shall exclusively support IPv6 in the upper layers (addressing area and certain multimedia services). Both IPv4 and IPv6 can be supported in the other specifications from Release 1999 and this will continue for Release 2000.

The development of GPRS standards is already resulting in implementations and the provision of services. With this, the Internet becomes mobile and paves the road for UMTS.

Work is continuously being performed. The major work in the area of mobile communications (3GPP) is expected to lead to up to 1000 deliverables over the next 18 months as releases are agreed and then maintained by the partners.

The global promotion of ETSI Harmonized Standards and other deliverables, including the work of ETSI AT, will result in cheaper access. ETSI BRAN is developing a number of scenarios that are of relevance. Much of the present work on cable modems performed by CENELEC/EBU/ETSI JTC Broadcast will contribute towards cheaper access. JTC Broadcast also processes DVB specifications for becoming ETSI deliverables. This is especially important to SMEs and at the domestic level. ETSI DECT has also been working on DECT/IP standards and DECT in the Local Loop (<http://www.etsi.org/technicalactiv/DECT/dect.htm>). ETSI PLT (Power Line Telecommunications) work will provide high-speed local loop solutions, hence high speed IP access at around 10 Mbit/s. In February 2001, ETSI increased its effort to specify IP Cable Communications (see http://www.etsi.org/technicalactiv/IP_Cable/lpcablecommunications.htm). With the members and partners from cable network industries, a new alternative access technology of global relevance is on the way. IP Cable Communications aims at the use of CATV networks for all types of telecommunication services, first of all Internet telephony and Internet access with high-speed data transmission. It is an alternative to other technologies in the local loop. Competition with alternative solutions will be a major driving force. ETSI SPAN is involved in trying to establish clearer control protocols for xDSL. ETSI TIPHON as a project covers a broad range of issues and will play a major role. ECMA TC32 also addresses some of these issues from an enterprise network perspective. ETSI TM (especially TM4 and TM6) are heavily involved in work on ADSL and xDSL (<http://www.etsi.org/technicalactiv/xDSL/xdsl.htm>). This will be an important area and specifications are being written for the transport layer.

There is a strong desire to achieve the goal of providing high-speed access at lower cost and to make more effective use of radio frequencies. ETSI is in the process of renegotiating the MoU with ERC (now ECC) in order to formalize the improved representation with the frequency managers. This will help to streamline the process of searching for new frequencies.

However, re-farming frequency spectrum is not a speedy process because of the economic factors present. The frequency spectrum is subject to international regulations agreed in World Radio Conferences, and modifying international agreements is notoriously slow.

The Commission has taken an initiative to give a legal status to harmonization measures taken by the ERC (now ECC), see the draft decision on a regulatory framework for radio spectrum policy in the European Communities (com(2000)407):

http://europa.eu.int/comm/information_society/policy/framework/index_en.htm

http://europa.eu.int/comm/information_society/policy/spectrum/index_en.htm.

ETSI provides input on frequency issues at the European level via liaison between ETSI ERM and the CEPT/ECC (formerly the ERC) Electronic Communications Committee.

ETSI STQ (Speech processing, Transmission & Quality aspects) deals with quality issues and other quality of service aspects have also been handled in work under the ONP directive. ETSI TIPHON (Telecommunications and Internet Protocol Harmonization Over Networks) is also dealing with aspects of Quality of Service with some published work and new activities underway. Much of this work is the result of input from ETSI STQ and network connection aspects are still under study. However, it is not only the infrastructure that needs to be acted upon, but also the service – hence a CEN/ISSS Workshop has been started on Internet Quality of Service.

ETSI recognises that several types of infrastructure are required to meet the objectives set (e.g. seamless services). Other market-accepted technologies include Bluetooth, WAP and IEEE Radio LANs. ETSI has liaisons with these groups and it may be possible to stimulate the achievement of the objectives set for eEurope through the use of the ETSI PLUGTESTS/Interoperability events.

ETSI is the forum where integration and convergence issues for fixed, mobile and TV standardization are handled.

W3C is dedicated to ensure that the Web universe is not fragmented:

The **W3C** and its Members are well-positioned to lead development in **mobile Web** to avoid incompatibility and achieve single Web authoring. The **W3C Device Independence** Activity is working to ensure seamless Web access with all kinds of devices, and world-wide standards for the benefit of Web users and content providers alike.

1 b) Faster Internet for researchers and students

The work from ETSI mentioned under 1a) above can be used by operators and providers when implementing such facilities. Also worth noting is the high-speed network infrastructure being developed for ATM (<http://www.etsi.org/technicalactiv/ATM/atm.htm>).

W3C's mission is to lead the Web at its full potential:

Since its inception in 1994, **W3C** has provided breakthrough and widely adopted technologies, such as HTML to make it easy to publish on the Web. The HyperText Markup Language - is the lingua franca for publishing on the World Wide Web. Having gone through several stages of evolution, today's HTML has a wide range of features reflecting the needs of a very diverse and international community wishing to make information available on the Web.

As of July 2002, W3C has published about 47 Recommendations. As W3C's family of specifications gets more complex, their acceptance and deployment on the market becomes an ongoing challenge. Past experience with HTML, CSS and more recently SMIL, all implemented with various degrees of conformance by vendors, were strong incentives to start the **Quality Assurance** Activity with due diligence.

1 c) Secure networks and smart cards

In relation to the Communication on "Network and Information Security: proposal for a European Policy Approach" [COM(2001)298 final], CEN and ETSI will collaborate to produce a report that will evaluate existing security standards, identify possible standardization gaps with respect to this Communication and include recommendations for standardization. The scope of this report will aim to cover the entire domain of Network and Information Security, beyond the existing work areas of smart cards and electronic signatures. A first meeting of the joint CEN/ETSI Group is planned for 4 July in Brussels.

Smart cards are an important part of any infrastructure as they offer a secure method that can be used to access services, authenticate devices and applications as well as store applications for local use. Common specifications that do not depart from emerging market-driven standards are valuable. The current work on electronic signatures is extremely relevant. Public Key Infrastructures (PKI) is a major aspect for the future deployment of smart cards and this area will be given priority.

Smart cards and security have been the subject of intense standardization activity for many years, and their importance is unquestioned. They ensure an inter-operable set of standard parameters that can be used with confidence not only by consumers but also by the business community. Problems from a lack of security (perceived or not) are all pervasive; standardization is a vital tool in ensuring adequate protection against potential disaster and recovery from it.

ESOs are participating as actively as possible in the Smart Card Charter Initiative, which is setting industry-driven requirements for standardization and other activities. They will seek to inform the Initiative participants of existing standards and consortia specifications, and of work under way, in order to avoid

duplication of efforts. In particular, the ESOs are providing the Secretariat to the Smart Card Charter Steering Committee, including a Secretary, e-mail excluders for the "Trailblazer" Working Groups, and the Charter web-site (<http://eeurope-smartcards.org/>)

The following are the present and immediately foreseen areas of activity within European Standardization on smart cards, electronic signatures and data protection and privacy:

Smart cards:

- **CEN TC224** – Machine-readable cards, related device interfaces and operations (<http://forum.afnor.fr/afnor/WORK/AFNOR/GPN2/Z15Y/indexen.htm#TC224>)

CEN TC224 is concerned with the organization, co-ordination and monitoring of the development of standards (including testing standards) for cards, related device interfaces and operations with special emphasis on inter-industry standardization and on Integrated Circuits Cards, and without restriction to payment cards or bank cards.

The aim of the TC is the organisation, the co-ordination and the monitoring of the development of inter-industry standards with a special emphasis on integrated circuit cards systems.

For certain sectors such as healthcare, transport, CEN/TC224 has established specific WGs and has developed sector oriented standards:

- WG10 Banking: Electronic Purse;
- WG11 Surface transport applications: standards for Driver license, Electronic fee collection, Interoperable public transport application, Electronic tachograph;
- WG12 Health applications: logical data structure, concept and organisation for the different cards of this sector.

- **CEN/ISSS WS Embedded FINREAD** - following the results of the FINREAD Workshop which has produced specifications for a secure IC card reader for bankcard payments and remote banking services delivered over the Internet and open networks (published as CWA14174: 2001), the Embedded FINREAD Workshop will produce specifications for a device that would offer to the cardholder the same convenience and the same level of security, whatever the card acceptance device appears to be. . Furthermore, Embedded FINREAD would provide the same interoperability of applications independently of the card acceptance device.

□

The Embedded FINREAD Workshop intends to concentrate on mass market of IC acceptance terminals such as Mobile phones, PDAs and Set-top boxes <http://www.cenorm.be/iss/Workshop/embedded-finread/Default.htm>.

- **CEN/ISSS Workshop URI** - This workshop aims to extend the work carried out in [CWA 13987:2000](#) Smart Card Systems: Interoperable Citizen Services: User Related Information (based on DISTINCT) from the standard smart card conforming to ISO 7816-4 to the newer program loadable multi-application smart cards such as JavaCard and MULTOS and to their putative management systems such as the Global Card Platform. Since there are no standards covering these cards management systems which are all mutually incompatible, part of the activity will be technical and part political to bring the parties together. In this task the workshop will work closely with the eEurope Smart Card Charter Trailblazer 7 – Multi-application Smart Cards which is seeking specifically to harmonise these differing systems.

- **CEN/ISSS Workshop FASTEST**

The FASTEST Workshop has the following objectives:

1. To produce guidelines and workshop agreements that support citizens' ease of use of ICT services by developing a consistency of user experience in the use of the smart card as an access token in European public transport and across other "associated" economic sectors such as parking, road user charging, leisure, sports and culture.

2. Assist public transport authorities and companies in adopting the concept of interoperability between smart card based products and systems in support of seamless travel by producing guidelines and workbooks.

This work is in close collaboration with Trailblazer 9 of the Smart Card Charter Initiative.

- **CEN TC251, CEN TC278** – work on use of smart cards in applications for healthcare and road transport telematics (<http://www.cen251.org>; <http://www.nen.nl/cen278/>)
- **CENELEC TC206** – consumer equipment for entertainment and information and related sub-systems: the use of smart cards for video on demand and similar applications
- **ETSI Project Smart Card Platform (SCP)** - This ETSI Project (EP), based on the re-organization of existing activities, produces multi-application framework specifications, to support multiple access technology applications on the common platform and a core toolkit specification to enhance security to support mobile commerce. This EP is the custodian of the Subscriber Identity Module for SIM card, which is the most widely deployed smart card ever. The EP draws upon a wealth of experience from its industry members who have already drafted a complete set of specifications for a smart card (the SIM) terminal (mobile) and their interface, breaking new ground both technologically and commercially.

The EP provides the core specification and common platform for all “next –generation” smart cards. The enhanced versions of the specifications are critical to the successful implementation of the eEurope Smart Card Charter. The work of this EP is supported at an international level by a large number of standards bodies and initiatives from all around the world.

Ongoing and future work will enhance the features and facilities towards a UNIVERSAL Integrated Chip Card (UICC).

- **ETSI SAGE** works in the field of cryptographic algorithms and protocols specific to fraud avoidance/unauthorized access to public/private telecommunications networks and user data privacy. The output may be open or confidential. Work completed has included algorithms for DECT, GSM, TETRA, audiovisual services, GPRS and UPT.
- **EESSI** - two projects in the context of electronic signatures specifically related to smart cards: together with Trailblazer 2, the publication of a pre-inventory of smart card based PKI projects in Europe; together with Trailblazer 12 (?), the specification of an Application Interface for Smart Cards used as Secure Signature Creation Devices (the E-Sign Directive is technologically neutral - this is a smart cards based solution for a SSCD).

Electronic signatures:

The European Electronic Signature Standardization Initiative (EESSI) – the results have been presented to the Article 9 Committee established under Directive 1999/93/EC. The ESOs will consider the requirements for any subsequent additional work required by the market, including, but not exclusively, the medium-priority items already identified, and prepare further standardization proposals accordingly. Technical work is performed in CEN/ISSS WS E-SIGN and ETSI ESI.

ETSI ESI and ETSI LI are focused on ensuring the authenticity of transactions and providing interoperability for PKIs as well as assisting in the prevention of fraud. They are the Technical Bodies within ETSI carrying the main responsibility for security infrastructures and services in the telecommunications environment. The Electronic Signature and Infrastructure (ESI)

(http://www.etsi.org/technicalactiv/Electronic_Signature/ElectronicSignatures.htm) and Lawful Interception (LI) are the bodies dealing with ETSI activities related to the EESSI Work Programme.

ETSI ESI and LI are co-operating with ECBS' Technical Committee “Security” based on a recently signed co-operation agreement.

CEN/ISSS WS/E-SIGN was formed to carry out the aspects of the EESSI work programme dealing with quality and functional standards for signature creation and verification products, as well as quality and functional standards for Certificate Service Providers (CSPs) (<http://www.cenorm.be/iss/Workshop/e-sign/Default.htm>).

ECBS will make consolidated input so that the interests of the banking community are sufficiently recognised. EESSI standards are taken into account in ECBS recommendations and reports.

Key meetings of CEN/ISSS WS/E-SIGN and ETSI ESI are co-located to maximise collaboration. The EESSI Steering Committee is co-ordinating further activities, including major programmes of seminars on different aspects, and the follow-up to the recent submission of the initial EESSI deliverables for consideration by the Article 9 Committee established under the Directive (<http://www.ict.etsi.fr/eessi/EESSI-homepage.htm>).

W3C lays down the foundation of Web Security:

Technical building blocks available across the Web are a necessary, though not by themselves sufficient to ensure that the Web is able to respond to fundamental public policy challenges such as privacy, security, and intellectual property questions. **W3C's** work in security on the Web include **XML Signature**, **XML Encryption**, and **XML Key Management**. For years W3C, in co-operation with the IETF, has done work which lays the foundation for Web Security, including "Web Services" Security. **W3C's** three Web Services Working Groups are working on SOAP 1.2, evaluating WSDL, and developing an extensible model of Web Services Architecture.

To harmonize the Web with new developments around electronic signatures, W3C created a liaison with the ESSI Initiative from ETSI and CEN. W3C provided support and feedback for the XML format of ETSI TS 101 733, which was produced by ETSI (XADES/TS 101 933).

Personal data protection/privacy-enhancing technologies:

The ESOs will complete their consideration of the possibilities for market-driven standardization activity in support of personal data protection and privacy, in support of Directive 95/46/EC. Subject to public consultation, additional standardization activities will be started and brought to a conclusion as appropriate. CEN/ISSS current activity, in response to a mandate from the Commission and EFTA. CEN/ISSS has current proposals (the Initiative for Privacy Standardization in Europe) for this assessment to be carried out, in response to a mandate from the Commission and EFTA. This work has now started, and a first draft report is now on the web for public consultation (<http://www.cenorm.be/iss/Projects/DataProtection/dp.default.htm>).

W3C cares about privacy of an individual's personal data

W3C's work currently focuses on privacy practice disclosure with respect to data collected through Web interactions. W3C's Platform for Privacy Preferences Project (P3P) enables Web sites to express their privacy practices in a standard format that can be retrieved automatically and interpreted easily by user agents. P3P enables the development of a whole new class of Web tools and services that will help users protect their privacy while streamlining e-commerce. The fact that the Web now has a standard language for describing privacy practices will enable a new level of transparency in Web-based interactions.

2 Objective 2 Investing in people and skills

2 a) European Youth into the Digital Age

The bulk of the target issues relate to policy implementation by national authorities. In general terms, standardization requirements are covered by generic standards.

Following a Mandate issued by the Commission to identify a work plan for Learning Technology standardization in Europe, WS/LT was launched in 1999. Its initial activity was the preparation of a report with recommendations for a European standards-related activity.

Deliverables following these initial recommendations are now being finalized for delivery by July 2002:

A report on standardizing an educational modelling language, deliverables addressing specific European requirements related to the IEEE Learning Object Metadata standard, a study on Quality Assurance in the new eLearning environment, a focal register of repositories and taxonomies relevant to a European learning

society, a standard to enable to describe end-user's language capabilities, and a report with guidance on Educational Copyright Licence Conditions.

New work will soon commence to address access for ALL to learning resources, the learner profile (to influence the international developments in view of certain European specific sensitivities e.g. privacy aspects), an interoperability framework for the exchange of school management information and the provision of a learning technologies standards observatory. And further in the pipeline is more work on quality (i.e. a common (process oriented) European Quality Framework standard), more work on vocabularies and taxonomies, as well as the creation of a focal repository that will facilitate access to various existing Learning Object repositories.

In Europe, WS/LT has established contacts with the PROMETEUS Memorandum of Understanding (<http://www.prometeus.org>) and more recently with the Industry ELIG group, who both are providers of requirements of learning technologies standardization.

Internationally, WS/LT has a close liaison with the IEEE LTSC (learning technologies standards committee). WS/LT has also A-liaison status in ISO/IEC JTC1/SC36, enabling to directly feed documents into the ISO/IEC approval process. Close contacts are also being established with the JTC1/SC36 Mirror Groups at national level.

Finally, technical specification providers such as the Ariadne Foundation and IMS are actively participating in the work of WS/LT.

ECMA works on Media/Information carriers

Some 35 standards on new and existing technologies for magnetic tapes (12,7 mm, 8 mm and 3,81 mm) and tape cartridges have been approved by ECMA as well as by ISO/IEC: LTO, SDLT, AIT. The annual tape drive market is about US\$ 3 billion, the tape media market is even bigger: 89 % of this market is covered by ECMA Standards.

In the field of optical disks ECMA has published the first (DVD-RAM and DVD-RAM Case) of the 2nd generation DVD disks; other 2nd generation DVD standards (DVD-RW and +RW) are under preparation. This work is executed in close co-operation with the DVD-Forum, which has over 175 members (industries, content providers, etc.), and another industrial group. The total number of optical disk standards published by ECMA is about 25.

A request has been made to ISO/IEC to make all these 60 standards available free of charge from the ISO web site, in the same way as ECMA (similar to the corporate telecommunications standards, see below).

W3C enables a Cooler Web:

W3C listens to end-users and works toward providing a solid framework for the development of a Cool Web through languages such as the Cascading Style Sheets (**CSS**), the Extensible StyleSheet Language (**XSL**), the Scalable Vector Graphics (**SVG**) language and the Synchronized Multimedia Integration Language (**SMIL**).

2 b) Working in the Knowledge-based Economy

Most of the core issues related to this target are for regional, national and local administrations, as policy actions and the like. Present standardization activities are relatively few, except for those specified in section 2 a) above.

However, there may be some possibilities for new actions in respect of the “standardization” of certain basic qualifications, in particular in relation to basic IT skills. The ESOs are willing to discuss the possibilities further with the Commission services.

The ESOs shall collaborate with the Career Space Initiative (<http://www.career-space.com>) concerning the harmonisation of generic skills profiles and curriculum development for the ICT industry and participate in the Initiative's Steering Committee, with a view to the submission of future documents for consensus approval in a CEN/ISSS Workshop.

In particular, the results of the Career Space Initiative (<http://www.career-space.com>) concerning the harmonisation of generic skills profiles and curriculum development for the ICT industry may be candidates for "standardization".

A new CEN/ISSS Workshop was launched on 24 June 2002 to produce good practice guidelines to promote the introduction and take-up of Knowledge Management practices in SMEs (<http://www.cenorm.be/iss/Workshop/KM/Default.htm>).

W3C leads the Semantic Web:

For the Web to reach its full potential, it must evolve into a **Semantic Web**, providing a universally accessible platform that allows data to be shared and processed by automated tools as well as by people. The **Semantic Web** is an initiative of the **W3C**, with the goal of extending the current Web to facilitate Web automation, universally accessible content, and the 'Web of Trust'. The finality is to be able to express ourselves in terms that our computers can interpret and exchange.

The Resource Description Framework (**RDF**) is a language designed to support the Semantic Web, in much the same way that HTML is the language that helped initiate the original Web. **RDF** provides common structures that can be used for interoperable XML data exchange. **RDF** follows the **W3C** design principles of interoperability, evolution, and decentralisation.

Automated tools can use common sets of terms called ontologies to power services such as more accurate Web search, intelligent software agents, and knowledge management. This work is conducted by W3C's Web Ontology Working Group (**OWL 1.0**).

The Semantic Web Activity is sponsored by European and US research funds.

2 c) Participation for all in the knowledge-based economy

At the Lisbon summit (23/24 March 2000), a workshop entitled "Citizens with Special Needs", established as part of eParticipation, made a key conclusion: access for all citizens in eEurope will only happen if there is legislation, and standards to support that legislation.

Standardization aspects in this area have been recognised as being of vital importance. Requirements for standardization for **design for all and assistive technologies** have been extensively addressed in response to a mandate (M/273) from the European Commission and EFTA. The mandate requests the identification of standards needed to make the Information Society accessible to everyone, including the elderly and people with special needs. The proposed work programme was to take due account of the results of relevant EU-supported R&D projects, *inter alia* under the TIDE and Telematics Application Programmes, and of the international dimension.

A report (<http://www.ictsb.org/Activities/Design.htm>) has been produced on behalf of the ICT Standards Board (ICTSB), and was presented in March 2000. The ICTSB members have evaluated the report's recommendations and some action has already been undertaken.

The recommendations of the report cover a very large number of current ICT standardization activities in all three ESOs as well as making proposals for new activities. They have been split into a number of specific subjects: Communication Devices, Digital Broadcasting, Way finding, Internet and Electronic Commerce, Personal Information Appliances, Personal Computers, Public Access Terminals, Services – Voice, Smart Cards, and Smart Housing. . Work has started in the ESOs towards the execution of these recommendations.

Coordination of the work happens in the Design-for-all and Assistive Technology Standardization Co-ordination Group (DATSCG), established under the auspices of the ICTSB. In addition to the providers of the standards and specifications such as the ESOs, membership also encompasses specialist organizations such as ANEC, the European Disability Forum (EDF), and the Association for the Advancement of Assistive Technologies in Europe (AAATE). Through this coordination group, industry also expects to maintain a dialogue with the various DGs of the European Commission involved in Accessibility, in order to understand

their priorities, to receive policy statements and plans regarding DFA regulations in the ICT context, and to inform them on standardisation initiatives.

In the context of "2003 the year of the disabled", CEN, CENELEC and ETSI have chosen "Accessibility for All" as the subject of their yearly standardization conference. This conference will take place on 27 and 28 March 2003 in Nice, France.

Groups in Europe working on standardization for people with special needs:

- **CEN/TC 224 - Machine-readable cards, related device interfaces and operations**

Working Group 6 of CEN TC224 covers the man-machine interface. As a direct follow-up to the recommendations of the ICTSB report the following draft Standards are expected before the end of 2002:

- An extension of the accessibility principles as provided by EN 1332 ('Identification card systems-man machine interface') to other users such as children and people with a combination of disabilities. The deliverable will be a standard on the definition of physical accessibility, including wheelchair access, to card reading devices.
- An Annex to EN 1332-1 containing icons, symbols and pictograms that are easily interpretable. These icons, symbols and pictograms will be made available in non-visual modes, in response to specific requirements of visually impaired users. ECBS members are actively taking part in this work.
- A Standard to enable "Selecting Cards by Touch" (basically different cards should have different tactile embossing).

In the domain of man-machine interface and in close relation with the project "Design for all and assistive technology", TC224/WG6 is currently developing 3 standards:

- Provision for physical accessibility to card reading devices in an inter-industry approach. A Project Team (TC224-PT06) was established on June 19, 2001;
- Icons, symbols and pictograms for card reading devices in inter-sector environments. . A Project Team (TC224-PT05) was established on June 19, 2001;
- Tactile identifier for differentiation of applications supported by a card.

- **CEN TC 278 – Road Transport and Traffic Telematics**

Working Group 3 of CEN TC 278 on public transport ticket vending machines is working on standardisation for people with special needs

- **CEN TC 293 – Technical Aids for disabled persons**

- **CEN/ISSS Workshop on design for all.** The main current work item in this Workshop is the to development of ICT sector specific design-for-all guidelines to the CEN standardization community, based on ISO/IEC Guide 71. The Workshop will also start looking into the requirements of ICT Assistive Technology standardization. Measures are also in place to promote and facilitate the participation of the user/consumer/disabled community in this Workshop.

- **CENELEC TC 205 – Home and Building Electronic Systems (HBES)** is the main European contributor to the "Intelligent Homes" standardization. It got therefore the task from the ICTSB to co-ordinate this field of standardization.

- **CENELEC TC 79 – Alarm Systems** contribute also to Intelligent Homes and Buildings because and the use of networks.

- **CENELEC** is also taking up the **Digital Broadcasting for All** with subtitling and audio description.

- **ETSI AT - Access and Terminals**

- **ETSI HF** – ETSI HF (Human Factors) has the responsibility to consider the needs of all users, including disadvantaged groups (e.g. the elderly and disabled). ETSI HF develops standards and guidelines dealing with ease of use and accessibility of telecommunication equipment and services and provides solutions to empower those groups facing difficulties. They have produced a number of guides with recommendations (e.g. the setting of ground rules for evaluating the usability of the design of telecommunications services to be used for manufacturers developing a special infrastructure for the disabled community). It has been indicated that Industry implements the recommendations especially in the next generation of mobile networks. TC HF also provides expertise from the telecommunications arena in the field of smart card design and have provided liaison to the CEN TC 224 Working Group dealing with banking cards.

TeleCare is a new subject, which relates to Human factors in the Intelligent Homes and Buildings context but will go beyond that and consider TeleCare anywhere.

- **ETSI STQ** – Speech processing, transmission and quality aspects with its work on speech recognition.

W3C hosts the Web Accessibility Initiative (WAI):

WAI, in co-ordination with organisations around the world, pursues accessibility of the Web through five primary areas of work: technology, guidelines, tools, education and outreach, and research and development. Because Web accessibility is a problem on many levels, **W3C's WAI** has five levels of work:

- ensuring that Web technologies support accessibility,
- developing guidelines for accessibility,
- developing tools to evaluate & facilitate accessibility,
- conducting education and outreach,
- co-ordinating with research and development.

W3C is working on expanding the Web with Voice Technologies:

People will be able to interact via spoken commands and listening to recorded speech, synthetic speech and music. This will also benefit people with visual impairments or needing Web access while keeping their hands and eyes free for other things.

The **W3C** is defining a contribute to the **W3C Speech Interface Framework**. It is composed of a suite of markup languages covering dialog (VoiceXML 2.0); speech synthesis (Speech Synthesis Markup Language); speech recognition (Speech Grammar, Stochastic Language Models, Semantic Interpretation for Speech Recognition, Natural Language Semantics); call control (Voice Browser Call Control: CCXML)

W3C addresses Patent Issues and the Web:

The mission of the **Patent Policy** Working Group (PPWG) is advise **W3C** on the means to address the growing challenge that patent claims pose to the development of open standards for the Web. Fear, uncertainty and doubt surrounding patents related to technical standards have been shown to be an unacceptable barrier to widespread implementation. The **Patent Policy Framework** aims to require clear disclosure of essential patents and predictable licensing terms for patents needed to comply with **W3C** Recommendations.

Internationalization effort at W3C to help interoperability and global communication:

The Web was originally developed to enable people throughout the world to communicate with one another. Having a single system that can deal with all languages and cultures has many advantages: when the same protocols are used everywhere, the same software can likewise be used. It needs to be easy to create and process information for a wide range of audiences: to publish material and exchange data in Arabic, Chinese, French, Japanese, Korean, Hebrew, or Thai. The **W3C's Internationalization** Activity make Web technologies work with the many writing systems, languages, and cultural conventions of the global community.

3 Objective 3 Stimulate the use of the Internet

ECAM contributes with enabling factors to the use of the Internet:

Computer Supported Telecommunication Applications (CSTA Phase III)

The redefinition of the CSTA protocol in XML has been published as ECMA-323, in addition to the existing definition in ASN.1 published as ECMA-285. The CSTA group is directly co-operating with W3C on the CCXML version of Voice Browser Call Control using CSTA functionality, and with IETF on SIP.

Telecommunications interworking

A special effort has virtually been completed to harmonize the 65+ ECMA Standards on QSIG published also both by ISO/IEC and ETSI. The QSIG standards for corporate networking between different switches serving the various sites of a corporation reflect the continued importance of standards in this field. Other publications include QSIG profiles for Virtual Private Networks (VPN) and for Air Traffic Systems, a QSIG call identification and linkage feature, and a QSIG simple dialogue service for conveying keypad and display information to/from devices such as message centres. Work is also under way for enhanced support of message centres.

Three Standards on interworking between QSIG and H.323/H.450 (generic support for supplementary services, call diversion supplementary services and call transfer supplementary services) have been published.

Two standards on QSIG-H.323 interworking and on tunnelling QSIG through H.323 networks have been published.

Work on the use of QSIG with the Internet Engineering Task Force's Session Initiation Protocol (SIP) and on mobility in IP-based corporate networks is ongoing.

The set of 65+ QSIG Standards is now also available free of charge from ISO/IEC.

Programming and scripting languages

ECMAScript remains the leading international standard (ECMA-262, ISO/IEC 16262) for scripting languages and is continuously further developed and refined: a new highly extended new version of the language will be published at the end of 2003. A subset of ECMAScript for use in low-capacity devices, e.g. WAP devices, mobile phones, etc.: has been published in June 2001 as ECMA-327.

The standard ECMA-334 for the new object oriented language called C# (pronounced as *Csharp*), based on the 'family' of C and C++, has been published in December 2001.

The standard, and a TR, for the new technology called Common Language Infrastructure (CLI) have been published in December 2001, as ECMA-335 and TR/84, resp.

CLI is a runtime environment designed to accommodate many devices, languages and platforms. It contains:

- A file format;
- A common type system;
- An extensible metadata system;
- An intermediate language;
- Access to the underlying platform;
- A factored base class library.

Work on a standard for the object-oriented programming language Eiffel has started. The first definition of the language took place in 1985; the current version is not far away from the 1985 version. The language is used both for several (large) applications and for educational purposes at universities. The newest version of Eiffel, just like C#, runs on CLI as well.

The goal is to publish a standard in December 2003.

The World Wide Web Consortium (**W3C**) creates Web standards. **W3C**'s mission is to lead the Web to its full potential, which it does by developing technologies (specifications, guidelines, software, and tools) that will create a forum for information, commerce, inspiration, independent thought, and collective understanding.

W3C is the home of XML:

XML is a low-level syntax for representing structured data. One can use this simple syntax to support a wide variety of applications. The **W3C** XML Activity, started in June 1996, culminated in the **W3C XML 1.0** Recommendation, issued February 1998 (revised Oct 2000).

The rapid growth of XML applications and the rapid development of new auxiliary specifications have led **W3C** to add new features to the already large family of **XML** specifications : XInclude, XQuery, XLink, XML Base, XPath, XML Infoset, XML Fragment Interchange, XML Schema, XPointer, etc.

3 a) Accelerating e-commerce

The **ESOs** re-affirm their willingness to consider with the Commission services the possibilities for market-driven standardization to support other existing or proposed Community legislation in the information society field, notably that on copyright and legal aspects of electronic commerce. In this context, the ESOs view electronic commerce in the broadest context, from simple trading up to complex industrial collaborations extending over many years, throughout the life of major capital assets such as buildings, ships and aircraft.

The approach in the Commission's Action Plan is mainly from a business-to-consumer perspective, although the major added value from electronic commerce is in the business-to-business and business-to-administration environment. The success of standardization in this arena will have a beneficial effect on business-to-consumer transactions as well.

Within CEN/ISSS, work on e-Commerce is being carried out in two main groups: the Workshop on e-Business Board for European Standardization (WS/eBES) and the Electronic Commerce Workshop (WS/EC).

eBES was formed through the merger of former EBES and XML/EDI Workshops. Its major objective is to create within Europe a central point focusing on the latest technologies used for the exchange of electronic business data.

It provides information about new standardized technologies in this field fosters their use and participates in or provides input to the new framework for business exchange using XML defined by the ebXML Initiative. This Initiative is a collaboration between the industry consortium OASIS (Organization for the Advancement of Structured Information Standards) and UN/CEFACT (United Nations Center for Trade Facilitation and Electronic Business), with the involvement of ANSI's X.12 EDI community.

eBES continues to provide the traditional EDI message consensus building for as long as that service is required, acting as the European arm of the UN/CEFACT process, but it will also interact with any new global institutional arrangements that will be created.

Particular emphasis is be placed on the role SMEs can play, without neglecting the large enterprises which have already made huge investments in e-Commerce and want to exploit these further.

The Electronic Commerce Workshop provides an open and flexible framework for market players (manufacturers, service providers, users, research bodies, administration, etc.) to identify and progress e-commerce standards and standards-related issues.

As electronic commerce impacts on all business processes, a common, multi-sectoral approach is crucial for ensuring interoperability between technical solutions which need to be implemented across businesses and value chains. CEN's EC Workshop offers a coherent and cohesive focus for e-Commerce standardization at a European level, within the context of global standardization activities.

The basic scope of the EC Workshop's technical projects is the core elements of e-Commerce, together with strategy and awareness activities, which promote and complement the technical work. Dedicated groups are set up to deal with specialist topics.

Recent activities include the update of a CEN Workshop Agreement on Frameworks, Architectures and Models for e-Commerce Projects underway include 'E-Commerce Integration Meta-Framework' (ECIMF) 'e-wallets' (there are a large number of electronic wallet systems in existence, and no standardization), "Open Source" (developing a model for Open Source Supply Chains), Directories for Electronic Commerce.

New activities include the publication of a guide to electronic signatures for SMEs (in collaboration with the European Electronic Signature Standardization Initiative (EESSI) and two projects on web services: Web services for electronic tendering (WSET) and Roadmap for the Utilisation of Web services (RUWS).

Support to sectoral initiatives to foster e-marketplaces and e-business in traditional sectors continues. Although almost all the initiatives launched under the ECOM-IS programme have come to conclusion, new initiatives have been launched within eEurope – so-called eEurope Standardization Action Plan.

The following projects and parallel Workshops have ended:

- Sanitaryware and heating systems: CEN/ISSS Workshop SAN, which produced a common product description for the industry (CWA 14113 in four parts)
- Hospital procurement and medical devices: CEN/ISSS Workshop ECHOP, with three projects in the fields of product description and best practice (CWA 14088 in five parts and CWAs 14445-6).
- Fun-STEP: an application of the ISO STEP standard for the exchange of furniture design information (CWA 14218/14219)
- Furniture: CEN/ISSS Workshop F-PORTAL - a web portal site for the furniture industry (CWA under publication).

The following projects and parallel Workshops are operating:

- Footwear: CEN/ISSS Workshop FINEC – XML/EDI for footwear manufacturers/ electronic network for retailers
- Textile: CEN/ISSS Workshop TEX/SPIN XML/EDI for clothing/textile industry
- Retailing: CEN/ISSS Workshop E-NOM; objective is to produce a classification system for non-food products for major retailers.
- Furniture: CEN/ISSS Workshop FunSTEP2 The Workshop will produce deliverables such as introductory and guidance material, technical specifications and other documents required to reach the Working Draft Status of the standard within ISO.

In each case, the link to pilot projects is providing actual working examples of e-business applications. Other activities – classification issues and XML for e-business – are under discussion.

ECBS is monitoring the workshop activities in order to facilitate bilateral information exchange with the banking community.

- The project on Architectures, Frameworks and Models for Electronic Commerce (Architectures) has already produced an extensive and neutral analysis. This document, which is being published as a CWA, has been well received by the different communities who need to implement e-commerce products and services. The project on Defining and Managing Semantics and Data types for European Electronic Commerce (DAMSAD) has produced a CWA, which provides specific recommendations on data types to be used for electronic data interchange, in alignment with the W3C XML Schema recommendations. The project on Electronic Commerce Integration Meta-Framework (ECIMF), which started in May 2001, is expected to provide a practical, business-oriented approach to interoperability by mapping the concepts and contexts between different existing e-commerce frameworks across multiple architectural layers. The project will develop a modelling methodology, a modelling language and proof-of-concept open source software that are expected to benefit in particular SMEs, system integrators and vendor companies. A fourth current project is on eWallet: This project started in May 2001 to investigate the interoperability and portability of electronic wallets, taking into account existing and emerging

solutions in the market. This project aims to provide recommendations, including technical specifications, to facilitate interoperability and guidance material for solution providers, content providers/merchants and end users. This activity has the support of the W3C Micropayments Markup Working Group as well as a number of existing eWallet providers.

Regulatory and Self-Regulatory Compliance and Trust for e-business

A CEN/ISSS Workshop on Regulatory and Self-Regulatory Compliance and Trust for e-business has been established. The purpose of the CEN/ISSS E-Trust Workshop is to develop a set of pan-European, uniform guidelines defining minimum requirements to be observed by those making available web sites offering e-commerce, easily understandable by the parties and immediately usable by e-commerce merchants and web-designers.

Three specific activities shall be included:

- Regulatory and self-regulatory requirements;
- Business-process requirements.
- IT security requirements;

Information on the Workshop is available at <http://www.cenorm.be/iss/Workshop/e-Trust/default.htm>

ETSI is currently monitoring the subject of .eu domain name and is participating in the EC panel participant (EC POP).

The ETSI M-Commerce and the ETSI 3GPP will feed into the development of, and further stimulate, electronic commerce for mobile and including the interface with "fixed" e-commerce. Encryption aspects will be included.

Any required work on algorithms can be performed by ETSI SAGE (Security Algorithms Group of Experts), an ETSI Technical Body that has already performed a good deal of work in the area of GSM for example. The work of ETSI TIPHON also has an impact as their items dealing with security, Quality of Service, validation and certification, addressing and naming and service capabilities will all encourage the growth and use of the Internet and e-commerce. A voice call over the Internet and their related new services are forms of e-commerce. It is recognised that strong liaison will be required between a number of ETSI Technical Bodies to ensure coherent and interoperable solutions (ETSI M-Commerce, ETSI 3GPP, ETSI SEC, ETSI TIPHON, ETSI SPAN, ETSI TM, ETSI SAGE and ECMA TC32).

ETSI PLUGTESTS (former Bake-Offs) can also be used as a tool to achieve confidence in the interoperability of products over networks based on standardized protocols.

With P3P, W3C enables the development of a whole new class of Web tools and services that will help users protect their privacy while streamlining e-commerce:

Internet users and site owners are adopting E-commerce at a rapid pace. Convenience and Trust -- both need to be improved before e-commerce can reach its full potential. Fortunately, solutions are starting to emerge.

W3C's Web services Activity:

The power of **Web services**, apart from their great interoperability and extensibility thanks to the use of XML, is that they can then be combined in order to achieve more complex operations. Several programs providing simple services can interact in order to permit complex operations.

In order to get a complete automation of such interactions, the architecture of **Web services** needs to be better understood, and several technologies need to be developed.

SOAP (Simple Object Access Protocol):

Today, the principal use of the World Wide Web is for interactive access to documents and applications. In almost all cases, such access is by human users, typically working through Web browsers, audio players, or other interactive front-end systems. The Web can grow significantly in power and scope if it is extended to

support communication between applications, from one program to another. The purpose of this Working Group is to create a simple foundation to support the needs of such communicating applications.

SOAP is a lightweight protocol for exchange of information in a decentralised, distributed environment. It is an XML based protocol that consists of three parts: an envelope that defines a framework for describing what is in a message and how to process it, a set of encoding rules for expressing instances of application-defined data types, and a convention for representing remote procedure calls and responses. **SOAP** can potentially be used in combination with a variety of other protocols; however, the only bindings defined in this document describe how to use SOAP in combination with HTTP and HTTP Extension Framework.

W3C lays down the foundation of Web Security:

W3C's work in security on the Web include **XML Signature**, **XML Encryption**, and **XML Key Management**. For years **W3C**, in co-operation with the IETF, has done work which lays the foundation for Web Security, including "Web Services" Security. **W3C's** three Web Services Working Groups are working on **SOAP 1.2**, evaluating **WSDL**, and developing an extensible model of Web Services Architecture.

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

The ESOs are willing to discuss further with the Commission services whether any additional activity of direct relevance to standardization might help to implement the eEurope objectives. This would include checking the quality of services, providing guidance, etc.

One area where work already has started relates to the CEN/ISSS Workshop MMI-DC (see section 2 a) above)) with the to production of a standardized set of meta-data for e-Government applications.

ETSI STQ has created a working group to deal with speech recognition description following the study of a report. This may lead to items to further deal with public kiosk services. Such work also falls within the objectives set in 1c) "Design for All and Assistive Technologies".

XForms as W3C's Next Generation of Web Forms:

XForms is **W3C's** name for a specification of Web forms that can be used with a wide variety of platforms including desktop computers, hand helds, information appliances, and even paper. Part of the **HTML** Activity, **XForms** started life as a subgroup of the **HTML** Working Group, but has now been spun off as an independent Working Group.

3 c) Health on-line

Much work has already been undertaken in this field, in particular by CEN/TC 251 - Health Informatics (<http://www.cen251.org/>) -, which has a very extensive and long-standing programme of standardization in many areas. Forty ENV pre-standards have been produced that in some cases are revised together with ISO to become global standards and in other cases are in the process of becoming full European standards. The TC has prepared a report in June 2001 on the impact of its work with proposals for further activities in a number of areas. CEN/TC 251 has had several mandates from EU and EFTA with the core of the present contract being finalised at the end of 2000. There are however, many areas that need further standards activities to meet the objectives of the eEurope plan for support of Health On-line.

A brochure is being prepared which sets out the activity in the healthcare for promotion and education on the available standards to European industry and procurers of health information systems. In addition there will be an interoperability demonstration of healthcare record communication. This demonstration will use European pre-Standard ENV 13606-4 and XML DTDs. It is proposed to take place in Budapest during the Medical Informatics Europe conference 27-29 August 2002 Partners will include 2 UK suppliers to doctors and Siemens Healthcare Solutions from Germany/Sweden.

In addition, it should be noted that CEN/ISSS has a Workshop under the ECOM-IS Initiative (**see section 3a) above**) relating to **e-commerce for hospital procurement (ECHOP)** (<http://www.cenorm.be/iss/Workshop/delivered-ws/ECHOP/default.htm>)

Whilst the current eEurope action plan does not seem directly to address these existing activities, CEN is ready to discuss further requirements. In addition, the action plan notes the identification of best practice in electronic health services and quality criteria. Each of these is an area to which the open consensus platforms of standardization are well equipped to contribute.

3 d) European digital content for global networks

The ESOs shall consider with the European Commission the final report of the current study into the market requirements for ICT standardization activities relating to cultural diversity and language, and carry out additional standardization activities in this field, subject to market acceptance.

Content provision *per se* is of course anything but a standards issue. But standardization has a role, and will have one in future, to enable the content industries to transmit data across cultural boundaries with the minimum of problems, as well as to facilitate the use of new developments such as mobile Internet access and m-commerce with the minimum of content adaptations.

CEN/ISSS has previously had a number of activities related to Localisation - i.e. the application of local linguistic and cultural requirements to Information Society issues. These were undertaken by **CEN/TC304 - Localisation requirements**

(http://www.cenorm.be/standardization/tech_bodies/cen_bp/resources/a304.pdf)

- and a number of related Workshops. Of particular importance is the work on matching requirements, which enables browsing and surfing in the individual languages of the different nations in Europe.

Finally the Commission Action Plan recognizes that it is important not to develop technological solutions, software and contents in isolation. One important aspect crucial to the ease of availability and reading of information is in relation to meta-data, where CEN/ISSS's current Workshop **Meta-data for Multimedia Information – Dublin Core (MMI-DC)** (<http://www.cenorm.be/iss/Workshop/MMI-DC/Default.htm>) has identified the need for a focal point in Europe on Dublin Core metadata standardization, feeding into the Dublin Core Metadata Initiative (DCMI - <http://dublincore.org>) at the global level.

Apart from this more general role as a European focal forum on Dublin Core metadata, the priorities of the Workshop MMI-DC during 2002 are directed towards the use of Dublin Core in the e-Government domain.

As a result of consideration of the final report of the PriceWaterhouseCoopers study into the market requirements for ICT standardization activities relating to **cultural diversity and language** a Cultural Diversity Steering Group of interested stakeholders has been created. This is in the course of preparing a proposed new work programme in this area.

Another new area of activity is **Digital Rights Management (DRM)**. Here the first objective, rather than start any new standards programme, is to make sense of a bewildering variety of standardization activities. Currently some 25 relevant activities, mainly in industry consortia but also in formal standards bodies globally, have been noted. CEN/ISSS has established an ad hoc DRM Group, with extensive support from content providers (broadcasting, film, publishing), consumer electronics, the IT industry as hardware and software vendors, etc. The Group is drafting a "state of the art" report with recommendations, and this will be put to a public meeting for discussion.

Internationalization at W3C: Making the Web truly World Wide:

Languages, writing systems, character codes, and other local conventions should not form barriers to **W3C** technology, for World Wide Web clients to receive understandable responses from a Web server, no matter where they are in the world, and no matter what the language and encoding of the data being retrieved. A number of **internationalization** features have been successfully incorporated into **W3C** Recommendations, including those for (X)HTML, CSS, XML, RDF, SMIL, DOM, MathML, SVG, XPath, XSL(T), and XML Schema. The HTTP/1.1 protocol also includes features associated with Web content in different languages and different character encodings.

W3C and Semantic Web engineers work today to build the richer Web of the future:

The Resource Description Framework (**RDF**) integrates a variety of applications from library catalogues and world-wide directories to syndication and aggregation of news, software, and content to personal collections

of music, photos, and events using **XML** as an interchange syntax. The **RDF** specifications provide a lightweight ontology system to support the exchange of knowledge on the Web.

RDF is an enabling technology for a wide variety of projects. For example, the Dublin Core Metadata Initiative is an open forum engaged in the development of interoperable online metadata standards that support a broad range of purposes and business models. DCMI's activities include consensus-driven working groups, global workshops, conferences, standards liaison, and educational efforts to promote widespread acceptance of metadata standards and practices.

W3C's Mobile Access and CC/PP:

Mobile devices need special consideration when it comes to using Web information. Their displays are generally much smaller than a conventional computer screen and are capable of showing only a small amount of text. On a cellular phone, for example, there may be only enough space for three or four rows of text. Palm-top pocket-sized computers have screens smaller than a PC or laptop, but large enough to read email and documents with a small amount of text. Mobile devices have limited memory and processing speeds, and these considerations also need to be taken into account.

Within **W3C's Device Independence** Activity, this kind of work is handled by the Composite Capability/Preference Profiles (CC/PP) Working Group. The current idea is to store data about each device - and also the preferences of its user - as a device profile. The device profiles would be stored as a kind of relational database located on a Web server. **W3C** is working jointly with the WAP Forum writing the database model and likely fields that it will contain. This work has led to the Composite Capability/Preference Profiles (**CC/PP**).

3e) Intelligent Transport Systems

CEN TC 278 – road transport telematics (<http://www.nni.nl/cen278/>) - has undertaken a very large and comprehensive programme of standardization over a number of years. In response to standardization mandate M/270 from the European Commission, a market study was undertaken to define the requirements for future standards in this area. The next step, Phase 2 of the mandate, has also been completed and a proposed revised work programme to take account of current requirements has been subject to public consultation at an Open Meeting on 24 May 2002 and is now being finalised. Many of the new applications involve radio communications, so a greater involvement of ETSI will be necessary in future (although **ETSI ERM** has already had some involvement in the present programme). A third phase to the activity will be the actual implementation of a revised standardization programme in this area. The work on the work programme according M/270 did not stop or delay the normal standardization activities on RTTT. The basic achievements are complete enough to start implementations such as motorway fee collection.

ETSI MSG (part of the former ETSI SMG) has also undertaken a work programme in respect of the standardization of the GSM system for European railways – R-GSM – in close collaboration with the UIC. This work programme will result in a set of ENs to reply to EC mandate M/275 to produce ENs for the High-Speed Trans-European rail network. One main EN has already been delivered for listing under Directive 96/48/EC. Some work previously in CENELEC has been transferred to ETSI and as a result a new ETSI Project, EP Railway Telecommunications (RT) has been created.

CENELEC TC 9X "Electrical and electronic applications for railways" contributes to the interoperability of railway systems.

A Harmonized Standard (EN 301 419-7) has also been adopted and referenced in the OJEC under Directive 1999/5/EC (the R&TTE Directive). It was produced under EC mandate M/0271.

In the field of air traffic management, **ETSI ERM** has worked in response to mandate M/239 and a further mandate (M/318) has been issued by the Commission Services for future standardization activity (<http://portal.etsi.org/erm/hta/AeronauticalRadio/aero.asp>). The participation of organizations such as Eurocontrol and EUROCAE is regarded as essential. This activity has resulted in ENs on VDL modes 2 and 4 being worked on. ECMA TC 32 has also worked in response to mandate M/239. It has enhanced the PSS1/QSIG signalling system to specifically meet the need of Air traffic Services (ATS) telephone networks and has prepared a Profile Standard for its use in such applications. This work has resulted in several ENs.

ETSI has also been contacted by ISO/TC 204 representatives, to study and to provide the underlying standards from the field of UMTS, GSM, etc. to support the next generation of Intelligent Transport Systems applications.

EC mandate M/282 is also dealing with EMC and air traffic management. ETSI ERM will be involved in this area. Discussions have already taken place with DG TRAN.

WS-MEET

This Workshop, operational during 2001, has delivered an open system specification that enables tracking and tracing of goods and parcels at the piece level (CWA 14356, a second CWA under publication). Easy adaptation of legacy systems operated by the carriers to the new information infrastructure was a key design criterion. Seamless interoperation between these systems on the one hand and the new tracking & tracing system had to be guaranteed.

The ESOs are prepared to consider together with the Commission services which additional contributions may be added to the various subjects in the current Commission action plan.

Objective 1 A cheaper, faster and secure Internet

1 a) Cheaper and faster Internet access

eEurope targets

The Lisbon summit requested:

- The conclusion “as early as possible in 2001” of work on the legislative proposals following the Telecom Review;
- Greater competition in local access networks by the end of 2000 and the unbundling of the local loop;
- That frequency requirements for future mobile communication systems should be met in a timely and efficient manner;
- Availability of low-cost, high-speed networks for Internet access;
- Fully integrated and liberalised telecommunications markets by the end of 2001.

Standards action plan

	Action	Action by	Timing	Remarks
1a)1	To ensure that the targets agreed upon at the Lisbon summit are considered fully in current and forthcoming standardization activities.	ESOs	Continuous but initially for the end of 2001.	
1a)2	Promote the use of existing work that can be used to implement eEurope.	ETSI	Continuous	
1a)3	Promote awareness of the requirements of the eEurope initiative in all current and new work (including maintenance)	ESOs	Continuous	Smart Card Charter Website operational since June 2001.
1a)4	Carry out a series of PLUGTEST (former “bake-off”) events over the coming years to enhance the interoperability of implementations based upon e.g. ETSI 3GPP and IPv6 (addressing) requirements.	ETSI	2000 to 2003: 9 events out of 16 by end 09/2002.	Association with CEN/ISSS in some events of common interest
1a)5	TETRA release 2 will improve Internet access	ETSI	Ongoing	March 2001: ETSI STF 179 created. 11 deliverables published between July 2001 and May 2002, 5 remaining deliverables to be published by April 2003
	HIPERACCES	ETSI	Conformance	Radio-based broadband

			testing specifications for 10/2002.	access; TS 101 999 published in 04/2002)
	HIPERLAN/2	ETSI		76 deliverables published; 37 deliverables to be in 07/2002
	HIPERMAN	ETSI	TR published in 2001; TSs scheduled for 01/2003	TR 101 856; Frequency spectrum sharing study (5,8 GHz) expected for 08/2002
1a)6	IP Cable Communications	ETSI	Lawful Interception scheduled for 2004	TS 101 909 multipart in line with ITU-T J.160 series including European aspects: 19 TSs published between 06/2001 and 04/2002; 23 TSs are being completed by 04/2003,
1a)7	Powerline communications	CENELEC ETSI	Mid 2001 Mid 2001 to early 2002	Physical layer aspects Phase 1 architecture published as TS 101 896; QoS published TR 102 049 in 05/2002
1a)8	Quality of Internet Service	CEN/ISSS WS QoS	Published 11/2001	CWA 14357:2001

1 b) Faster Internet for researchers and students**eEurope target**

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

Standards action plan

	Action	Action by	Timing	Remarks
1b)1	To ensure that there is full visibility of existing international standards relating to data formatting, etc.	CEN	t.b.d.	
1b)2	To ensure that electronic resources have valid markup, hence providing fast and interoperable scientific communication	W3C	HTML 4.0 and XHTML 1.1 as W3C Recs	W3C HyperText Markup Language (HTML) Activity
1b)3	To solidify and extend current quality practices, and to educate by sharing W3C's understanding of coordination, certification, funding, and tracking of the quality of products and services related to W3C technologies.	W3C	Continuous + W3C Validator Tools	W3C Quality Assurance (QA) Activity

1 c) Secure networks and smart cards

eEurope target

- The Lisbon summit considered that consumer confidence is a key factor in the development of electronic commerce.

Standards Action Plan

	Action	Action by	Timing	Remarks
1c)1	Full participation in Commission's Smart Card Charter Follow-up	CEN and ETSI	As per the Smart Card Charter	Activities started in June 2000. ESOs now provide logistical support to Secretariat.
	Redefinition of work items as appropriate; new work items etc.	CEN and ETSI	As required	Work items for proposed new work in ETSI identified by the new ETSI Project SCP Relevant new work begun in CEN on particular aspects
	Ongoing work items: <ul style="list-style-type: none"> - Personal Identification Numbers (PINs) on the UICC platform - Terminal/UICC interface noise immunity investigations - Definition for EMC measurements at UICC and mobile equipment - Support of large files - Advanced UICC Communication - Generic Phonebook - Release 6 version of TS 102 221 - Release 6 version of TS 102 222 	ETSI/SCP		Partly to be incorporated into existing specifications
	TS 102 241: Java Card API for the UICC	ETSI/SCP	To be published 9/2002	
	TS 102 240: UICC Application Programming Interface (API)	ETSI/SCP	To be published 9/2002	
	TS 102 230: UICC/terminal interface; Physical, electrical and logical tests	ETSI/SCP	published 7/2001	Release 4
	TS 102 226: Remote APDU structure for UICC based applications	ETSI/SCP	published 4/2002	Release 6

	TS 102 225: Secured packet structure for UICC applications	ETSI/SCP	published 4/2002	Release 6
	TS 102 224: Security mechanisms for the Card Application Toolkit: Functional Requirements	ETSI/SCP	published 4/2002	Release 6
	TS 102 222: Administrative commands for telecommunications applications	ETSI/SCP	published 5/2001	Release 99
	TS 102 221: UICC/terminal interface; Physical and logical characteristics	ETSI/SCP	published 3/2002	Release 5
	TS 101 220: Application identifiers for telecommunications)	ETSI/SCP	published 10/2001	Release 4
	Smart Card Systems - Interoperable Citizen Services - User Related Information			
	Smart Card Systems - Interoperable Citizen Services - User Related Information (based on DISTINCT) - Part 1: Definition of User Related Information	CEN/ISSS WS DIS	published 10/2000	CWA 13987-1:2000
	Smart Card Systems - Interoperable Citizen Services - User Related Information (based on DISTINCT) - Part 2: Implementation Guidelines	CEN/ISSS WS DIS	published 10/2000	CWA 13987-2:2000
	Smart Card Systems - Interoperable Citizen Services - User Related Information (based on DISTINCT) - Part 3: Guidelines to Creating, Operating and Maintaining an Interoperable Network	CEN/ISSS WS DIS	published 10/2000	CWA 13987-3:2000
	Financial transactional IC card reader			
	Financial transactional IC card reader (FINREAD) - Part 1: Business requirements	CEN/ISSS FINREAD	published 07/2001	CWA 14174-1:2001
	Financial transactional IC card reader (FINREAD) - Part 2: Functional requirements	CEN/ISSS FINREAD	published 07/2001	CWA 14174-2:2001
	Financial transactional IC card reader (FINREAD) - Part 3: Security requirements	CEN/ISSS FINREAD	published 07/2001	CWA 14174-3:2001
	Financial transactional IC card reader (FINREAD) - Part 4: Architectural Overview	CEN/ISSS FINREAD	published 07/2001	CWA 14174-4:2001

	Financial transactional IC card reader (FINREAD) - Part 5: Download file format	CEN/ISSS FINREAD	published 07/2001	CWA 14174-5:2001
	Financial transactional IC card reader (FINREAD) - Part 6: Definition of the virtual machine	CEN/ISSS FINREAD	published 07/2001	CWA 14174-6:2001
	Financial transactional IC card reader (FINREAD) - Part 7: FINREAD card reader application programming interfaces (APIs)	CEN/ISSS FINREAD	published 07/2001	CWA 14174-7:2001
	Financial transactional IC card reader (FINREAD) - Part 8: FINREAD client application programming interfaces (APIs)	CEN/ISSS FINREAD	published 07/2001	CWA 14174-8:2001
	Workshops URI and FASTEST	CEN/ISSS	Scheduled for completion autumn 2002	
	EESSI support to SCC TB2	CEN and ETSI	Completed autumn 2001	Specification agreed and published on EESSI web site
1c)2	Participation in IPTS European Payments Systems Observatory	CEN and ETSI	Completed spring 2002	Full contribution made to EPSO closing conference session on standards issues
1c)3	Mobile Commerce	ETSI in association with CEN/ISSS	2000	ETSI Project M-Commerce created; First meeting held on 31/10/2000, meeting #7 held in May 2002
1c)4	Electronic Signature standardization package	CEN and ETSI	End 2000	First set of deliverables (phase 2) published. Phase 3 underway as detailed below ???
	Security Requirements for Trustworthy Systems Managing Certificates for Electronic Signatures - Part 1: System Security Requirements	CEN/ISSS WS E-SIGN	published 11/2001	CWA 14167-1:2001
	Security Requirements for Trustworthy Systems Managing Certificates for Electronic Signatures - Part 2: Cryptographic Module for CSP Signing Operations - Protection Profile (MCSO-PP)	CEN/ISSS WS E-SIGN	published 03/2002	CWA 14167-2:2002
	Secure Signature-Creation Devices "EAL 4"	CEN/ISSS WS E-SIGN	published 07/2001	CWA 14168:2001
	Secure Signature-Creation Devices "EAL 4+"	CEN/ISSS WS E-SIGN	published 07/2001	CWA 14169:2001
	Secure Signature-Creation Devices "EAL 4+"	CEN/ISSS WS E-SIGN	published 03/2002	CWA 14169:2002

	Security Requirements for Signature Creation Applications	CEN/ISSS WS E-SIGN	published 07/2001	CWA 14170:2001
	Procedures for Electronic Signature Verification	CEN/ISSS WS E-SIGN	published 07/2001	CWA 14171:2001
	EESSI Conformity Assessment Guidance - Part 1: General	CEN/ISSS WS E-SIGN	published 07/2001	CWA 14172-1:2001
	EESSI Conformity Assessment Guidance - Part 2: Certification Authority services and processes	CEN/ISSS WS E-SIGN	published 07/2001	CWA 14172-2:2001
	EESSI - Conformity Assessment - Guidance - Part 3: Trustworthy systems managing certificates for electronic signatures	CEN/ISSS WS E-SIGN	published 11/2001	CWA 14172-3:2001
	EESSI Conformity Assessment - Guidance - Part 4: Signature Creation Applications and Procedures for Electronic Signature Verification	CEN/ISSS WS E-SIGN	published 11/2001	CWA 14172-4:2001
	EESSI - Conformity Assessment - Guidance - Part 5: Secure signature creation devices	CEN/ISSS WS E-SIGN	published 11/2001	CWA 14172-5:2001
	Guidelines for the implementation of Secure Signature-Creation Devices	CEN/ISSS WS E-SIGN	published 06/2002	CWA 14355:2002
	Security management and certificate policy for CSPs issuing qualified certificates	ETSI	Published in 4/2002	EESSI report/area C; to be co-ordinated with IETF for reaching a global agreement; deliverable: ETSI TS 102 456 Co-operation with ECBS TC4/WG2 "Certification Authorities"
	Security management and certificate policy for CSPs issuing which meet classes of requirements different from those for qualified certificates	ETSI	Published 3/2002	EESSI report/area C; deliverable: ETSI TS 102 042 on policy requirements for CSPs covering Art. 5.2 of the Electronic Signature Directive.
	Policy requirements for time-stamping authorities	ETSI	Published 4/2002	EESSI report/area E; Deliverable: ETSI TS 102 023
	Time stamping profile		Published 4/2002	Deliverable: ETSI TS 101 861
	Electronic Signature syntax and encoding formats in XML	ETSI	Published 4/2002	EESSI report/area H deliverable: ETSI TR 102 038
	Technical aspects of signature policies	ETSI	Published in 2/2002	EESSI report/area R co-operation with IETF; IETF experimental RFC as input to ES 201 733

	Electronic signatures; Certification of roles and attributes & Multiple signatures	ETSI	Started 01/2002 Publications scheduled 12/2002	Deliverables: ETSI Reports Work item references: DTR/ESI-004016 and – 004017.
1c)5	Work programme on personal data protection and privacy	CEN/ISSS and ETSI	Report and work programme published Q1/2002	Report of the Initiative on Privacy Standardization in Europe (IPSE)
	Launch of CEN/ISSS Workshop	CEN/ISSS	Q3 or Q4/2002	Depends on consultation
1c)6	New or revised activities in relation to design for all and assistive technologies	CEN, CENELEC and ETSI (see section 2 c)	Started early 2001, ongoing	ICTSB established Design-for-All and Assistive Technologies Co-ordination Group (DATSCG)
1c)7	Secure interworking over the Internet	ETSI	between 8/2002 and 12/2002	Multipart ETSI TSs for testing to be published
	Telecommunications and Internet protocol harmonization over networks	ETSI	partly published, rest by the end of 2002	Deliverables: ETSI TS 101 314 on security mechanisms and protocols; Multipart ETSI TS 101 329 on QoS management published,; ETSI TS on firewall and inter-domain routing of state aware streaming media (Tiphon); ETSI TS on the development of protocols.
	Human Factors (HF); Standardisation for Universal Communications Identification (UCI) Solutions	ETSI	start 09/2000 For ETSI Member Vote to be published 09/2002	Deliverable: ETSI Guide 202 067 Work Item Reference: DEG/HF-00025
	Maximising the usability of UCI-based services	ETSI	Started January 2002. TR publication for 11/2002 & EG for 10/2003	Deliverables: ETSI Report and ETSI Guide Work Item Reference: DTR/HF-00036 & DEG/HF-00037
	TETRA is preparing the use of smart cards for secure networking	ETSI	Ongoing	Part of TETRA release 2; see Annex 1a)5
1c)8	Secure e-mail for banks as users of e-mail	ECBS	published 02/2001	ECBS TR408-1 V1
	Banks and certification authorities for secure e-mail	ECBS	published 11/2001	ECBS TR408-2 V1
1c)9	To specify XML syntax and processing rules for creating and representing digital signatures	W3C	XML Signature as a W3C REC	This specification was produced by the IETF/W3C XML Signature Working Group
	To develop a process for encrypting/decrypting digital content	W3C	Ongoing work on XML Encryption	W3C XML Encryption WG

	To develop a specification of XML application/protocol that allows a simple client to obtain key information (values, certificates, management or trust data) from a Web service	W3C	Ongoing work on XML Key Management	W3C XML Key Management WG
	To create and provide a simple and lightweight protocol for exchange of information in a decentralised, distributed environment.	W3C	SOAP 1.2 as an Ongoing work	W3C XML Protocol WG within W3C Web Services Activity
	To provide a simple, automated way for users to gain more control over the use of personal information on Web sites they visit.	W3C	P3P 1.0 is a W3C REC	W3C's Privacy Activity and it's Platform for Privacy Preferences (P3P) Project
1c)10	To provide an overview report on network and information security standards issues	CEN and ETSI	NIS Group launched July 2002; open meeting early 2003	Preparation of a report in connection with Commission Communication on NIS

2 a) *European Youth into the Digital Age*

eEurope targets

The Lisbon Summit requested that:

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

Standards Action Plan

	Action	Action by	Timing	Remarks
2a)1	Delivery of final WS/LT work programme	CEN/ISSS WS/LT	End-June 2000	Submitted to Commission under mandate
2a)3	WS/LT Implementation	CEN/ISSS WS/LT	January 2001 onwards	
	A Standardization Work Programme for "Learning and Training Technologies & Educational Multimedia Software"	CEN/ISSS WS LT	Published 10/2000	CWA 14040:2000
	Availability of alternative language versions of a learning resource in the IEEE Learning Object Model	CEN/ISSS WS LT	Scheduled Q4/2002	
	Translations of IEEE LOM into European languages	CEN/ISSS WS LT	Completed	Discussion under way with IEEE over publication arrangements
	Description of language capabilities	CEN/ISSS WS LT	Scheduled Q4/2002	
	Report on the feasibility of standardized educational copyright licences	CEN/ISSS WS LT	Scheduled Q4/2002	
	Internationalisation of IEEE Learning Object Meta-data	CEN/ISSS WS LT	Publication pending	
2a)6	Report of Cultural Diversity Steering Group into future work in this area	CEN/ISSS	end Q3/2002	To recommend future arrangements for such work
2a)7	Meta-data focal point	CEN/ISSS in	Established early	

		consultation with Commission services	2001	
	Revision/update to guidance on Dublin Core meta-data model	CEN/ISSS WS/MMI-DC	Q2/2003	Updating of CWA 13988
	Dublin Core eGovernment Application Profile	CEN/ISSS WS/MMI-DC	Under definition	
	Guidelines on Dublin Core Application Profiles	CEN/ISSS WS/MMI-DC	Under definition	
	Management of information resources in eGovernment	CEN/ISSS WS/MMI-DC	Under definition	
	Mappings between Dublin Core and forthcoming IS 19115 for geographic information meta-data	CEN/ISSS WS/MMI-DC	Under definition	
2a)8	To offer extensive stylistic control over the presentation of Web pages. CSS is playing an increasingly important role in styling many kinds of XML documents: XHTML, SVG, XML, and SMIL, etc.	W3C	Ongoing work on CSS3	W3C Style Activity
	To define a practical style and transformation language capable of supporting the transformation and presentation of, and interaction with, structured information (e.g., XML documents) for use on servers and clients.	W3C	Ongoing work on XSLT 2.0 XSLT 1.0 is a W3C REC. XSL 1.0 is a W3C REC.	W3C Style Activity
	For describing two-dimensional graphics in XML. SVG allows for three types of graphic objects: vector graphic shapes (e.g., paths consisting of straight lines and curves), images and text.	W3C	SVG 1.0 is a W3C REC. Ongoing work on SVG1.1/1.2	W3C Graphics Activity
	To provide choreographing multimedia presentations where audio, video, text and graphics are combined and synced in real-time.	W3C	SMIL 2.0 is a W3C REC.	W3C Synchronised Multimedia Activity

2 b) Working in the Knowledge-based Economy

eEurope targets

The Lisbon Summit concluded:

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

Standards action plan

	Action	Action by	Timing	Remarks
2b)1	Discussion of possible standardization activity in relation to basic qualifications	ESOs in discussion with Commission services	t.b.d.	
2b)2	Idea of having data on the Web defined and linked in a way that it can be used for more effective discovery, automation, integration, and reuse across various applications.	W3C	Ongoing	W3C Semantic Web Activity
	To provide a framework for supporting resource description, or metadata (data about data), for the Web.	W3C	RDF Model and Syntax as a W3C REC. Ongoing work in the W3C RDF WG	W3C Semantic Web Activity
	To build upon the RDF Core work a language for defining structured, Web-based ontologies which will provide richer integration and interoperability of data among descriptive communities.	W3C	Ongoing work on the Ontology Web Language (OWL 1.0)	W3C Semantic Web Activity W3C's Web Ontology WG
2b)3	European Guide to Good Practice in Knowledge Management	CEN/ISSS WS/KM	mid-2003	Multi-part CWA

2 c) Participation for all in the knowledge-based economy

eEurope targets

The Lisbon summit recognized:

- that special attention should be given to disabled people and the fight against “info-exclusion”.

Standards action plan

	Action	Action by	Timing	Remarks
2c)1	Consideration of and initial response to Project Team recommendations	CEN, CENELEC, ETSI	October 2000; Continuous activity	ICTSB D-FAST group identified key standardization priority areas and work commenced in the ESOs; Superseded by ICTSB-DATSCG activities in November 2001.
2c)2	Discussions with European Commission and Member States concerning implementation	CEN, CENELEC, ETSI	Summer/autumn 2000	Subjects and support by Commission agreed for 2001 ???
2 c)3	Implementation of recommendations	CEN, CENELEC, ETSI	By end-2002	Where appropriate and practicable (see details below)
	Extension of the accessibility principles as provided by EN 1332 ('Identification card systems- man machine interface') to other users such as children and people with a combination of disabilities.	CEN/TC224	Q1 2002	
	increase user accessibility of smart card systems through supplementing EN 1332 with icons, symbols and pictograms that are easily interpretable	CEN/TC224	Q1 2002	
	Human factor/Man-machine interface. Physical/logical accessibility to card reading devices.	CEN/TC224	Start: June 2001 Deliverables: November 2002	
	Human factors. Inter-sector icons, symbols and pictograms.	CEN/TC224	Start: June 2001 Deliverables: October 2002	
	Human factors. Tactile identifier for differentiation of applications	CEN/TC224	Started end 2001	
	Guidelines to standardizers of ICT products and services	CEN/ISSS WS/DFA	Q3/2003	CWA to specify ICT aspects of

				CEN/CENELEC Guide No. 6
	Web accessibility by sign language	CEN/ISSS WS/DFA	12/2002	
	Requirements for ICT assistive technologies standardization	CEN/ISSS WS/DFA	12/2002	
	Human Factors (HF); Requirements of Assistive Technology Devices in ICT	ETSI	Published 06/2002	Ref: Design for All report Deliverable: ETSI TR 102 068 Work Item Reference: DTR/HF-00018
	Human Factors; Design for All; guideline for ICT products and services	ETSI	Start in 09/2000, For ETSI Membership Vote to be published in 09/2002	Ref: Design for All report Deliverable: ETSI Guide EG 201 116
	Human Factors (HF); Multimodality of icons, symbols and pictograms	ETSI	Start in 09/2000, On ETSI Membership Vote to be published in 09/2002	Ref: Design for All report Deliverable: ETSI Guide 202 048 Work Item Reference: DEG/HF-00027
	Speech recognition; voice user interfaces: Generic user command, control and editing vocabulary for ICT products: Main European languages	ETSI	For ETSI Membership Vote, to be published 10/2002	Ref: Design for All report Deliverable: ETSI Standard ES 202 076 Work Item Reference: DES/HF-00021
	Common identification schemes for next generation networks	ETSI	Started in 01/2002. Publication for 02/2003	Deliverable: ETSI Guide Work Item Reference: DEG/HF-00038
	Human Factors of Call Centre operation	ETSI	Started in 01/2002. Publication for 03/2003	Deliverable: ETSI Report Work Item Reference: DTR/HF-00032
	Alphanumeric characters used in European languages: Sorting orders and assignment to the 12-key telephone keypad	ETSI	Started 01/2002 Publication schedule: 07/2003	Deliverable: ETSI Standard Work Item Reference: DES/HF-00026
	Multi-modal interaction, communication & navigation	ETSI	Started 01/2002 Publication scheduled 06/2003	Deliverable: ETSI Guide Work Item Reference: DEG/HF-00029
	Access to ICT by young people	ETSI	Started 01/2002 Publication scheduled 03/2003	Deliverable: ETSI Report Work Item Reference: DTR/HF-00034
2 c)4	To ensure that the core technologies of the Web are accessible and that the Web is accessible to people with disabilities, including people with visual, hearing, physical, cognitive, and neurological disabilities	W3C	Continuous	W3C Web Accessibility Initiative (WAI)
2 c)5	To expand access to the Web to allow people to	W3C	Ongoing with the W3C Speech	W3C Voice Browser Activity

	interact via key pads, spoken commands, listening to prerecorded speech, synthetic speech and music.		Interface Framework.	
2 c)6	To require clear disclosure of essential patents and predictable licensing terms for patents needed to comply with W3C Recommendations.	W3C	Ongoing work on Patent Policy Framework	W3C Patent Policy WG
2 c)7	To ensure that W3C's formats and protocols are usable world-wide in all languages and in all writing systems.	W3C	Continuous	W3C Internationalization Activity

3 a) Accelerating e-commerce

eEurope targets

The Lisbon Summit came to the following conclusions:

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

Standards action plan

	Action	Action by	Timing	Remarks
3a)1	Discussions with European Commission on how existing and proposed activities can be adjusted to meet eEurope requirements	CEN, CENELEC, ETSI	end-2005	Proposed CEN/ISSS report targetting eBusiness standards issues to be addressed
3a)2	Specific discussions with public authorities on the role of standardization in on-line public procurement	CEN, CENELEC, ETSI	t.b.d.	See annex on Security and Smart Cards
3a)3	Ongoing development of m-commerce standardization (EP e-pay)	ETSI		See annex on Security and Smart Cards; ETSI M-Commerce started after conference
3a)4	Development of business and functional requirements for mobile payments	ECBS TC6/WG4 "Mobile Payments"	t.b.d.	Co-operation agreement between ECBS and ETSI signed in 01/2002
3a)5	Ongoing development of work in ETSI Technical Bodies to meet the objective	ETSI	Continuous	.
3a)6	To provide a simple, automated way for users to gain more control over the use of personal information on e-commerce Web sites.	W3C	P3P 1.0 is a W3C REC	W3C's Privacy Activity and it's Platform for Privacy Preferences (P3P) Project
	In order to get a complete automation of such interactions, the architecture of Web services needs to be better understood, and several technologies need to be developed.	W3C	Ongoing work on SOAP 1.2, XML Protocol, WSDL 1.1.	W3C Web Services Activity

	To create and provide a simple and lightweight protocol for exchange of information in a decentralised, distributed environment.	W3C	SOAP 1.2 as an Ongoing work	W3C XML Protocol WG within W3C Web Services Activity
	To specify XML syntax and processing rules for creating and representing digital signatures	W3C	XML Signature as a W3C REC	This specification was produced by the IETF/W3C XML Signature Working Group
	To develop a process for encrypting/decrypting digital content	W3C	Ongoing work on XML Encryption	W3C XML Encryption WG
	To develop a specification of XML application/protocol that allows a simple client to obtain key information (values, certificates, management or trust data) from a Web service	W3C	Ongoing work on XML Key Management	W3C XML Key Management WG
3a)7	Message Implementation Guidelines (MIGs)	CEN/ISSS WS/EC	published 07 1999	CWA 13691:1999
	Product and Business Data Harmonisation (PBDH)	CEN/ISSS WS/EC	published 07 1999	CWA 13692:1999
	Datotyping for Electronic Data Interchange	CEN/ISSS WS/EC	published 03 2001	CWA 14162:2001
	Summaries of some Frameworks, Architectures and Models for Electronic Commerce	CEN/ISSS WS/EC	published 06 2001	CWA 14228:2001
	eCommerce Integration Meta-Framework	CEN/ISSS WS/EC	Target autumn 2002	CWA
	Open Source Supply Chains	CEN/ISSS WS/EC	Target autumn 2002	CWA
	eWallet Interoperability and Portability	CEN/ISSS WS/EC	Target autumn 2002	CWA
	Practical use of electronic signatures in e-commerce	CEN/ISSS WS/EC	Target autumn 2002	CWA
	Roadmap for the utilisation of web services	CEN/ISSS WS/EC	Target spring 2003	CWA
	Web services for electronic tendering	CEN/ISSS WS/EC	Target spring 2003	CWA
3a)8	Recommendations for Standardization in the field of XML for Electronic Data Interchange	CEN/ISSS WS XML-EDI	published 08/ 2000	CWA 13992:2000
	Recommendations and Guidance on the Use of XML for Electronic Data Interchange	CEN/ISSS WS XML-EDI	published 08/ 2000	CWA 13993:2000
	Results of ISIS Expert 2 Project	CEN/ISSS WS/eBES	Target autumn 2002	CWA
	Migration from UN/EDIFACT to ebXML	CEN/ISSS WS/eBES	Target autumn 2002	CWA

3a)9	Regulatory and self-regulatory requirements for e-commerce	CEN/ISSS WS/eTrust		Target Q4/2002	CWA
	Business process requirements for e-commerce	CEN/ISSS WS/eTrust		Target Q4/2002	CWA
	ICT security requirements for e-commerce	CEN/ISSS WS/eTrust		Target Q4/2002	CWA
3a)10	European Electronic Commerce for Hospital Procurement (ECHOP) - Part 1: Common operations carried out by HPDs (Hospital Procurement Department) in Europe	CEN/ISSS ECHOP	WS/	published 01 2001	CWA 14088-1:2001
	European Electronic Commerce for Hospital Procurement (ECHOP) - Part 2: List of standardized functional and technical specifications V.0.1	CEN/ISSS ECHOP	WS/	published 01 2001	CWA 14088-2:2001
	European Electronic Commerce for Hospital Procurement (ECHOP) - Part 3: Protocols of security and the interoperable authentication at the level of the sector V.0.1	CEN/ISSS ECHOP	WS/	published 01 2001	CWA 14088-3:2001
	European Electronic Commerce for Hospital Procurement (ECHOP) - Part 4: Future operations that should need to be standardized (due to the appearance of a standardized denomination of products)	CEN/ISSS ECHOP	WS/	published 01 2001	CWA 14088-4:2001
	European Electronic Commerce for Hospital Procurement (ECHOP) - Part 5: Technology that still needs to be standardized	CEN/ISSS ECHOP	WS/	published 01 2001	CWA 14088-5:2001
	European Electronic Commerce for Hospital Procurement (ECHOP) - Part 6: Legal issues to facilitate the standardization of electronic commerce	CEN/ISSS ECHOP	WS/	published 01 2001	CWA 14088-6:2001
	European Generic Article Register - Recommendations regarding terminology of product groups and article designations and relation to other nomenclatures	CEN/ISSS ECHOP	WS/	published 03 2002	CWA 14445:2002

	European Generic Article Register - Conceptual description of EGAR, working Methodology and relation to the tendering and procurement process in the healthcare sector	CEN/ISSS ECHOP	WS/	published 03 2002	CWA 14446:2002
3a)11	Model of different categories of furniture and types of products created to build a portal and an auction house over the Internet	CEN/ISSS FPORTAL	WS/	published 06 2002	CWA 14515:2002
3a)12	funStep (Furniture Product and Business Data) - funStep Application Activity Model - AAM	CEN/ISSS FUNSTEP	WS/	published 07 2001	CWA 14248:2001
	funStep (Furniture Product and Business Data) - funStep Application Reference Model - ARM	CEN/ISSS FUNSTEP	WS/	Published 11/2001	CWA 14249:2001
	fUNStep2 (Furniture Product and Business Data) – Working Draft with ISO WD AP236	CEN/ISSS WS/FUNSTEP2		Target 11/2002	CWA
	fUNStep2 (Furniture Product and Business Data) – Committee Draft with ISO CD AP236	CEN/ISSS WS/FUNSTEP2		Target 06/2003	CWA
	fUNStep2 (Furniture Product and Business Data) – DIS with ISO DIS AP236	CEN/ISSS WS/FUNSTEP2		Target 12/2003	CWA
3a)13	Electronic Commerce for the Sanitaryware and Heating Systems Industry - Part 1: Product Terminology and Classification	CEN/ISSS WS/SAN		published 02/2001	CWA 14113-1:2001
	Electronic Commerce for the Sanitaryware and Heating Systems Industry - Part 2: Digital Formats	CEN/ISSS WS/SAN		published 02 2001	CWA 14113-2:2001
	Electronic Commerce for the Sanitaryware and Heating Systems Industry - Part 3: Rights and Rules	CEN/ISSS SAN	WS	published 02 2001	CWA 14113-3:2001
	Electronic Commerce for the Sanitaryware and Heating Systems Industry - Part 4: Industry Common Data Bank	CEN/ISSS SAN	WS	published 02 2001	CWA 14113-4:2001
3a)14	Specification of FINEC technical architecture	CEN/ISSS WS/FINEC		Target March 2003	CWA
	Specification of EFNET mapping service	CEN/ISSS WS/FINEC		Target March 2003	CWA
	Specification of EFNET application testing tools	CEN/ISSS WS/FINEC		Target March 2003	CWA
3a)15	Facilitating a European Electronic Commerce framework for product nomenclature/classification standards	CEN/ISSS NOM	WS/E-	Target November 2002	CWA

3a)16	Textile supply chain integrated network	CEN/ISSS WS/TEX-SPIN	Target summer 2003	Programme of CWAs
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3 b) *Government on-line: electronic access to public services*

eEurope targets

The Lisbon summit called for:

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

Standards action plan

	Action	Action by	Timing	Remarks
3b)1	Discussions with European Commission on whether any additional standardization activity is required	CEN CENELEC, ETSI	Details t.b.d.	See e-government as part of Smart Card Charter
3b)2	To separate presentation from content, allow reuse, give strong typing - reducing the number of round-trips to the server, as well as offering device independence and a reduced need for scripting.	W3C	Ongoing on XForms 1.0	W3C HTML Activity + W3C's XForms WG

3 c) *Health on-line*

eEurope targets

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

Standards action plan

	Action	Action by	Timing	Remarks
3c)1	Discussions with European Commission on whether any additional standardization activity is required	CEN	t,b,d	CEN has prepared a report on impact of existing standards programme as a prelude to discussing possible new areas of work.

3 d) European digital content for global networks

eEurope targets

The Lisbon summit concluded that:

- Content industries create added value by exploiting and networking European cultural diversity;
- Member States and the Commission should ensure the availability of content for high-speed networks.

Standards action plan

	Action	Action by	Timing	Remarks
3d)1	Localisation aspects – market survey of standards requirements	CEN/ISSS-appointed consultancy company	February 2001	Survey took account of Commission proposals concerning development and use of digital content and promotion of linguistic diversity, and of issues concerning co-ordination of digitisation programmes.
	Localisation aspects – consultative meeting	CEN/ISSS	February 2001	
	Revised localisation standardization programme	CEN/ISSS Cultural Diversity Steering Group	By end 2002	
3d)2	Speedy development and implementation of 3GPP specifications to allow digital services to be commercially viable for e- and m-commerce.	ETSI	2001	Release 1999 published; Release 2000 now split into release 4 and 5. Release 4 available since March 2001. Release 5 scheduled for December 2001
3d)3	To provide a framework for supporting resource description, or metadata (data about data), for the Web.	W3C	RDF Model and Syntax as a W3C REC. Ongoing work in the W3C RDF WG	W3C Semantic Web Activity
	To ensure that W3C's formats and protocols are usable world-wide in all languages and in all writing systems.	W3C	Continuous	W3C Internationalization Activity
	To provide the efficient delivery of Internet content to wireless devices	W3C	Ongoing	W3C Device Independence Activity
3d)4	Provision of a report on the state of the art concerning standardization of Digital Rights Management	CEN/ISSS DRM Group	Open meeting 11/2002	

3e) *Intelligent Transport Systems*

eEurope targets

The Lisbon summit requested:

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

Standards action plan

	Action	Action by	Timing	Remarks
3e)1	Revised standardization work programme for road transport telematics	CEN, CENELEC, ETSI	July-September 2001	Project Tem preparing programme to take account of eEurope requirements
	Road transport telematics – consultative meeting	CEN, CENELEC, ETSI	24/05/2002	M/270 phase 2 open meeting
	Revised RTT standardization programme	CEN, CENELEC, ETSI	summer 2002	For discussion with the Commission services
3e)2	Discussion with European Commission of other potential contributions from standardization to the eEurope ITS objectives	CEN, CENELEC, ETSI	t.b.d.	
3e)3	Air Traffic Management	ETSI	Standards under production plus further work under discussion with EC.	Mandate M/239. 2 ETSI Specialist Task Forces (STFs) have already performed work. M/282 is also to be noted.
3e)4	Prepare and promote GSM, TETRA and UMTS as communications transport systems for intelligent transport	ETSI	Ongoing ISO contacts established on 22/05/2002 (ETSI/ERM)	GSM-R deliverables are published as TSs, ; New contacts with ISO/TC 204, which will refer to GSM, UMTS, etc for RTT applications.