

Chapter 13

Vision Impairment and Electronic Government

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EXECUTIVE SUMMARY

Vision impaired are in a distinctive disadvantage when using computer screens based on visual presentation of data. Their situation becomes increasingly critical, as most society services, including issues such as eCommerce, eBusiness, eHealth, and eGovernment go on-line. Yet modern technologies can too offer solutions to their problems, both at hardware and software level, and often with reasonable cost. Effective ICT can open up new communication channels and functionalities for say totally blind people, that would not have been available for them otherwise. General sensitivity for this issue, and especially sensitivity among designers of governmental e-services must be developed. eGovernment is an especially demanding activity area as it comes to all sorts of imparities (not just vision impairment), as governmental services are often in a monopoly service delivery situation: citizen have to use them and there is often no other alternative. The issue binds it to the wider discussion on digital divide, where vision impairment is one cause for digital divide, and often very devastating, especially if still combined with other sources of digital divide.

ORGANIZATION BACKGROUND

Vision impairment is vision loss (of a person) to such a degree as to qualify as a handicap through a significant limitation of visual capability (Arditi & Rosenthal, 1998). It is a form of disability. Countries around the globe are acting to promote

e-governance, so that people with disability are increasingly able to get access to information on the Internet. However, it is always a difficult commitment for many countries to reach the whole community (AHRC, 2009), and majority of the websites in the education, cultural and business sectors are still inaccessible to people with vision impairment. (HKBU, 2006).

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Currently, there is less than 6% percent of printed material that is accessible for those citizens who are vision impaired or have other print disabilities. Moreover, people with vision impairment report frustration that they must continually request that government documents are presented online in multiple formats apart from PDF such as RTF, MS Word, and HTML (ACCAN, 2009; BSI, 2006). The system should be able to consider the needs of people with disabilities, such as providing alternative keyboard navigation, animated displays, color and contrast setting, and other means of making the system usable to people with vision impairment (Govt. of US, 2007). In addition to these blind, deafblind and vision-impaired people have particular needs. Skill development programmes must not be designed solely for people who can see and read standard print, and who can use software without altering its on-screen appearance or using adaptive technology. (NZ Foundation, 2009; EATT Project, 2003). Foremost, there should be studies to identify factors accounting for why some states or countries are more responsive than other states or countries to the needs of people with disabilities in their use of e-government (Rubaii-Barrett & Wise, 2008).

In this context, digital divide could be termed as the inequality in accessing services of the information society (Brodie, Flourney et al. 2000; Compaine 2001; Norris 2001; Siochrú, Girard et al. 2002; Akhter 2003), and one form of digital divide is caused by vision impairment, that can take several forms from total blindness to minor shortcomings say in colour recognition. The number of people with visual impairment worldwide in 2002 was in excess of 161 million, of whom about 37 million were blind (Resnikoff, Pascolini et al. 2004).

The case is discussing governmental support for vision impairment in two well-developed countries, Germany and Finland. It is well clear that the problems might be totally different in less-developed countries, in which vision impairment can too be even more a severe problem;

especially the area of e-Government is looking at. By e-Government this research means the delivery of governmental services to citizen through electronic means, mainly the Internet. In this perspective, parts of the government activities are; providing the needed regulation and legislation for both public and private organizations to deliver good services for vision impaired through electronic means; and delivering robust and well-designed government services to citizen with vision impairment. If the government fails in providing these services, pressure to serve citizen with vision impairment materializes strongly in other service channels.

SETTING OF THE STAGE

Vision Impairment

Equality of citizen is a central value in modern societies. In reality, the equality is of course eroded by many factors. Most permeating factors causing inequality are of course permanent physical capabilities of individuals. Alongside conditions such as deafness, dumbness, inability to move normally because of missing limbs etc. or failures in the neural system, vision impairment, at its worst form totally blindness, is a key source of inequality. The term often used in this connection is vision impairment.

In worldwide statistics vision impairment officially touches upon 160 million people (Resnikoff et al., 2004), but in reality the figure is most likely much bigger. The amount of totally blind people is expected to be around 37 million (Resnikoff et al., 2004).

The most common causes of blindness around the world are (World Health Organisation, 2009):

- cataracts (47.8%),
- glaucoma (12.3%),
- uveitis (10.2%),

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