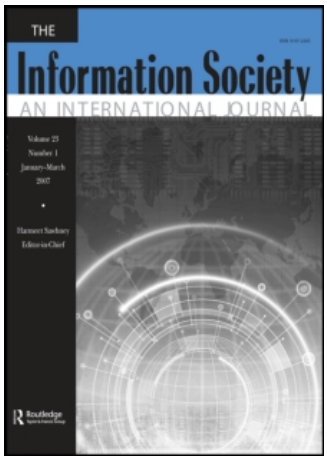


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PERSPECTIVE

# Working for Barrier Removal in the ICT Area: Creating a More Accessible and Inclusive Canada

*A Position Statement by the Council of Canadians with Disabilities*

**April D'Aubin**

*Council of Canadians with Disabilities, Winnipeg, Manitoba, Canada*

**This article describes the rights-based approach to access to information and communications technologies (ICT) used by the Council of Canadians with Disabilities (CCD). This approach challenges the thinking of policymakers, those in industry, and others who argue that access to ICT can be achieved through a variety of economic, business, or market-based perspectives. It argues that these approaches have failed to deliver accessible ICT to people with disabilities, and that improved legislation, regulation, policy, and programs are required to remove the barriers to ICT experienced by people with disabilities in Canada.**

**Keywords** accessibility, accessible, disabilities, disability, inclusion, inclusive, information and communications technologies, information technologies, rights

Disability advocacy organizations that work from a human rights perspective argue that information and communication technologies (ICT) need to be accessible so that people with disabilities experience the benefits of ICT. This article presents the arguments of one national Canadian organization, the Council of Canadians with Disabilities (CCD),[1] which has had a rights-based approach to disability issues. Accordingly, CCD is critical of "economic" arguments that call on people with disabilities to assist the ICT sector, reconceptualize themselves as a potential market, and increase the industry's understanding of their commonalities with other consumers. Some proponents of the "economic" approach suggest that business and government are suffering from "rights fatigue" and rights arguments should be abandoned.

My argument in this article—and that of the CCD to policymakers—is that the human rights approach yields results for persons with disabilities and as such should not be set aside. This means that Canadian organizations of people with disabilities need to continue to focus on the public sector, advocating for improved laws, policy, and programs that remove barriers from ICT for people with disabilities. Rights-based legislation gives business a needed push toward delivering access. When Canadian businesses have ignored access, people with disabilities and their organizations have had to undertake legal challenges to remedy the resulting discrimination. These experiences intensify disability rights groups' commitment to a rights-based approach to ICT and cause skepticism when they are encouraged to trust the market and industry to address any shortfall in access.

The Council of Canadians with Disabilities is the primary national organization of people with disabilities in Canada and works internationally through Disabled Peoples International. It was founded in 1976 with a cross-disability mandate. This means it shares advice on public policy issues affecting people with various types of disabilities and Canadians facing various disability-related barriers participate in the organization's activities. CCD has

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Address correspondence to April D'Aubin, Council of Canadians with Disabilities, 926-294 Portage Avenue, Winnipeg, Manitoba, R3C 0B9, Canada. E-mail: april@ccdonline.ca; web site: www.ccdonline.ca

concentrated on ending discrimination in the various social systems—employment, transportation, income security, health, and justice. CCD advocated for the legal tools that make barrier removal possible—human rights protection (*Canadian Human Rights Act*) and equality rights guarantees *(Charter of Rights and Freedoms*) (Peters, 2004). CCD's public policy strategies are formulated by its committees—Human Rights, Transportation, Social Policy, and Access to Technology. The arguments of CCD reflect the approaches taken by disability rights advocates around the world, including in the recently adopted United Nations Convention on the Rights of Persons with Disabilities.[2]

## PEOPLE WITH DISABILITIES AND ICT IN CANADA

ICT holds particularly great promise for people with disabilities because it has the potential to reduce or eliminate many of the disabling barriers that impair or completely prevent people with disabilities from working, learning, shopping, banking, being entertained, and communicating with others. For example, the World Wide Web gives people who are blind access to a multitude of newspapers, periodicals, and other documents which were previously only available in print or, in limited cases, in Braille or audiotape versions available long after the print versions were published.

But many barriers still remain. For example, despite the existence of international guidelines devoted to designing accessible web sites, most web sites are not compatible with the assistive technology blind computer users usually use to convert text to speech/audio output (Disability Rights Commission, 2004; Nomensa, 2006). People with dexterity impairments who are unable to use the conventional computer mouse cannot access web sites where the only mode of navigation is via clicking of links. People who are Deaf or have hearing impairments cannot access the vast of majority of video clips on the web because they are uncaptioned. People with impaired vision are excluded from web sites with fixed font sizes that prevent the user from enlarging the text to their preferred size. Many consumer electronic devices, such as telephones, music players, video-recording devices, etc., utilize visual displays and tactile inputs that present barriers to people with visual or physical impairments. The complexity of many ICTs creates considerable obstacles for people with intellectual impairments.

### Disability, Poverty, and ICT

Even in those situations where ICT has few or no technical barriers to people with disabilities, poverty prevents many people with disabilities from purchasing ICT equipment and services, getting training, and upgrading software. In Canada, unfortunately, having a disability often results in being poor and, conversely, living in poverty increases the likelihood of acquiring a disability. In 2002, 15% of adults with disabilities lived in poor households, compared to only 6.6% of adults without disabilities (Human Resources Development Canada, 2004).

While income level affects everyone's ability to purchase ICT, some people with disabilities need to use ICT because it is a crucial disability-related support for independent living. For example, a visually impaired person, for whom print is a barrier, may need a computer with audio output and a scanner to assist him or her to access printed information. In Canada, while there are some provincial government programs that provide people with disabilities these supports, the programs have restrictive eligibility criteria and not everyone who needs disability-related supports qualifies.

People with disabilities also incur extra costs associated with their disabilities—costs that people without disabilities do not have to bear. For example, a person with a visual impairment who needs to make notes for him- or herself may need to purchase a product such as Braille 'N Speak, which costs more than US$1,000. To use a personal computer, many visually impaired persons need to purchase a screen reading program, which also costs more than US$1,000. These costs are in addition to the cost of the personal computer, operating system, and software.

Due to the poverty faced by many people with disabilities, those who do manage to acquire ICTs are often unable to maintain or upgrade them. New and improved programs often address barriers identified in older versions, but limited purchasing power keeps many people from using older computer systems that do not have the capacity to surmount certain obstacles.

### ICT Use by People With Disabilities

Given the technical and economic barriers that exist for people with disabilities, it is not surprising that the limited data available show that people with disabilities are less likely than people without disabilities to use ICTs. In 2000, 58% of Canadians with disabilities did not have a computer at home, compared to only 37% of non-disabled Canadians (Canadian Council on Social Development, 2002a). People with disabilities are also less likely than people without disabilities to have an Internet connection at home, to access the Internet elsewhere, or use a cell phone (Canadian Council on Social Development, 2002b).

### ICTs in Public

There are a multitude of technologies we encounter outside of our homes, from banking machines to retail Interac point-of-sale terminals to airport check-in kiosks to

interactive voice response (IVR) telephone systems. These and other technologies in the retail and public spheres present a variety of barriers to people with disabilities in Canada. In some cases, the end result is exclusion, while in other cases, segregation results.

ICT has the potential to improve access for travelers with disabilities, yet Canadian transportation carriers have introduced ICTs that are inaccessible. In 1999, Marjorie Fulton filed a complaint with the Canadian Transportation Agency (CTA), the regulatory body for transportation in federal jurisdiction. The Canadian Transportation Act empowers CTA to remedy undue obstacles to the mobility of persons with disabilities. Ms. Fulton's complaint concerned Air Canada's ticketing kiosks—devices that require travelers to interact with screens and buttons to obtain boarding passes. For her, a woman with a visual impairment, the Air Canada kiosks presented a barrier to independent and dignified travel. While the CTA agreed that the kiosks were a barrier, the undue obstacles test was not met because Air Canada also had ticket agent stations where a traveler could receive a boarding pass (Canadian Transportation Agency, 2000).

The approach taken by the CTA was not one favored by the disability community, which promotes a universal, rather than segregated, approach to service delivery. With a universal approach, services are designed so that everyone, to the greatest extent possible, can partake. Segregated services have a negative impact on persons with disabilities. Take, for example, a group of business colleagues, one with a visual impairment, traveling together. The group arrives at the ticketing kiosks. The traveler with a visual impairment must separate from the group to use the accessible ticketing option (i.e., the human ticket agent). It is not inconceivable that the traveler with the disability could become separated from the group, missing out on some of the group's discussions and activities. Segregation conveys the message that society condones differential treatment. Just as racial segregation is unacceptable, segregation based in ability/disability is unacceptable.

The Canadian disability community is not the only one to encounter problems with the air industry's inaccessible kiosks. The American National Council on Disability states,

> Although no airline-kiosk vendor serving the U.S. market has included accessibility among its product features, vendors confirm that they foresee no significant technical obstacles to development and deployment—using existing access technology—of fully accessible kiosk systems. A leading authority on accessibility technology estimates that the costs of access hardware and software modifications for a fully accessible system would not exceed one to two percent of the overall cost. However, the airline industry has yet to acknowledge the need for such a product. (National Council on Disability, 2006, p. 1)

Many businesses choose to manage customer contacts with interactive voice response (IVR) telephony technology. IVR presents a barrier to some people with disabilities, such as people labeled mentally handicapped and people with hearing problems, making it harder, and sometimes impossible, for them to get information and services from various public and private offices. Darlene Gardeer-Bonneau suggests that for people with hearing-related disabilities IVR is as great a barrier as graphic user interface (GUI) has been for people with visual impairments (Gardner-Bonneau, 2000).

ICTs are changing how people undertake financial transactions. Point-of-sale devices, which require users to interact with visual screens and buttons, are inaccessible to some people with disabilities. In these cases, people with disabilities are excluded from the convenience of not having to use cash. A newer barrier for some is the addition of a PIN (personal identification number) system, where a numerical code, will replace signing a receipt for a credit card purchase (Adams-Spink, 2004). Some people with cognitive problems have difficulty remembering numerical sequences, while others with dexterity problems experience difficulty using numeric key pads (Gill, 2004).

## ICTs in the Workplace

In many workplaces, there is a trend toward using ICT with visual complexity that can leave behind computer users with visual impairments. For example, customer service positions create barriers for the visually impaired where employees have to navigate through several computer screens to complete a job task (Steen, 2003). Many ICT users with disabilities find themselves always playing catch-up—waiting for adaptive technology to become available that enables them to use the ICT that people without disabilities are using. There is also the added problem of convincing employers to undertake necessary accommodations, such as purchasing adaptive technology.

## Inclusive ICT

ICT that is accessible enables people with disabilities to participate in their communities. Jim Sanders, president and chief executive officer (CEO) of the Canadian National Institute for the Blind (CNIB), recounted a positive experience with accessible technology. He wanted to vote in his city's election for mayor. Previously he had used a ballot template overlay to vote independently; however, with 49 candidates this method would have been unwieldy. When Sanders went to the polling station, he found ICT facilitating the electoral process: a fully accessible electronic voting machine (Sanders, 2006).

Individuals with disabilities also find creative uses for ICT that enhance their participation in community

activities. For example, pagers that maintain contact between deaf young people and their parents are enabling deaf teens to participate in typical youth activities because their parents feel more comfortable about their safety, knowing that there is a direct line of communication that can be accessed in emergencies (Hudder, 2005). People with disabilities are also using ICT for various types of peer support, building supportive relationships facilitated by e-mail, chat rooms, and telephone (Burgstahler, 2006).

Among the people who make up the Council of Canadians with Disabilities, there is concern that opportunities to create accessible ICT are being lost. The disability community inherited a constructed world largely built without consideration to the needs of persons with disabilities. As ICT is a newer area, we hoped that access would have been on ICT developers' checklists. However, after 25 years of promoting and advocating for accessible ICT, the Canadian disability community continues to witness various ICT business sectors bringing inaccessible products and services, all of which diminish the quality of life of persons with disabilities.

## COMPONENTS OF AN ACCESSIBLE AND INCLUSIVE APPROACH TO ICT

To develop an accessible and inclusive approach to ICT, we look at both how barriers and discrimination have been experienced by people with disabilities and what inclusion and access to these technologies involves. The critical building blocks of the disability rights approach include respect for the human rights of persons with disabilities, respect for personal choice, and development of universal design[3] and disability-related supports.

### Respect for the Human Rights of People with Disabilities

Human rights legislation across the world, including United Nations human rights instruments, provides protection from discrimination for all people, including people with disabilities. In Canada, the *Charter of Rights and Freedoms* and federal and provincial human rights laws require nondiscrimination against persons with disabilities. Respecting human rights in this context means not only removing discrimination and barriers, but also refining human-made environments so that they take into account the characteristics of people with disabilities (*Eldridge v. British Columbia*, 1997).

When governments and other service providers, for example, develop policies requiring accessible web sites, they are respecting the human rights of persons with disabilities. When they purchase telephones with built-in volume control, which can benefit both hard-of-hearing people and anyone who is using a telephone in a noisy environment, they are respecting the human rights of people with disabilities. Building in respect for human rights at the development or implementation stage can also be of direct economic benefit to companies, aside from any rights-based argument. Over the long run, phones with built-in volume control cost less than phones with add-on volume controls, and also the risk of a discrimination lawsuit or human rights complaint is removed.

Governments can often lead best by their own example. When government makes a commitment to access, it acts as a role model of responsible corporate behavior vis-à-vis people with disabilities. The city of Winnipeg, Manitoba, provides an example of this type of leadership with its Universal Design Policy adopted in 2001: "The City of Winnipeg will ensure all new construction and/or major renovations to buildings, exterior environments, as well as purchases and new developments in services, products or systems that are funded in whole or in part by The City will follow Universal Design criteria" (City of Winnipeg, 2001).

Meaningful consultation with people with disabilities can also contribute to respecting the human rights of persons with disabilities. In Canada, governments now regularly involve people with disabilities when they develop disability policies. From CCD's point of view, ICT developers and other types of product developers need to consult actively with the disability community in order to ensure that access is a fundamental part of products. From the developers' point of view, this is an extension of user testing already practiced in the field. This calls for industry researchers to work in partnership with disability rights organizations, which can provide expertise that comes from living with the experience of disability.

> [W]e often have to react once it [ICT] has already been built. We've talked for a long time about being in at the design stage, although I suppose the challenge is even more fundamental. We need to create a new mindset where even before the design stage, there is a value base that says, "We want to make this usable by as many differently-abled people as we can." (Jim Derksen, quoted in Dis-IT Research Alliance, 2004)

More researchers need to explore with disability rights organizations how people with disabilities can participate in research teams. Both sides will have to make an investment of time and resources to develop a working partnership and a shared understanding of access and product development.

### Respect Personal Choice

The second building block in the rights perspective is respect for the principle of choice. This principle holds that people with disabilities have the right to make their own decisions in life, and to accept the risks associated with

those choices. While seemingly easy to accept, this principle has significant implications when put into practice.

According to this principle, particular ICT options must not be imposed on people with disabilities. Often choices for accommodating impairments are made by a technical "expert"—someone who knows the technology options and assesses what they believe is best for the user. In the disability rights approach, the user is the "expert"—knowing his/her own situation best and accordingly making a choice based on the options provided by a resource person who has considerable knowledge about technology. The support from the resource person is critical for the user to make an informed choice.

This may include the choice of not using technology at all. While some people prefer technological solutions, others do not. For example, a person who needs print material read aloud might prefer to have the reading done by a colleague rather than by a computer with audio output capacity. Technology-based solutions are not always the most dignity-enhancing (Cavalier, 1987). Once again, choice is the key—what does the person with the disability prefer? Disability rights organizations, such as CCD, make personal choice a priority, in response to a long history of people with disabilities having their choices removed including through forced institutionalization, sheltered workshops, and inaccessible community services.

Choice is not only about having the opportunity to select among options, but to have real options from which to choose. If only certain ICTs are accessible, then people with disabilities can only choose the accessible option—it is a forced choice. If the costs of specialized equipment or software are considerably more than the costs of mainstream software or hardware, the choices of the user with disabilities are restricted to what they can afford or can appeal to a charitable organization or government program to provide. These situations illustrate that often barriers to access rather than personal choice dictate the option a person with a disability can use. Forced choices carry with them the message that non-disabled people warrant a full range of affordable options, while people with disabilities only deserve the few, often specialized and expensive, options that are made available to them.

## Develop Both Universal Design and Disability-Related Supports to Ensure Inclusion

The final building block in the disability rights perspective is the development of ICT, as much as possible, that is based on universal design principles, and where it is not, to provide the appropriate disability-related supports to ensure inclusion. This two-pronged approach to inclusion in ICT reflects the social model of disability that is in keeping with the disability rights approach. The social model of disability was developed initially in the United Kingdom in the 1970s (Oliver, 1990) and is now widely used across the world. The social model holds that it is socially constructed barriers, rather than the impairments of people with disabilities, that limit their opportunities. Often the solutions developed in accordance with the social model of disability help not only people with disabilities but also the general public. For instance, the curb cuts that make urban streets usable for people who rely on mobility aids have enabled disability activists to argue for "virtual curb cuts" to make the "information highway" and ICT accessible (Roulstone, 1998).

The "virtual curb cuts" are those measures that can be used to enhance access to ICT for as many people, disabled or not, as possible. These may include interoperability between different technological platforms or as one group describes it "any to any" connectivity (Women with Disabilities Australia, 2003), standardized USB ports for linking different devices, software compatibility, and adherence to standardized protocols for website and software development. Some have further developed universal design as it applies, for example, to the Internet. "Universal Design for the Internet is making sure that the presentation of content on the Internet and the design of Internet technology is flexible enough to accommodate the needs of the broadest range of users possible, regardless of age, language, or disability" (Burks & Waddell, 2001). Universal design is an empowering concept that enables more people to use products and environments, including ICT.

Despite its benefits, universal design is not a panacea for making ICT accessible for people with disabilities to ICT. There are ongoing constraints relating to materials and knowledge gaps. "Not long ago, it was not clear how we would create public computer-based information displays that were accessible to individuals who were deaf-blind. Today, we do. . .and it can be done in a way that does not add to the cost of manufacturing the system" (Vanderheiden, 1996, p. 1).

Additionally, there are differences in how people with and without disabilities can access and use ICTs that may be beyond the reach of universal design. These differences create the need for disability-related supports. In addition to design issues, social and cultural factors also influence whether or not people with disabilities become ICT users (Stienstra & Troschuk, 2005). In addition to appropriately designed products, people with disabilities also need information, training, and local support services in order to become successfully connected to the digital world (Tobias, 2003).

A disability rights perspective holds that society should make necessary supports available to people. In this way, people with disabilities can both enjoy the benefits of society and be productive citizens. For example, a university student who has a learning disability requires a personal

computer, equipped with audio output, as an important disability-related support because it provides a way to manage print information that is necessary to her/his education. This support can be made available using public resources, such as through a government disability supports program, and thus can ensure the student's rights are protected.

People with disabilities often show ingenuity in using mainstream information technologies as disability-related supports. These innovative solutions mean that specialized or adaptive technologies do not need to be developed to address that particular use. For example, some people who are nonverbal can use an electronic agenda, particularly ones with large screens, to facilitate interpersonal communication (Fichten et al., 1999). A person labeled mentally handicapped uses VoIP and a web camera to maintain personal connections to mentors. Screen readers are being embraced by users with low vision and users with learning disabilities, in addition to users who are visually impaired (Fichten et al., 1999).

By adopting the principles of universal design as well as providing disability-related supports, not only are the rights of people with disabilities protected, but the landscape of information and communications technologies is changed. As one technology commentator asserts, the disability rights organizations' emphasis on accessible design is contributing to the democratization of technology: that is, technology supporting citizens' aspirations, rather than people's needs and wants being defined by available technology (Schlove, 1995, p. 30). Schlove (1995) advocates increased citizen involvement in technological development, so that it is not solely the preserve of engineers and business leaders.

## CRITIQUING THE ECONOMIC MODEL

The Canadian disability rights movement has spent the past 30 years working for an accessible and inclusive Canada using the human rights model. Admittedly, progress has met some roadblocks, and from time to time the movement has been encouraged to abandon or moderate the human rights approach in favor of one based on market economics. For ICT, disability advocates are prodded to make the business case for accessible ICT, that is, how accessible ICT can enhance the profitability and other business goals of industry. Proponents of this approach herald it as a way of building bridges with the ICT industry. At the 2004 summer institute of the Disability and Information Technologies (Dis-IT) Research Alliance, Steve Jacobs of the IDEAL Group and former manager of NCR Corporation's global accessibility program promoted linking the interests of the disability community and other communities with access needs (i.e., elderly people, people with poor literacy, consumers in the developing world) in order to attract the attention of ICT developers (Dis-IT Research Alliance, 2004).

The disability community is no stranger to neo-classical economics, or what is commonly known as the economic model in our community (Enns & Neufeldt, 2003). This is a status quo model that emphasizes competition in the economy, and is based on an assumption that the well-being of a society's citizens will be maximized through the workings of a market economy. Along with other marginalized groups, people with disabilities in Canada have not found that the market economy has maximized their well-being; market forces have failed to deliver access.

One rebuttal to those who advocate the economic model approach to accessible ICT is that it creates categories of "haves" and "have nots." Government provides services to people with disabilities to make them competitive in the labor market, leaving those outside of the labor market without services (Bickenbach, 1993). CCD suggests that a reliance on the economic model will result in maintenance of the status quo, with most people with disabilities on the losing end. For example, in Manitoba, Canada, a visually impaired university student needing a computer as a disability-related support would receive one through provincial vocational programming, but a retired senior citizen facing the same barriers to accessing print information would not receive this essential disability-related support.

The Canadian federal government has been moving toward less regulation of major economic sectors, such as transportation, electricity, broadcasting, and telecommunications (Industry Canada, 2006; Labelle, 2006). Nevertheless, Canada continues to maintain some regulation, and components of this regulatory framework promote "the public good." Disability rights organizations have been seeking to expand the concept of public good to include access and inclusion for persons with disabilities.

These factors lead disability advocacy organizations to exercise considerable caution when economic model advocates suggest that market forces will deliver accessible ICT. At the 2005 Dis-IT summer institute, Laurie Beachell, National Coordinator of the Council of Canadians with Disabilities, suggested:

> While we can argue market share and align ourselves with other market groupings like seniors, etc., the reality is that while we have seen tremendous improvements in access to the built environment, buildings, parks, public spaces, etc., there has been little in the way of assured access to new and emerging technologies. Some industries that have undertaken major changes using new technology, like the airlines, are actually *decreasing* service access, not improving it. All of the indicators in the market are that services for the last five to eight years are getting worse. We are not moving forward. We have to fight battles that we thought we had won 20 years

> ago. Unless we also put in regulations, and unless we change the legislation, and unless governments use purchasing power to influence accessible design, I don't think we're going to be able, as a community with a limited leadership and resource, to do the education that is needed to change the mindset of a very strong opposition. (Dis-IT Research Alliance, 2005)

From CCD's point of view, the economic model is what is driving the development of ICT and it has been delivering inaccessibility.

The captioning of television broadcasts provides an example of how a business case for accessible ICT that was developed by people with disabilities has not stimulated industry to make its products accessible. Canadian television broadcasters are a component of the ICT sector that the disability community, particularly Deaf people, has focused on for over two decades. The groundbreaking 1981 Obstacles report, Canada's first parliamentary report to examine the social barriers facing people with disabilities, devoted a chapter to information and communication (Special Parliamentary Committee on the Disabled and the Handicapped, 1981). This chapter illustrates how the Deaf community actively attempted to convince television broadcasters to make their programming accessible through closed captioning. Broadcasters have not been moved by the business arguments in favor of 100% closed captioning put to them by the Deaf community. The Canadian Association of the Deaf (CAD) holds that:

> [C]aptioned broadcasting is not merely "a Deaf issue". The potential captioning audience is not limited to the 310,000 Deaf people in this country. There are 2.8 million hard of hearing Canadians who may also benefit from captioning. Captioning has been proven to improve the reading and writing of people who have low literacy skills: there are 6.5 million functionally illiterate Canadians. Children learn language through the kind of exposure provided by captions. Immigrants who know neither English nor French can utilize captioning to assist them in learning one or the other language. Anyone who knows one of Canada's official languages and wishes to learn or improve skills in the other language can use captioning to this end. Thus, a conservative estimate would be that over 10 million Canadians—more than one-third of the total population—can benefit from captioned broadcasting. (Canadian Association of the Deaf, 2002)

Despite this large pool of potential caption users, Canadian broadcasters do not caption 100% of the programming they transmit to Canadians. The improvements in captioning that have occurred resulted from complaints made to human rights commissions and other regulatory bodies by the Deaf community (Canadian Human Rights Tribunal, 2000; Canadian Association of the Deaf, 2002; Gordon, 2006). The business case presented by the disability community has not been enough to sway broadcasters to provide 100% access for caption users. Within a market economy, small populations like people with disabilities who require alternative arrangements or particular attention pose little potential for benefit or profit.

Better access to ICT has resulted from the use of the human rights model in other countries, particularly the United States. The U.S. Rehabilitation Act was strengthened in 1998 by an amendment of Section 508, which requires U.S. federal government agencies to purchase electronic and information technology that is accessible to people with disabilities (Section 508, 1998). Although Section 508 has produced some disappointment (Maskery, this issue), many ICT companies that want to do business with the U.S. government have complied. "When government says you need to build technology a certain way, for vendors like ourselves that's a very compelling maxim," says Christy Hubbard, product manager for Adobe's ePaper Solutions Group. "We need to build products that can be sold to the government. It's not very practical for us to build multiple versions of our products" (Marsan, 2001). These legislative successes, in turn, have convinced the Council of Canadians with Disabilities that it should stay the course in advancing human rights arguments to Canadian legislators.

The Council of Canadians with Disabilities would like to see the Canadian federal government adopt similar accessible procurement regulations that would ensure that it would only procure accessible ICT. This would benefit federal government employees with disabilities and Canadians with disabilities who interact with the Canadian government. Moreover, it would send a significant message about accessibility to the ICT industry and the entire nation.

## CONCLUSION

The Council of Canadians with Disabilities sees regulation in ICT, reflecting existing human rights commitments, as the most effective way forward in ensuring access and inclusion in information technologies. This is said recognizing that there is opposition from some in the disability community as well as the ICT industry which argues that regulation undermines creativity, innovation, and competitiveness (New, 2001).

People with disabilities have little faith that market forces will eventually yield accessible ICT, and even advocates of the economic model acknowledge that it is a slow route to change (Karasik, 2005). For too long, people with disabilities have been a community in waiting. This waiting is not an abstract or productive period of time. It is a time when people with disabilities are not able to use the most significant vehicles of change in our society, and creates for them exclusion and segregation instead of participation as full citizens.

## NOTES

1. CCD is a national organization that speaks for people with disabilities. Its members include 10 provincial or territorial disability organizations, 5 national disability specific organizations, a national disabled women's organization, and an organization of postsecondary students with disabilities organizations. Its web site is http://www.ccdonline.ca.

2. http://www.un.org/esa/socdev/enable.

3. Universal design has been defined as design of products and environments to be usable by all people, to the greatest extent possible, without adaptation or specialized design (Center for Universal Design, nd).

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