

Commission Communication "Towards an accessible information society"

Background note



In December 2008, the European Commission adopted the Communication "Towards an accessible Information Society". This document makes suggestions for improving both *web accessibility* (access to the Internet) in particular and *e-Accessibility* (access to electronic equipment) in general, notably to:

- **Pursue and make full use of instruments at European level, in particular: standardisation efforts, financial support for research and deployment of technology solutions in favour of people with disabilities and for elderly persons, and possibilities under current and proposed legislation.**
- **Reinforce cooperation with Member States and other stakeholders towards a common European approach for e-Accessibility, and in particular to accelerate web accessibility, including through a new EU high-level e-accessibility expert group to provide strategic guidance.**

This Communication is accompanied by two other Commission documents: a staff working paper on e-Accessibility, and a report from an online public consultation on the same topic. The Communication also builds on two independent studies on the situation of e-accessibility in Europe, conducted for the Commission.

Why this Communication?

We are living in a society where many aspects of our daily life are increasingly dependent on technology-based products, ranging from emails and the Internet to digital television, automatic teller machines and ever more sophisticated inventions. This trend brings consumers enormous benefits. Going online to fill in administrative forms, buy goods, order tickets or carry out research offers wide opportunities and saves time.

Nevertheless there is also a downside. People with disabilities, whether this affects their sight, speech, hearing and physical or mental abilities, can have great difficulty in using this new technology. As a result, they do not enjoy the professional, educational, social and leisure opportunities opened to other citizens by new technologies. Moreover they may find themselves even more marginalised as these technologies become an integral part of daily life.

The scale of this problem, which covers both access to electronic equipment (e-accessibility) and more particularly to the Internet (web accessibility) is enormous. Some 15% of Europe's population has a disability. Around one in five people of working age have impairments requiring some form of assistance. By making the internet and other new opportunities offered by the Information Society more accessible, three out of every five people stand to gain.

To ensure the widest possible benefits from these technological advances, all ICT goods, products and services should be accessible: computers, telephones, televisions, online government, online shopping and reservations, call centres, and self-service terminals like automatic teller machines and ticket machines.

Why is it right for the EU to act?

The Commission has a twofold aim. Firstly, it is to raise awareness of the problems that people with a disability face. This will allow adopting measures to overcome those difficulties. This can be achieved in various ways by public authorities, manufacturers, service providers, European organisations and others.

Secondly, the Commission's aim is to emphasise that, in order to find effective solutions, all those involved must cooperate closely on accessibility issues. Many countries have adopted some legislative or support measures to promote e-accessibility, while the information and communication industry is also making significant efforts to ensure that its products and services are accessible to as many people as possible.

The Commission's Communication aims at providing a coherent, common and effective approach towards e-accessibility and web accessibility. Common standards for the equipment will help technology users. But they are even more important for the industry. The absence of uniform norms across Europe would fragment markets, preventing industry from enjoying economies of scale and the necessary momentum to stimulate innovation.

How does the Communication propose to improve the current situation?

The primary responsibility for the accessibility of websites and electronic devices in general lies with Member States and individual service providers. But the European Commission can help promote the drive towards improvements. That is why the Commission has adopted the Communication "Towards an accessible Information Society" which suggest ways in which more accessibility can be achieved:

- European standards organisations could agree on norms that would apply to the industry across the EU, and possibly even further;
- Existing legislation on issues as varied as public procurement and employment equality can be used to encourage accessibility;
- European and national funding can stimulate innovative solutions;
- Websites, especially those of public service, should be made accessible with the help of internationally agreed guidelines.

The Commission proposes to make its own contribution by monitoring the progress in Member States and by creating a high level ad hoc e-accessibility group which will advise on priority areas of action. The group will represent users, particularly the disabled and elderly, the industry, academia and the relevant authorities.

The Commission can also encourage more action through its various policy and funding programmes that support research, innovation and pilot projects. In 2008 alone 13 new projects were financed with some € 43 million, and a major new research programme – Ambient Assisted Living (AAL) - was adopted by the European Parliament and the Council. More than € 600 million in public and private funding will be invested in the AAL over the next six years to support and enhance the independent living of elderly people.

How would the Commission's proposals work?

The Communication sets out goals and reminds of existing targets, such as the fact that Member States should prepare for the new web accessibility specifications and ensure that public websites are 100% accessible for people with disabilities by 2010. The Commission will monitor the progress made towards these targets and, where possible, support the overall aim through its policies, funding, and by offering means for cooperation.

For instance, in 2009, it expects to finance a pilot on total conversation, i.e. real time multimedia electronic communication combining audio, text and video to help people with disabilities. This will enable anyone with a hearing or speech impairment to access the European 112 emergency call number.

The European Parliament, Council of Ministers, Economic and Social Committee and Committee of the Regions are invited to give their opinion on the Communication. The benefits of the measures, for both users and providers, should start coming through fairly quickly.

The European industry undoubtedly faces a challenge in developing sophisticated, reliable, easy-to-use technology that can be used in everyday life. But if it succeeds, it will access a growing market, not just inside the EU. This market is not limited to people with disabilities, but it extends to a far wider number of people who will benefit from the greater ease of use of products and services which are increasingly part of people's lives.

More information

WHAT IS E-ACCESSIBILITY?

e-Accessibility is about addressing the barriers that people with disabilities and many others may experience when using all kinds of Information and Communication Technologies (ICT) products and services. Improving e-accessibility implies designing ICT products and services that can be used by people with disabilities. This is also important for many old people.

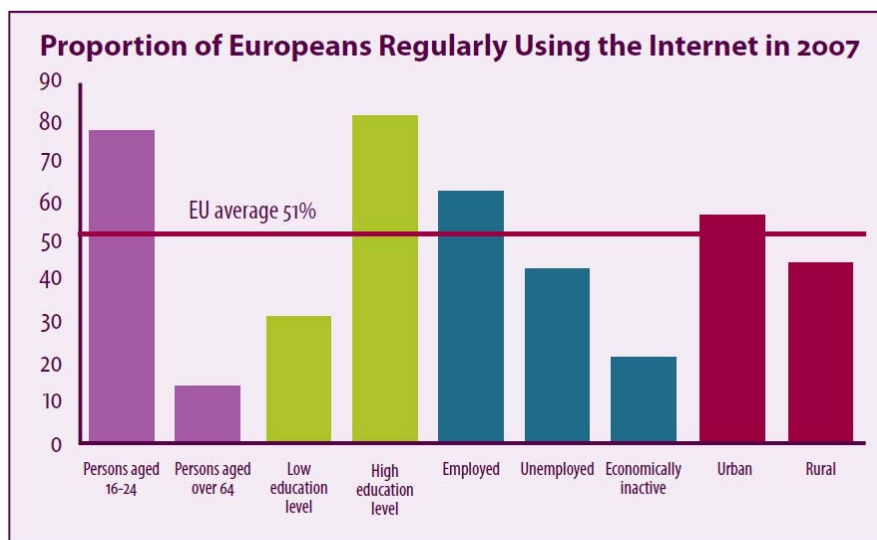
In some cases, to achieve accessibility it is necessary to combine standard ICT with assistive technologies (adapted interfaces for users with disabilities), e.g. Braille readers, text-to-speech software (when this is not provided as a standard feature), adapted keyboards or alternative input system (e.g. speech, simple switch, eye-gaze).

Examples of accessibility include:

- Web accessibility offers people with disabilities the possibility to perceive, understand, navigate, interact and contribute to the web, for example using Braille displays or text-to-speech software.
- Accessible TV can be enjoyed by the hard-of-hearing thanks to subtitles and by the visually-impaired thanks to audio description.
- Text and video phones allow the hard-of-hearing and speech-impaired to communicate.

HOW IS IT RELATED TO E-INCLUSION?

Accessible ICT enables e-Inclusion, a broader concept aiming at reducing disparities (between individuals, entities or geographical areas) with regard to ICT use. Despite significant improvements over the last two years, only 51% of the European population uses the Internet regularly. There are still significant differences due to geographical location, disability, age, cultural and language barriers, lack of skills and information, and other reasons.



European Commission, i2010 Mid-Term Review 2008

The Commission promotes e-Inclusion as part of its overall Information Society policy, as outlined in the Communication "European i2010 initiative on e-Inclusion - to be part of the Information Society". The Commission promotes both inclusive ICT (notably ICT that is accessible), and the use of ICT to achieve wider objectives on social cohesion and economic growth.

In a Ministerial Declaration of 2006, many European countries committed to a series of e-inclusion goals and targets; this included halving the gap in internet usage among groups at risk of exclusion by 2010, such as older people, people with disabilities, and unemployed persons.

WHY IS E-ACCESSIBILITY IMPORTANT AND WHO DOES IT AFFECT?

ICT plays an essential role in today's digital society. The internet, for example, is increasingly used at work, in day-to-day relationships, in dealing with public services and for entertainment and leisure.

Accessible ICT products and services like phones, televisions and vending machines allow people with disabilities and old people to actively take part in the information society. For people with sensory (visual, hearing, speech), motor or cognitive impairments, e-Accessibility is therefore important for full participation in everyday social and economic life. This becomes even more important as the Europe's population ages.

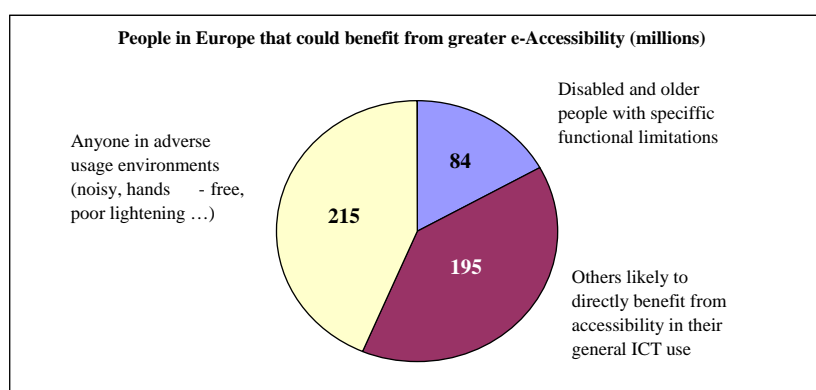
Moreover, e-Accessibility can benefit everyone by making ICTs easier to use, especially in certain situations. For example, it allows hands-free talking and makes it easier to use technology in noisy or poor lighting environments, by allowing the user to switch between text or speech output, use touch screen or keyboard, change the graphics of the device or simply change the font size or the contrast on the screen.

Estimated user demand for accessible ICT products, services and assistive technologies, on the basis of people older than 50 years in Europe (EU25, in million) who have various impairments

Indicator of potential market size		Demand potential in Mio			
Indicator for need	Degree of impairment	2005	2010	2020	2050
Vision problems	slight/ moderate	43.1	46.3	53.1	59.1
	severe	19.1	20.5	23.5	26.2
Hearing problems	slight/ moderate	41.4	44.4	51.0	56.7
	severe	8.0	8.5	9.8	10.9
Dexterity problems	slight/ moderate	30.2	32.5	37.2	41.4
	severe	15.9	17.1	19.6	21.8
More than one of these	slight/ moderate	68.5	73.5	84.3	93.7
	severe	33.4	35.9	41.2	45.8

Source: Own calculation demographic data available from SENIORWATCH 2002 and demographic projections from Eurostat 2005

From Study "The Demographic Change – Impacts of New Technologies and Information Society" http://ec.europa.eu/employment_social/social_situation/studies_en.htm



Source: Study "Accessibility to ICT products and services by disabled people"

http://ec.europa.eu/information_society/activities/einclusion/library/documents/index_en.htm#Reports

From an economic point of view, lack of e-Accessibility leads to large productivity losses: when people cannot use ICT, it limits their job prospects, and their consumption of goods and services. In addition, the potential of creating a single internal market for accessible ICT remains under-exploited. Fragmented national approaches regarding requirements imposed on suppliers of accessible ICT products and services hinder a single EU market for e-accessible products and services.

WHAT IS THE BALANCE OF COSTS AND BENEFITS OF E-ACCESSIBILITY?

While the benefits of e-Accessibility are clear for those concerned and for society at large, making ICT more accessible comes at a cost. This is the argument often mentioned to justify slow progress.

There is limited evidence on this issue, but many experts argue that costs of making ICT products and services more accessible are lower than often thought. Such costs have tended not to be considered as undue burden in various court cases, e.g. in the United States and Australia.

An independent study conducted for the Commission ("Accessibility to ICT products and services by disabled people") provides indications about the costs and benefits of web accessibility¹ The Commission expects to launch a study soon on economic assessment and evaluation of recommendations for improving e-Accessibility.

It is generally accepted that costs are typically a lot lower at the design stage in comparison to the costs of retrofitting accessibility for products and services that already exist. For the web in particular, costs are likely to increase with increasing size and complexity of websites, particularly when improving the accessibility of existing websites.

It appears that, more than the cost, poor e-Accessibility is often due to limited awareness and competence (e.g. of those responsible for maintenance of websites). Conversely, benefits from e-Accessibility are often underestimated or simply not considered. The study referred above indicates that, whether the results of estimations vary according to the parameters retained, such benefits can be substantial: reducing expenses of delivering public services off-line, increase in sales, increase in jobs, etc.

HOW ACCESSIBLE ARE ICT PRODUCTS AND SERVICES?

A recent European survey² showed that there is still much to be done, as the following examples illustrate:

- On average, only 8% of all Automatic Teller Machines (ATM) installed by the EU's two main retail banks provide 'talking' output (enabling self-service for customers with visual impairments). A leading retail bank has installed them but only in six Member States. Since regulation outside Europe requires "talking output", many manufactures already incorporate this functionality, however it is often not activated.
- Text relay services (that allow deaf and speech impaired people to communicate over the telephone) are only available in half of EU Member States.
- Emergency services are directly accessible to people with disabilities in only seven Member States. The Commission expects to launch a pilot on accessible emergency services in 2009.
- Only 5% of public websites comply with minimum web accessibility guidelines. This means that many public web sites do not live up to basic principles of accessibility notably that the web page and its content should be perceivable, operable, understandable and robust.
- The provision of subtitled audiovisual programming varies widely (from 2.5% to 95%). Subtitling of TV programmes not only benefits people with disabilities, but can potentially benefit other people e.g. when watching TV in noisy environments (such as airports, gyms etc), as well as facilitate learning foreign languages.
- Sign-language programming ranges from less than 0.5% to 5%. Sign-language programming allows deaf people to understand TV programming, specially those that have sign-language as their first language.

¹ According to this study, the overall cost-benefit would be only negative in the most pessimistic scenario of 'additional accessibility cost versus additional web visitors' (assumption: 30% additional costs of improving web accessibility, versus 5% additional web visitors gained from that improvement). In the most favourable scenario, the study estimates net benefits of more than € 1.2 billion across Europe (assumption: 2% additional costs of improving web accessibility, versus 20% additional web visitors.)

² Measuring progress of e-accessibility in Europe (MEAC), available at http://ec.europa.eu/information_society/activities/einclusion/library/studies/meac_study/index_en.htm

- Broadcasting with audio description ranges from less than 1% to slightly more than 10% of programmes. Audio description, where a voice explains the content on the screen, enables people with visual impairments to follow TV-programming.

HOW IS E-ACCESSIBILITY AND WEB ACCESSIBILITY MEASURED? HOW DOES EUROPE COMPARE GLOBALLY?

One of the findings of the study "Measuring Progress of e-Accessibility in Europe" (MeAC)³ is that most of the European countries are lagging behind the US, Canada and Australia when it comes to e-accessibility achievements, and to the availability of policy and legal measures in this field. Amongst other, this study assesses the status of e-Accessibility (in sectors like telephony, broadcasting, web-pages and ATMs) from the responses to questionnaires sent to stakeholders (user organisations, industry and authorities).

e-Accessibility varies widely among Member States. Several Member States have taken action to improve the situation, for example by introducing guidelines and setting targets for public websites. However, such approaches are still fragmented across the EU.

WHAT IS BEING ALREADY DONE TO IMPROVE THE SITUATION?

Many public authorities at various levels, market players (ICT vendors and providers of products and services that use ICT) and civil society organisations are trying to improve e-Accessibility. The EU, and particularly the European Commission, has also been active in this area for many years through three sets of actions, as explained in the Communication "Towards an accessible information society":

- Policy action: Communications, Resolutions, Reports, etc; events; studies; co-ordination activities and dialogue with stakeholders.
- Financial support: notably to research on accessible technology (European research framework programme) and deployment of solutions (e-TEN and Competitiveness and Innovation Programme), for instance on accessible digital television (the Commission currently co-finances a pilot) and accessible emergency services (the Commission expects to co-finance from 2009 a pilot).
- Legislation: notably provisions on people with disabilities in existing European legislation on electronic communications, public procurement, and audiovisual media services. The Commission has proposed new provisions on people with disabilities in the revision of the directives on electronic communications, and in a new proposed directive on equal treatment.

The previous Communication on e-Accessibility, adopted in 2005, announced that the Commission would review the situation within 2 years time, which it did through a large European survey mentioned above. In addition, since 2005 the Commission has taken other measures on e-Accessibility such as proposing new or stronger legislation (see above) and issuing the "mandate 376" to the European Standardisations Organisations regarding standards for public procurement of accessible ICT goods and services. All these efforts contribute to the goals of the European social agenda.

The Commission launched an online public consultation on web accessibility and other e-accessibility issues in the Summer of 2008. Most of the 161 respondents agreed that a common European approach was necessary to improve e-Accessibility in general and web accessibility in particular. 90% of user organisations considered binding legislation a high priority, versus only 33% of industry and public authorities. However, expectations varied as to what a European approach would prioritise and how it would be carried out.

³ See reference above.

WHAT SORT OF RESEARCH ON ACCESSIBILITY DOES THE EU SUPPORT?

European research projects are playing a key role in supporting the development and deployment of accessible technologies⁴. For instance, in the area of web accessibility, the most recent activity in this area is WAI-Age, which aims to better understand the needs of older people when using the web, and adapt accordingly the Web Accessibility Initiative (WAI) guidelines (see below).

As part of these efforts, a cluster of three research projects developed a common methodology (UWEM) to assess technical conformance with the WAI guidelines, both with automatic and human expert testing. One of these projects (EIAO) built upon this methodology a complementary statistical indicator specification and produced a prototype of a large scale automatic Observatory for accessibility of public websites in Europe.

The second project (Support-EAM) investigated the various quality mark schemes to report accessibility of individual websites against the WAI guidelines. The resulting specifications were published by CEN – the European standardisation body – in 2006. A third project (BenToWeb) developed new software algorithms to test automatically compliance with more complex web guidelines.

WHY IS WEB ACCESSIBILITY A PRIORITY?

Web technologies are an essential means to deliver and accessing information and services in today's society. Web accessibility has become particularly important because of the explosive growth in on-line information and interactive services provided on the web: online banking and shopping, dealing with government and public services, communication with distant relatives, etc. If web accessibility is not achieved, many people are at risk of being partially or totally excluded from the Information Society.

Efforts to make websites accessible for users with disabilities result in a better user experience for all. Simple changes that make sites easier to use bring huge improvements for everyone, and economic gains for businesses. More accessible web pages tend to have more hits in search engines, enhanced usability, lower maintenance costs and reduced server load. This is mainly due to the simpler structure of an accessible web page.

WHAT ARE THE WEB ACCESSIBILITY GUIDELINES?

Founded in 1994 with the Commission's support, the World Wide Web Consortium (W3C), the body which oversees web standards, has set up the Web Accessibility Initiative (WAI) to produce guidelines allowing web access to everyone. The most known guidelines are the Web Content Accessibility Guidelines (WCAG). This provides a voluntary code on the design and structuring of websites, which has been widely endorsed by many public and private entities, and promoted by the EU, e.g. in a Commission Communication of 2001. However in 2007, only 5% of public websites and less than 3% of private websites in the EU are found to be "fully accessible" according to these guidelines

The W3C has recently adopted a new version, WCAG 2.0, adapted to advanced web technologies and their support in recent assistive systems, e.g. dynamic content generation (for interactive pages) and content in some non-HTML formats (if this content production also respects the accessibility guidelines). This version is also easier to test and compare.

The WAI is also in the process of updating its two other important accessibility guidelines: on Authoring Tools (ATAG), to help producing accessible content, and on User Agents (UAAG), for accessibility of browsers and media players (and their interoperability with assistive technologies).

⁴ For details of research projects supported by EU funding see http://ec.europa.eu/information_society/activities/einclusion/research/projects/index_en.htm

HOW CAN EUROPE PROMOTE WEB ACCESSIBILITY FURTHER?

There is broad consensus that WCAG 2.0 guidelines will be the technical specifications to be followed for web accessibility. This can be the basis for standards developed by European Standardisation organizations as part of their ongoing work on e-accessibility (notably in the framework of the above-mentioned 'mandate 376').

It is important that the new guidelines are translated into national rules and that public and private organisations actively implement them. Today's Commission communication on e-accessibility provides suggestions for public authorities and websites owners in to implement these guidelines.

Europe is therefore now in a good position to achieve significant progress and get closer to the goal of making public websites accessible by 2010, which was set in the 2006 'Riga' Ministerial Declaration on e-Inclusion. This will be possible if EU Member States and other actors work together, with the support of the Commission, limiting fragmentation and increasing efficiency, while securing the necessary industrial support.

WHAT ABOUT ADDITIONAL EU LEGISLATION?

There is not yet a clear consensus on possible EU legislation specifically dedicated to e-Accessibility. In the public consultation, 90% of user organisations considered binding legislation a high priority, versus only 33% of industry and public authorities.

Given the vast, complex and evolving nature of the e-accessibility field, there are many open questions on the elements of possible EU legislation on e-Accessibility such as its scope, standards, compliance mechanisms, links to existing legislation.

Moreover, there are various possibilities under current EU legislation that remain under-exploited, as stressed in the Communication "towards an Accessible Information Society". In addition the Communication stresses the need to explore the possibilities to improve e-Accessibility through several pieces of EU legislation that are, or will be soon, under review, or have recently been proposed.

As regards web accessibility, binding web-accessibility legislation at European level may be expected to have a stronger and more consistent impact across the Member States and should not be excluded for the future. However, such legislation would require, amongst others, the availability of European standards; these are not yet available, although European standardisation work based on the WCAG 2.0 specifications is expected to progress rapidly.

THE E-ACCESSIBILITY COMMUNICATION IS AVAILABLE AT:

http://ec.europa.eu/information_society/activities/einclusion/policy/accessibility/com_2008/index_en.htm

All documents referred to in this note are available at: <http://ec.europa.eu/einclusion>

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