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Delegations will find attached Commission document SEC(2002) 1039[1].

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COMMISSION OF THE EUROPEAN COMMUNITIES

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# COMMISSION STAFF WORKING PAPER

# *D E L I V E R I N G*

# *E A C C E S S I B I L I T Y*

## Improving disabled people's access to the Knowledge Based Society

[With the support of the High Level Group on the Employment and Social Dimension of the Information Society (ESDIS) and the active involvement of its *e*Accessibility expert working group]

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# 1.    Introduction

This report is designed to aid further understanding for the need for *e*Accessibility in furtherance of EC ambitions within its employment and social policy fields. It has been produced with the active involvement of  the *e*Accessibility expert group which is convened, under the auspices of the High Level Group on the Employment and Social  Dimension of the Information Society (ESDIS[2]), to advise the Commission on policy in this area. ESDIS has reviewed the draft report as presented to them on 12th July 2002 . That final draft forms the basis of the now published report with the details of any substantial amendments to it (e.g. because of interservice requirements) provided in the annex.

## 1.1        Overall recommendation

To achieve the priority goals for *e*Accessibility of the Union as a whole, a more co-ordinated and focussed approach must be taken by the key players involved in *e*Accessibility activities and in the application and development of existing and new instruments in the three areas of technology and standards, legislation and persuasion, and education and information. As a concrete measure to provide a focus for such a more co-ordinated approach a new web portal, dedicated to *eA*ccessibility  issues, should be set up and maintained by the European Commission.

Moreover, disabled persons themselves should be encouraged and empowered to take more control over the development of the mechanisms for delivering *eA*ccessibility in all three above domains. This can be achieved by support for their increased participation in technology programmes and projects, standardisation bodies and technical commitees, committees looking at legislative and/or persusasive measures and education, training and empowerment initiatives.

The establishment of the portal, and a benchmarking of the degree and adequacy of disabled peoples participation and empowerment  in all *eA*ccessibility activities should be achieved by the end of the European year of people with disabilities 2003 and be monitored by ESDIS.

Other recommendations relating to the instruments for delivering *e*Accessibility are set out in section 5.

## 1.2    Background, policy and legal basis

*e*Accessibility: has been described, very concisely, as "online access ramps"[3] or "ramps to the internet" indicating that it refers to disabled people's access to knowledge services using Information and Communication Technologies (ICTs). Hence *e*Accessibility is a concept for embracing the rights and possibilities for better integrating disabled people into the Knowledge Based Economy and Society (KBE/KBS).

**The Demographics of Disabled People:** It is important to realise that disabled people are not just a tiny minority of the population of the Europe Union. The lowest

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[2] http://europa.eu.int/comm/employment_social/soc-dial/info_soc/esdis/index.htm
[3] See US section 508 site, articles at:
http://www.section508.gov/index.cfm?FuseAction=Content&ID=76

estimate, based on the extremes of currently defined disablement categories[4], puts their total number at around 40 Million persons (nearly 11% of the population of the EU[5]). However, other estimates that take more account of a) people with cognitive difficulties, and b) those people in the so called hinterland between fully able bodied and the classically termed disabled, could considerably raise those numbers.

Moreover, even the the number of what are traditionally perceived as disabled people (people with physical or sensory disabilities) is rising. Both cognitive and functional disability (the second largest group of disabled persons) is strongly related to age with around 70% of people with these kinds of disabilities aged over 60. By the year 2020, it is estimated that 25% of the population will be over 60, with the largest increase in the 75+ age band, where such disabilities are most prevalent[6].

**The Social Model of Disability**: The general understanding of disability is changing in society, from attitudes regarding disability as a merely personal problem related to a specific impairment, to a general social issue. "Disability" in this respect can be seen as part of a sociological pattern; a result of barriers in society against the full participation of individuals in taking part in the Information Society. These barriers are made through lack of accessible technology to be used by individuals with specific impairments.

From this viewpoint, disability is no longer just an attribute of a person, but a set of (potentially) restrictive conditions that arise, not as the result of impairment per se, but of society's failure to accommodate the needs of those with disabilities and to allow them to exercise their abilities. Disability seen as part of a sociological pattern requires a change both in attitudes and a political recognition of the needs of initiatives to remove barriers in society.

**EU Measures**: Measures aimed at improving *e*Accessibility at the European level are of three main types: human rights policy, social inclusion policy and support for RTD&D and standardisation actions.

**Human Rights policies**: From the human rights policy perspective, *e*Accessibility is an extension of general accessibility measures and activities for disabled people. Legislative measures enacted so far include: a directive aimed at combatting discrimination against disabled persons, amongst others, at work[7], and the designation of 2003 as the year of People with Disabilities as confirmed by a recent Council decision[8]. A key policy document in the frame of general accessibility is a Communication from the Commission entitled: "Towards a Barrier Free Europe for people with Disabilities"[9].

**Social Inclusion and Employment policies**: From the social inclusion and employment policy perspectives, there are a number of initiatives aimed at disadvantaged people as a whole (including disabled people) for whom positive

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[4] http://www.un.org/esa/socdev/enable/dpb19992c.htm
[5] Source: Eurostat, see: http://europa.eu.int/comm/eurostat/Public/datashop/print-product/EN?catalogue=Eurostat&product=3-11012002-EN-AP-EN&mode=download

[6] http://www.stakes.fi/include/incc310.html
[7] Council Directive 2000/78/EC of 27th November 2000
[8] Council Decision 2001/903/EC of 3rd December 2001
[9] COM(2000) 284 final of 12.05.2000

actions are deemed necessary. A new cycle of Social Inclusion National Action Plans (NAPs) were begun in 2001 (and thereafter every two years) where these aspects are addressed at the national level and benchmarked against European guidelines following the model of the Employment NAPs (where measures for disabled persons in work are treated). The accompanying funding mechanism of the European Social Fund (and especially the initiative EQUAL) is also used to fund projects for better integrating disabled people into mainstream society. Particularly in relation to ICTs, the term "*e*Inclusion" is used. A key document in this respect is a Commission Staff working document on: "*e*Inclusion - The Information Society's potential for social inclusion in Europe"[10].

**RTD&D and Standardisation actions:** In research and development, *e*Accessibility has been substantially addressed in the TIDE Initiative as well as in the Fourth and the current Fifth Framework Programme for Research and Technical Development (5FP). In the Information Society Technologies (IST) thematic programme, Key Action 1: "Systems and services for the citizen", and especially the area 1.2: "Persons with special needs including the disabled and elderly", there are many projects that address *e*Accessibility for persons with disabilities and older people through better assistive technologies and Design for All in products and services. Other research areas, such as Administrations, Transport and Tourism and Cross-programme actions, have also funded projects that include eAccessibility aspects.

In addition, within FP5, the "Quality of Life" thematic programme addresses the needs of disabled and elderly people within its Key Action 6: "The ageing population and disabilities" and in its "Generic activities - Research relating to the persons with disabilities". Projects concerning social inclusion and accessibility are specifically included in the areas 6.3: "Demographic and social policy aspects of population ageing" and 6.4: "Coping with functional limitations in old age".

The COST (European Cooperation in the field Of Scientific and Technical research) committees 219 and 219bis "Telecommunications: Access for Disabled and Elderly People" have carried out a broad range of activities on *e*Accessibility issues, particularly in the telecommunications field.

A number of standardization activities supporting eAccessibility have been initiated. A Commission mandate on ICT standardization and people with disabilities and older people has been issued to the standardization organisations CEN, CENELEC and ETSI. The organisations now run over twenty projects relating to eAccessibility with funding from the European Commission. A coordination body has been set up. The projects address both broader accessibility requirements and specific technical issues.

## 1.3 The Impact of the Knowledge Based Society and Economy (KBE/KBS)

The advent of a KBE and associated knowledge Based Society (KBS) has provided new opportunities but also new challenges for better integrating disabled people into society. A key document in this respect is the "*e*Europe action plan 2002"[11] in which, *e*Accessibility, in particular, is treated in sub area 2c:"Participation for All in the

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[10] SEC(2001)1428 of 18.09.2001
[11] http://europa.eu.int/information_society/eeurope/action_plan/index_en.htm

Knowledge Based Economy". Here five specific action lines were set out. The progress on each of these action lines is described in the next section.

## 2.    Current European Union initiatives

### 2.1    The *e*Europe 2002 action plan

**Progress on the specific action lines of the "participation for all in the knowledge based economy" objective (2c)**

This section provides the essential elements of progress on each of the specific action lines mentioned in the previous section.

### 2.1.1    Policies to avoid info-exclusion will be more effectively co-ordinated at European level through benchmarking of performance and exchange of best practice between Member States. Actors: Member States, European Commission. Deadline: end 2002.

This action line was implemented, via the work of ESDIS, culminating in the publication of the Commission staff working paper on *e*Inclusion referenced earlier. This document also formed the basis of a Council Resolution of 8th October 2001 on "*e*Inclusion - exploiting the opportunities of the information society for social inclusion"[12].

### 2.1.2    Adoption of the Web Accessibility Initiative (WAI) guidelines for public websites. Actors: Member States, European Commission. Deadline: end 2001.

The Commission's main contribution towards fulfilment of this action line was the publication of the Commission Communication on: "*e*Europe 2002 - Accessibility of Public Web Sites and their Content"[13].

Many Member States have expressed their intention to adopt the recommended guidelines and some have already done so (see section 3). However, the work of monitoring the implementation of such adoption and its extent (foreseen in the Communication) continues. Following the Communication, a Council Resolution[14] was adopted in March 2002, further encouraging Member States and EU institutions to adopt and implement the WAI guidelines for their public websites. The Resolution also "INVITES the High Level Group on the Employment and Social Dimension of the Information Society (ESDIS) to monitor progress in the adoption and implementation of the Web Accessibility Initiative (WAI) guidelines and to develop common methodologies and comparable data so as to facilitate the evaluation of progress". To this end, the *e*Accessibility expert group is currently working on an updating of the conformance of Member States public web sites with the WAI guidelines using existing tests of conformance. Recommendations for a common methodological basis for verification of web sites conformance with the WAI guidelines and to what degree of affinity. Also, in response to the Commission

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[12] Council resolution 2001/C 292/02 published in the Official Journal of the European Communities of 18.10.2001 (C292)
[13] COM(2001) 529 final of 25.09.2001
[14] Council Resolution 7087/02 of 20th March 2002 on: the *e*Europe Action Plan 2002: Accessibility of public web sites and their content

Communication, the European Parliament, the Economic and Social Committee and the Committee of the Regions have all supported and further emphasized the importance of accessible websites and wide adoption of the WAI guidelines.

### 2.1.3 Review relevant legislation and standards to ensure conformity with accessibility principles. Actors: Member States, European Commission. Deadline: end 2002.

Based on the action 's draft report of: 26.06.2002.

The report starts from the premise that access to the Knowledge Society is rapidly becoming a "sine qua non" for the economic, educational and social life of the European citizen. This heightened reliance on Information and Communication Technologies (ICTs) to convey/distribute products and services has raised hope and concern as to whether Knowledge Society oriented products and services are fully accessible for all people, especially people with disabilities. There is also a growing awareness that people with disabilities have the right to expect the same standard of service and access as every other member of the public. The principles of full participation and equality of opportunity are as important in the Knowledge Society as they are in all other forms of society and perhaps even more so. Full access is a pre-requisite for full citizenship. Being a citizen involves the right to participate on equal terms, having a voice when decisions are made. Non-discrimination is the guiding principle for all legislation in this area. Relevant areas of legislation for *e*Accessibility include: employment provisions, telecommunications services, public procurement and intellectual property rights (copyright).

**In the employment field**, a European Directive establishing a general framework for equal treatment in employment and occupation[15], lays down a general framework for combating discrimination, e.g. on the grounds of disability. The directive includes also articles about reasonable accomodation for disabled persons and positive action. Member States should implement the Directive by December 2003. One kind of reasonable accommodation involves the provision of "Assistive Technologies" and/or equipment based on "Design for All" principles to the worker who needs it. Therefore, "reasonable accommodation" is an important legal concept that could become highly relevant with regard to improving the accessibility of the working environment and ICT. It creates a general duty for employers to make their facilities accessible to employees who have disabilities.

**In the Telecommunications field**, in 2002 a new package in telecommunications legislation was enacted. It contains, amongst others, a directive on Universal Service provisions[16] in which social obligations are defined in Chapter II. According to its Article 6, Member States shall ensure that the national regulatory authorities can impose obligations on undertakings in order to ensure that public pay telephones are provided to meet the reasonable needs of end users. This in terms geographical coverage, the number of telephones, the accessibility of such telephones to disabled users and the quality of services.

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[15] 2000/78/EC

[16] Directive of the European Parliament and of the Council on universal service and user's rights relating to electronic communications networks and services (OJ L 108, 24.4.2002, p. 51-77).

**Public procurement** indirectly provides a powerful means of delivering *e*Accessibility through public purchasing actions. Given that the total public procurement in Europe is worth an estimated 1.300 billion € (or over 15% of EU GDP) this is not an insignificant issue for buyers or sellers of such goods and services. Community public procurement legislation does not prescribe in any way what contracting authorities should buy and is consequently neutral as far as the subject matter of a contract is concerned. The Community public procurement directives provide only procedural rules for awarding procedures. A recent communication[17] explains the different possibilities open to public authorities for fulfilling particular requirements in this regard. In particular they are free to define the subject matter of the contract in the way they consider most appropriate regarding e.g. *e*Accessibility criteria provided that technical specifications and award criteria do not distort competition or discriminate between tenderers.

**Concerning Copyright**, **the EC** adopted a Directive on Copyright and Related Rights in the Information Society (2001/29/EC) which takes account of the possibility to provide for exceptions under certain conditions from the reproduction and the communication to the public right for uses for the benefit of people with a disability (Article 5(3)(b)). Clear exemptions from exclusive rights are crucial to ensure that works may be copied at appropriate terms where the purpose is to modify them to meet the special needs of people with physical or mental disabilities. The necessary provisions have been set out at EU level so it is now for Member States to implement them, in an appropriate way, at national level by the end of 2002.

**International comparison**

It is made particularly with the US providing relevant models for Europe.

In the US there is a long history of regulatory and legislative activity related to accessibility. From the mid-1970s until today, there is a clear pattern of public awareness of and responsiveness to accessibility issues coupled with disability advocacy and practical know how. Three pieces of relevant legislation are briefly described below.

Since 1973, the Rehabilitation Act already required federally conducted or federally sponsored programmes to be accessible to persons with disabilities. Within the federal employment jurisdiction it provides for non-discrimination in the hiring, placement, and advancement of persons with disabilities.

 The main civil rights legislation in the US is the Americans with Disabilities Act (ADA) of 1990[18]. ADA has adapted and extended much of the existing coverage of the Rehabilitation Act for implementation more generally. E.g. it requires barrier-free access to places that serve the public, such as theatres, restaurants, and museums. In addition, State and local government services, transportation, and telecommunications

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[17]  Interpretative communication of the Commission on the Community law applicable to public procurement and the possibilities of integrating social considerations into public procurement (COM(2001) 566 final)

[18] http://www.usdoj.gov/crt/ada/adahom1.htm

services must also be accessible. Discrimination on the basis of disability in private sector employment is also prohibited. The ADA requires employers to make reasonable accommodation for a individual with a known physical or mental disability. Potential reasonable accommodations include:
job restructuring, reassignment to a vacant position, part-time or modified work schedules, assistive technology provision, or aides or qualified interpreters.

Potentially the most useful piece of legislation in the US armoury for *e*Accessibility is Section 508 of the Rehabilitation Act[19]. Broadly, Section 508 states that any computers that are to be used by Federal Government agencies must be capable of being adapted to be accessible to workers with disabilities. In particular, it refers to the section of the Workforce Investment Act 1998 and establishes accessibility requirements for any electronic and information technology developed, maintained, procured, or used by the Federal government. The requirement first came into force from June 2001 and has already had a powerful effect on re-orienting the American ICT industry and Information Services providers towards a Universal Design (Design for All) approach.

The significance of section 508 lies in the fact that mainstream technologies such as PCs, telephones, voice recorders and photocopying machines must now comply with accessibility standards for persons with disabilities if they are to be purchased or used by US Federal agencies. Since public procurement accounts for more than a quarter of all purchases of ICT equipment in the USA, producers of hardware, software, training schemes and a host of ancillary services have realised that separation of the market into 'mainstream' and 'disabled' is no longer economically tenable. Design for All standards form the bridge that enables the transition from "insular" mainstream products to equipment and services that are accessible to all, including disabled citizens. This development in US legislation has already started and will continue to have a powerful impact on all forms of services that are dependent on Information and Communication Technologies, such as on-line services run by administrations, the whole world of "*e*Commerce", Internet-based education and training, teleworking, etc.

Overall the report concludes that legislation in this area can become outdated due to rapid technological development. Therefore, a combination of general legislation, specific legislation, "soft law" and reference to the relevant standards seem to offer the best possibilities to ensure *e*Accessibility.

Some potential recommendations stemming from the report are:

On general legislation

A Directive prohibiting discrimination based on disability outside the scope of employment should be adopted by the Community.

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[19] http://www.access-board.gov/sec508/508standards.htm

In the employment field, following the implementation of the Directive establishing a general framework for equal treatment in employment and occupation, good examples should be developed and disseminated.

Existing measures in telecommunications to improve accessibility should be implemented by Member States and the Commission. In addition these should be extended to cover e.g. mobile telephony.

The current possibilities to introduce *e*Accessibility requirements in public procurement, especially for ICT equipment and services, should be actively used.. The EU funded project ACCENT has studied how accessibility is included in regulations and practices in some other countries. The project has also produced guidelines for inclusion of accessibility in public ICT procurements. (http://www.statskontoret.se/english/accenteng.htm).

Concerning copyright, a directive (2001/29/EC) provides for exemptions, by Member States, for the benefit of disabled persons. The Commission is monitoring very closely whether and how Member States provide for such exceptions or limitations. These relate, in particular, to the "reproduction right", the "right of communication to the public" and the "making available right" for the benefit of people with a disability in accordance with Article 5 (3)(b) of this directive. Further analysis of the situations and concepts is needed as a next step to ensure accessibility.

On monitoring progress.

Examples of possible indicators or follow-up themes are:

- directory services for blind and partially sighted persons,
- emergency services by text,
- relay  services (text, videophone, speech to speech)
- good examples about services, legal measures and information.

**2.1.4    Ensure the establishment and networking of national centres of excellence in design-for-all and create recommendations for a European curriculum for designers and engineers. Actors: Member States, European Commission. Deadline: end 2002.**

This action is aimed at raising the profile of Design-for-All as an important mechanism to achieve greater *e*Accessibility. Design-for-All has a much wider scope than *e*Accessibility or even measures to improve general accessibility for disabled people. In its broadest sense it refers to the design of accessible environments, systems, products, services and reliable sources of information to maximise people's choice and enhance the ability of the individual to live independently and to exercise citizenship proactively. However, in order that the focus on *e*Accessible design be maintained, a definition and scope for Design for All for this action ( its particular application to Information Society products and services) has been agreed.

The activities of the proposed European network have been set out, the most important of which is to provide input to recommendations for a European Curriculum in Design for All. The network will also serve as a forum for Design for All issues, including the exchange of best practices, discussion and review of different experiences and methodologies in teaching Design for All, and sharing of expertise. Joint activities such as conferences or symposia, as well as an exchange of scholars and students, are also among the proposed tasks of the network.

The network will foster awareness and promote changes of culture in the public and governmental sectors in order to better integrate persons with disabilities into society and increase possibilities for independent living. It will also establish links with the appropriate education channels in order to embed Design for All best practices into new curricula for designers (including engineers, programmers, architects, and city planners). Through its common activities and proposals, the network will help create a cohesive group of individuals and organisations working towards advancement and excellence in Design for All.

An informal Call for Interest in Participation in the Network of Centres of Excellence has thus far resulted in over 90 applications. For each Member State, a National Contact Centre (NCC) has been nominated. In most cases this is a single existing physical centre whilst in a few cases it is a virtual centre linking several national organisations.

The NCCs will coordinate the network within their own countries and work together to establish the network at the European level. The network, called European Design for All eAccessibility Network (EDeAN), is headed by a European Secretariat, a function that will rotate between NCCs. The Danish NCC, the Danish Centre for Technical Aids for Rehabilitation and Education, will serve as the first European Secretariat, which will coincide with the beginning of the Danish Presidency as the network was officially launched in July 2002. The European Secretariat and the NCCs are working together with the Commission to define more closely the structure and procedures of the network. Support activities in the form of so called Thematic Networks on Design for All will be funded under the IST programme to support the EDeAN and the work on a European curriculum.

### 2.1.5 Publication of "Design for All" standards for accessibility of information technology products, in particular to improve the employability and social inclusion of people with special needs. European Commission, Private sector (via the European standards bodies). Deadline: end 2002.

Formal standards are made at the international level by organisations such as ISO, IEC and ITU and at the European level by CEN, CENELEC and ETSI. In addition, informal standards are created by industry consortia, one example being the WAI Guidelines developed by the World Wide Web Consortium (W3C).

At the European level, a number of efforts associated with the eEurope initiative are under way, partly funded by the Commission. These are coordinated, at the ICT Standards Board level, via the newly formed Design for All and Assistive Technologies Standards Coordination Group (DATSCG). Some of the activities are related to the Commission Mandate M/273 on ICT standardization and the needs of

persons with disabilities and older people[20] and some are related to broader actions promoting accessibility in standardization work. The projects address both specific technical issues and broader aspects of accessibility and ICT standardization, such as the need for new standardization activities.

As a rule, publication and distribution of standards is carried out by the respective standardization organisations. In addition to the standardization work itself, it is expected that a comprehensive list of the finished standards and work in progress with a report on their relevance will be completed by the deadline.

## 2.2    Other European Union initiatives

### 2.2.1    The Framework Programmes for Research and Technical Development

The current Fifth Framework Programme addresses disability and ageing in general and eAccessibility in particular by funding research projects within two of its thematic programmes: IST and Quality of Life.

A few examples: The DASDA project is a support measure that will increase awareness and knowledge of accessibility and Design for All among various stakeholders in European industry through the production of a set of multimedia-based products. The IRIS project will enhance and evaluate Internet services in fields such as eCommerce, teleworking and eLearning with several groups of users with special needs. The project ELDERATHOME will develop sets of criteria that cover the preconditions of the elderly for living at home as regards the dwelling, its surroundings and facilities providing services and infrastructure.

In the Sixth Framework Programme, starting late in 2002, the IST programme will include a subprogramme on Major Societal and Economic Challenges, where eInclusion will be one of the themes.

### 2.2.2    The European Social Fund (ESF)

Many projects addressing employment and social inclusion aspects for disabled and elderly people are funded under the ESF especially through the EQUAL initiative and its predecessor programmes (e.g. HORIZON for disabled people). One project targeting disabled people that is already up and running is provided as an example:

Employment Board System (EBS) supported under the HORIZON programme.

This project, developed by the Centro de Reahab. Prof. de Gaia (CRPG) of Vila Nova de Gaia,  Portugal, in partnership with IBM's Training For Work Programme (TWP), aimed at addressing professional qualifications needs of, in particular, disabled persons and assisting them in job placements. Six local centres each equipped with a web server + 3 regular and one assistive technology adapted workstations were provided with a connecting network. The centres were also equipped with an Information Kiosk offering professional advice and job placement services. The project, now completed, has been very successful and will probably be reproduced in other Portuguese local territories.

For further information contact: carlafaria@papim.com

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[20] http://www.etsi.org/public-interest/mandate/M273.pdf

### 2.2.3 EU institutions

Following the developments mentioned above regarding accessible websites, the EU institutions will initiate activities to adopt the WAI guidelines and make their own websites accessible.

### 3. Member States initiatives

As well as the EU initiatives, Member States have also launched initiatives and other actions in the field of *eA*ccessibility. A snapshot of each is presented in the following also providing references for further information:

### 3.1 Austria

The situation in Austria is based on a report issued by the Chief Information Office dated 28.3.2002. (ref: birgit.wilder@cio.gv.at).
The main effort has been to commit, implement and monitor the conformity to the WAI content guidelines, at the "A" level, for public websites. This, first of all, in fulfilment of the *e*Europe 2002 action line calling on all EU Member States to commit to use the WAI guidelines as the basis for the accessibility of their public web sites by end 2001. Secondly to further comply with the requirements of the resolution adopted by the Telecommunications Council in March 2002 for the implementation and follow up measures concerning that commitment.

Concerning first the commitment. The Office of the Federal Chancellor organised an information session in July 2001 to ensure awareness of the issue by all the interested parties (federal, regional and city level). A private initiative was taken at this time to better inform all those concerned about the guidelines.

A visually impaired specialist from BFI Steiermark made a very useful contribution to the understanding of the user group problem with using the Internet. He explained the nature of the current assistive technology aids for the visually impaired. Following these discussions the Federal Instiute for the blind offered to examine web sites from the point of view of their accessibility by blind people. Numerous departments made use of this offer.

In November 2001 a follow up workshop was organised by the Federal Ministry for public performance and Sport. The aim was to encourage conversion activities in view of the deadline of 1.1.2002 for the commitment to adopt the WAI guidelines. The so-called IKT Board received a short information about the planned monitoring of the implementation.

By November 2001, all affected federal departments as well as the other interested parties at the regional and city level were requested to provide concrete information about the status of conversion work. At the Federal level the request was to all departments excluding the Federal Ministry for foreign affairs, the Ministry of the Interior, the Federal Ministry for national defence and the Federal Ministry for traffic, innovation and technology. At the regional level, the region of Lower Austria participated. A status report was issued concerning the responses received by 31.1.2002. The status report was submitted to the IKT-Board in February 2002 with

the reference to missing contributions. These were supplied later in March 2002 with two exceptions.

The beginning of the work for the compilation of the first Austrian conversion report is planned for 2nd quarter 2002. The results should be seen used as representing the status at end of June 2002 for European Commission benchmarking purposes.

Progress reached:

1. Sufficient awareness raising of Web accessibility requirements took place in the last months. All participants are committed to achieving the objectives of the WAI-Initiative and the guidelines.

2. The first conversion activities, with most of the departments, were begun in autumn 2001. However, the full scope of the necessary measures of adaption was possibly underestimated. Some delays arise with the implementation by all departments. Although numerous minimum requirements are fulfilled, at present only some Websites are marked with the W3C-Logo/A-level. The majority of the departments on average predict a conclusion of the work between end 2nd quarter 2002 and end 2002. It is planned that all departments will finalise the implementation by end of 2002.

3. The biggest problems with the implementation are the large legacy of use of PDF-Formats, Frames, graphics as well as the misuse of tables.

In conclusion, the awareness raising measures, starting from mid 2001, have led to a generally high awareness level of those responsible for public web sites. The implementation of the WAI guidelines has been pursued with a large commitment, since the objective of the WAI-Initiative overlaps with the interest to offer the access to the information and services of the public administration to all persons barrier free. The work was also used to check the design of the previous Web sites for overall user friendliness. The conversion efforts have intensified over the last months but, in the case of some departments, it will still not be completed for some time. There is a large problem concerning converting older Web sites. For departments not being able to use content management it is to be assumed that more public funds will be required to transform existing sites to make them WAI guidelines conformant. Lastly, Austria is mindful that the referenced council resolution also requires Member States to continue to review the state of the accessibility of the public web sites in the light of the further development of the new technologies. On the one side these provide better accessibility possibilities but on the other side, as they become more complex, they create more difficulties to implement the WAI-guidelines..

## 3.2    Belgium

Web Accessibility is taken into account in several Belgian *eG*overnment projects. E.g. guaranteeing accessibility following acceptance of *e*Europe2002 was a requirement for the bidders to the high speed intergovernmental network UME set up by the federal ICT promoting agency FEDICT (http://www.fedict.be).

*e*Accessibility was already an issue in the Tele-administration projects funded by the Flemish government that ran until 2001.

http://www.vlaanderen.be/ned/sites/teleadmin/
The research group on Document Architectures of the Katholieke Universiteit Leuven ( http://go.to/docarch) was in charge of consulting the Tele-administration projects on accessibility issues. The WAI Guidelines on web accessibility have been promoted.

Since April 2001, the non-governmental organisation called Blindenzorg Licht en Liefde (BLL), together with the Blindsupport pressure group, is checking public and semi-public websites for the implementation of WAI guidelines. A "Blindsurfer" logo is given to the websites found accessible. Details are available from: http://www.blindenzorglichtenliefde.be or http://www.blindsupport.be/bslabel.htm.

The Flemish government is supporting BLL in their efforts to check and advise many provincial and community-level sites.

The Walloon Agency for the Integration of Disabled People (AWIPH), (http://www.awiph.be), which is a Walloon Region competence centre (http://www.wallonie.be), has created a chart of accessibility of the Internet with a version tailored to visually impaired people. The chart encourages web developers to follow the tips and technical approaches proposed in the guidelines.

## 3.3 Denmark

Devolvement of the care of disabled persons implied a desire both with the organisations for disabled persons and the Government that the dialogue about equal opportunities for disabled persons should be placed with an effective central body. This led to the establishment of the Danish Disability Council.

The Danish Disability Council is a Government-funded body made up of an equal number of representatives from disabled people (nominated by the DSI, the Danish Council of Organisations of Disabled People) and from public authorities. The Council's tasks are to monitor the situation of disabled people in society and to act as an advisory body to Government and Parliament on issues relating to disability policy. The Council can take initiatives and propose changes in areas affecting the life of disabled people and their living conditions. All central authorities are expected to take the Council's advice in these matters.

Section 87 of the Danish Act on Due Process of Law and Administration in the Social Area, is the Danish Disability Council's working basis. The Ministry of Social Affairs appoints the chairman of the Council. In order to strengthen the professionalism of the Council, a number of people with special expert knowledge from various sectors are attached to it. This composition of the Council ensures wide scope of knowledge and experience concerning disability policy. The Danish Disability Council has a close cooperation with The Equal Opportunities Centre for Disabled Persons. In general, sector responsibility is the basis for sector directed initiatives meaning that action is taken in different  sectors to find accessible solutions. However, many needs are cross sector directed – not least in the IT context – and the Government has appointed a committee with members from relevant sectors to act as an umbrella for covering the cross sector needs.

Advice, knowledge, and research are present for general service in the public and private sector – mainly in the form of Centres of Excellence covering different specialties.

## 3.4    Finland

"The National Strategy for Education, Training and Research in the Information Society 2000-2004" www.minedu.fi/minedu.publications/index.html  is based on the principle of every citizen´s equal opportunity to study and develop their own knowledge and extensively use information resources and educational services. There are a number of public and NGO-driven initiatives aimed at equalizing the opportunities of all to participate in the information society.

Concerning web accessibility, the WAI guidelines are included in the *"JHS129 Guidelines"* (Ministry of the Interior, December 2000).  The guidelines are addressed to public sector service providers at national and local levels. The guidelines establishes four central principles to public websites: they have to be accessible, information needs to be easy to find, sites have to be service oriented and participatory. http://194.89.205.3/juhta/suositukset/jhs129.htm#yleisperiaatteet

In April 2002 www.suomi.fi  - a common portal for Finland's public sector services and related information - was opened. It includes web services of more than 100 organisations. There are also about 2000 links. Special attention has been paid to accessibility and usability. The text version complies with AA level of WAI guidelines. Also otherwise it follows guidelines as much as possible. The eGovernment initiatives are expected to adapt to the same principles.

The Finnish Information Society Development Center www.tieke.fi is promoting the use of the WAI guidelines by making available adapted versions to various user groups.

Accessibility training was introduced to public sector procures of internet services by the JUNA project (www.intermin.fi/suom/juna) to enable procurers to demand accessibility from subcontractors.

There are several projects aiming at empowering the users. The project "ITSE" is a cooperative activity by the Ministry of Social Affairs and health and a number of regional Centers of Excellence to disseminate information and to train staff in e.g. information technology –based assistive devices so as to better be able to respond to the needs of disabled clients.  A number of NGOs run services that aim at equipping people with disabilities and the elderly to use ICT.

While municipalities have the responsibility to make available social and health services equally to all, disability organizations have a central role as service producers. For instance, several organizations  provide training in information technology to people with disabilities and the elderly. The Finnish Central Union of the Visually Impaired provides major newspapers on-line for auditive output devices. Six Finnish national organizations of disabled people run a project "Interactive service network on augmentative and alternative communication (AAC) in the Internet",

PAPUNET. It is a - Service network on speech impairments and plain language www.papunet.net.

There are a number of initiatives and development project related to Information Society at national and local levels such as the following examples.

Teleworking is a way to organize work to increase possibilities for presence in physical, virtual, and social - thinking-supportive - environments and processes (Juhani Pekkola, Etätyö Suomessa, Publications of the Swedish School of Economics and Business Administration Nr 104, Helsinki 2002.).

There are safety telephone services at a local level. An example comes from the town of Kotka in south-eastern Finland. It has for 10 years had an agreement with the local telephone operator Kymen Puhelin corporation to produce safety phone services. The safety phone is meant for old people and for special groups living alone. By pushing a button on his/her wrist (clock-like device) the customer is connected with the local alarm-receiving station. This service does not require major investment, because it is based on existing telephone networks and an emergency organisation. The operator takes care of the equipment and bills the customers for the use of devices and calls.

## 3.5    France

Many measures have been taken by the public authorities over the last twenty years to reorient the aid mechanisms for disabled persons both to guarantee their autonomy and ensure their integration into the ordinary life environment. See: http://www.social.gouv.fr/htm/pointsur/handicape/index.htm

The law of 1987 on the occupational integration of the disabled workers created a specialised agency (the A.G.E.F.I.P.H, www.agefiph.asso.fr ) that directly finances the installation of  work stations, and can also support the development, production and adapted technical aid diffusion, in particular,  those that make it possible to access the tools of the information society.

More recently, the multiannual plan (2001-2003) announced by the Prime Minister to the advisory national Council of disabled persons (CNCPH) on 25 January 2000, envisages the adoption of a site network "for autonomous life" throughout the territory. Based on a general activity, and intended to coordinate better public and private actors, SITEVA provides a "one stop shop" for the  treatment of disabled persons' requests thus ensuring the coordination of the administrative, technical and financial interventions of the various local partners. The multi-disciplinary team evaluates the situation of the person and proposes an individualised aid plan which takes all necessary aid and technical amendment into account.

Parallel to the mechanism of direct aid implemented through the policy for disabled persons, the public authorities carried out actions in order that the information society, and the web in particular remain accessible to persons having special needs. E.g. the National Institute for Research in Computer Science and Control (www.inria.fr), the cofounder of  the World Wide Web Consortium (W3C) takes an active part in the work of the WAI.

To accompany the Circular by the Prime Minister of October 1999 envisaging that the national web sites have to be accessible  by implementing the priorities of level A of the WAI, the authorities responsible for the development of the electronic administration implemented actions of the distribution of technical support for assessment to the administrations concerned.

The site www.atica.pm.gouv.fr provides the French translation of the recommendations of the WAI that is regularly updated. A general evaluation of the public Web sites at national level, includes, for a second year,  an evaluation of their accessibility.

Following the last evaluation of a sample of 30 sites which showed that none of them respects completely the recommendations of the WAI, it strengthened its action in organising a cycle of "training the trainers" in web site accessibility in order to train ad hoc public agents with a view to constituting an interministerial network of experts in accessibility.

Regarding private initiatives, two examples are:

- A guide for better accessibility of the public sites for disabled persons, designed for webmasters, produced and distributed  by the association Braillenet. It supplies concrete solutions to the practical questions raised by the application of the WAI recommendations.

- The French company: "Visual Friendly S.A."(http://www.visualfriendly.com), provides a very useful software service (http://www.labelvue.fr) that enables visually impaired internet users to customize web sites for better accessibility and usability.

## 3.6    Germany

I. Initiatives of the Federal Government in the field of the Information Society

These are mainly focussed on three fields of action:

- The action programme "Innovation and Jobs in the Information Society of the 21st Century" jointly presented by the Federal Ministry of Economics and the Federal Ministry of Education and Research in September 1999. (www.bmwi.de/homepage/politikfelder/Informationsgesellschaft/Aktionsprogramm/Aktionsprogramm.jsp)

- The ten-point programme of the Federal Government "Internet for All" of September 2000 the aim of which is that all groups of society use modern information technologies. (www.bundesregierung.de)

- The implementation of the action plan "eEurope 2002 - an Information Society for All" of June 2000 which also represents the right of people with disabilities to obtain a barrier-free access to information and communication technologies.

Initiative of the Federal Ministry of Economics "Internet without barriers"

- In the framework of the initiative of the federal government "internet without barriers", the Federal Ministry of Economics has launched the campaign "Digital Integration" in 2001. A number of actions were meant to bring the Internet closer to societal groups that had little or no access to the Internet and to people with disabilities. In the context of the campaign "internet without barriers", differentiated information was obtained in a broad survey on the expectations of people with disabilities with regard to the Internet and on the existing barriers. The results were published in the service brochure "Einfach machen - Barrierefreie Webangebote" (Just do it - To make things easy - barrier-free websites): Einfach machen - Barrierefreie Webangebote
(Service for enterprises and companies, April 2002). Press communication of 29 April 2002: www.bmwi.de (Politikfelder / Informationsgesellschaft / Digitale Integration)

## II. Application of the WAI Guidelines

Section 11 on "Barrier-free Information Technologies" of the Act on Equal Opportunities for People with Disabilities which entered into force on 1 May 2002 regulates the design of the web offers of the federal authorities (agencies and other institutions of the federal administration, including federal corporations under public law, public law bodies and foundations). In accordance with the already existing international standard as laid down in the W3C-WAI-Web Content Accessibility Guidelines (Web Accessibility Initiative) these authorities have to design their public websites in such a way that as a rule they may be used by people with disabilities without restrictions. Subject to the technical, financial and administrative-organisational options a legal ordinance to be issued by 31 July 2002 will lay down further details, e.g.:

- which groups of people with disabilities are to be included,
- which technical standards and requirements have to be taken into account for a barrier-free presentation of information via IT media and the date of their binding application, and
- which fields and types of public information are presented.

A quality standard corresponding to WAI conformity "AA" is to be applied to new websites which will be designed after the entry into force of the legal ordinance. A quality standard corresponding to WAI conformity "AAA" is recommended for central navigation and homepages of a web offer. Already existing websites which are of particular interest to people with disabilities are to comply with the standard by 31 December 2003 at the latest and all others by 31 December 2005 at the latest. This means that step by step all Internet offers of the federal administration are to be made accessible without barriers by 31 December 2005.

First it is binding on the federal authorities to make their websites barrier-free. The instrument of an agreement on objectives which is laid down in the Act on Equal Opportunities for People with Disabilities will give recognized associations (see section 13 para. 3 of the said Act) the possibility to enter into negotiations on barrier-free web offers with the business sector.

III. Comments on initiatives of the federal states

In addition to the initiatives of the Federal Government, the federal states have also made efforts of their own in order to improve the use of the Internet in the administration and for the citizens (e.g. Bremen online, DOIT in Baden-Württemberg).

IV. Initiatives of the business community and of private associations

In the following some private initiatives are listed which are very active in the field of a barrier-free design of the Internet:

- Barrierefrei Informieren and Kommunizieren - BIK (Barrier-free information and communication) ([www.dias.de](www.dias.de))

- Einfach für alle (Easy for all) ([www.einfach-fuer-alle.de](www.einfach-fuer-alle.de))

- Forschungsinstitut Technologische Behindertenhilfe der Evangelischen Stiftung Volmarstein - FTB (Research Institute Technological Assistance for People with Disabilities of the Evangelische Stiftung Volmarstein) ([www.ftb-net.org](www.ftb-net.org))

- Internet Zugänglichkeit (Internet - Accessibility)

- Kompetenzzentrum barrierefreies Internet (Competence Centre Barrier-free Internet) (TEDIS) ([http://access.gmd.de](http://access.gmd.de))

- Netzwerk Digitale Chancen an der Universität Bremen - NDC (Network Digital Opportunities at the University of Bremen) ([www.digitale-chancen.de](www.digitale-chancen.de))

- Web for All ([www.webforall-heidelberg.de](www.webforall-heidelberg.de))

**3.7    Greece**

A Task Force has been set up by the Secretariat of Information Society at the Hellenic Ministry of National Economy to co-ordinate activities in Greece on the issues of Universal Access and Usability, Design for All and Assistive Technologies for people with disabilities and other disadvantaged groups.

The Task Force will have an advisory role to the Greek Government on the above issues taking into consideration initiatives at EU level (e.g., *e*Europe 2002 and *e*Europe 2005), the current plans for activities in the context of the Third Community Support Framework, the currently available infrastructure in Greece in relation to the needs of the Greek industry and the Public and Private Sectors, etc.

The Task Force will provide an "umbrella" under which the Greek National network on Design for All (c.f., *e*Europe *e*Accessibility Group) will operate at national level, while ICS-FORTH (Centre for Universal Access and Assistive Technologies) will act as the National Contact Centre.

The National Network will operationally commence its activities in September 2002, and will be open to the participation of all actors actively involved, including Disability Organisations (e.g., National Confederation of People with Disabilities), NGOs, Public Organisations, Ministries, Universities and Research Centres, industry, etc. Further details will become available after September 2002.

## 3.8    Ireland

Government Departments in Ireland have modified their websites to comply with the WAI standards and WAI Level "AA" compliance is a condition for new website developments. The Irish National Disability Authority  (www.nda.ie)  has produced IT Accessibility Guidelines. The Guidelines cover websites, public accesss terminals, telecoms and application software.  The Guidelines for web accessibility are presented in a clear, easy to follow format and have been developed for both a technical and non-technical audience.   The Guidelines are intended to facilitate and promote accessibility of websites for people with disabilities and have been based on the WAI Guidelines.   The Irish Revenue Commissioners operate a fully accessible on-line service site (www.ros.ie) which gives electronic access to customer account information and allows tax returns to be filed and paid on-line.   The exercise of electoral rights by people with disabilities is facilitated by special arrangements including statutory provision in 2002 for electronic voting.

The on-line access to services website OASIS (www.oasis.gov.ie), provides immediate access to public service information.  This site has been developed by the state information service Comhairle, which has a special support role for people with disabilities, as an easy to use site organised around areas of public interest and major life events.  The intention is to present multi-agency information from one source. In time, the website will also act as a portal or gateway to services.  In public library sites, a pilot scheme is in operation under which optical scanning facilities for the visually impaired, including text to speech conversion software.  A departmental-wide initiative BASIS (www.basis.ie), is being undertaken as part of the Government's proposals for implementing the Information Society in Ireland and the framework for delivering eGovernment through a Public Services Broker.  While the main focus of BASIS is electronic public services for the business community, the development by public sector agencies of these services and the delivery of integrated public sector information in a client centred manner will enhance accessible services generally.

## 3.9    Italy

The actions taken to integrate Italian disabled people into the ICT society are addressed in two main directions. Firstly, the financial support of the National Health Service in purchasing assistive technology, according to a regional regulation as well as fiscal benefits (reduced vat, deduction from tax declaration etc...) for those who buy such equipment on their own. Some public and private organizations provide the suitable rehabilitation for the access to ICT.

Secondly, public regulation on accessibility of information tools and sources. In particular, a directive of the Ministry of Public Function, published in March 2001, (www.governo.it/sez_dossier/linee_web/circ13mar2001_fp.html)

contains the guidelines for the organization, usability and accessibility of public Web sites, in line with the WAI WCAG 1.0.

In September 2001 the Authority for Information Technology in the Public Administration (AIPA) published a directive:
(www.aipa.it/servizi[3/normativa[4/circolari[2/Aipacr32.asp)on the accessibility of information tools and services of the public administration (Web sites, hardware, software). AIPA introduced also the accessibility requirements in the regulation for teleworking and for procurement contracts of the public administration.

The AIPA directive applies also to educational material of State schools so that, hopefully, this will contribute to overcome many problems encountered in accessing multimedia materials which are often used or produced in the school. Taking into account that in Italy all disabled children are integrated into normal schools, this aspect is crucial for their real integration. Most of them, especially blind and motor impaired children, are initiated in the use of a personal computer as a primary communication tool.

The law 104/1992 has established resources to provide State schools and universities with suitable hardware and software for disabled students, on the basis of specific projects. The exchange of these materials among schools is encouraged. For this purpose, in 2001 networks of schools (CTI: Territorial Integration Centres) and a Web site (www.bdp.it/handitecno/) have been created by the Ministry of Education.

Concerning the issue of copyright, in 2001 a number of publishers reached an agreement with the Italian Library for the Blind and other organizations about the use of the electronic version of books for Braille transcription and for online access by registered disabled users by means of username/password.

## 3.10 Luxembourg

*e*Accessibility measures are included under general einclusion measures for disadvantaged persons including the disabled and elderly.

Example taken from the National Action Plan for Employment 2002.

A Luxembourg partner involvement in a European project (Leonardo Da Vinci/Equal) together with a proposed Centre for vocational training of handicapped persons in Bitburg Germany. One of the project goals is to establish a vitual centre for information and communication.

## 3.11 the Netherlands

The main objective of policy for disabled people in the Netherlands is that persons with disabilities have all possibilities to participate fully in society. Within this general frame more specific objectives are:

1.    persons with disabilities have access to means that compensate for their impairments;
2.    society is socially and physically accessible;

3.  the social separation/exclusion of persons with disabilities will be stopped;
4.  persons with disabilities will have authority over type, kind and quality of the services used.

The second and third objectives imply that all actions of the ministries have to take into consideration that all citizens have different abilities. These differences have to be reflected in the policy itself. The result will be an inclusive policy. Special treatment of persons with disabilities will be an integral part of regular policy. Only in very exceptional cases a separated policy to compensate for the adverse consequences of actions is permitted (TK 24170 nr 66; 5 June 2001).

Different types of policy are prepared to reach these objectives and to raise awareness that inclusive policy has to be accepted broadly. The European Year of People with Disabilities 2003 will be used to promote these ideas and a bill on Equal Treatment in Labour and Vocational Education and Training (before parliament) will be a significant instrument to stimulate inclusion policies. In March 2002, the State Secretary of Health, Welfare and Sport informed Parliament about awareness-raising campaigns for the coming years (TK 24170 nr 71; 15 March 2002).

An important project in the field of *e*Accessibility is Drempelsweg (barrier free internet) (www.drempelsweg.nl). The project is an initiative of the Ministry of Health, Welfare and Sport that handed over the project to the Dutch National Bureau of Accessibility (LBT). The LBT is a national centre of expertise promoting accessibility in different fields like building, traffic and transportation, recreation, technology and ICT. On the one hand this project motivates designers and owners of websites to make and keep their site accessible by asking them to sign a declaration of intent. In that declaration they state that they will make their site priority 1 accessible within the next year. On the other hand the project encourages people with disabilities to take an active part in the information society. They can benefit from the unlimited possibilities that form a door to the world from their (wheel)chair.

During the first year four "ambassadors" with different disabilities have brought accessibility to the attention of a broad public including government and private enterprises. Their approach has lead to more than 100 (private) organisations signing a declaration of intent. In the year 2002 again, 100 organisations, companies and local governments will be asked to sign such a declaration.

Drempelsweg offers the participants a technical helpdesk by the Accessibility Foundation (www.accessibility.nl), experts in benchmarking sites for accessibility following the W3C guidelines. Drempelsweg and Accessibility offer a special benchmarking service on the site www.design4all.org and are in the process of making an official quality mark and subsequent testing method for websites.

As part of the launching of the project Drempelsweg, the Minister of Urban Policy and Integration of Ethnic Minorities signed a declaration of intent that all internet-sites of the national government will be accessible in 2002. So far the sites of 70 % of the ministries comply with the WAI-standard at low level, 50 % comply with this standard at a high level. At the end of this year it is expected that 80 % will comply with the high level.

Local and regional governments only comply with the lower percentage. The Ministry of Home Affairs is funding the building of sites of local authorities on condition of accessibility according WAI-standards. Moreover the Ministry of Home Affairs examines periodically all governmental sites for general usability. Part of this monitoring is concerned the accessibility of the sites for persons with a disability.

The Ministry of Social Affairs and Labour stimulates participation of persons with disabilities on the labour market. Part of this policy is to make assistive technology available. Employees are stimulated to work on an accessible intranet.

The Ministry of Social Affairs and Labour also stimulates employers to extend their human resources policy to disability management as deployability policy. In this respect, the Dutch government has established the Committee for Occupational Disability and Work in which key persons from Dutch society are active in creating social support for changing the image of people with an occupational disability in general and disability management in particular. The government monitors the developments in order to gain insight on the number of people with a chronic affliction, desease or handicap and on the obstacles they meet when trying to secure and retain a job. The challenge for companies and their staff is to give a concrete meaning to disability management and to equal opportunities for people with an occupational handicap. Upcoming legislation for equal treatment in employment and occupation will help to achieve these goals.

The Standardization Institute of the Netherlands (NEN) plays an active role in the implementation of the ISO-guide 71 (translation funded by the Minister of Social Affairs). The use of the WAI-standard will take an essential role. A special committee stimulates harmonization of standards based on design for all and assistive technology.

## 3.12   Portugal

The concern with inclusion of people with disabilities into the Information Society is assumed by the Government through the approval by the Council of Ministers of two resolutions, in August 1999: the National Initiative for Citizens with Special Needs and the Resolution which makes accessibility to Public Administration websites compulsory by compliance with the WAI directives.

To monitor the implementation of the above-mentioned resolutions, the Ministry of Science and Technology set up the Acesso Unit (www.acesso.mct.pt ). This Unit also develops training actions on accessible websites and keeps a helpdesk of web accessibility to public sites webmasters. Acesso developed guidelines on accessibility for the Museums-on-line Project set up by the Ministry of Culture. (www.acesso.mct.pt/museus.htm ).

The Public Administration Websites Design Handbook of July 2001(www.cisi.mct.pt ) and the following assessment procedures of websites take into consideration the WAI guidelines on accessibility of content.

The National Secretariat for Rehabilitation and Integration of People with Disabilities (SNRIPD) (www.snripd.mts.gov.pt) and the Acesso Unit develop awareness actions

directed to municipalities and other public services as well as measures aiming at raising the attention of governmental departments.

To urge NGOs in the field of rehabilitation to use Internet and to design their own web pages, the Ministry of Science and Technology provided the "Solidarity Network" (www.acesso.mct.pt/cnes/cnes.htm ) free of charge, including the offer of one computer, printer and router, and free access to Internet. The FCCN (Foundation for National Scientific Computing) is responsible for the management of this infrastructure.

The Employment and Vocational Training Institute (www.iefp.pt) implements the measures included in the Employment National Plan concerning telework and telecenters. There are 4 tele-centers located in Rehabilitation Institutions: ACAPO (www.acapo.pt) for blind people, CIDEF (www.cidef.org) and CRP Gaia (www.crpgaia.pt), for motor disabled persons and Alcoitão/Ranholas: (www.iefp.pt/Quem_Somos/Centros/cfp/alcoitao/alcoita/html), for all kinds of disability.

The Public Internet Access Points (PIAPs) Project for Municipalities includes accessible stations.

The Acesso Unit delivered a document to Municipalities with the requisites including the equipment to make accessible the PIAPs by those with visual impairment, deafness, motor impairment and reading difficulties:
 (www.acesso.mct.pt/spacenet.htm).

TV Law sets as specifically compulsory for TV companies to guarantee, progressively, that television broadcasting may be understood by deaf people or people with hearing disabilities, by use of caption and sign language, as well as specific programmes directed to this specific public.

Both tenders concerning selection of UMTS operators and licensing of digital TV include criteria of accessibility features for people with disabilities. The UMTS tender included the projects within the area of Citizens with Special Needs.

In the education field, the Evaluating Centre in New Technologies of Information and Communication (CANTIC) (www.cantic.rcts.pt ) evaluates students with disabilities regarding software and hardware special needs and tele-schooling activities for in-patient students that cannot attend classes.

The Information and Communication Rehabilitation Engineering Centre (CERTIC) (www.acessibilidade.net) develops projects and actions in this area, namely a free Electronic Post Office service (Mec Braille) to convert messages sent by Internet into Braille which are delivered by post, and the Cyber-infirmary project in hospitals.

Several funding programmes (POSI, Nónio XXI, CITE…) finance projects promoting the access of people with disabilities in the Information Society.

## 3.13   Spain

A number of important conferences and other events, concerning disability issues in general and *eA*ccessibility in particular, have been hosted by Spain during its Presidency of the European Union from 1st January  to 30th June 2002. Two of the most important of these were:

-       A European conference on New Technologies and Disability held in Madrid on 6th and 7th February 2002  and

-       The European Congress on Disability held in Madrid on 20th to 23rd March 2002.

The main outcome of the second of these, the "Madrid declaration", can be found at: http://www.disabilityeuropeancongress.org/english/informationMADRIDDECLARATION.doc

Concerning national initiatives, some of the most important are provided hereunder:

In the framework of INFO XXI: Information Society for All Initiative and Action Plan the Ministry of Science and Technology (MCYT), through its programme to encourage scientific and technical research (PROFIT), is also supporting access for people with special needs through the development of information and communication technology systems and tools designed to integrate disabled people into the information society.

Ongoing dialogue with representatives of the disabled is assured under the Agreement between the Committee of Representatives of Disabled People (CERMI), the Ministry of Science and Technology and the ONCE Foundation.

A law about Services of the Information Society and *e*Commerce was approved by the Parliament and published on July 12th 2002. It provides for Public Administrations to take the necessary means to guarantee that disabled and elderly people will be able to access their web pages, according to accessibility criteria previously recognized. In the same way, accessibilty facilities will be provided by software and equipment manufacturers, so as to ensure an easy access to digital contents for disabled and elderly people. http://www.mcyt.es

The Ministry of Labour and Social Affairs by means of IMSERSO-CEAPAT and REAL PATRONATO has established different actions to promote *e*Accessibility. Examples are:

-       Financial support to R&D projects in the National Plan on accessible new technologies.

-       Establishment of training courses for two hundred political and technical agents to promote web accessibility for central and local governments in collaboration with the  Blind Asociation (ONCE).

-       Establishment of Test of Accessibility to the Web (TAW) following the WAI guidelines (http://www.ceapat.org )

- Collaboration with the Spanish Standardization Organization (AENOR) to promote accessibility. Spanish Technical Standards for hardware and software UNE 139801 EX and UNE 139802 EX

- National Centre for Information and Advice on Accessible New Technologies in collaboration with Telecommunication Operators (http://www.ceapat.org)

- National Programme for Social Alarm Systems supporting people with disabilities and elderly people living safely at home.

- Elaboration of the White Book on R&D on Technologies for people with disabilities and elderly people.

- Elaboration for ACCEPLAN Integral Accessibility Plan which includes *e*Accessibility.

- Internet Information Service on Disabilities (http://sid.usal.es)

The Ministry of Science and Technology has established different actions to promote *e*Accessibility such as:

- Digital Literacy:

  a) Internet for All: Courses aimed at basic digital training. http://www.Internetparatodos.es

  b) Training courses for groups of people with disabilities. The aim is to provide assistance in the use of "1907" portable computers. (CTE/1043/2002, of 7 May 2002)

- Financial support to R&D projects in the framework of the National Plan on accessible new technologies. It includes also supporting access for associations and people with physical disabilities (PROFIT).

## 3.14 Sweden

During the last two years the Swedish Government has moved strongly towards a policy aimed at better chances of *e*Accessibility. Two fundamental government bills contain the broad outlines for the continuation of work in this field as well as suggestions for tangible measures. These are: Bill 1999/2000:79, "From Patient into Citizen – a National Plan for Action for Handicap Policies" and Bill 1999/2000:86, "An Information Society for All".

Since autumn 2001 there has been a Governmental regulation in place stating that all agencies have to make their facilities, information and services accessible.

As a complement to this regulation the Government has appointed the Disability Ombudsman as the responsible agency for managing an Accessibility Centre.

Further on, there is a Government initiative to make sure that the WAI guidelines are implemented.

Information & Communication Technology accessibility is assured in Sweden through a number of acts, ordinances and policies. Also the Government has, via ordinances, defined assignments and duties for a number of authorities and organizations. This concerns above all the following:

- The Swedish National Post and Telecom Agency
- The Office of the Disability Ombudsman
- The Swedish Agency for Public Management
- The Swedish Library of Talking Books and Braille
- The Swedish Handicap Institute

There is a programme of action going on in the field of IT for disabled people, 1998-2002. It has four main elements:

"IT in Practice – ItiP" (http://www.hi.se/it/itipraktiken/pdf/ITinPractise.pdf), The Swedish Handicap Institute (HI), http://www.hi.se

"Developing users' competence regarding IT", IT association of the Swedish disability movement, "h@andikapp.se"), www.funkanu.se,

"Fritt Fr@m" information campaign "Come on out". Jointly run by HI and the Swedish disability movement. The aim of the campaign is to broaden awareness of the importance of an IT-based society for all. www.frittfram.nu and

Analyses and studies of the use of IT, by HI. The work is being carried out in collaboration with the disability movement, county councils, municipalities, and the relevant authorities.

All four elements of the programme are provided with financial support from the Swedish Inheritance Fund. This broad approach provides a vital opportunity to stimulate developments in the field of IT for disabled people.

The Swedish Handicap Institute (HI) has since some time administrated courses about the WAI guide lines to personnel within both the public and private sectors. The Swedish Handicap Institute (HI) made an inventory of Swedish acts, regulations, policies and rules concerning the possibilities of access for functionally disabled people to the IT society. This has been made available to other Member States.

### 3.15    United Kingdom

The websites of Government departments and agencies in the UK should be user focused. This means they:

- are engaging;
- provide the information and services that users want;
- continually evolve to meet user demand; and
- achieve universal accessibility and usability.

Websites that do not identify and meet our users' needs cannot be effective; social exclusion policies require that information have-nots should have access to services. The UK Disability Discrimination Act [1] and the Special Educational Needs and Disability Act 2001 means that webmasters have to take reasonable steps to change practices, policies and procedures that make it impossible or unreasonably difficult for people with disabilities to use our on-line services.

We also recognise that accessibility involves more than individuals with special needs. Some corporate firewalls strip out scripts, which is an issue for sites with business audiences.

New or redesigned government websites should comply with the internationally recognised World Wide Consortium's (W3C) Web Accessibility Initiative and since February 2001 WAI Level A compliance in line with the Web Content Accessibility Guidelines (WCAG1.0) has been the baseline requirement.

However, we recognise that strict WAI compliance alone will not give us a suitable site. Usability means the site is easy to use by the intended audiences.

The Guidelines for UK Government websites [2] have been extensively revised. They have developed for both a technical and non-technical audience and cover a wide range of issues such as the management of websites, the content of websites, legal issues, security and tutorials. A major section covering '*Building in universal accessibility'* presents the range of WCAG1.0 Priority 1 checkpoints and provides solutions to these and to a range of the Priority 2 issues. The Guidelines have also introduced the principle of establishing a UK Government accesskeys standard. A small tutorial template website has also been provided to support issues covered within the Guidelines. [3]

The Royal National Institute of the Blind, an NGO, is running a national campaign for Good Web Design with a 'see it right accessibility website' award scheme. [4]

References:
[1] Disability Discrimination Act 1995 and its Code of Practice:
www.drc.org.uk/drc/InformationAndLegislation/Page331a.asp

[2] Guidelines for UK Government websites:
www.e-envoy.gov.uk/webguidelines.htm

[3] Start-up kit:
http://www.e-envoy.gov.uk/publications/guidelines/webguidelines/handbook/introduction/startup.htm

[4] RNIB See it right accessible website consultancy:
http://www.rnib.org.uk/digital/siraccess/

## 4. Instruments for delivering *e*Accessibility

It can be seen from the foregoing that there are different instruments used to achieve increased *e*Accessibility for disabled persons . E.g. in the *e*Europe action plan 2002, each specific action line focuses on one or a combination of particular instruments to achieve the goal of *e*Accessibility. These instruments can be classed as: "Technical and/or standards", "Legislative and/or persuasive" and "Educative and/or informative".

Each instrument class is further analysed as follows:

### 4.1. Technical and/or standards instruments

With the emergence of a more knowledge based society and economy (KBS/KBE), based on the widespread use of Information and Communication Technologies (ICTs), for accessing, storing and distributing information, both new opportunities and new challenges have arisen, affecting particularly citizens with disabilities.

A group more challenged are persons with cognitive disabilities, who will have difficulties to cope with the demands of the KBS.

On the opportunity side, the "death of time/distance" aspect of use of ICTs has improved the situation for disabled persons to engage in economic and social pursuits with a reduced need to physically commute (e.g. the use of teleworking and/or telecommuting). However, on the challenge side, the visually impaired citizen is at a distinct disadvantage when utilising an ICT based system that currently requires a predominantly visually biased user environment to be navigated before accessing desired information. Even then the information is not likely to be in a suitable format for digestion.

The information and communication technologies should be used to create both *empowering technologies*, which provide support and problem solutions for an individual with disability, and *barrier-free technologies,* which ensure that people with disabilities are not excluded from the use of mainstream technology.

More recent technological advances utilising, for example, multi-media (visual/aural/movie) software can provide user environments and alternative information formats suitable for many disability groups. However, such advanced facilities take time reaching applications for persons with disabilities and may take even more time to become affordable for disabled users. Such systems also make more severe demands on the underlying telecommunications infrastructure (need to use higher transmission speeds etc.) and require more powerful and expensive computing equipment to host them, which also may cause a certain delay.

The challenge is to ensure that the principle of Design for All is applied as much and as well as possible to new products, systems and services and that new technical advances can be deployed, via standard interfaces, to existing equipment and services (especially assistive technology devices) enabling their use by disabled users to enhance rather than diminish their experience.

Keeping in mind that it takes time to move from the emergence of new technological advances to the adoption of standards, comprehensive sets of technical standards to which new equipment should adhere should be developed as soon as possible, for

example for interfaces between new and existing devices to allow assistive technology devices to be used with mainstream equipment and vice versa.

## 4.2    Legislative and/or Persuasive instruments

In the review of relevant legislation action line (see section 2.2), relevant areas of legislation and persuasion for *eA*ccessibility, ranging from the general (non-discrimination ) to the more specific (telecommunications, public procurement and copyright) were examined and analysed. The potential recommendations stemming from the review make a clear distinction between the absolute need for legal safeguards in the former area and a mixture of some specific legal (e.g. in telecommunications) and more persuasive approaches in the latter area. That is why this class of instruments is termed legislative and persuasive.

In the former case, the trend towards societal conformity to the needs of the disabled rather than the other way round should continue. It is clearly unjust if the goods or services of the KBS/E, just like any other goods and services, cannot be utilised by a section of the public who contribute to their costs and could potentially most benefit from their deployment to satisfy their requirements. That is why direct legislative instruments should be used, where necessary, to enforce compliance by, especially, the public authorities in this area. However, direct legislative measures are not the only means to achieve a greater degree of *e*Accessibility. In other cases, especially where more complex technical issues intrude, more indirect and, in some cases, no legislation but purely incentive measures, aimed at persuading the market to produce better solutions than provided at present, may be the best approach

## 4.3    Educative and/or informative instruments

As well as instruments focussing on technical improvements and legislative or other means of persuading organisations to implement them, there is the question of the awareness, general understanding, education and training of both the supplier and the user of *e*Accessible goods and services.

Generally, the awareness about the problems and solutions for access of people with disabilities to information is rather low. It is therefore required to start awareness raising campaingns for the general public and mainstream suppliers.

On the supply side, new approaches require those who will be implementing them to be adequately trained. Hence designers and engineers working on new products and services should be aware of the possibilities afforded by new technology and also what are the constraints imposed on design by accessible features. There is not a single "one size fits all" approach but a multiplicity of approaches combining the best of available technology together with alternatives to compensate for the impairments in one or other of the senses when required. Such design courses pose exciting new challenges to young designers of the future.

On the demand side, there is a need for building both the capacity and empowerment to use. Although not specifically dealt with in the ongoing action lines outlined above, this user empowerment/capacity building aspect was, to a certain extent, addressed in the referenced einclusion report and subsequent resolution following the original action line attributed directly to ESDIS.

People with disabilities are at particular risk of being excluded from a knowledge based society if not adequately empowered to have equal access to the knowledge, skills and resources required for effective participation in it. For this to take place, it is not enough to have in place only the tools and legislative or other framework; further positive action is also required. This fact has been recognised in e.g. the Madrid declaration of 2002[21].

There are many sources of detailed information concerning positive action and empowerment mechanisms. For example, a European project called FORTUNE[22] sets out some of the principles for the participation of disabled persons, in particular, in Research and Technology Development Projects whilst more general potential actions in this domain were provided as an output from another European project called PROMISE[23].

## 5. Instrument related recommendations

The overall recommendation has been set out in section 1.1. This concerns issues cutting across all the instruments described in the previous section. The remainder of the recommendations pertaining to each instrument so described are set out here. All the recommendations have a deadline of end 2003 for their implementation.

## 5.1 Recommendations concerning the use of technical and/or standards instruments

a) With respect to the utilisation of the WAI guidelines:

- Ensure that a regular common method based monitoring process is in place for public web sites at all levels of government in Member States and the European Institutions.

- Ensure regular monitoring and update of standards for web accessibility in order to keep pace with the rapid development and with new technologies.

- Extend the scope of the web sites to be so monitored in line with the referenced Council resolution.

  Actors: European Commission, Member States.

b) With respect to Standardisation actions:

  Production of harmonised standards

- Ensure that the necessary standardisation activities be identified and carried out, focusing on the need for standards connected with the directives of the European Commission (harmonised standards). This may require complementary mandates from the Commission to the European standardization organisations (CEN, CENELEC and ETSI);

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[21] http://www.disabilityeuropeancongress.org/english/informationMADRIDDECLARATION.doc
[22] http://www.fortune-net.org
[23] http://www.stakes.fi/promise/respack/actions/pract1.htm

- Ensure that the above activities be carried out by offering public funding of the work of convenors and secretariats.

Compliance with common requirements and test methods

- Ensure that requirements and test methods used by manufacturers, test institutions and other concerned parties comply with commonly approved requirements and test methods (such as European standards) and that national deviations be avoided as much as possible.

Information, consultation, evaluation

- Ensure that the Design for All concept (Mandate 283 etc)  be fully and effectively implemented in the standardisation work, focusing on the need for :

    - 'sector guidelines' for prioritised standardisation sectors, developed as complements to CEN/CENELEC Guide 6;
    - information and consultation for standards developers, producers, consumers and other concerned parties
    - a database containing relevant literature references;
    - periodic evaluation of all standardisation activities and their impact on the real-life situation of elderly and disabled persons;

- Ensure that the above intentions be realized by offering public funding of the costs for the activities and facilities.

Consumer's participation

- Ensure that consumer representatives can actively participate in the standardisation activities by offering public funding for their participation, including preparatory training.

Actors: European Commission, European Standards Organisations.

Concerning Research and Technical Development

- Ensure that the the Sixth Framework programme for Research and Technical Development 2003-2006 (6FP) will support actions to promote eInclusion, developing both empowering technologies and barrier-free technologies and including the take-up of results.

- Ensure that the relevant parts of the 6FP can be adapted to the priorities as set by an overarching mechanism such as the *e*Europe Action Plan 2005.
- Ensure user participation in projects as well as evaluation and review activities.

- Seek coordination between European programmes and national programmes for research and technical development in line with the European Research Area.

Actors: European Commission, Member States.

**5.2    Recommendations concerning the use of legislative and/or persuasive instruments**

a) With respect to legislative measures

- A Directive prohibiting discrimination based on disability outside the scope of employment should be adopted by the Community.

- Focus on measures to encourage private enterprise to make their ICT based products and services accessible including requiring accessible products and services for ICT public procurement contracts to be accessible. In this case utilise the possibilities that exist within existing European public procurement legislation to include specific references to accessibility criteria of relevant goods and services.

- Ensure that, where possible, exceptions to copyright that are consistent with the legal framework laid down in Directive 2001/29 enable the dissemination of protected material in accessible formats for the use of disabled people

Actors: European Commission, Member States, Private sector.

b) With respect to persuasive measures

- Adopt an "*e*Accessibility mark" for goods and services which comply with relevant standards for *e*Accessibility.

- Ensure that there is a large enough European space (harmonisation) to persuade commercial goods and service providers to offer more *e*Accessible goods and services. For example, consider VAT exemptions on specific goods and services to encourage the provision of more *e*Accessible solutions.

Actors: European Commission, Member States.

**5.3    Recommendations concerning the use of educative and/or informative instruments**

a) With respect to Centres of Excellence and networking in Design for All:

- Ensure that the network is totally inclusive and covers all Member States.

- Ensure that proposed Design for All curricula are developed and adopted by the relevant educational authorities in each Member State.

b) With respect to user capacity building and empowerment

- Provide awareness raising of people with disabilities and the elderly as well as service providers of the opportunities of modern ICT and the net for people with disabilities and the elderly.

- Improve the employability of people with disabilities through appropriate vocational programmes targeted towards KBS jobs as well as training in KBS oriented skills within other vocational programmes.

- Apply the principles of and existing facilities for lifelong learning to upgrade the skills of people with disabilities.

c) With respect to the integration of disabled students in the normal schools

- Ensure that the multimedia materials and the use of ICT in education do not create new barriers for the integration of disabled students.

d) With respect to general vocational training

- Ensure that *e*Accessibility become a regular part of all education programmes of vocational schools of any level, e.g. Web masters, multimedia authors and software developers.

Actors: European Commission, Member States, Disability NGOs.


The above recommendations are not exhaustive and should be further developed through dialogue with the actors most concerned.

## 6. Conclusions

In this report, *e*Accessibility has been shown to be a multi dimensional concept requiring actions in different policy areas and utilising RTD&D and other EU funding mechanisms. Moreover delivering *e*Accessibility requires a combination of: technological/standards, legislative/persuasive and educative/informative instruments that, to some extent, were addressed by the relevant *e*Europe 2002 action lines.

In the review of the progress towards fulfilling the goals of these action lines, it was noted that there were sometimes conflicting requirements leading to the report's main recommendation that, in the future, the initiatives requiring a combination of different instruments should be better adapted to meeting overarching European priorities. Specific recommendations have also been provided for each of the instruments especially as reflected in the relevant *e*Europe 2002 action lines progress.

Based on the experience of *e*Europe 2002, *e*Accessibility actions could figure more strongly and specifically under the proposed *e*Europe 2005 initiative. In particular, with reference to the Telecommunications Council resolution and the subsequent European Parliament report (referenced in section 2.1.1), a follow up to the *e*Europe 2002 *e*Accessibility targets and a horizontal layer on eInclusion actions within the three targets of *e*Europe 2005 could be envisaged. These *e*Accessibility actions should be monitored by ESDIS.

It is clear from the report that disabled people need a greater visibility and a better understanding of their condition on the part of society. It is hoped that this report, and especially its recommendations, can be taken up and used in furtherance of the aim of providing a better deal for disabled people in the KBE/KBS.