E-GOVERNMENT SERVICES: ACCESSIBILITY AND USABILITY

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Abstract – In recent years, e-government services have greatly benefited society by simplifying and enhancing processes, making administrative procedures more efficient and reliable, guaranteeing transparency and increasing user satisfaction. Most of this modernization process occurred using simple services, relying on World Wide Web (WWW) protocols and user interfaces. Due to their institutional nature, e-Government services must offer equal access and opportunities to any individual, regardless of her/his abilities, aiming to progressively reduce and extinguish all aspects of the digital divide.
Since 1999 the European Union has acknowledged the need to promote Web accessibility by implementing a number of actions, with the aim of enhancing and reshaping a fairer and more inclusive society. This paper offers an overview of accessibility and usability from its origins to the present, with special focus on the framework of current European legislation, providing a simple interpretation of the phenomenon.

Keywords: eGovernment services, Accessibility, Usability, Legislation, Europe.

1. – Introduction

Since the late 1990s the Internet network has spread, pervading all sectors and the Web with its simple user interface, greatly enhancing the experience of all users and simplifying access to an enormous amount of distributed data and services by masking the complexity of interaction with different systems, servers and databases. The e-government services have a fundamental role in the lives of all citizens, but access to this information depends on various factors. Some users must use assistive technologies to facilitate their access to information and services available on the Web. If these technologies or the browser used for navigating web pages present accessibility or usability issues (technological barriers), the user may experience difficulties or be unable access to data and services at all. If the language is technical or specific to the subject or if the language is foreign, content may be hard to understand. There are several different levels of accessibility that influence the user's experience positively or negatively, and thus affect his/her satisfaction. The paper is organized into five sections. After this introduction Section 2 discusses various aspects of accessibility and usability, Section 3 focuses on actions, directives and communications of the European Union in the field, and Section 4 discusses the digital divide. Last, a brief discussion and conclusions end the paper.

2. – Web Accessibility and usability

In this section we introduce the definition and the basic concepts of accessibility and usability, highlighting their correlation.

2.1 – Accessibility and usability of the Internet

The concept of usability arose in the 1960s and began to develop in the environment of Information Communication Technology (ICT) in the late 1980s. In fact, this period marked the introduction of the mass use of the computer as a medium combining artificial intelligence, computer science, and economics. The idea arose that the computer, with its hardware and software interfaces, could be functional not only for the needs of designers and programmers, but also those of general users. In the 1990s, the birth of the Internet further increased its range of usability, extending it to the creation of products for the Web.

The ISO has released two standard usability regulations, which are not related in a specific way to the Web, but in general, to the scope of Human-Computer Interaction. The first legislation -- ISO/IEC 9126 -- proposed an approach to quality in such a way that software companies could improve their organization and processes and thus the quality of the developed product. The characteristics of the second law -- ISO 9241-11 -- were also instilled with the aims of the Web. ISO 9241-11 conceived usability as having three basic requirements: effectiveness ("the accuracy and completeness with which users can achieve their goals"); efficiency ("the amount of effort users need to put in to achieve their goals"); and satisfaction (the latter defined as "how users feel about the system"). The accuracy and completeness of a website is essential for users to achieve their goals. This can be measured by quantifying how many times, compared to the total number of attempts, a sample of users reached their goals [1]. The technology become pervasive and invisible, embedded in objects [2]. The elaboration of the concept of usability of the web was for the most part carried out to scholars such as Nielsen [3], Tognazzi [4] and Krug [5]. The heuristics and principles of their statements derived from exporting the experiences of Human-Computer Interaction to a Web environment. The authors focus on the visibility of interface elements: color choices, visual arrangement of the elements, interface navigability, readability and visibility of elements of navigation. In order for a website to be usable, the pages' interface should not be brought to the conscious attention of the user, thus facilitating access to information and services.

The study of usable interfaces is part of the history of the personal computer and consequently of the willingness of industry experts to create hypertext interfaces that can be used by anyone who desires access. In fact, if we consider usability as a particular property that allows a website's visitors to explore it in depth, always quickly finding the desired information without ever feeling at the mercy of chance, and with satisfaction, the boundary is not entirely clear between the concept of usability and that of accessibility, in consideration of the needs and preferences of users with disabilities. Thus it is important to consider usability as the main guideline for accessibility in practice: in other words, it is necessary to think of usability in terms of a "usable accessibility". The concept of accessibility originated in the 1990s, when the Web acquired its characteristics of a mass phenomenon and its use boomed. While the concept of usability refers to the ease of use of the site, namely the ease with which the user is browsing the site and finds information, accessibility refers to the organization of content and tools that ensure easy navigation of the site for all users, including those who connect exclusively by keyboard without using a mouse, by screen reader, browser, or handheld devices. A definition of access is found in Article 1 of the Electronic Communications Code, according to which access refers to provisioning of "electronic communications services; among other things, it includes access to the elements of the network and associated resources, which may involve the connection of equipment, wired or wireless, including access to the local network and to the facilities and services necessary for providing services by means of the local area network; to the physical infrastructure; to relevant software systems including operational support systems, service-number translation or systems offering

equivalent functions; to fixed and mobile networks, especially for roaming between mobile operators, to conditional access systems for digital television services, and the services of a virtual Private Network." The aim of accessibility is to offer access to information on pages to the largest possible number of people, regardless of any disability or the hardware and software equipment available. In light of this, there are two basic requirements for access, the resolution of any problem of Web access for the disabled, and the guarantee of universal access. Only the concept of universal access can guarantee finding information conveyed via Internet regardless of the instruments used for connection, the language used, the culture of each user of the network, geographical location, or physical or cognitive disability. Only in this context is it possible to "to lead the Web to its full potential" [6]. The main reason for making an accessible website is social: all people are equal, with the same rights and duties. The first amendment regarding the elimination of access barriers dates back to 1973, the year in which the US government enacted a law known as the Workforce Rehabilitation Act, intended to eliminate or reduce various types of barriers that impede a disabled person, whether civil servant or common citizen, in the use of services and information provided by federal agencies. Section 508 of this law presented set of guidelines for eliminating barriers to accessing information and services in the field of the so-called Information Technology. This article did not directly establish the accessibility requirements that public offices should adopt. A technical body was set up, called "The Access Board," to which was delegated the task of operationally determining the necessary accessibility standards. On March 21, 2000, as a result of the study, the Access Board published a draft of accessibility guidelines. After an evaluation period, on December 21, 2000 these proposals became law. Section 508 was aimed at federal agencies and government entities, activities sponsored or subsidized by the federal government, projects developed by suppliers who work for the federal departments and government agencies and activities sponsored by states that adopted the regulation.

In parallel to Section 508 the first steps were taken towards what was called the Web Accessibility Initiative (WAI) by the World Web Consortium (W3C) . One of the main acts of the W3C dates back to 1999 with the birth of the WAI project, which studied Web design in order to identify and suggest criteria for making the content of any website accessible to users with disabilities [6]. It was a new way of conceiving the development of Web pages, based on the principles of universal design so that even users with disabilities could access the content of websites. WAI generated the WCAI (Web Content Accessibility Initiative) which was assigned the task of releasing documents containing principles and guidelines for creating Web content that is accessible to as many people as possible. Persons with disabilities may encounter difficulties both when using the computer and when surfing the Web. Since disabled people often employ non-standard devices and browsers, creating more accessible websites would be beneficial to a large number of Internet users. In May 1999, WAI published the Web Content Accessibility Guidelines 1.0; this document defined the standards for the constructing Web pages that are accessible in structure and content. A user with special needs, who uses a mode of presentation adapted to them, would experience the changes in a document's structure differently from another person with different needs. However, neither would lose the related information despite the various types of presentation. Since the publication of the "Guidelines", the Working Group involved in their drafting has collected a number of notes and comments on their usability, applicability and clarity. These led the development of a new version of the recommendations: WCAG 2.0, published after nearly 10 years at the end of 2008. The overall aim was the same as that of the previous version but in addition to accessing content and services it also intended to ensure their usability. Other requirements were added, such as:

- Ensure compatibility with previous recommendations. A large number of assessment tools and publication of policies of governments and organizations refer to version 1.0 of the "Guidelines", so the new edition will not completely change the definition of accessible Web content in order to ensure continuity.
- Ensure that the requirements for compliance are clear. The new version should clearly specify the minimum requirements for compliance of the document with the guidelines and these must be verifiable; all of which involves the provision by the Working Group of a whole series of lists of specific checkpoints for each technology, examples and methods for determining compliance.
- Ensure ease of use for new entries on the Web.
- Clearly identify the beneficiaries of accessible Web content. Thus, it identified the categories of disabled people who will benefit from the various technical solutions implemented.
- Ensure the applicability of the requirements via different types of technologies. While the "Guidelines" in the previous version were written primarily for HTML documents, the rules of the new edition are written in general terms, to ensure their applicability to more than one markup language or type of format of the content.

Consult an increasingly diverse audience of readers. In addition to developers of accessible websites it addresses those who want to create special policies of Web accessibility, developers of tools for publishing, evaluation and repair, and interpreters. In 2012 the Web Content Accessibility Guidelines were approved as an ISO standard: ISO/IEC 40500:2012. This event is highly relevant since the WCAG moved from a de facto standard to a formal international standard acknowledged worldwide.

2.2 - What unites accessibility and usability

In the world of Internet users we often see overlapping concepts of usability and accessibility. In fact the differences between usability and accessibility reside primarily in the final target and the nature of the project. With regard to the final target, accessibility is also aimed at categories of individuals such as the disabled, those with little technological means, and the elderly. The web should be accessible to a very high number of users of the medium, striving to reach all individuals. Usability, unlike accessibility, can be addressed to a specific niche market, the target of the project. So a usable site may not be easily accessible to all, since it is aimed at a specific group of users. With regard to the nature of the project, accessibility tends to be applied to sites that cater to a wide range of users, such as government sites, those of public bodies, and sites of common interest, regarding health, culture, and society. It is immediately evident that making "the universe" contained in the Web accessible to all is a challenging project. Still, the WAI guidelines are very rational. They are based on a fundamental principle: not everyone sees, hears, moves, or understands in the same way, but content should still be made accessible to all. Thus, not only can a text be made accessible to a blind user through a voice browser that reads it, but any image or table could also be described by the same computer program. This depends on the page designer who has to write the code of the table or image. The main purpose of usability is making the site suitable for fulfilling the user's needs rapidly in a simple, effective way.

In conclusion, we can state that while accessibility is a matter of technical compatibility, as well as clarity in navigation and communication aimed at universal access, usability regards the experience of the users and is always aimed at making the interface more accessible. Thus, we could say that usability aims to achieve full user satisfaction, and for this accessibility is a prerequisite. A non-accessible site is not usable. An accessible site may not be very usable, and thus should be improved. Given the importance of its function in society and its

increasing use, the Internet inevitably drew the attention of the governments of the Member States, which have addressed the issue by issuing a series of regulations to regulate usability and accessibility. While drawing on the same principles, the resulting legislation has evolved at different rates and in different ways in the various European countries.

3. The European regulations on accessibility

The European Union has issued numerous communications and directives pertaining to the issue of accessibility of the web:

- The Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions [SEC (2005) 1095] on eAccessibility. This Communication contributes to the implementation of the recent initiative "i2010 - A European Information Society for growth and employment[1]", which presents a new strategic framework and broad policy guidelines aimed at promoting an open and competitive digital economy, emphasizing the role of ICT as a "driver" toward inclusion and quality of life. The Commission has had the ambitious goal of establishing a "society for all", promoting a digital society that offers opportunities to all citizens and to minimizing the risk of exclusion. The implications are clear: to allow as many people as possible to take advantage of ICT is essentially social, ethical and political. This goal falls within the broader concept of eInclusion, which also covers other types of obstacles, particularly financial, geographic or educational. The European institutions have expressed in many contexts the need to involve all citizens in the information society. The Commission has undertaken initiatives under the two eEurope Action Plans in order to create a more accessible information society. The action plan for 2002 included a distinct course of action regarding these issues. It recommended the adoption of guidelines for the accessibility of the web (Web Accessibility Initiative, WAI) [6], the development of a European curriculum design for all (European Design for All, DFA), and the strengthening of assistive technologies and standardization of the DFA. The eEurope 2005 Action Plan aimed to integrate eInclusion in all courses of action. It also proposed to introduce requirements regarding the accessibility of ICT in public contracts. In its previous 2003 resolution on eAccessibility [2], the "Social Affairs" Council invited Member States to devote themselves to removing technical, legal and other barriers to the effective participation of persons with disabilities in society and the knowledge economy. In this context, the European Parliament, in its 2002 resolution on the accessibility of websites[3], "reiterates the need to avoid any form of exclusion from society and therefore the information society, and particularly calls for the integration of disabled people and the elderly". "Another resolution also mentions the use of sign language in telecommunications in Europe[4]. Art. 13 of the Treaty establishing the European Community generally provides for the adoption of appropriate action to combat discrimination based on disability. Based on this Article, the Council Directive 2000/78/EC of November 27, 2000 [7], aims explicitly (art. 1) "(...) to establish a general framework for the fight against discrimination on grounds of religion or belief, disability, age or sexual orientation as regards employment and

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[1] COM(2005) 229 def. of June 1° 2005.
[2] Council Resolution 14892/02.
[3] European Parliament resolution on "eEurope 2002: accessibility and content of the public administrations websites" (2002) (0325).
[4] European Parliament resolution on sign language- Resolution B4/0985/98.

working conditions." The directive specifically states, " It is appropriate to provide for appropriate measures, i.e., effective and practical measures intended to adapt the workplace to the disability, for example, arranging the rooms or adapting equipment (...)".

- The European Disability Strategy 2010-2020 (accessibility of ICT). The full participation of disabled people in society and the economy is essential if the EU wishes to ensure the success of the Europe 2020 strategy [8] for intelligent, sustainable and inclusive growth. The accessibility of all the services and products has considerable economic importance, given the demands from a growing number of older consumers. This strategy aims to improve the lives of the people and offer greater benefits to society and the economy without creating an undue burden on industry and governments. The Commission has identified eight main areas for action: accessibility, participation, equality, employment, education and training, social protection, health and external action. These sectors were selected based on their potential contribution to achieving the overall objectives of the strategy and the UN Convention, the relevant documents of the EU institutions and the Council of Europe, the results of the EU Action Plan in favor of persons with disabilities and public consultations with Member States and stakeholders. Accessibility is a precondition for participation in society and the economy, but it is still a distant goal for the EU. The Commission proposes using legislative and other means, such as standardization, in order to optimize the accessibility of ICT initiatives in accordance with the "Digital Agenda" and "Innovation Union". This will encourage the integration of the principle of accessibility and "design for all" to encourage the development of an EU market for assistive technologies. EU action will support and supplement national measures to implement the principle of accessibility, to eliminate existing barriers and to increase the availability and choice of assistive technologies.

- The European Action Plan for eGovernment 2011-2015 (eGovernment services inclusive and accessible). The Plan of Action - in accordance with the guidelines established in the Digital Agenda for Europe - identifies four policy priorities defined on the basis of the declaration of Malmö, November 18, 2009. The Plan adopts new trends and changes taking place in the public administration (such as open government, open data, social media, etc.), aiming at the creation of a new generation of eGovernment services "designed around" European citizens and businesses, which are able to provide public services consistent with an economy of knowledge. The Plan also aims to maximize the complementarity of tools and policies adopted at both national and European levels through actions in support of the seamless transition to a new generation of open, flexible and collaborative systems from the local to the regional, national and European levels. In the plan of the EU, making services accessible to all EU citizens could appreciably strengthen the digital market and complement existing legislation in key areas such as eIdentification, e-Procurement, e-Justice, e-Health, mobility and social security, providing tangible benefits to citizens, businesses and governments throughout Europe.

- The Digital Agenda for Europe (where the Commission proposes to ensure full accessibility to all websites in the public sector by 2015) and the EU funding programs (FP7, CIP) in favor of R & D related to technological solutions for web accessibility.

The final important initiative at the European level in the field is a proposal for a directive of the European Commission of December 3, 2012 regarding the accessibility of websites of public bodies. This proposal is based on Article 9 of the UN Convention on the Rights of Persons with Disabilities [9], which requires the Member States and the EU to take appropriate measures to ensure persons with disabilities, under the same conditions as others, access to applications such as information and communication technologies, including the

Internet. This Directive would ensure the effective use of the standard harmonized for web accessibility that will be elaborated on the basis of the conclusions reached by the Commission mandate M/376 [10]. The bill focuses on the websites of the public sector (government, taxation, job search services, education, healthcare, etc.), With the aim of ensuring all citizens with disabilities access to all areas of public services and information on their rights. The proposal was welcomed among EU countries, aware of the difficulties and inequalities created by different approaches to accessibility. The European Disability Forum, "having on several occasions pointed out that accessibility is a prerequisite for the full participation of persons with disabilities in all aspects of life, welcomes this proposal as a positive first step towards the removal of all barriers regarding access to the products and services of the network". Neelie Kroes, European Commission Vice President, replied to the Edf expressing his esteem "for their commitment and efforts to support the needs of people with disabilities and in promoting the importance of accessibility. I am convinced that the EDF, along with other stakeholders, will play a vital role in the next stage of the adoption process and will continue to support our common effort to make web accessibility a reality in the European Union.", The Directive's goal is the approximation of the laws, regulations and administrative provisions of the Member States in the field of web accessibility of public bodies through the establishment of harmonized requirements. The proposal sets out technical provisions which provide that Member States make available the content of certain types of websites of public bodies (hereinafter "websites concerned"). Through these types of web sites, specified in a list, public authorities provide information and services essential for citizens' participation in the economy and society and of the enjoyment by EU citizens of their rights. These are listed in Appendix I and is drawn from the comparative analysis of e-government in 2001[5]. Member States may decide to extend this list by including other types of websites. In a recital, the Directive provides that in working with the European standard that will be adopted under Mandate 376 and, subsequently, of the harmonized standard to be determined on the basis of the results of this work, consideration should be given to the criteria for success and the requirements of level AA conformance specified in version 2.0 of the Guidelines for the Web Content Accessibility Guidelines (WCAG 2.0) issued by the World Wide Web Consortium (W3C). These specifications, neutral in terms of technology, form the basis for the requirements relating to web accessibility. How can Web designers meet accessibility in practice? The W3C consortium provides fundamental resources for applying the WCAG 2.0 guidelines in practice by specifying "success criteria", "techniques" and "failures to avoid" in order to assure fulfillment of requirements. Specifically, descriptions, code examples, browser and assistive technology notes and tests are available. Each guideline or success criterion is detailed by resources linked by "Understanding". Unfortunately, the level of the translations into worldwide languages is uneven and is generally performed by volunteers, so this practical advice, crucial for the actual application of these criteria, is often unavailable. Different approaches for evaluating website accessibility are also provided by the W3C (http://www.w3.org/WAI/intro/wcag.php). Furthermore, tools are available for verifying single properties, such as contrast level or link integrity, or for checking the full adherence of web pages to WCAG 2.0 requirements, such as AChecker (Web Accessibility Checker http://achecker.ca/), which allows one to comprehensively test single pages. The inspection by experts and user tests are additional suitable steps.

The right of access to the Internet is a tool for achieving the substantial equality of citizens. Denial of access to the Internet could affect basic human rights such as freedom of expression, right to information, development and education [9]. It thus supports equality with

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[5]http://ec.europa.eu/digital-agenda/en/news/egovernment-indicators-benchmarking-eeurope

a view to the full development of human beings and the effective participation of all workers in the political, economic and social development of a country. Nowadays to be without access to the Internet is to be relegated to the margins of society.

4. The Digital Divide in a changing society

The term digital divide[6] denotes an economic inequality between groups, broadly construed, in terms of access to, use of, or knowledge of information and communication technologies (ICT) [11]. In practice, it is configured as a disparity between citizens who can use the Internet and technology, and those who cannot due to lack of means, culture, or network access[7]. In addition to potential barriers to access, the digital divide may also relate to other factors, including the availability of information, the quality of the technical resources, and personal ability to use technology. Thus, in addition to the infrastructural digital divide, we must also take into account the social digital divide, namely the lack of involvement of part of the population in the use of IT tools and new services. Instead of a binary structure the human computer interaction is mappable to a multiple structure that combines several variables. A combination that has been defined as "the Access Rainbow" composed of physical devices, software, contents, services, infrastructures and so on [12]. Recognizing digital inequality is important because it allows one to place the aspect of access in a broader context, characterized by a strong focus on the impact that technologies have on social inequality. These considerations permit separating the concept of digital divide into three aspects, namely access, use and skills.

Later the merits of the subdivision of these asset classes will be discussed, but for the moment it is important to emphasize that the quality of access, the availability of increasingly sophisticated technological equipment that enables a continuous connection, along with having the skills that allow one to achieve more and better-quality goals, are all elements reflected in the sphere of Internet use. The social problem of digital literacy, understood in its double meaning as the real chance to own the physical means to access the service and an appropriate level of technical expertise has been neglected until recently. Nowadays, instead we are witnessing a remarkable expansion of the telecommunications sector that should also be supported by an increase in computerization of the public sector through an effective expansion in the use of new technologies. This creates an obvious gap between those who have the ability to go online and those who cannot [13]. The state's duty is thus to eliminate cognitive obstacles that hinder true digital equality. Among the policies aimed at developing the degree of access to the Internet, most countries have promoted specific proposals for skills training, involving workplaces and schools. The largest computer literacy program has been developed by Korea, with several programs in recent years making use of various resources. The most important program was devoted to training housewives "Cyber21". The plan consisted of a 1-week course (around 20 hours in all) offered at over a thousand educational institutions and was funded entirely by the government. It must be remembered that Korea

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[6] The official entry of the definition of digital divide in the legal and sociological literature dates back to 1995, when the *National Telecommunications and Information Administration*, a United States advisory body on policy in the telecommunications sector, published the report *"A Survey of the have-nots in Rural and Urban America ", the first in a series entitled" Falling Through the Net"*.

[7] "In Italy, 41.7% of households say they do not have access to the Internet because they do not have the skills to use it; 26.7% consider the Internet useless and uninteresting, 12.7% have no access to Internet access from home but access it from another place, 8.5% because it considers the equipment needed to connect expensive and 9.2% because it believes the cost of the connection is excessive."

also organized further free or low-cost training courses for large portions of the citizenry. In fact, the "10 Million People IT Education Project", aimed to increase knowledge of new technologies, incorporating not only schools, but also the elderly and the disabled, military personnel and farmers. However, in Europe the process of digital literacy has its roots in eLearning programs, focusing on the improvement of ICT skills of students and teachers. This method allows the user to undertake a process of self-instruction using and exploiting the data and materials present on the Web. According to a definition provided by the ANEE (Association of Multimedia Services and Content), e-learning means: *"Method of teaching and learning that involves both the product and the training process. An educational product is any type of material or content made available in digital format through computer media or the Web. The educational process indicates the entire educational program, involving aspects of dispensing, use, interaction, and evaluation. In this aspect the real added value of e-learning emerges in services and tutoring, in both synchronous and asynchronous modes of interaction, sharing and collaboration at the community level. A peculiarity of e-learning is the great flexibility it offers the learner by the availability of learning content anytime, anywhere, which enables the self-management and self-determination of one's own learning; however it remains of primary importance to scan the training process according to an agenda that empowers both learner and teacher in the achievement of learning objectives"*[14].

A special feature of this method is its flexibility, as it provides both lifelong learning and social inclusion. England launched the program "Train To Gain", providing meticulous training in the workplace. It involved 127,000 employers and provided training to more than a million workers. Furthermore, everything was boosted by ad hoc campaigns, the use of special roadshows, with buses running around the city promoting and spreading the potential of new information technologies. Similarly, in Greece the government intervened by providing in its "Plan for the Development of Broadband Services" in 2008 the creation of 85 information points to explain to citizens how the Internet works. It was a real training and support project for the use of computers to easily navigate the Web [7, 8]. It could thus be assumed that the right of access is connected, in a close relationship of cause-and-effect, to a condition of aid from the State [15], which guarantees an infrastructure plan providing the right to access services offered by broadband, regardless of the potential user's geographic location. Moreover, the State should facilitate the purchase of a computer for people who are unable to afford a similar expense, by offering financial incentives [16]. A question then arises: does lack of access to the Internet lead to discrimination for an individual, creating an obstacle to their full social inclusion [17]? An affirmative answer to this question suggests that broadband should be included in the essential services guaranteed and protected by the State, and thus considered an essential public service?

5. – Conclusion

The right to Internet access (or right to broadband), means that anyone should be able to access the Internet. It is based on the principle of equality, as a tool that allows substantial equality of citizens in several fields: from education and socialization, to culture to participation in the country's social and political life. Denying Internet access would thus affect fundamental human rights, since it denies substantive equality for the full development of the human being – for today the Internet can empower a person, promoting their emergence and developing their full potential. Digital barriers and inaccessible websites are another kind of inequality that affect differently-abled persons and represent a form of digital divide. The goal is the European Union's aim to make all public administration websites and eGovernment services full accessible by 2015. This goal was established before 2010, but it

failed despite a widespread campaign implemented throughout Europe (communication). Indeed, legislation alone is unable to provide the overall development of accessibility. Education and the availability of advanced tools to assist designers in building accessible sites are crucial factors to be further addressed. This encourages the creation of a pervasive accessibility and usability culture. Accessible websites should be easy-to-make for all, masking the technology's complexity. To build an accessible and inclusive information society a joint effort by all stakeholders is required (technical, research and educational organizations along with governmental and law experts) to create a synergic and coordinated action [18]. The right to Internet access is linked to the right to access the Internet, in order to pursue an equal society based on a Web for all. The progressive reduction of the digital divide and removal of digital barriers are based on the increasing knowledge, use and application of International Standards. The digital natives are growing up and can influence this process, providing both technological and social contributions. Schools and universities face the challenge of educating our younger citizens regarding the responsible and creative use of technology.

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Government Services. Health Care Success. Legacy Information.Ä Celebrated the 10th anniversary of the Digital Accessibility and Usability law in partnership with Minnesota IT Services' Office of Accessibility, legislators, other disability agencies, and community partners. This occurred at the State Capitol Rotunda and included Experience Labs where people could try accessibility equipment. 2013. Passage of a bill, which allocated funds for MN.IT for $580K for the biennium for two staff positions to make all state websites accessible and state online content for the state technology agency, MN.IT, and $150K for captioning of online floor sessions and committee hearings. can engage to develop successful E-Government services such as focus groups and interviews (with experts and users); usability, functionality, and accessibility testing throughout the design and development process; encouraging real-time comments and suggestions about the services being used; log file and transaction log analysis; providing interactive help screens or 1-800 assistance; and developing and adhering to measures and.Â Such program evaluation cannot occur without significant and ongoing user input that is collected in a systematic and regular process. Governments can implement various strategies to do this â€" online surveys (brief pop-up surveys, or... An e-Government services with better usability features helps to improve civil service performance. Moreover, user satisfaction can increase and the usersâ€™ engagement with e-Government services is promoted (Bwalya, 2009). In addition, this initiative can play the role of an advocator for more organizations to expand their online government services.Â e-Government website improving its usability and accessibility of application and in order keeping smooth operation of government electronic activities from different perspectives. Furthermore, the research may provide an opportunity for academia to consider specific usability and accessibility evaluation solutions for e-Government web based electronic services.