Chapter V

Web Accessibility for Users with Disabilities: A Multi-faceted Ethical Analysis

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Abstract

When designing information systems, it is important to consider the needs of users with disabilities, including those with visual impairment, hearing impairment, or color-blindness. This is especially important for designing Websites. It takes time and money to create or redesign Websites for easy access for users with disabilities. This is also known as Web accessibility. This chapter will discuss the ethical implications involved with Web accessibility. An ethical analysis of Web accessibility will be performed using a partial combination of two structured analysis approaches. It is the position of the authors of this chapter that Website development should consider accessibility for users with sensory and motor disabilities as an ethical requirement.

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Introduction

It is always important to consider the needs of users when building an informational system (Hoffer, George & Valacich, 2002). One portion of the user population is users with disabilities. Accessibility means to make a system or building usable by a person with a disability. When applied to informational systems, accessibility means that an information system is flexible enough to be utilized by someone using alternative input and/or output methods. These alternative input/output methods are known as assistive technologies (Alliance for Technology Access, 2000). Assistive technologies include screen readers (where the output on the screen is presented as speech synthesis output), voice recognition, and Braille output. When an information system provides flexibility for those using assistive technology, this is called an accessible information system. There are specific guidelines for making accessible information systems and accessible Websites. An important question to consider is “Why make a Website accessible?” While Web accessibility is an important goal, making a Website accessible costs money, and therefore it is important to identify clearly the stakeholders, the various concerns, and the benefits. The purpose of this chapter is to perform an ethical analysis of Web accessibility.

Web Accessibility

For a user with an assistive technology to fully utilize a Website, this site must be very flexible to meet different user needs. Only then can the Website be called an accessible Website. To make a Website accessible, all forms of multimedia (such as graphic, audio, and video) must be available in a textual format (Paciello, 2000). Site navigation must work without graphics, applets, or other plug-ins, because otherwise a user cannot get past the home page (Lazar, 2001). For that matter, all portions of the Website must be available to someone who can browse using only text (Paciello, 2000). There are other challenges in making a Website that is accessible. For instance, tables that are used for page layout, instead of for presenting data, can be problematic if not clearly marked. Since many users with disabilities create and apply their own style sheets (also known as cascading style sheets or CSS), a Web page must still work properly when an associated style sheet is turned off. Important data must also be presented in a way that is useful to users with color-blindness. For
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