Accessibility Monitoring for People with Disabilities: 
A Collaborative Virtual Community

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ABSTRACT

The Accessibility for Ontarians with Disabilities Act (AODA) is a law mandating that organizations in Ontario must comply to accessibility standards for people with disabilities. However, there is no tool to report accessibility complaints and track them. To that effect, mobile applications can be effective to make report and monitor accessibility issues as they arise in private as well as public spaces (e.g. building, sidewalks). An App would provide users with an opportunity beyond the mapping of compliance, it can provide data that addresses the gaps across legislation and embodied experiences. The objective of this paper is to share a novel method associated with the development accessibility monitoring Android App prototype called “ACCESS-ABILITY.” ACCESS-ABILITY is a first-of-its-kind app in the domain of disability informatics, it facilitates the formation of a collaborative virtual community that can be used by people with disabilities, advocacy groups, organizations and official bodies.

KEYWORDS

Accessibility, Advocacy, AODA, Disabilities Act, Disability Informatics, Disability, Health Informatics, mHealth, Mobile Virtual Communities, Monitoring, Ontario, Tracking, Virtual Communities

INTRODUCTION

In 2005, the Accessibility for Ontarians with Disabilities Act (AODA) (Accessibility Ontario, 2017; Government of Ontario, 2005) came into effect, its purpose is to create accessibility standards that organizations from public, private, and non-profit sectors must follow to make an accessible province for all Ontarians. AODA sets a deadline for achieving accessibility for people with disabilities – January 1, 2025.

The main requirements of AODA stipulates that all organizations with one or more employees develop an accessibility policy and be compliant with AODA by January 1, 2025; organizations with 20 or more employees were legally required to file an accessibility compliance report by December 31, 2017. Non-compliance penalties range from $200 to $2,000 for individuals and unincorporated organizations, and from $500 to $15,000 for corporations (Government of Ontario, 2015).

The development of accessibility policy supports organizations to ensure at least minimal compliance to the standards. Members of an organization work to identify barriers that prevent people
with disabilities from accessing the organization’s goods, services, or facilities and to determine how those barriers can be prevented or removed.

At a policy level “the term “disability” covers a broad range and degree of conditions. A disability may have been present at birth, caused by an accident, or developed over time” (Ontario Human Rights Commission, 2016). This definition which dominates Canadian policy does not address disability’s complexity or its context dependency. Recognizing that no one definition can account for the diversity of embodied variations and intersections, critical disability studies (CDS) challenges this narrow definition. Understanding not only the corporeal reality of disability CDS complicates contemporary constructions through its reflexive nature, orientation to social justice, a distrust of categories of difference, and an engagement beyond the normative binaries, and an orientation to the fluidity of disability (Ontario Human Rights Commission, 2016; Shildrick, 2005; Spagnuolo, 2016).

From a CDS perspective we recognize that institutional compliance with legislation may not be enough to ensure meaningful inclusion and access. As such the app supports the reporting of experiences not captured through legislative and policy standards, issues which are often imperceptible from an administrative point of view, and yet of great significance to those living with disability.

Progress in solving accessibility issues has been slow; it has been reported that thousands of Ontario businesses are missing accessibility deadlines, as 65% of businesses with 20 employees or more, did not file their mandatory accessibility reports due in 2012 (Deschamps, 2015). To this date there is no system to report AODA non-compliance; in 2019, a legislative review of the AODA recommended the establishment of a complaint system for reporting AODA violations (Onley, 2019).

Our current work is a step forward in this direction: we are establishing a first-of-its-kind App in Canada to put in the hands of activists, organizations and businesses the capacity to report and search for complaints and experiences with AODA compliance.

We use collaborative tagging (Golder & Huberman, 2006) to build a collaborative mapping (Balram, 2006; Michael et al., 2012; Rouse, Bergeron, & Harris, 2007) of the non-compliant instances. Users can upload photos showing non-compliant instances and report their location; they can add a description of the situation they have witnessed. In the following we report the technical aspect of the App development.

**METHODS**

**Software System Development**

When designing the app, we kept in mind several important considerations. One of the main objectives was to build a user-friendly App to ensure that the users can report accessibility issues easily and accurately.

There are two interfaces for the app, the front-end and the backend; the backend consists basically of the database system and the front-end can be accessed by two types of users, the App users and the App admin. The App users will be able to enter any accessibility issues in a geographic location and upload it to the database. They will also be able to view all the issues entered, both in list-view and in map-view. The admin, in addition to what a user can do, will also be able to delete the issues that have already been resolved. The current scenario suggests the App is adopted by one entity (e.g. York University, Ontario government); the admin will be linked to that organisation (e.g. an activist organization, AODA compliance director, Accessibility Directorate of Ontario). The Accessibility Directorate of Ontario enforces AODA accessibility compliance requirements (Thomson, 2018), requires organizations submit accessibility compliance reports and hence can administer such App and use it as a complaint system to get access to AODA violations reports in order to take the right steps to enforce compliance. The App can function to not only develop a better understanding of access but also to articulate user experiences not captured by legislation as it intersects with those living with disability. Figure 1 shows the app design.


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