



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 25.09.2001
COM(2001) 529 final

**COMMUNICATION FROM THE COMMISSION TO THE COUNCIL, THE
EUROPEAN PARLIAMENT, THE ECONOMIC AND SOCIAL COMMITTEE, AND
THE COMMITTEE OF REGIONS**

eEurope 2002: Accessibility of Public Web Sites and their Content

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Table of Contents

1.	Introduction.....	3
2.	The Web Accessibility Guidelines	4
3.	Implementation Plans and Mechanisms inside The European Union.....	6
4.	Developments outside The European Union	9
5.	Conclusions and next steps	10
	ANNEX 1: The Guidelines of The Web Accessibility Initiative	12
	ANNEX 2: Making Web Sites Accessible.....	15
	ANNEX 3: Table Showing Member States' Adoption and Implementation of The Guidelines	18

1. INTRODUCTION

The *eEurope Action Plan 2002*,¹ adopted by the Feira European Council in June 2000, is a wide-ranging initiative designed to speed up and extend the use of the Internet to all sectors of European society. The action plan seeks to bring European citizens on-line in all aspects of their lives, allowing them to participate in and benefit from the possibilities offered by digital technologies. This increased use of the Internet will, in turn, fuel the development of the new, knowledge-based economy. These actions comply with the principle of non-discrimination set up in the Treaty on the European Union.

One of the action plan's specific targets is to improve access to the Web for people with disabilities: this is the subject of this Communication and its recommendations.

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People with disabilities and older persons face a wide range of technical barriers in terms of their capacity to access the Internet. The accessibility challenges faced by these and other users of the Internet can to a large extent be solved by means of appropriate coding when constructing Web sites and content, and the application of some simple rules of layout and structure when designing Web pages. These techniques are, however, not widely known or applied by the majority of Web site designers and Web content providers.

Indeed, accessing Internet Web pages and their content presents a variety of problems for persons with physical, sensory or cognitive impairments. Many of the 37 million European citizens with a disability may be unable to access the information and services they require when using the new media. With the development of governmental on-line services, there is a serious risk of social exclusion of a large percentage of the population.

For instance, persons who are blind or visually impaired find it difficult - or impossible - to access some electronic documents such as Web pages with the types of browsers (such as screen readers) and other assistive devices they use. Someone who is deaf may need to use captioned audio portions of multimedia files or a person who is either colour blind or partially sighted may need his or her own style sheets. There are other issues of importance to people with disabilities, such as accessible multimedia, device-independent access, labelled frames, and appropriate mark-up of tables.

Other users, such as older persons, who may not be familiar with Web browsers or with how to navigate a Web site, may be confused and discouraged by sites which present complex, highly detailed information, do not have a consistent design or navigation options, or which use flashing or moving images. Given the demographic shift towards an ageing population, this group of users will increase significantly in the coming years.

¹ The eEurope 2002 Action Plan may be downloaded from the Web site: http://europa.eu.int/comm/information_society/eeurope/actionplan/index_en.htm

2. THE WEB ACCESSIBILITY GUIDELINES

The European approach to ensuring the availability of accessible information on public Web sites is encapsulated in the *eEurope Action Plan 2002* agreed by the Feira Council in June 2000. Under its objective 2c, the action plan includes five targets for promoting “Participation for all in the knowledge-based society”, the action plan emphasises that, “...**Public sector web sites** and their content in Member States and in the European institutions **must be designed to be accessible** to ensure that citizens with disabilities can access information and take full advantage of the potential for e-government”.

This action is to be executed by the European Institutions and the 15 European Union Member States through:

Adoption of the Web Accessibility Initiative (WAI) Guidelines for public Web sites by the end of 2001.

2.1. The Web Accessibility Initiative (WAI)

This initiative is one of the five domains of the World Wide Web Consortium (also known as the W3C), which is made up of over 500 member organisations and includes participants from over 30 countries². The Web Accessibility Initiative (WAI) has developed a number of guidelines, with the participation of industry, research, governments, and disability organisations.

Web accessibility guidelines have been developed with the financial support of the European Commission in the Fourth Framework Programme Telematics Applications Programme (TAP), various governments, and other organisations. These guidelines are more precisely known as the *World Wide Web Consortium/Web Accessibility Initiative (W3C/WAI) Web Content Accessibility Guidelines version 1.0 (WCAG 1.0) (or WAI/W3C WCAG 1.0)*. They are referred to here as **the Guidelines**. This terminology is used to distinguish these guidelines from others that the World Wide Web Consortium/Web Accessibility Initiative has developed such as Authoring Tool Accessibility Guidelines (ATAG) version 1.0 and User Agent Accessibility Guidelines.

The Guidelines are recognised as a *de facto* global standard for the design of accessible Web sites.³ See Annex 1 for an overview of **the Guidelines**. An annotated description of some of the principal aspects of **the Guidelines** is outlined in Annex 2.

Within the short deadline implied by the *eEurope Action Plan 2002*, the Member States and European institutions have been encouraged to act quickly and decisively. The purpose of swift action is clear. By adopting **the Guidelines**, it is also possible to make a major impact on accessibility across the other target areas of *eEurope*. For instance, applications for *eHealth*, *eGovernment* and *eLearning* based on public Web sites will have to address accessibility issues by making sure that their services are designed for all citizens. This will

² Information on W3C is available at <http://www.w3.org/>, and the Web site of the Web Accessibility Initiative is: <http://www.w3.org/WAI>.

³ The text of the World Wide Web Consortium Web Accessibility Initiative Web Content Accessibility Guidelines version 1.0 are available at <http://www.w3.org/TR/WCAG10/>

contribute to enabling people with disabilities to use the same on-line services as any other citizen.

In order to support the adoption and implementation of **the Guidelines** by Member States and the European institutions, the Commission has prepared this Communication. It outlines the relevant policy frameworks; the technical aspects covered by **the Guidelines**; a range of strategies for implementing the guidelines and for monitoring the accessibility of public Web sites based on the experiences of the World Wide Web Consortium/Web Accessibility Initiative and on best practices identified within the Member States, the European Commission, Australia, Canada, and the United States; and a set of conclusions and recommendations.

2.2. The Guidelines as a policy instrument

The World Wide Web Consortium/Web Accessibility Initiative has established its guidelines for Web content accessibility based on a consensus developed between a broad range of sector actors. **The Guidelines** provide a voluntary mechanism for public information providers to conform to a set of informal rules which take the form of principles, tools and methods described by the World Wide Web Consortium/Web Accessibility Initiative.

Information managers, Web designers and developers are therefore able to streamline the process of putting accessible information into the public domain. With some training and experience, Web designers and developers can be sure that the key factors for assuring accessibility are taken into account at relevant points in the work-chain: the length of such training can differ substantially given the need for it to be tailored to specific audiences depending on their degree of technical expertise and design background. It can range anywhere between a half-day or one or two full days, to a full week or more.

Since the use of any guideline is in principle voluntary, it is essential that **the Guidelines** themselves are developed and updated within the community of interest which they seek to serve. Through the World Wide Web Consortium, the relevance and acceptance of guidelines is continually tested and re-affirmed by users in industry, universities and public administrations. It is widely acknowledged that **the Guidelines** represent best practice in universal design for the Internet, and their acceptance is spreading through a broad sector of involvement in the World Wide Web Consortium/Web Accessibility Initiative's activities. They provide a harmonised set of technologically-based rules which also meet the usability requirements of the broadest possible range of Internet users.

The Guidelines aim to be compatible both with earlier technologies and Web design tools and also with new technologies and tools, for example, with new types of Web browsers such as digital assistants and WAP telephones. With this open-ended approach, **the Guidelines** represent a dynamic and evolving set of rules which seek to keep pace with and anticipate the latest technological developments.

The Guidelines provide technical guidance that is readily available on-line, and give considerable assistance in overcoming barriers to access of the Internet for people with disabilities. By using **the Guidelines**, it is technically feasible to make Web sites accessible to disabled users and thereby contribute to their full participation in the Information Society.

3. IMPLEMENTATION PLANS AND MECHANISMS INSIDE THE EUROPEAN UNION

The eEurope Action Plan 2002 proposes adoption of **the Guidelines** as an initial step towards making European public Web sites and their content accessible to people with disabilities. By adopting **the Guidelines**, the Member States and European institutions will give the target of Web accessibility broad recognition and support, through the use of the global *de facto* Web accessibility standard which the work of the Web Accessibility Initiative represents.

Adoption of **the Guidelines** will also show commitment from the Member States and the European institutions to the goal of integrating Web accessibility within national and institutional policies for public information services and standards, including eGovernment.

The spirit of eEurope is to encourage swift and decisive action in order to open up the digital age to all citizens, and to make it a reality for all persons with a disability. This makes implementation of **the Guidelines** a necessary and urgent sequel to adoption.

3.1. Review of progress in the Member States

In connection with the implementation of the eEurope Action Plan 2002 in the area of “Participation for all in the knowledge-based society”, the High Level Group on Employment and the Social Dimension of the Information Society (ESDIS), which is composed of representatives from all the Member States, was mandated to monitor these developments. An eAccessibility expert group was set up to support the work of the High Level Group.

The eAccessibility expert group has provided written and oral input to a review of progress of the Member States’ adoption and implementation of **the Guidelines**. This review describes a variety of approaches, plans and methods for using **the Guidelines**. The eAccessibility expert group has also agreed to organise a monitoring exercise among the 15 Member States.

The eAccessibility expert group has played a role in identifying examples of good practice. Examples of such practice can be cited in areas that relate to the development and dissemination of information, training of personnel, monitoring of Web sites for compliance with **the Guidelines**, the improvement of existing Web sites, promotion of best practice, and the provision of support and assistance mechanisms for Web content developers.

Good practices in the Member States have been presented in relation to four broad themes. Firstly, there exist good examples of mechanisms to raise awareness of policy-makers and information managers in public administrations of these **Guidelines** and their purpose. Secondly, there are Member States that successfully establish mechanisms to encourage content providers, Web designers and technical personnel to use those tools and specifications available to ensure accessible Web sites and Web content. Thirdly, in various Member States there are methods for training and support of persons responsible for Web pages. Fourthly, Member States have identified, and are using, various means of monitoring progress and compliance in applying **the Guidelines**.

As shown in Annex 3, the approaches used by the European Union Member States are diverse, but progress in implementing **the Guidelines** is encouraging. Already a number of Member States have developed policies and mechanisms for ensuring that their public Web sites are accessible, based on **the Guidelines**. In the global medium of the Internet, European administrations are fulfilling their responsibility as major public content providers by making their information and services accessible.

3.2. Web accessibility in the European institutions

The European Union recognises the importance of Web accessibility for people with disabilities. For many years, the European Union has been keen to tackle the inaccessibility of Web sites, notably through the 1994-1998 Telematics Applications Research and Development Programme (TAP) and a supporting action project called the Web Accessibility Initiative (WAI). This aim has continued in the Fifth Framework Programme Information Society Technologies programme.

Guidelines for accessibility have also been developed in 1998 by the ACCENT project within the SPRITE-S2⁴ initiative.

The European Commission wants to show its commitment to Web accessibility. Now, as part of its *e*Commission strategy, the European Commission is actively engaged in a process of improving the accessibility of its Web-based services, following **the Guidelines**. It has been active in informing and involving other European institutions in this process.

In the last few years, the Commission and its departments have successfully introduced Web technologies as the fastest and most efficient tool to interact with and deliver multilingual information to the public. EUROPA,⁵ and the European Commission's site in particular, has grown into one of the largest, most popular, and most referenced public Web sites in the world. Making EUROPA accessible is a major challenge; steps in this direction are, however, already underway.

The European Commission and its Office for Official Publications of the European Communities (OPOCE) have also started programmes to upgrade the accessibility of their Web sites and to provide accessible Web-based information, following **the Guidelines**.

3.2.1. *The EUROPA Web site*

The EUROPA Web site is the main communication platform for on-line information about the activities of the European institutions. It provides information to citizens and acts as the interface for contacts between the European Union, organisations, and citizens around the world. In connection with the planned upgrading of the Commission's Internet-based services, it is envisaged that the so-called EUROPA II will be implemented in the period 2001-2004.

The implementation plan includes a number of new *e*services and the full migration of EUROPA towards a thematic and service-oriented Web site by the end of 2004. In support of this transition, an Information Providers' Guide has been operational since June 2001. The Guide will contain ten rules with detailed specifications for Web content creation. Rule seven concerns accessibility through adoption of **the Guidelines**, and it states that the Web sites must be accessible to the greatest number of users. The European Commission has decided to adopt level A (Priority 1) conformity. Conformity to **the Guidelines** is more fully described in Annex 1.

⁴ The main priority of the initiative, which took place throughout the late 1990s, was to create guidelines intended as a reference to procurers.

⁵ <http://www.europa.eu.int>

Within this context, the accessibility of the Web sites of the European institutions is currently under revision, so as to respect the target of adoption of **the Guidelines** by the end of the year 2001. The activity will be based on the encouraging experiences of those institutional Web sites which have made progress to date.

3.2.2. Office for Official Publications of the European Communities (OPOCE)

The Commission has initiated a pilot demonstration project within OPOCE for making accessible on-line the documents of the Treaties to people with visual impairments. To begin, the work was done with the French version of the re-compilation of the Treaties on-line on the EUR-Lex⁶ site. The site and content were adopted following **the Guidelines**. Accessible versions will be available during the year 2001. A report with recommendations, based on this experience, has been discussed and the recommendations have been taken into account in the next generation of the EUROPA Web site.

3.2.3. Intranet

Internally, the Commission is committed to conform to **the Guidelines** level A (Priority 1) in elaborating the next version of its Intranet site for the end of 2001. The aim is to facilitate the possibility of people with a disability taking up employment in the institution, in line with the Commission's own 1998 Code of good practice for the employment of people with disabilities⁷.

3.2.4. European Union Fourth and Fifth Framework Programme research projects

Complementing and supporting European policy developments, research and technology development work has taken place over the past ten years that has addressed the needs and requirements of disabled people. This work has been conducted in the two phases of the Technology Initiative for Disabled and Elderly persons (TIDE 1991 - 1993); in the Fourth Framework Programme (Telematics Applications Programme, Applications relating to disabled and elderly persons, 1994 - 1998); and in the present Fifth Framework Programme (Information Society Technologies programme, Applications relating to persons with special needs, including the disabled and the elderly, 1998 - 2002).

One of the projects given financial support by the European Commission in the 1994-1998 Telematics Applications Research and Development Programme (TAP) was the Web Accessibility Initiative (WAI) project, which contributed to the work of producing **the Guidelines** and other specifications and tools for the promotion of access to the Web. The reasoning underlying the project was that the World Wide Web constitutes the foundation of the Information Society for European citizens, and that barriers to access by European citizens ought to be minimised. The initiative leveraged the technical effort of the World Wide Web Consortium in the area of access, and linked its efforts to specific European actions on education and outreach, while involving users and carrying out various standardisation activities.

Within the Fifth Framework Programme Information Society Technologies programme, as part of its continuous commitment to improving and promoting the concept of Web

⁶ <http://europa.eu.int/eur-lex/fr/accessible/treaties/fr/index.htm>

⁷ http://europa.eu.int/comm/employment_social/soc-prot/disable/codehaen_en.htm

accessibility, the European Commission gives financial support to the project entitled Web Accessibility Initiative-Design for All (WAI-DA).

Key objectives of the WAI-DA project involve increasing the extent of participation of European organisations in international activities promoting Web accessibility through the World Wide Web Consortium's (W3C) Web Accessibility Initiative; increasing awareness and implementation of the Web Content Accessibility Guidelines on Web sites throughout European Union Member States; and increasing implementation of the Authoring Tool Accessibility Guidelines version 1.0. Public administrations in the Member States are specifically encouraged to co-operate with the WAI-DA project. The project may be contacted via its Web site.⁸

More and more research and technological development projects within the Fifth Framework Programme Information Society Technologies programme are using **the Guidelines** developed by the Web Accessibility Initiative. The Commission also sponsors other projects such as IRIS, ViSiCAST, and WWAAC.⁹

IRIS is enhancing and evaluating Internet services in fields such as electronic commerce, teleworking/online learning with several groups of users with special needs. ViSiCAST is oriented largely towards the needs of deaf persons who use signing. It is developing virtual human and language processing technologies to be deployed, in broadcast television, in face-to-face retail transactions and in Web-based and multimedia interactions. WWAAC supports a series of activities that will make Internet-based activities accessible to persons with cognitive difficulties, particularly symbol system users, and to elderly people with language disorders.

4. DEVELOPMENTS OUTSIDE THE EUROPEAN UNION

Actions that correspond to those undertaken within the framework of the eEurope action plan 2002 are also promoted and implemented in other regions of the world, with **the Guidelines** as a significant element. Web accessibility is an integral part of public information policies, for example, in Australia, Canada, and the United States.

In some countries, legislation provides an important framework for achieving the accessibility of Web sites. In Australia, commonwealth departments and agencies are obliged by the Discrimination Act 1992 to ensure that on-line information and services are accessible by people with disabilities. The Online Council agreed to the adoption of **the Guidelines** as the common best practice standard for all Australian government sites. The Guidelines have the support of Australia's Human Rights and Equal Opportunities Commission, and disability groups.

The Government of Canada has ensured that its Web sites and electronic products and services are accessible to all. In keeping with the client-centred approach of the Canadian

⁸ <http://www.w3.org/WAI/WAIDA>

⁹ The full titles of these three projects are: Incorporating Requirements of People with Special Needs or Impairments to Internet-based Systems and Services (IRIS), Virtual Signing: Capture, Animation, Storage and Transmission (ViSiCAST), and World Wide Augmentative and Alternative Communication (WWAAC). See <http://www.cordis.lu/>

Common Look and Feel initiative, universal accessibility standards are directed toward ensuring equitable access to all content on Government of Canada Web sites.

Federal Web sites in the United States are required to be accessible by law since the amendment of section 508 of the Rehabilitation Act in August 1998. This section has been in place since 1986, and was amended in 1992 and again in 1998 to strengthen conformance requirements. In December 2000, the United States Access Board issued regulations defining conformance to Section 508 as amended in 1998. These regulations became effective in June 2001. This legislation also has important considerations for the public procurement of information technologies that are accessible to persons with a disability.

Finally, the European ministerial conference held in Warsaw in May 2000 underlined the importance of complementing European Union political commitments by creating an *eEurope*-like action plan (*eEurope+*) *by and for* the candidate countries seeking membership of the European Union.

5. CONCLUSIONS AND NEXT STEPS

During the past decade, increasing world-wide and European recognition has been given to the existence of barriers - social, environmental, cultural, technical and others - that hinder the full participation of people with disabilities in society. In Europe, it is now clearly established that actions must be taken to identify and remove such barriers in order to secure an inclusive society with equality of opportunity for all¹⁰.

This Communication on the accessibility of public Web sites and their content is but one example of the concerted effort which is required to remove access barriers and to ensure that future technologies and information systems do not create new, additional difficulties for people with disabilities.

The following conclusions can be drawn from the experiences to date of adopting the existing Web Accessibility Guidelines for public Web sites in the Member States and the European institutions.

1. The Member States and the European institutions are on a dynamic path to achieving adoption of these Guidelines for all public Web sites before the end of the year 2001;
2. National administrations should seek constantly to improve the accessibility of their Web pages and explore new and better ways to deliver Web content and services as new technologies and new versions of these Guidelines are developed. Adoption and implementation of these Guidelines for public Web sites may thus be seen as a first, decisive mechanism towards ensuring an increasingly inclusive Information Society;

¹⁰ In line with the principle of non-discrimination (Article 13), the European Commission produced a Communication in May 2000 entitled "Towards a Barrier-Free Europe for People with Disabilities": COM (2000) 284, 12 May 2000 - Towards a Barrier-Free Europe for People with Disabilities. In it, a range of policy areas and sectors are identified in which barriers need to be addressed. These include barriers in the area of Information Society technologies where a number of significant technological barriers must be removed if Europe is to be truly accessible for people with disabilities.

3. The Commission will propose to the other European institutions the establishment of an inter-institutional group to promote and ensure the adoption, implementation, and regular updating - following the World Wide Web Consortium/Web Accessibility Initiative developments - of these Guidelines within the European institutions;
4. The resulting accessibility of public Web sites should be monitored and best practices identified. The Commission will compile and disseminate the results of this action. Under the auspices of the High-Level Group on Employment and the Social Dimension of the Information Society (ESDIS), assisted by the *e*Accessibility expert group, the Member States and the European Institutions have agreed to exchange information and to benchmark their progress to be based on mutually agreed criteria in the areas of adoption and implementation of these Guidelines;
5. The *e*Europe Web site will present the progress towards adoption and implementation of these Guidelines by the European institutions and the Member States;
6. Measures for awareness-raising, dissemination, education, and especially training in Web accessibility should be promoted in both the European institutions and the Member States;
7. Organisations receiving public funding from the European institutions or the Member States should be encouraged to make their Web sites accessible;
8. Within the framework of the *e*Europe action plan, the Member States could encourage not only national public Web sites but also local and regional public Web sites to comply with the Guidelines;
9. There should be a major initiative devoted to achieving overall accessibility of both public and private Web sites during the year 2003, the European Year of Disabled People;
10. The Member States and European institutions should develop an ongoing dialogue with persons with disabilities and their representatives in order to ensure regular and consistent feedback on these issues.

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ANNEX 1: THE GUIDELINES OF THE WEB ACCESSIBILITY INITIATIVE

This annex presents an overview of **the Guidelines**, their accessibility levels, how to declare conformity with **the Guidelines**, how to perform validity checks of **the Guidelines**, and tools for creating accessible Web sites automatically.

The World Wide Web Consortium/Web Accessibility Initiative Web Content Accessibility Guidelines Version 1.0

The World Wide Web Consortium (W3C)/Web Accessibility Initiative (WAI) has developed guidelines for making Web sites and their content accessible to all users. The Web Content Accessibility Guidelines version 1.0 (hereafter referred to as **the Guidelines**) are widely accepted by the global Internet community as the benchmark specification providing guidance on how to make Web sites accessible for people with disabilities. The specification contains fourteen guidelines which are general principles of accessible Web design. Each guideline is associated with one or more checkpoints describing how to apply that guideline to features of Web pages. A “List of Checkpoints for the Web Content Accessibility Guidelines 1.0”¹¹, presents the checkpoints sorted by priority in a checklist format for manual Web site evaluation.

The Guidelines not only make pages more accessible to people with disabilities, but also have the added benefit of making pages more accessible to all users. Availability is also improved for users using different devices or in different environments. There may be those who use different browsers, for example, desktop browsers or voice browsers; who use one of the emerging handheld, voice-based, or automobile-based personal computers; or who are located in different environments such as a hands-free environment, in noisy surroundings, or in an under- or over-illuminated room.

Accessibility levels A, AA and AAA

The WAI has defined three levels of conformity to **the Guidelines**. They are commonly known as levels A, AA or Double-A, and AAA or Triple-A, and are described below.

PRIORITY 1 (level A). A Web content developer must satisfy this checkpoint. Otherwise, one or more user groups will find it impossible to access information in the document. Satisfying this checkpoint is a basic requirement for some groups to be able to use Web documents.

PRIORITY 2 (level AA or Double-A). A Web content developer should satisfy this checkpoint. Otherwise, one or more groups will find it difficult to access information in the document. Satisfying this checkpoint will remove significant barriers to accessing Web documents.

PRIORITY 3 (level AAA or Triple-A). A Web content developer may address this checkpoint. Otherwise, one or more groups will find it somewhat difficult to access

¹¹ The checklist of checkpoints for **the Guidelines** is: <http://www.w3.org/TR/WAI-WEBCONTENT/full-checklist.html>

information in the document. Satisfying this checkpoint will improve access to Web documents.

Conformance with the Guidelines

Web sites which have been designed in accordance with **the Guidelines** may declare their conformity on their pages. This declaration can take the form of a “label”. It may be placed on Web pages to show the level of compliance attained. **The Guidelines** specify:

“Claims of conformance to the WAI guidelines must use one of the following two forms.

Form 1: Specify:

The guidelines title: 'Web Content Accessibility Guidelines 1.0'

The guidelines URL: <http://www.w3.org/TR/1999/WAI-WEBCONTENT-19990505>

The conformance level satisfied: 'A', 'Double-A', or 'Triple-A'.

The scope covered by the claim (e.g. page, site, or defined portion of a site)

Example of Form 1:

This page conforms to W3C's 'Web Content Accessibility Guidelines 1.0', available at <http://www.w3.org/TR/1999/WAI-WEBCONTENT-19990505>, level Double A.

Form 2: Include, on each page claiming conformance, one of three icons provided by W3C and link the icon to the appropriate W3C explanation of the claim. Information about the icons and how to insert them in pages is available on the Web page entitled “WCAG-ICONS”.¹²

Performing validity checks of the Guidelines

It is possible to check the accessibility characteristics of Web sites that are already in existence by using various software tools. These tools for performing semi-automatic checking of Web site accessibility are listed on the Web Accessibility Initiative Web site.¹³

The validation of accessibility can be performed partially with automatic tools, but should also include human review. **The Guidelines** specifically note that while automated methods are generally rapid and convenient, they cannot identify all accessibility issues. Human review can help to ensure the use of such approaches as clear language and easy navigation. Validation should take place at the earliest stages of development: accessibility issues identified early are easier to correct or to avoid. Tools are also available for repair of Web sites and transformation to accessible formats, for example, changing text to a format which can be read by a standard screen reader. These tools are listed on the WAI's Web site.

¹² WAI ICONS: <http://www.w3.org/TR/WAI-WEBCONTENT/-ref-WCAG-ICONS>

¹³ Web suite evaluation, repair and transformation tools: <http://www.w3.org/WAI/ER/existingtools.html>

Authoring tools for creating accessible Web sites automatically

In addition to checking the validity of Web sites that are already in existence, the WAI has worked on the development of guidelines for authoring tools that can assist Web designers in creating Web sites which will be accessible from the very beginning. By using such tools from the start, the work of checking accessibility aspects is much reduced, although not avoided completely. Thus, the WAI has developed the Authoring Tool Accessibility Guidelines (ATAG) version 1.0, and is currently developing a number of complementary and counterpart techniques. The WAI also works with mainstream software developers to encourage them to apply the Authoring Tool Accessibility Guidelines (ATAG) into their authoring tool products. The range of products covered by the authoring tools include WYSIWYG editors, save-as-HTML conversion tools, database generator tools, and site management tools.

ANNEX 2: MAKING WEB SITES ACCESSIBLE¹⁴

The WAI has a set of ten ‘Quick Tips’ for Web developers. These ten tips highlight some of the most basic accessibility solutions for Web sites, and are available in a business-card sized format in a variety of languages. The ‘quick tips’, while a handy reminder, are not a comprehensive solution to Web accessibility. So, it is important to consult the Guidelines when developing Web sites¹⁵.

This annex cites the tips in direct quotation. An annotated text then describes in simple, less technical, phrasing the recommendation contained in each tip.

W3C QUICK TIPS TO MAKE ACCESSIBLE WEB SITES

Web Accessibility Initiative

FOR COMPLETE GUIDELINES & CHECKLIST: WWW.W3.ORG/WAI

- **Images & animations.** Use the **alt** attribute to describe the function of each visual.
- **Image maps.** Use the client-side **map** element and text for hotspots.
- **Multimedia.** Provide captioning and transcripts of audio, and descriptions of video.
- **Hypertext links.** Use text that makes sense when read out of context. For instance, avoid “click here”.
- **Page organisation,** use headings, lists, and consistent structure. Use **CSS¹** for layout and style where possible.
- **Graphs & charts.** Summarise or use the **longdesc** attribute.
- **Scripts, applets & plug-ins.** Provide alternative content in case active features are inaccessible or unsupported.
- **Frames.** Use the **noframes** element and meaningful titles.
- **Tables.** Make line-by-line reading sensible. Summarise.
- **Check your work.** Validate. Use tools checklist, and guidelines at <http://www.w3.org/TR/WCAG>

¹ Cascading Style Sheets

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The following texts give a flavour of the common issues that are dealt with in the area of Web accessibility.

- **Images & animations.** Use the **alt** attribute to describe the function of each visual.

For each image or animation on a Web page, add a brief textual description of the image function inside the code of the page. In this way, assistive interfaces used by visually impaired people can extract this alternative information in order to produce the same global

¹⁴ See the quick tips page available at: <http://www.w3.org/WAI/References/QuickTips/>

¹⁵ The full text of the World Wide Web Consortium, Web Accessibility Initiative Web Content Accessibility Guidelines version 1.0 is available at <http://www.w3.org/TR/WCAG10>

message from the page. These techniques are also useful for people using alternative devices such as personal digital assistants, third generation mobile phones, or text-only browsers (which are frequently used by people with slow Internet connections).

- **Image maps.** Use the client-side **map** element and text for hotspots.

An image map is an image that has been divided into areas with associated actions. Selecting an area causes an action to occur, for example, following a link to another page. “Client-side” image maps encode this activity available to assistive technologies, as opposed to server-side image maps where the interactivity is not accessible to assistive technologies.

- **Multimedia.** Provide captioning and transcripts of audio, and descriptions of video.

For each form of multimedia embedded in a Web page, either in the same page or in a sub-page add captioning and transcripts of audio, and descriptions of video. Thus, people who cannot see or hear the multimedia content can have access to the same message.

- **Hypertext links.** Use text that makes sense when read out of context. For instance, avoid “click here”.

For each hyperlink in a page, choose a meaningful click-able text which will still make sense if the rest of the sentences or page layout is removed. Assistive interfaces often have a ‘hyperlinks summary mode’, which is a facility for faster browsing. Also, assistive interfaces usually use an inherently slower channel of human communication - such as voice synthesis or Braille - which makes ‘reading’ all the content of a page very slow. Finally, avoid using the phrase, “click here”.

- **Page organisation,** use headings, lists, and consistent structure. Use **CSS¹⁶** for layout and style where possible.

Choose a clear and consistent structure for the information on Web pages, so that it is easy to understand and recognise from one page to another. Also, use the dedicated coding available for creating this structure in the page (structural markup), and separate the coding of content and style so that assistive technologies can navigate efficiently through content and structure. This approach will also be beneficial in preparing the move to the coming, new generation of content rendering devices.

- **Graphs & charts.** Summarise or use the **longdesc** attribute.

For each graph or chart on a page, add a textual summary or place an alternative textual description inside the page code so that it can be exploited by an assistive interface instead of any visual/graphical representation.

- **Scripts, applets & plug-ins.** Provide alternative content in case active features are inaccessible or unsupported.

To produce dynamic effects or active features on a page, or to improve the interactivity of Internet applications, it is possible to encode ‘stored intelligence’ in pages (called ‘scripts’,

¹⁶ Cascading Style Sheets (CSS)

‘applets’, or ‘plug-ins’). This information needs to be processed and therefore understood by the user’s browser. As such actions cannot necessarily be reproduced through assistive interfaces and even through some browsers, always add an alternative way to convey or to indicate the intended content inside the page coding.

- **Frames.** Use the **noframes** element and meaningful titles.

A page layout can be split in ‘frames’, the contents of which can be updated separately through the user interaction. In the layout coding of the page, add a meaningful name for each frame. In this way, assistive technologies can provide information which helps the user to make sense of the relationship between the frames and their contents.

- **Tables.** Make line-by-line reading sensible. Summarise.

Tables: bi-dimensional organisation of information is highly visual, and current assistive interfaces transcribe it in a line-by-line reading. Improve the efficiency of this method by adding a summary of the table content and encoding meaningful headings for each column and row. Also, if possible, avoid using tables to replace the current lack of Web page facility to create multi-column page layout. There is now support from most commercial Web browsers for new technologies that enable designers to split page content from presentation (using Cascading Style Sheets).

- **Check your work.** Validate. Use tools checklist, and guidelines at <http://www.w3.org/TR/WCAG>

Check the quality control of your work by inspecting the page code produced by the authoring tools used, by using freely available evaluation tools, and by trying to display the produced page on a text-only browser.

ANNEX 3: TABLE SHOWING MEMBER STATES' ADOPTION AND IMPLEMENTATION OF THE GUIDELINES

This table is based directly on materials received from the Member States, and has last been updated on July 17th, 2001. Maintenance and updating of the table is ongoing, and is undertaken as part of the eEurope activities.

Adoption of the Guidelines¹⁷ for public Web sites.
<p>A: The Guidelines are the subject of the working group on Web-based applications which is related to the Consultation Committee for Information Technology.</p>
<p>B: Web Accessibility is included in the egovernment concept but detailed specifications have not yet been addressed.</p> <p>Accessibility was already an issue in the Tele-administration projects funded by the Flemish government that ran until 2001: see http://www.vlaanderen.be/ned/sites/teleadmin/. The research group on Document Architectures of the Katholieke Universiteit Leuven (see http://go.to/docarch) was in charge of consulting the Tele-administration projects on accessibility issues. The Guidelines on Web accessibility have been promoted.</p> <p>In April 2001, the non-governmental organisation called Blindenzorg Licht en Liefde set up a Blindsurfer logo for Flemish language Web sites. It is attributed after a human checking of the whole Web site, based on the Guidelines. Details about the logo will be available soon from: http://www.blindenzorglichtenliefde.be</p>
<p>D: The federal government and the governments of the Länder are working on taking up the Guidelines. A particular role in this context is with non-governmental organisations and initiatives, especially from the disability sector, to support this process.</p>
<p>DK: The Guidelines have been included in the national guidelines for Accessible web design; standards for accessible public publications; and advisory activity between public Web masters. The Guidelines have also been used when providing information on accessible Web design for Web designers. Checks are being made on the accessibility of public Web sites in different public sectors, and the results are published on the Web at: http://www.bedstpaanettet.dk All Web pages on public Web sites are being checked over a three-year period. The last check in 2001 will take place in August 2001. User panels including persons with disabilities take part in the assessment of the public Web sites. A national prize has been instituted for exemplary accessible Web site design. This prize is open to commercial sites as well as public sites.</p>

¹⁷ Throughout this table, the World Wide Web Consortium/Web Accessibility Initiative (W3C/WAI) Web Content Accessibility Guidelines version 1.0 (WCAG 1.0) are referred to (as in the main text) as **the Guidelines**.

EL: Official adoption of **the Guidelines** and the practical implementation plan for existing and future public Web sites are currently the subject of deliberations under the auspices of the Secretary for Information Society of the Hellenic Ministry of National Economy.

E: The WAI is being considered by parliament, and a standards working group is working with **the Guidelines**. A group in the Ministerio de Trabajo y Asuntos Sociales provides support on accessible Web site implementation based on **the Guidelines**.

FIN: **The Guidelines** have been adopted as part of the Public Administration Recommendations in the “*JHS 129 Guidelines*” concerning development of eServices, Ministry of the Interior, December 2000. See the Web site: <http://www.intermin.fi/juhta/suositukset/jhs129.htm>

JHS129 emphasises equality of access for different users using different technologies; it makes a requirement of testing pages with several browsers and operating systems; it makes specific Web-page design recommendations; and it requires that there must be alternatives to Web-based public services (e.g. telephone services).

F: In application of the 12th October 1999 administrative guidelines (*circulaire*), the ‘Mission pour les Technologies de l’Information et de la Communication’ (MTIC) of the Prime Minister has published standards for accessibility of public Web sites. This action aims to promote the following documentation and tools among public sector Web masters which are already available on MTIC’s Web site:

- the ‘circulaire’ on Internet sites of public services and administrations;
- the recommendation of the W3C on **the Guidelines**;
- the white paper of BrailleNet entitled “Towards a more accessible web”;
- the free Web browser Braillesurf;
- tools to verify the accessibility of Web sites;
- the existing labels;
- the recommendations of the Council of Europe.

I: On March 13th, 2001, the Ministry of Public Function signed a Cabinet Resolution with the title: "Linee Guida per l'organizzazione, l'usabilità e l'accessibilità dei siti Web delle Pubbliche Amministrazioni". See the following Web sites:

[Http://www.funzionepubblica.it/download/pdf/accessibilita.pdf](http://www.funzionepubblica.it/download/pdf/accessibilita.pdf)

[Http://www.governo.it/sez_dossier/linee_web/direttiva.html](http://www.governo.it/sez_dossier/linee_web/direttiva.html)

This document has been developed by an inter-departmental working group, established in September 2000, that has the purpose of preparing national guidelines for both usability and accessibility of Web sites of the public administration, in line with **the Guidelines** (WCAG 1.0) and to promote the application of the eEurope programme concerning the accessibility in the framework of the Italian egovernment plan.

Another working group was set up by Authority for Information Technology in the Public Administration (AIPA) in July 2000 with the purpose of planning initiatives to promote and to facilitate the application of accessibility to both public Web sites and hardware/software used for departmental activities of the public administration.

In 2001, a national conference on the subject was organised and a CD-ROM published.

Other initiatives are currently being planned by the AIPA group: a survey, a variety of templates, customised repair tools for existing public sites, another national conference, a course, a training plan, and an assessment of the impact of accessibility on the activities of the public administration.

Some important public Web sites, such as that of the Italian government (<http://www.governo.it>) and that of the Department of Public Function (<http://www.funzionepubblica.it>), have been completely redesigned, and are now accessible. Other public Web sites, such as that of the Chamber of Deputies (<http://wai.camera.it>), are available in an accessible version.

IRL: Recommended Government Guidelines on Web Publication for Public Sector Organisations have been published which include guidelines in relation to accessibility. A target has been set for all government Department Web sites to achieve level A compliance by the end of April 2001, with achievement of level AA compliance as a target for the end of 2001. A Webmasters Network Group representing all government departments is making progress on these objectives.

L: In February 2001, the government adopted a national action plan: eLuxembourg. **The Guidelines** will be included in the egovernment concept (one of the six main targets of the eLuxembourg programme).

NL: **The Guidelines** have been recommended by the Minister of Public Health, Welfare and Sport in February 2001. There is ongoing development of adoption plans.

P: The Web Accessibility Initiative has already been adopted within the framework of the National Initiative for Citizen with Special Needs in Information Society (*Iniciativa Nacional para os Cidadãos com Necessidades Especiais na Sociedade da Informação*) by Cabinet Resolution 96 in August 1999 and Cabinet Resolution 97/99 – Accessibility to the Public Administration Web sites.

An Access Unit (*Unidade Acesso*) has been created within the Ministry of Science and Technology, which develops coordination activities and communicates information about projects within the ambit of the above-mentioned National Initiative (*Iniciativa Nacional*), as well as training and the creation of skills for citizens with special needs. The following actions have been carried out or are in progress:

- visitability requirements;
- an “Accessibility of Web Public Administration” conference, held in November 2000;
- training courses on designing Web accessibility;
- helpdesk of Web Accessibility to public Web sites Web masters;
- an Accessibility of Public Administration Web Sites Report;
- a Web Accessibility Evaluation Methodology;
- an Accessibility prize: Portugal@cessível;
- a Users Panel;
- an Accessibility Gallery.

S: Accessibility to information is included in the government bill “From patient to citizen - a national action plan for disability policy”. The bill emphasises that the state should set an example and that public authorities should ensure that their operations, information, and premises are accessible to people with disabilities.

A government ordinance concerning state government authorities and their responsibility for implementing the disability policy has recently been issued. According to the ordinance, which comes into force on September 1st, 2001, authorities have to take into account to make their buildings, information, and other activities accessible to people with disabilities. In the work with accessibility issues, the authorities have to draw up action plans. The point of departure should be the United Nations Standard Rules.

The Guidelines have been recommended by the Swedish Handicap Institute (SHI) since February 2001. Educational activities on Web accessibility and **the Guidelines** are being arranged by the SHI.

The Swedish Agency for Administrative Development states in its report “Criteria for 24/7 agencies in the networked public administration” that the agencies’ services for people with disabilities should be designed with a broad perspective, taking into account the variations related to special requirements. The Government has recently decided to commission the Agency to stimulate the development of 24/7 agencies. In this work, the needs of people with disabilities should be taken into consideration. No group of citizens should be excluded.

UK: The current guidelines for UK government Web sites were published in late 1999. Chapter 4.4 deals with accessibility and points to the W3C WAI Web site and tools such as Bobby.

These guidelines are currently being investigated by the Office of the eEnvoy. A draft is available at <http://www.open.gov.uk/dev/neil/>

In an effort to increase awareness of Web accessibility issues, the eEnvoy's office has expanded greatly on the amount of accessibility information available, and has established a mandatory level - the application of **the Guidelines'** level A - to all new or re-designed government Web sites. For this, ministerial approval has been obtained. The draft guidance is at: <http://www.open.gov.uk/dev/neil/guide/chapt-8-4.htm>