

PORTUGUESE WEB ACCESSIBILITY SNAPSHOT

Status of the Portuguese Websites Regarding Accessibility Levels

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Abstract: The Internet is extremely important for the publishing of information and for the interaction between the society elements. Due to this, it's essential that the web presents itself accessible to all, including those with any kind of disability. An accessible web may help the handicapped citizens interact with the society in a more active way. This paper presents a study made with a universe of 777 Portuguese biggest enterprises, using a W3C referenced tool (SortSite), and presents some statistical results according to the Portuguese Classification of the Enterprises Activities. The achieved results present a serious troubled reality that's preventing the disabled citizens from having the same access rights to the World Wide Web as the "non-disabled" citizens.

1 INTRODUCTION

According to the European Commission all the disabled citizens can be better integrated in society through the use of Information and Communication Technologies - ICT, but for this to happen, these same technologies must be accessible to all (EU, 2008).

In the last two decades a very important change in the economical and social activities has occurred. The ICT have contributed in a significant way to this change (Socrates, 2007).

According to Ban Ki-Moon, it's internationally consensual that the Information and communications technologies have a central role to play in the quest for development, dignity and peace (Ki-Moon, 2007).

The ICT have become indispensable for the social and economical evolution of society. As a result of this, one of the social factors to be considered is the accessibility to all available resources, including the Web. According to Tim Berners-Lee, the power of the web is the possibility of access to all available resources by everyone and its universality (Out-Law, 2006).

2 WEB ACCESSIBILITY IN THE WORLD

2.1 Web Accessibility Concepts and Concerns

The term accessibility can easily be defined as the possibility of disabled people interact with a product, resource, service or activity as normal people would. In what concerns the ICT, we can define accessibility as the creation of interfaces that are perceived, operable and easy to understand for people with a wide range of features. This includes all deficiencies, functional limitations, including a visual impairment, hearing, physical, cognitive and neurological (W3C 2008).

2.2 Web Accessibility World Regulations

According to the European Commission, there are about 37 million European Citizens that present some sort of disability or impairment, that need access to all web content (EU, 2002). As an example, in the United Kingdom, there's an estimate that the disabled citizens present a market value of about 120 billion pounds (Freedman, 2008).

The World Health Organization – WHO claims that about 10% of the world population suffers, from

some kind of disability or incapacity. This number clearly shows the existing need for health and rehabilitation services. Due to this, the WHO created an action plan called “Disability and Rehabilitation Action-Plan 2006-2010”, whose mission goes not only, for trying to disseminate and create awareness of this reality throughout the world community, but also to create initiatives that help in the process of recovery and re-integration of disabled people back to society (WHO, 2006).

2.2.1 W3C Accessibility Initiative

Web content accessibility has been a priority for various world entities, such as the W3C consortium which in 1999 created the World Accessibility Initiative – WAI. This initiative was created with the aim of being a parallel organization to the W3C and its mission was to develop guidelines that would be understood as the international standards for web accessibility; as well as to develop support materials for a better understanding and development of web accessibility, and to develop new resources through international cooperation (W3C, 2008b).

2.2.2 Portuguese Web Accessibility Regulations and Concerns

In the year 2002, the Portuguese National Institute of Statistics - INE promoted a demographic study named “Censos 2002 – População residente com deficiência segundo o grau de incapacidade e sexo”. According to this study, there were 634000 Portuguese citizens with some kind of disability. This number represents 6% of the entire Portuguese population (INE 2002).

3 WEB ACCESSIBILITY EVALUATION

Our work consists in an evaluation of the 1000 biggest Portuguese enterprises websites homepage. This list of enterprises was achieved by the Portuguese Institute of Statistics and the main criteria was the business volume (INE, 2007).

3.1 Evaluation Proceedings

According to the W3C Web Accessibility Initiative, the accessibility evaluation of a website is a process achieved by the following steps: definition of the scope of the evaluation, definition of the evaluation tools, definition of the proceedings for the manual

evaluation and definition of which reports will result from the evaluation process (W3C, 2006b).

For the definition of the scope of the evaluation, we had to identify the criteria to be used for the accessibility evaluation and who would be part of the target group. In order to achieve good results, we decided to use the “AAA” accessibility level announced by the W3C as the evaluation criteria (W3C, 2008).

For the evaluation tool, we’ve chosen the SortSite Tool (Sortsite, 2009). This was the chosen web accessibility evaluation tool because, in first place, it is referenced by W3C and secondly because it is capable of automatically evaluate an entire website against WCAG2.0, creating summary reports that can be used to extract the evaluation results.

Concerning the kind of reports that would result from the evaluation process, we decided to do a group of simple statistical studies (average, standard deviation, maximum and minimum), that would represent the reality of the web accessibility levels presented by the Portuguese enterprises.

In this paper we present only the results of the first page in each web site. Following this work, we will proceed to the evaluation of 30 pages on each web site.

3.2 Evaluation Target Group

For the definition of the target group we realized that evaluating all the Portuguese enterprises websites was extremely complicated, so as a way to solve this issue we decided to evaluate, the 1000 largest Portuguese enterprises (INE, 2007).

3.3 Evaluation Results

We started with a universe of the 1000 biggest Portuguese enterprises, but only 777 (77,7%) were evaluated, allowing us to compare this results with the previous collected and discussed in the study “Portuguese Web Accessibility” (Martins, Gonçalves et al, 2009).

After the evaluation of the remaining 777 enterprises websites, we reached to a significant group of results. However, following the line of other Works (Martins, Gonçalves et al, 2009), we believe that separating these results according to the Portuguese Classification of the Enterprises Activities (INE, 2008).

When we reached the separated evaluation results (according to the previous defined criteria), we also decided to group these same results

according to the success criteria levels defined in the W3C Web Content Accessibility Guidelines 2.0. With this in mind we reached the results that can be perceived in table 1, 2 and 3.

As we can perceive by looking at table 1, the dispersion of results is extremely intense, but it's possible to see that none of the evaluated websites presents a zero count of level A errors. Another aspect that we can also retrieve by looking at table 1, it the maximum number of level A errors. By looking at table 1 is also possible to perceive that, the activity sectors E – Water and Residue Treatment, A - Agriculture and I - Housing are the most accessible in what the WCAG2.0 level A criteria concerns. In opposite, the activity sector N – Administrative Activities, J - Audiovisual and Q - Health are the less accessible.

Table 1: Level A Evaluation Results.

Activity Sector	Avg	Median	Standard Deviation	Max	Min
Water & Residue	2	1	3	15	0
Agriculture	4	1	7	38	0
Housing	8	3	15	73	0
Construction	9	2	34	600	0
Consulting	11	3	25	164	0
Transformation Industries	12	2	34	947	0
Arts & Sports	13	4	26	137	0
Electricity, Water and Gas	13	2	30	141	0
Auto Commerce	14	3	39	608	0
Bank and Ensurance	15	3	33	355	0
Real Estate	16	3	45	389	0
Transportation	17	3	44	288	0
Administrative Activities	21	3	83	1358	0
Audiovisual	22	3	51	484	0
Health	29	4	78	432	0

Table 2: Level AA Evaluation Results.

Activity Sector	Avg	Median	Standard Deviation	Max	Min
Water and Residue	3	1	3	15	0
Agriculture	5	2	12	81	0
Housing	13	4	28	162	0
Construction	14	3	48	751	0
Transformation Industries	16	4	44	978	0
Consulting	17	4	38	223	0
Arts & Sports	21	5	44	221	0
Auto Commerce	22	4	61	947	0
Real Estate	22	4	52	389	0
Bank and Ensurance	25	4	57	431	0
Transportation	26	4	72	698	0
Administrative Activities	30	4	109	1390	0
Electricity, Water and Gas	30	4	74	388	0
Audiovisual	39	5	105	1162	0
Health	46	5	127	638	0

Table 3: Level AAA Evaluation Results.

Activity Sector	Avg	Median	Standard Deviation	Max	Min
Water and Residue	4	2	4	15	0
Agriculture	6	2	12	81	0
Housing	14	7	27	162	0
Construction	16	4	48	751	0
Transformation Industries	18	7	45	978	0
Consulting	19	7	38	223	0
Arts & Sports	23	8	43	220	0
Real Estate	24	8	52	389	0
Auto Commerce	25	7	62	947	0
Bank and Ensurance	27	8	57	431	0
Transportation	29	7	72	698	0
Electricity, Water and Gas	32	8	74	388	0
Administrative Activities	32	7	109	1390	0
Audiovisual	43	8	104	1162	0
Health	49	8	127	638	0

By looking at table 2, we can see that, although some activity sectors present a low error average, we can see that there isn't a single one that clearly complies with the guidelines proposed by W3C. As well as in table 1, also in table 2 we can perceive that the maximum of errors is extremely high.

As we can perceive by analyzing table 3, the results are in some way disperse, but it's still possible to retrieve some indicators, such as the high average of errors and an extremely high maximum of errors. These indicators clearly show that the evaluated websites are not made according to the W3C WCAG2.0 in what the level AAA criteria concerns.

4 CONCLUSIONS

With this work we managed to achieve our initial goal that was delivering indicators on the actual accessibility levels presented by the Portuguese enterprises websites.

As the results that were presented show, the accessibility evaluation that was done, led to the detection of a considerable number of errors on each of the websites first page that belong to the target group. This fact indicates that the accessibility levels of the Portuguese enterprises are very low.

The World Wide Web is constantly evolving and, alongside with this evolution, the citizens requirements towards the services provided by the Web (websites, web applications, etc.) are also changing and evolving. In this way, it's imperative that all services available in the web should be accessible. This same situation can be applied to the Portuguese websites, so that the Portuguese disabled citizens can use them and be less limited in our society.

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