

Chapter 8.8

Making the Web Accessible to the Visually Impaired

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ABSTRACT

Accessibility is the possibility of any person to make use of all the benefits of society, including the Internet. As the interfaces are typically graphic, sites can be an obstacle for visually impaired persons to access. For a site to be accessible to blind persons it's necessary the information contained in the visual resources be reproduced by means of an "equivalent" textual description, capable of transmitting the same

information as the visual resources. This study is aimed at identifying and defining usability guidance compliant with accessibility W3C directives that can facilitate the interaction between visually impaired and Internet and still guarantee sites with understandable navigation content. Towards this end an exploratory study was conducted, comprised of a field study and interviews with visually disabled people from Instituto Benjamin Constant, reference center in Brazil for the education of visually impaired persons, in order to get to know these users better.

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INTRODUCTION

Accessibility is the term used to indicate the possibility of any person to make use of all the benefits of society, among which, the use of the Internet. (Nicholl, 2001). Digital accessibility is more specific and refers only to access to computer resources; accessibility to the Internet is the right to use the resources in the worldwide computer Web and accessibility to the Web, or *e-accessibility*, referring specifically to the Web component (Sales, 2003).

The Web component plays a fundamental role in the innovation that the Internet represents in the daily lives of persons with special needs; it facilitates the lives of these people as it allows them to create new ways of relating to others and performing activities previously unattainable (Takagi, 2004) and (Petrie, 2006). But getting digital accessibility is no simple matter; it requires organizations to adapt their resources in order to make the use of the computer accessible to any person ([http_1](#)).

In order to be accessed by visually impaired users, the graphic interface of computer systems should be designed with an “equivalent” textual description. These “equivalent” interfaces should be built in such a way that when accessed by support technology, they continue to provide “friendly” interaction, i.e., an interaction focused on usability. Hence, the present study is aimed at identifying and defining usability guidance compliant with accessibility laws, which may facilitate the interaction between those visually impaired and the Web, guaranteeing sites with understandable navigation content. This research is focused on Brazil’s necessities. To achieve this end, a Field work was conducted at the Instituto Benjamin Constant (IBC), an agency of the Ministry of Education of Brazil, and a center of excellence and national reference in matters related to studies of visual impairment ([http_6](#)

ACCESSIBILITY TO THE WEB OR E-ACCESSIBILITY

Digital accessibility refers to access to any Information Technology resource, whereas the term accessibility to the Internet is used, widely speaking, to define universal access to all components of the worldwide computer Web, such as chats, e-mail, and so on. The term Web accessibility, or *e-accessibility*, specifically refers to the Web component, which is a set of pages written in HTML language and interconnected by links to the hypertext (Sales, 2003), (Modelo, 2005) and (Nevile, 2005).

Aimed at making the Web accessible to all, W3C (the World Wide Web Consortium), an international committee that regulates matters linked to the Internet, created, in 1999, the WAI (Web Accessibility Initiative), made up of work groups intent on producing guidance to guarantee Web content accessibility to people with disabilities and to people accessing the Web under special conditions related to environment, equipment, navigator and other Web tools (Nevile, 2005), ([http_5](#)) and (Enap, 2007).

The members of W3C/WAI put together “W3C Accessibility Guidelines” (WCAG 1.0); this document is the first version for Accessibility to Web Content, released in May 1999, and has been the main reference to Web accessibility until today ([http_5](#)). In Brazil, accessibility began to be a part of public policy in the year 2000, when Federal Laws no. 10,048 dated November 8 2000, prioritizing services rendered to people with special needs, and no. 10,098 dated December 19 2000, establishing norms and criteria to guarantee accessibility were promulgated (Enap, 2007). In December 2004 these laws were regulated by decree no. 5,296 that initially established a 12-month deadline for all public administration or public interest sites to undergo an accessibility process; this deadline was subject to prorogation (Queiroz, 2007).

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