Chapter XVI

Disability Access to the Built Environment: On-Line Evaluation and Information Dissemination

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Identifying and removing architectural barriers to access for people with disabilities follows community recognition that people with disabilities share the same rights as others. In terms of access to buildings and facilities, it is a question of degree. Examination of the steepness of a gradient, the available circulation space at a doorway, the type, fixation and position of a handrail, the amount of colour contrast and lack of other sensory cues determine degree of compliance. Absence of critical features discriminates against certain users and influences the likelihood of litigation. This chapter presents a methodology for computer-assisted access evaluation, which encapsulates facility features for accessibility auditing, describes a data model representation which capturing relevant information and demonstrates mapping of access audit analysis onto sets of queries via a Web-accessible information system. Thus the Web-accessible information system provides on-line accessibility information, generated from the accessibility database.

In this chapter, the on-line evaluation of accessibility for people with disabilities is explored as a potential enhancement of existing methodologies derived from practical application of data modeling. Initial data modeling was undertaken as a part of a large-scale accessibility audit undertaken for a major Australian University. A systematic outline of on-line approaches is suggested for the entire audit process. To demonstrate this process an object-orientated database and data model is described. This model underpins the collection and analysis of access-related building data and provides the basis for the development of an on-line Web-based interface. Detailed analysis of the audit process itself provides the basis for describing techniques for utilization of other available Web tools to better manage
the training, education, data gathering and reporting processes. This is particularly impor-
tant as many large-scale accessibility audits are commissioned by organizations including
major healthcare providers whose facilities are spread across cities, states, and sometimes,
whole continents. Implementation of on-line technologies that can facilitate collaboration
and teamwork between a variety of locally-based audit teams and across rural and remote
sites makes this type of large-scale auditing more feasible.

Any perspective on the issue of accessibility auditing stems from an understanding of
how computer applications can assist in evaluation and prediction of human responses to the
built environment. Understanding the legislative and social imperatives allows the reader
to grasp the issues associated with capturing knowledge needed to develop effective
evaluative and predictive on-line tools including appropriate digital representation. Com-
puter technology can impact positively by providing opportunities to present and interact
with information in ways previously unseen.

There are thus two major foci that will be addressed in this chapter: (1) how best to
represent knowledge required for accessibility auditing, and (2) how best to integrate on-
line methodologies into the audit process. Presentation of our data model allows exploration
of issues, controversies and problems encountered in accessibility auditing and indicates
how on-line methodologies assist in addressing them. Following this, exploration of the
stages or steps in accessibility auditing allows us to present a more comprehensive and
integrated picture. Finally the authors work in development of on-line tools illustrates the
benefits of implementing and enhancing these technologies in creating environments which
support all people to achieve their full potential without experiencing secondary disabilities
or discrimination.

BACKGROUND

Large numbers of individuals in our community experience functional limitations as
a direct outcome of occupational health injuries, home accidents, road trauma, crime,
genetic predisposition, and/or the onset of chronic disabling conditions associated with the
aging process. Consumers, families and healthcare professionals agree that physical
settings are critical in reducing institutionalisation and promoting integrative and inclusive
environments (Iwarsson and Isacsson, 1998; Fox, 1995). Indeed in rehabilitation practice,
the environment has been conceived of as a prosthetic support for functional independence
(Steinfeld and Danford, 1997). In addition, the pressure to identify and remove architectural
barriers to access for people with disabilities has markedly increased following community
recognition that people with disabilities share the same rights as others (Goldsmith, 1997;
McAuley, 1994). Recognition of these rights is reflected in recent changes to federal
legislation, such as the Americans with Disabilities Act Accessibility Guidelines (ADAAG-
1991). The USA is just one of many industrialized nations to enact this type of legislation;
similar legislation exists in Australia and England.

Analysis of recent discrimination complaint trends in Australia indicates that indirect
discrimination associated with lack of access to premises demonstrates the greatest area of
increased litigation (Human Rights & Equal Opportunity Commission, 1997). The fear of
litigation by building owners and operators means that disability action or transition
planning based on building evaluation has become essential (Kelly, Deshon, Jones and
Fisher, 1996; Government of Western Australia, 1996; Martin, 1997).
From Non-Invasive Hemodynamic Measurements towards Patient-Specific Cardiovascular Diagnosis
www.igi-global.com/chapter/non-invasive-hemodynamic-measurements-towards/58724?camid=4v1a

Creating Awareness for Using a Wiki to Promote Collaborative Health Professional Education
www.igi-global.com/article/creating-awareness-using-wiki-promote/64326?camid=4v1a