Disability and Information Technologies (Dis-IT) Research Alliance

2006 Hardwiring Inclusion Conference:

Building an Accessible ICT World

Oct 26-27, 2006

Winnipeg, Manitoba, Canada

www.dis-it.ca

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Table of Contents

Overview

Dis-IT Conference 2006, "Hardwiring Inclusion: Building and Accessible ICT World" was held in Winnipeg, Manitoba, Canada on October 26-27, 2006. 49 people attended the Hardwiring Inclusion Conference, which brought together disability advocates, designers, product developers, manufacturers and service providers, policy makers, and researchers to share knowledge about accessible/inclusive information and communications technology (ICT) and develop strategies to mobilize that knowledge into action and change.

Most of the sessions in the conference took the form of moderated panel discussions and small group discussion. The panel discussion topics included:

- "What key issues and challenges need to be addressed to bring accessibility and inclusion to ICT?"
- "Is there common ground between bottom lines and human rights?"
- "Findings from research conducted by the Disability and Information Technologies (Dis-IT) Research Alliance"
- "Creating a climate for accessible ICT: Telecommunications as a case study"
- "Moving forward: Mobilizing knowledge for accessible/inclusive ICT"

The second day of the conference also included a session of small group discussion and reporting back on "the lessons of Dis-IT." Discussions at the conference covered a wide variety of ICT's, including computer hardware and software, wireless and other telecommunications products and services, self-service public and retail ICT's such as point-of-sale terminals, automated banking machines, ticket-dispensing machines, etc., the World Wide Web, on-line consultations, eLearning technology and courseware, and technology used as workplace accommodations.

Themes that emerged during the panel discussions included the increasing importance of information technology in the realms of education, retail and public services, employment and political participation of people with disabilities in the ability to participate in society. It became clear during the presentation of the Dis-IT research findings that although technology is increasingly important in these areas and advancements are being made in many areas toward accessible information and communication technologies there is a lack of consistent consultation and understanding of what accessibility means or requires by both industry and even people with disabilities themselves. There is a need for continued dialogue between industry and the disability community in order to clarify the ways that

technology can be made accessible and what the needs of various groups of people with disabilities are in regards to information and communication technologies.

About the Dis-IT Research Alliance

The Dis-IT Research Alliance is a three-year project bringing together leading researchers, representatives of disability organizations, government, industry and service providers who have studied how to ensure Canadians with disabilities can be part of the innovations in emerging information and communications technologies of the New knowledge-driven Economy. Dis-IT has examined how information and communications technologies can increase the quality of life and the inclusion of Canadians with disabilities in four areas: employment, post-secondary education, retail and public services, and democratic participation. It is funded by the Social Sciences and Humanities Research Council of Canada (SSHRC)'s Initiative on the New Economy (INE).

Thursday, October 26, 2006

PANEL DISCUSSION: "What key issues and challenges need to be addressed to bring accessibility and inclusion to ICT?"

Moderator: Roger B. Jones (World Accessibility)

Panelists: Steve Jacobs (IDEAL Group Inc.), Kier Martin (Council of Canadians with Disabilities and Canadian Association of Independent Living Centres), Joan Wolforth (Office for Students with Disabilities, McGill University)

In this opening panel the discussants addressed the question posed by Roger Jones "what are the key issues and challenges concerning the accessibility of information and communication technologies?" from the perspective of each of their respective stakeholder groups.

Panelist: Joan Wolforth (Office for Students with Disabilities, McGill University)

Joan Wolforth described the current status and importance of information technology in education, particularly at the post secondary level.

> "We now live in a largely 'e' environment, from applications to universities and colleges that are on the Web right through the registration process, information on

> timetables and calendars or catalogues and right into the classroom in terms of the use of courseware such as WebCT which helps deliver course information, sets up chat rooms for students, delivers exams to students online now…We've gotten to a point now where, if a student is not in some way technologically savvy, they're going to have a real problem functioning at the post-secondary level."

Wolforth explained that almost all the information a student needs to enrol or prepare for classes, use libraries, facilities, and services provided by the university are available only on the Internet. The result for many students with disabilities, she argued, has been higher levels of independence than before. Whereas in the past a hard copy of the course calendar would have to be translated into Braille, today students with visual impairments can simply use a screen reader to get the same information without ever having to contact services for students with disabilities. Digital formats for books and journal articles have also allowed students to rely less on human assistance in libraries and often eliminate the need to have the book read into a cumbersome audio tape format. Class notes are also more easily accessible through WebCT. Wolforth said, "At many universities there is a full range of adaptive technology including up-to-date screen readers such as Kurzweil and JAWS for people with vision issues. We also have WIN and text help programs for students with learning disabilities, etc." However, Wolforth pointed out, there are limitations to these technologies.

> "Sometimes the platforms that students have to interact with are not compatible with adaptive technologies. We will just get everything stable in our university, for instance, and then somebody in the administration will decide to buy a new version of WebCT which is not as accessible…Or we've got some students who have older versions of adaptive technology that only work with Windows 98."

Wolforth suggested that if decisions to upgrade technology were made at the same time across the university, the process would be simpler for updating adaptive technologies.

She also discussed the problems associated with establishing accessible web sites for universities where few people who think in terms of accessibility. "We have technical personnel who are purchasing and administering technology, making the senior decisions. The technical people in the libraries, universities tend to be extremely well distributed across all kinds of departments. So you have one department making a decision that another department doesn't know about."

Wolforth said also problems occur when professors set up their own websites, and use technologies, like Power Point presentations, which are not compatible with adaptive technologies, on their own sites. "We have challenges in terms of trying to centralize the

training of our professors to conform to certain standards when they're putting up their websites, or putting up their WebCT pages." In this context, establishing standards that everyone conforms to in their web design is very complicated.

Wolforth discussed the challenges student's face getting training on new software, particularly because many, coming from high school, have little experience with adaptive technology.

> "[Adaptive technology] just doesn't seem to have reached down into the school system in the way that it should have. So we are faced with students who have never seen a computer program that will read their books to them, for instance, or never seen a computer program that will let them dictate their work into the computer."

According to Wolforth, many students face financial barriers to accessing the technologies they need. Although there are programs that provide funding through student loans and bursaries, many do not qualify. Those who do quality face long delays and a complicated bureaucratic process.

Wolforth explained that inconsistencies between publishers and the availability of digital formats of texts also complicate the process. Issues of copyright are more complex in Canada than in the United States making it more difficult to get electronic copies of textbooks.

> "Some publishers are very open about it, and some publishers are not open at all about sending us a digital format. We are still scanning printed material and turning it into digital format. We know it's originally being produced in digital format, but we just simply can't get it from the publisher, even if we show proof that the student has brought the print copy of the book before they send us a digital copy."

Wolforth also said that, with the popularity of the IPOD, students with visual impairments are able to listen to digitized reading materials instead of the old four track tape players. Wolforth concluded that overall in this field, there remain some important challenges but on the whole there is gradual improvement.

Panelist: Steve Jacobs ([IDEAL Group Inc.](#))

Based on his experience in industry, Steve Jacobs provided an overview of some of the barriers to designing mainstream information and communications technology (ICT) products that are accessible to as many consumers with disabilities as technically possible

and economically feasible. He used an acronym, "FOLD Pi" to organize these issues. Each of the letters of FOLD Pi stands for a group of these issues.

- F for Financial,
- O for Organizational,
- L for Legal,
- D for Design,
- P for Perception
- I for Informational.

Jacobs discussed how each of these barriers could be addressed through more effective communication between industry and communities of people with disabilities.

In his discussion of financial issues Jacobs explained that the wide range of types and degrees of disability is difficult for industry to grasp. He also stated that retrofitting for accessibility can be an expensive process.

> "The target markets are not very well understood by marketing people in industry. The term disability community can have a lot of meanings and it doesn't necessarily mean that each person that makes up the disability community has the same access needs, as I'm sure you all know. Another financial issue is that it is expensive to retrofit an existing product to make it accessible, so right away some people see red flags."

Regarding organisational issues Jacobs made two main points.

> "People who are commissioned to drive accessibility throughout an organization are not necessarily in the best position to influence decisions at a high level in the corporation. It may be Human Resources, it may be human factors engineers, but they are not necessarily able to drive accessibility down from the top, which needs to be done in order for a company to begin embracing accessible design practices into the fabric of their design processes."

Secondly, he argued, "accessibility is often a minor issue when compared with other business issues like pleasing your stockholders and making a profit."

Next, Jacobs discussed concerns around legal issues.

> "Within the legal realm there are many issues. For example, how do you measure compliance with standards and guidelines? One can view certain functionality of an

application as being compliant; while someone else might not view it as compliant … that's an issue."

He also noted, in relation to legal issues "the belief that regulations unnecessarily restrict creative design and innovation is a fallacy."

Jacobs explained that mainstream market forces and design processes "can negatively impact the availability of accessible mainstream ICT." He cited two examples.

"Marketing and technology trends often run counter to accessibility needs. Cell phones are getting smaller as are the displays, and the keypads, when many people need larger displays and larger keypads. Individuals with disabilities are not integrated into the design or evaluation processes. This is a problem and it's an issue from a design standpoint."

Perception issues, Jacobs explained, prevent creative engineers and companies from designing more accessible products because of their pre and misconceptions about the access needs of people with disabilities.

"Many of the things they perceive as barriers are really a lack of information or a misunderstanding of information. For example, there are perceptions that there's no way that you can develop a business case for accessible design. Another perception is that cost is prohibitive. Another is that you have to sacrifice the aesthetics of a brand in order to make it accessible. Finally, it takes longer to develop a product and get it to market if you design it for accessibility."

In his discussion of informational issues, Jacobs argued, that accessibility needs to be integrated into the training of engineers and designers.

"Engineers and designers are not sufficiently exposed to accessible design practices at the university level. While some universities are beginning to integrate accessible design materials into their core courses, it isn't happening frequently enough. Another example of an informational barrier is that accessibility is often interpreted narrowly to only include people with disabilities. Accessibility can be looked at in a much broader sense to include people who are senior citizens, people who never learned to read, people operating from within low bandwidth environments or people driving a car that wish to access information."

Jacobs concluded that, "if we could come to some kind of a common understanding across all stakeholders of what the issues really are and leave emotions out of it, I think we could take a giant step forward in addressing these issues."

Panelist: Kier Martin ([Council of Canadians with Disabilities](#) and [Canadian Association of Independent Living Centres](#))

Kier Martin discussed the barriers faced by people with disabilities in accessing information and adaptive technologies. The first barrier he pointed out was the cost of technology, particularly computers. Martin said, "though the cost of computers have come down significantly, the fact is, a lot of folks with disabilities still live in poverty and they don't have $400 or $600. The computer still might as well be $3000 to $5000." At the same time, adaptive technology has also remained very expensive, "so there's a need to explore other technologies: what are the sharewares, the quick fixes, and the demo downloads that people can use"

Martin noted that the assessment methods used to determine which adaptive technologies will work for different individuals need to be improved.

> "In some areas folks have had great assessments done on what their technology needs are. In other areas it comes down to a lot of times an occupational therapist going on the web and ordering some magazines, and saying 'here's the product that I think that works for your disability, its going to fix everything for you.' So there needs to be more standardization of how folks with disabilities can self-assess themselves for what technology that they need."

Martin suggested that because more disability advocacy organizations are putting their resources online, it is critical to ensure that their online resources are accessible.

> "There's a need for community to better develop some community space for our groups and consumers to come together to get feedback on how we're promoting technology. What's needed by consumers, what's needed by community groups, as we move towards, like other groups, like industry, like government, putting more and more of our resources online. We're asking consumers to not physically come to our building first, but to visit our webpage first. [This is] how a lot of folks are finding us, so we need to make sure that as much as our building is accessible, that our website is accessible, that our content is usable, that's its in a plain language that folks can understand."

He also suggested that because more resources are located on the Internet in stead of in the community than in the past, and because employers are weary of investing in expensive technologies they may not know much about, "there's a further need to demystify technology and the resources as they go online."

Another improvement Martin suggested was to enhance the promotion and availability of information about technologies so that people do not have to rely on "random Google searches" to find the information they need. This means, "finding the research groups like Dis-IT, finding where the most accurate information is around technology, and providing a little bit of direction."

Martin also mentioned the need for consumers to asses their own needs and know "where they want the technology to lead them." At the same time, accessibility needs to be built into the design of technology and networks as "a standard part of the way things are, just as a business looks at the security of a new network. They need to make the accessibility a step that's in there as well so that it's not put at the end."

Martin concluded his discussion with the observation that ultimately, all of these advancements in information technology and the availability of resources on the Internet should take place "at the speed of the consumer." He argued "we need to make sure the consumer base feels very comfortable in using online training and learning, and that they have a sense of ownership over that; that this is their online training, this is their online learning."

QUESTION AND ANSWER PERIOD:

Moderator Roger Jones asked the panelists to discuss Canadian legislation and compare it to the United States particularly Section 508 of the *Rehabilitation Act*.

Steve Jacobs pointed out that the US government is a large purchaser of Canadian IT exports.

> "Close to 80% of Canada's IT exports go to the US and close to 50% of those exports are used by the US federal government. What that means is if a product is not designed to comply with Section 508 in the States, and you're designing ICT with the hope of the government acquiring your product, you will run into problems. That's a big motivator for at least taking a look at section 508 and gaining an understanding of what the current standards are and to taking a look at the functionality of a product to determine whether or not it meets those standards."

Joan Wolforth discussed the accessibility issues faced in education because of its status as a provincial responsibility. She said that provincial divisions inhibit the ability to set national standards on accessibility and information technology in post secondary education.

> "One of the problems that we have as service providers across the country is trying to ensure voluntarily that all of our students, a) can have an equal opportunity wherever they study and b) that there is some transportability of benefits so that a student who is in British Columbia and wants to study in Nova Scotia, can in fact access the technological benefits that they have no matter where they study. That really is a key issue. Every other student [without disabilities] can move around the country; a student with a disability should be able to do that as well."

Kier Martin also discussed the role of accessible information technology in education. He noted that many students with disabilities choose to attend university online. Often the decision to attend one university over another is based on whether they offer accessible online courses. This can mean that students do not go to their first choice school, but have to go instead where there is access through the Internet.

Tim McIsaac (University of Manitoba) asked the panelists to discuss training for people with disabilities who do not have the time or capabilities to learn new technologies or programs on their own. He commented on the difficulty he faced in accessing training offered to non-disabled people in his workplace because the use of adaptive technologies was not part of the standard training for new programs.

> "At my last job they were regularly sending people to a company that specialized in two day courses. I couldn't go to them because, even if I could take a laptop with a screen reader, the whole course is predicated on the idea that everybody uses a mouse which, if you use a screen reader, you don't really do."

Steve Jacobs responded to McIsaac's question by agreeing that there is a shortage of accessible training resources for people using adaptive technologies. However, he pointed out that the Internet is an excellent medium for people to subscribe to accessible training services from anywhere in the world.

David Donovan (Service Canada) commented on the public's low expectations of the government's provision of information in accessible or alternative formats and the resulting lack of engagement from citizens with disabilities. Donovan emphasised the need for clients and users to bring their needs and expectations forward to the government to raise awareness about their issues. He asked the panelists to discuss ways to raise awareness about providing accessible government information and services.

Kier Martin suggested that the commitment of the government to a certain level of accessibility should be stated on their website, and to have the guidelines spelled out there.

Joan Wolforth pointed out that sometimes information does not get passed on because it comes in the wrong format in the first place. She suggested that electronic format for posters are more likely to be widely distributed. She also suggested that more frequent reminders to departments like hers or to national professional associations of the services available would also be helpful in raising awareness.

Roger Jones asked the panelists to discuss positive developments in the field that will soon be available and to possibly tie it into the Dis-IT research findings.

Steve Jacobs responded first by discussing a US project called "Access Tomorrow" that he is involved in. The project aims to address the problems students with disabilities face when transitioning from grade school to high school because adaptive technologies belong to the schools they come from. Jacobs explained, "The student moves to another school and they have to go through a whole lot of trouble to get AT again. This project focuses on using open source assistive technology of which there are some very high quality products out there." He further stated that using portable smart drives can enable students with disabilities to execute programs off of smart drives. The goal is to "provide students with assistive technology that they can carry with them to any PC anywhere. They would no longer be restricted to using AT in a classroom."

Joan Wolforth emphasized the importance of research like that of the Dis-IT eLearning project in demonstrating to administrators that certain technologies are preferable because they are more accessible. This makes it more likely that administrators will consider these options in their decision making processes. She also said that because the Dis-IT eLearning research covered such a broad spectrum of people from students, to service providers, to administrators, it is more persuasive. Because of this, she said, it has also been effective in engaging people in discussion about accessible technologies and has started people thinking about these issues just from responding to the research questionnaires. She said that the research has already resulted in more accessible websites being designed and in more discussion of universal design principles, not only in technology and architecture, but in curriculum design and the delivery of accessible materials as part of the curriculum.

Wolforth also said that, due to the training and use of the technologies needed by students in university, once students with disabilities graduate from the university they are far more technologically savvy, and know what technologies they need. As a result, they are able to articulate this to their employers, are well prepared for the job market, and are more attractive to employers.

Keir Martin discussed a "geo spatial project" he has been involved with that focuses on making a map on the Internet of where disability resources are physically located in the community.

> "Now that we have this pool of resources we found that it was very important to map on the web where these resources exist physically and put them in a format that is accessible for folks with disabilities so that they can go online and find out where different disability resources are. We're working with other provincial and national groups around emergency preparedness for people with disabilities so that we can ensure that shelters are accessible; that if people are using wireless devices that they're able to use way-finding navigation to move around a building freely and easily in case of an emergency. We feel that we're building the geography of Canada to be physically accessible and now we want to make the geography of Canada accessible online as well."

Phyllis Gordon (ARCH Disability Law Centre) commented on current concerns about attacks on network neutrality in the United States and Canada.

> "Last weekend I went to the Alternative Telecommunications Policy forum in Ottawa which was largely attended by people who are advocates of community control and community use of the Internet for economic and social development locally, particularly aboriginal communities and small rural communities. A key concern of theirs is the attack on network neutrality, in the United States in particular, where proposed amendments to the American telecommunications act that would end network neutrality has at least been stalled. Network neutrality, to my untechnical mind, means that packets of data can flow on the Internet and reach their source without control and without a price situation where you pay more for the higher quality packet getting delivered. It was reported at that conference that there is a danger that The [Canadian] telecom policy review panel's recommendations probably, if implemented, would mean the end of network neutrality in Canada."

She asked Steve Jacobs to discuss the divided position of the disability community in the United States on this issue, and the possible impact of price tiers on the Internet.

Jacobs said that he was not an expert on net neutrality, but wasn't aware that the U.S. disability community was divided on the issue. He said that advocates of network neutrality argue that any non-neutral scheme would allow ISPs to unfairly discriminate and control which data they prioritize, such as data from their own sponsors or media

interests. He urged the conference participants to become more knowledgeable about net neutrality.

PANEL DISCUSSION: "Is there common ground between bottom lines and human rights?"

Moderator: Cathy Moore ([Canadian National Institute for the Blind](#))

Panelists: Phyllis Gordon (ARCH Disability Law Centre), Kathy Marshall (St. John's Independent Living Resource Centre), David Dougall (Research in Motion), Steve Jacobs (IDEAL Group)

This discussion aimed at identifying common ground between the human rights of people with disabilities, particularly their rights to access technology, and the bottom lines that companies must deal with. Each of the discussants addressed this issue from their respective stakeholder groups including business, people with disabilities, and the law.

Cathy Moore opened the discussion by observing that we often see issues like these as an either/or situation, with no middle ground. She suggested that this panel was an opportunity to resist that temptation and look for creative ways to bring bottom lines and human rights together. She said "there needs to be some thought here, some openness, and some willingness to learn, I believe from all parties, in order to tease out the dilemma of the requirements to respect the human rights and access, while at the same time understanding the pressures and the framework under which industry works."

Panelist: David Dougall (Accessibility Programs Manager at [Research in Motion](#))

David Dougall began by discussing a number of factors that motivate a company like Research In Motion (RIM) to focus on accessibility. These included:

- customer inquiries about accessibility
- market opportunities presented by accessible products
- corporate social responsibility

"First and foremost," Dougall began, "as a customer-driven organization, we found that we were starting to get a large increase in the number of inquiries related to the accessibility of the BlackBerry. We needed to be able to understand what the issues were and to be able to respond to our customers." Dougall linked the increase in inquiries about accessibility to regulation, particularly in the United States.

> "As a member of the telecommunications industry, we're subject to a heavily regulated environment, and our key market is the US. With some of the existing legislative framework in place – with Section 508 and Section 255, as well as the FCC Hearing Aid Compatibility Act – there are certain aspects of that environment that are paramount for RIM as a telecommunications manufacturer to be able to bring a product to market."

Dougall also noted that RIM's interest in accessibility was heightened by the market opportunity that became apparent when the company discovered that many people who are Deaf were BlackBerry users. "From an accessibility perspective, RIM experienced that early on in the sense that many members of the Deaf community were early adopters of the BlackBerry. That was before we recognized that they would be a core target audience for the product."

Corporate social responsibility was the third factor Dougall said motivated RIM's interest in accessibility.

> "As companies grow, corporate social responsibility becomes a bigger element to look at. It can be clearly a win-win for companies, employees, and customers to be able to focus on products and services that meet the needs of all of the customers, including those with disabilities. It certainly is very gratifying for myself and for a lot of other people at RIM, like the engineering group that are involved in bringing some of the solutions to market that are tied to the accessibility components. People within industry are individuals and want to know that they are making a difference. I think that often gets overshadowed in terms of the context of profit driven organizations overall, but for the individuals themselves, that's still an important aspect to keep in mind."

After identifying those motivating factors, Dougall discussed some of the concerns companies have when designing for accessibility. Because RIM sells its products in a variety of countries which have their own standards, guidelines and regulations, he said "it's important and paramount for the accessibility community worldwide to focus on trying to bring harmonization of those elements [standards, guidelines and regulations] to the extent that it is possible, because overall it will provide much better solutions [for people with disabilities]."

Dougall also explained that companies concerned with making accessible products need to be able to protect the innovation which leads to competitive differentiation. Regulation, he argued, can undermine innovation. "Regulation can often lead to a more common baseline solution, as opposed to the optimal solution. Where an opportunity exists for

differentiation that's not tied to regulation, in many cases that will actually bring a better and more optimal solution to the marketplace."

Dougall acknowledged that industry needs to address some of the issues raised during the conference's first panel discussion, particularly training and awareness.

> "Those aspects are a really critical factor to bring forth to industry to help us understand what the requirements of individual user communities are, beyond 'this product doesn't work for me.' We need to understand why it doesn't work and how to bridge the gap between the specific 'where are you going to use it? How are you going to use it?' so that we can understand which feature functionality is on our road map and, moving forward, we can put that in the product."

Dougall added that it is easier to get corporate approval for new accessibility features when those features also have benefits for users without disabilities.

> "To the extent that we can understand what some of the opportunities are, we can leverage the fact that, in many cases, they can be features and functionalities that are utilized by the mass market. In terms of getting internal adoption for a feature functionality, it's so much easier within a company such as ours to be able to explain it from the aspect of 'this is something that will benefit our entire user base, and that it also will be extremely beneficial for people of this particular disability community.' So trying to tie the two together is an important concept."

Dougall explained that some accessibility features present challenges regarding commercial implementability.

> "We've seen a couple of situations within the industry where we have been struggling with implementation with respect to hearing aid compatibility; differences in network technologies make it inherently easier on certain networks than on others. It's a significant challenge in a regulated environment. If a regulation is in place that you're forced to meet, but at the end of the day there are distinctions between different types of products and it's easier to meet the regulation with one product than another, but you're really not given a choice; you have to make it work for both. There's a significant amount of energy that our company has been expending to an end [hearing aid compatibility] that is already met by one of our other products very well, but we're struggling to meet it with another. In my mind it's a question of 'is that value added?' I would prefer to look at options to address other accessibility requirements because we know we already have a product that meets that need."

Dougall suggested that optimizing a product for one disability community can inherently reduce the product's accessibility to people with other kinds of disabilities. "There are inherent tradeoffs that will happen. Features don't tend to necessarily coincide for each group. That's an important consideration, and that's where we look at software changes being much easier to make than hardware changes." He closed by noting that people working on accessibility solutions also need to be aware of how the product interacts with accessories and third-party solutions.

Panelist: Phyllis Gordon (ARCH Disability Law Centre)

Phyllis Gordon discussed some of the ARCH Disability Law Centre's recent work advocating for Canadians with disabilities in the area of access to ICT, particularly telecommunications. She began by defining human rights as "the fundamental values that infuse all aspects of Canadian life and include full inclusion, participation, and dignity. The Supreme Court of Canada has agreed with us on many occasions, making this the law of the land."

ARCH focuses on promoting the rights and inclusion of people with disabilities not only through the human rights commission and court challenges, but through alternative pathways as well. She said, "we believe it's essential to bring the equality values and obligations to wherever they can be heard and wherever they are applicable." She noted that it is often not economically feasible or practical to take large corporations to court for a lack of accessibility as a human rights violation.

> "We don't think it's practical to try to take a major corporation to the Human Rights Commission; they can pay as many lawyers as they want to just keep tying us up. Rather, it's important for all of us to get to the regulator, whichever regulator it may be, if there is a regulator. We need to be bringing principles of inclusive design and inclusive thinking to the regulators."

According to Gordon, recent Supreme Court decisions have supported this means of advocating for the rights of people with disabilities. In a recent case, the Supreme Court held that specialized tribunals can interpret, use, and apply the human rights code of its jurisdiction. Gordon explained that this is a key case because it means that tribunals are not only governed by Charter principles, but human rights principles, such as the duty to accommodate, as well.

Gordon noted that she had recently reviewed the work ARCH has been doing and realized that ARCH's work has been about universal design in a very broad sense.

"We work on an unarticulated premise that all of us must incorporate universal design fundamentally into our structures, into government structures and into the ways adjudicators adjudicate. The goal is that a body such as the Canadian Radio-television and Telecommunications Commission (CRTC) will always consider inclusion as a matter of course. The correlated goal is that the telecom industry will recognize that all people living in Canada need telecommunication services, regardless of whether a particular segment of the market leads to a reasonable or a large profit."

Gordon said "there are two main arenas for our joint efforts: the granting sources and the regulatory regime… We need more people to get engaged in the policy and regulatory debate, where human rights values and fundamental principles of dignity and inclusiveness are addressed." She argued that accessibility advocates should not focus all their attention on government granting agencies. Instead, she said, they need to consider the regulatory environment more creatively and more actively. "The regulatory regime underpins everything that's getting done and actually governs it with respect to telecom."

Gordon also argued that it is also important that people with disabilities and major advocacy organizations are involved in the decision making processes of regulatory bodies. ARCH has been arguing for this in submissions to the CRTC, which led to the recent "deferral account" decision. This CRTC decision ordered Bell Canada and the other local telephone service providers to spend $32 million improving the accessibility of their products and services. That led, she said, to "some concerted national disability thinking – organizational thinking—on advances and requirements for telecom."

Gordon said that another arena where further engagement by the disability community will be required is the report from the Telecom Policy Review Panel. This review began under the former Liberal government but is being actively pursued by the current Conservative government as well.

"The focus of the review is to emphasize market forces and to downplay regulation. We think there are many, many concerns and if all of the recommendations from the report go through we're very worried that the fundamental framework of telecom regulation that exists today will disappear. The review pays a lot of attention to developing a national ICT policy, but neither disability nor universal design are mentioned with respect to such a policy, despite it having been clearly drawn to their attention by ARCH."

Gordon then discussed how disability was addressed in three recent CRTC decisions. She said there were "strong references to disability" in the Voice over Internet Protocol (VoIP)

and deferral account decisions. The third decision was one that received less notice than the VoIP and deferral account decisions. In it, the CRTC considered whether to continue to regulate or to de-regulate the "local exchange" market (i.e., land-line local telephone services). The CRTC does not regulate the cell phone market, and was under pressure from Bell Canada and other "incumbent local exchange carrier" (ILEC's) to deregulate the local exchange market as well.

This decision (CRTC Telecom Decision 2006-15) opened the door to de-regulation under certain conditions, but included strong language indicating the CRTC felt that people with disabilities would suffer under de-regulation. Gordon quoted two paragraphs (440, 459):

> "In ARCH's view, the experiences of disabled persons regarding terminal equipment [i.e., land-line telephones] and wireless phones indicated that when the Commission had forborne [abstained] from exercising its powers under subsection 27(2) of the Act [i.e., the section that deals with non-discrimination with respect to rates] or had not used those powers to ensure accessibility to persons with disabilities, it had failed to discharge its legal obligation of ensuring that persons with disabilities do not face discrimination in their access to telecommunications services [440]. …The Commission is not convinced that the operation of market forces will serve to discipline the behaviour of ILEC's with respect to…customers with disabilities [459]."

Gordon said this CRTC decision was reflective of the language and objectives of the Telecommunications Act and Charter of Rights and Freedoms, and "articulated a really strong understanding of the requirement to be ready to regulate when social issues come to the fore, and not leave everything to the market." She cautioned, however, that the Telecommunications Policy Review Panel's emphasis on de-regulation and market forces could eliminate the obligation to regulate if the regulations of social issues like accessibility are not clearly resolved.

> "That language will be undone if the Telecom Policy Review Panel's approach goes forward. The entire economic regulatory scheme will go. Yes, it is true that persons with disabilities are now mentioned in the objectives, but I think that's a small victory. It's a small victory because what's been lost in the telecom review, and in this new perspective, is a sense of public good. I think Canada has already defined public good to include accepting everybody with dignity, and including everybody. I'm quite worried that the new regime will not be able to address disability in the way the old regime does."

Panelist: Steve Jacobs (IDEAL Group Inc.)

Steve Jacobs discussed the things that need to be done to bridge the gap between human rights and companies' bottom lines and emphasised the need for cooperation and mutual understanding through education.

> "To arrive at a common ground, stakeholders need to meet in the middle. They need to foster a spirit of cooperation and understanding of each other's differences. And most important they need to respect each other. In order to meet in the middle a lot of education needs to take place."

Speaking first about people with disabilities, he said that consumers need to be more educated about the development process of products and how they are made accessible. "If you don't understand the process you can never hope to change it." He noted, "consumers need to understand that the forces driving accessibility today are not self-sustaining without external pressure on industry. "Cultural, organizational, moral, legal, ethical, all those market forces are not self-sustainable without external pressure. What is self-sustainable is profit."

Jacobs pointed out that profit does not necessarily mean simply raising the price. Accessible products can have larger markets, increase competitive advantage, be sold to more people, and therefore result in a lower price. Jacobs also pointed out that consumers need to realize that accessibility standards are different in different countries, which complicates matters for companies producing information technologies.

Shifting his focus to industry, Jacobs discussed the ways that industry is often uninformed about accessibility and the needs of people with disabilities as a market.

> "Industry needs to understand how people with disabilities of various types access electronic and information technology. Many engineers who design products never learned that in college because it is not in the curriculum. Industry also needs to understand the potential for compatibility and interoperability issues between assistive technology and mainstream technology."

Jacobs also pointed out that there may be similarities between the way in which a blind person uses a piece of technology and the manner in which a person who never learned to read uses the same product. Thinking like this, he said, would shed light on larger potential markets for accessible products, and make companies more likely to embrace accessible design practices. It was this kind of thinking that lead the NCR Corporation, Jacobs' former employer, to develop a talking ATM. They realized that some of the fastest growing markets in the world (e.g., China, India) have large populations of people who

never learned to read. In order to access these markets NCR Corporation developed a talking ATM, which is also accessible to people with visual impairments.

> "ATMs are extremely important to developing countries because a majority of developing countries are cash-based societies; people keep money under their mattresses, pillows and buried in the ground for safe keeping. When this happens cash is not available to the government for capital projects like building schools, medical clinics and hospitals, so the government needed to figure out a way to bring that cash back in for investment purposes. ATMs can do just that. People never had bank accounts before."

Panelist: Kathy Marshall (St. John's Independent Living Resource Centre)

Kathy Marshall addressed the issue of how inaccessible information and communication technologies prevent people with disabilities from full participation in society. She pointed out that when discussing the accessibility of information technologies it is important to keep in mind the systemic barriers people with disabilities face in accessing technology. For example, poverty, unemployment, and a lack of education prevent many people with disabilities from being able to use computers and technology. She said, "Consumers really want to engage with business and industry and want to be consulted from the developmental stages, so that their viewpoints and ideas can be discussed."

Marshall listed the following as things that people with disabilities are looking for in information technologies:

- portability
- universal access
- choice
- the ability to mix and match the hardware and software to customize it to their own needs
- training and support
- instruments and technology that are functional with sustainable operating systems so that adaptive technology upgrades are not always necessary
- to be consulted in all levels of developing common ground approaches with business and profitability
- a mainstream look and name

She also discussed what people with disabilities do not want in relation to information technology:

- higher costing adaptive technology
- having to purchase packages that don't meet their individualized needs
- to be "overtapped"
- to be assessed by third parties

Cathy Moore concluded the panel discussion with an observation about the link between social and economic determinants of health including "access to good housing, access to employment, which render people healthier" and access to information and communication technologies. She said that access to ICT's "allows people to have independence, control over their own amassing of information and is good for our health." She argued that this insight can be used as an economic argument on the broader government public policy scale.

QUESTION AND ANSWER PERIOD:

Sheila Carlin (President of the [Canadian Association of the Deaf](#)), asked David Dougall to discuss the availability of a [TTY](#) function in Blackberries. She noted that the user manual does not mention the TTY function and she wanted to know if it is available, or would be in the future.

> "A lot of deaf and hard of hearing people are using the device. As a user, I've been playing around with it and the phone option—TTY mode—is there, but in the instruction book, there's no mention of it, so the deaf or hard of hearing community is not aware. So my question is, does the TTY mode work in the Blackberry currently, or is that in process or do you have that planned for the future?"

David Dougall answered the question in two parts. First he addressed the instruction manual issue.

> "It's not part of the printed safety guide, but we do cover the usage of it in the user guide which is on the CD. So that's where you'll find the information about it. What the BlackBerry actually provides however, is not a direct or native TTY solution on the device; it provides connectivity to an external third party TTY solution as required for cell phones in the US market. So we're meeting that requirement with that external connectivity."

Secondly, Dougall explained, that RIM is making efforts to investigate developing TTY capability in the BlackBerry itself, but there are several technical issues to overcome before this is possible. He explained

"RIM currently has resources investigating the viability of doing that type of functionality. Although it would seem to be a straightforward thing to provide a native TTY solution directly on the device, it's not as straightforward as it looks; there are several underlying technical challenges. This is a question that's come up on several fronts including being a hot topic in the US, given the fact that the TTY connectivity is the only mechanism by which people can have the E911 access to the public safety answering points in the US. Although the deaf and hard of hearing community have certainly migrated to other more prevalent solutions such as IP Relay, instant messaging and email directly, those elements are not tied into the other regulated aspect which is the PSAP's (Public Safety Answering Point)."

He noted that this is related to bridging "the gap between the TTY technology, which is becoming quickly outdated, and having consistency of those various standards, because there are also many different TTY standards."

Henry Vlug asked the panelists to comment on the need for 'education' when his experience has been that large businesses and institutions know what they are obligated to do, but do not do it.

"I've been fighting with people who already know; in spite of the fact that they're educated, they just don't give a damn. Bell Canada knows that they have to follow human rights Legislation University of British Columbia knows what's required, they know the regulations. But they don't do it until we go to CRTC or we go to the Human Rights Commission. Once they are forced, they'll comply. When we talk about people being educated, when we talk about the business community, in some instances they know, but they still refuse. What do you think?"

Phyllis Gordon responded to this comment first by acknowledging that it is often difficult to get large institutions to fulfill their obligations.

"I know exactly what Henry's talking about; it's the most frustrating experience that we all share. I think this is where we do need to go beyond complaints-driven solutions. We need to be looking at procurement policies; we need to be looking at disability legislation standards and regulations, because the big players such as public institutions continue to avoid their responsibilities. It's going to take more time, but it is a solution that needs to be pursued more actively in Canada."

Steve Jacobs added to this by clarifying that the kind of education he was referring to earlier in the discussion was not about creating awareness of, or compliance with, laws. "The education I was referring to had nothing to do with the fact that people have to follow

laws." He suggested that if someone does not want to follow the law, and laws are not aggressively enforced many people are not inclined to follow them—especially if they perceive following the law as costing them money—then an organizations' unwillingness to fulfill their legal obligations could simply be due to a lack of knowledge about why it is in their best business interests to do so. He suggested education should be aimed at creating "interest in the topic, the problem or to provide information that people may not have had before," to help them view laws from a different perspective.

Kurt Lynn (Canadian Hard of Hearing Association) noted with disappointment that both industry panelists said that industry's interest in accessibility is greater when an accessibility feature has benefits for non-disabled users rather than the smaller disability market.

> "It's not my objective to demonize industry, but I find two examples we've heard this afternoon kind of sadly frustrating. One says that we should focus a lot of product development on dealing with an illiterate population in Asia while ignoring people [with disabilities] right here that may be illiterate, may desire literacy and are unable to access the same tools that everybody else has. And David Dougall said something that to me epitomizes the exact issue of industry and what the market forces are. You were saying 'this [feature] satisfies this market requirement, and by the way, it's also useful for blind people.'"

Lynn continued, "The test to business, in my opinion, is to ask them 'what would you do without regulation? What would you do on your own? How would you set priorities without regulation or the threat of regulation, as a pre-emptive means?'" David Dougall responded with an example of how a company like RIM pursues accessibility initiatives regardless of regulation.

> "I think it comes back to understanding the user requirements and getting a good sense of what is possible with the technology and where we can meet the needs. The example this morning that got me excited was Gary Birch's presentation on the work that he's been doing in retail and public services. I had no idea that that work was going on. There's an interesting opportunity that we can pursue irrespective of regulation. That's one example of how we would go about that."

Lynn commented that there are two primary windows of opportunity in product development where accessibility can be addressed.

> "My own experience in industry says that there are only two windows for small markets and, unfortunately, disabilities represent a small market. We can intercept

> industry at the design time where it's cheap to implement accessibility. The other option is at the end of the development cycle. That says if industry will leave an open interface to whatever it is they're building, and don't worry about access for people with disabilities, but allow other people that are focused on that market segment to add value to it."

Dougall agreed with Lynn and noted, "we need to look at product development in the early stages, especially with respect to the hardware elements. There's typically an 18 to 36 month lead time in the development cycle for a product that may only be on the market between 18 to 24 months. There's a significant upfront development, so it still comes back to interacting directly with the user communities and gaining a better understanding of the requirements." He also described how RIM's open platform provides opportunities for companies specializing in accessibility.

> "There are many excellent smaller companies that are focused specifically on accessibility requirements and understand the respective niches very well. That's part of RIM's strategy in terms of how we meet the needs of the various stakeholder communities, because a) we do not have the internal expertise and b) it makes sense to leverage those other external companies that already have that expertise. By providing an open platform for input and output peripherals as well as customized software solutions, that can go a long way to solving this problem."

Gary Birch (Neil Squire Society) asked David Dougall to discuss his experience in the information technology industry in a regulated environment. He asked, "How important is it to the people that make the decisions in large companies around these things that they actually have something that really discriminates them and makes them a leader in a regulatory environment?" in terms of what kind of features can we add on, "or how we can be creative in a product line, such that we meet this [requirement] better than anybody else?"

David Dougall responded by commenting on the impact regulation has had on product development at Research In Motion.

> "There are two sides of it. It is easier to try to meet a defined requirement and engineers like that because it's very concrete and very tangible for them, but by the same context, it can constrain the ingenuity and possibilities as the technology evolves over time, and we've certainly seen that with respect to certain aspects of Section 508. So I think it will be very interesting to see how that evolves over the next eighteen months and you definitely are seeing there will be a lot of active involvement including companies such as ourselves and myself in particular in

terms of looking at that legislation as it's redrafted. The government, as a vertical market for RIM, is quite important to us as a customer, so that is another direct aspect."

Jim Tobias (Inclusive Technologies) commented that the current theory of the market is underdeveloped as well as the role of market and non-market motivations in industry.

"What people outside of industry often don't understand is that companies don't do every single thing that they can do that's profitable. It's like when you go home to cook dinner; you don't cook everything you have in your pantry and your refrigerator, right? Companies do the things that are the most profitable for them and the most strategically aligned at that moment in time. We'd be deceiving ourselves if we thought that if we could make a really good case that there's at least one dollar of profit to be made above the five million dollars of investment we're asking the company to make that we've somehow made our case, we're absolutely wrong. It's just an example of how I think we need to delve deeper into the details of the business."

Tobias also pointed out that it would be useful to look at other movements such as the environmental, occupational safety and health, and gender equity movements that have struggled against a market approach and have been successful in many cases. He said, "in many cases, [these movements] have been much more successful than we've been. If we can understand what they did—how they organized, what they used within government, within public relations and public appeals –we can adapt those for our issue."

Aldred Neufeldt (University of Calgary) commented on the need to examine how and where creative innovations happen in industry.

"We have this somewhat naïve notion that if we approach Research In Motion, and if they would only do their thing, then certain problems will be solved. Well, it might or might not happen; large corporations tend not to be terribly innovative. It got started as a very innovative [company;] whether it continues to be innovative, that's always a big challenge. New innovation really comes around new entrepreneurs, just the way RIM started, just the way IBM started, just the way Microsoft started; that's where they were really creative."

Neufeldt argued the focus should be on new entrepreneurs because that is where new innovation really comes from. He said, "If we're really going to solve these problems we've got to figure out where the next creative edges are." In addition, he noted that though the

legal strategy is part of the solution, we also "need to think about some strategies that keep the agenda upfront."

Phyllis Gordon reiterated that the Canadian government is implementing the recent Telecommunications Policy Review at an unprecedented speed. She said,

> "The reason I'm pushing people to read and think about the Telecom Policy Review is that this is really being acted upon by government now; cabinet's issued a directive to the CRTC. It's going to be made into a regulation which will put priority on market forces. We've never seen any government report be acted upon so quickly. There's an election coming, and nobody has looked at the Telecom Policy Review outside of the business pages. I hope to be able to get something written, a citizens' analysis, not just a disability citizens' analysis, but a citizens' analysis of that major shift in telecommunications policy that's just a sleeper."

Marcia Cummings (Rogers Communications Inc., Alliance for Equality of Blind Canadians) commented on the lack of marketing aimed at people with disabilities and used the example of the Blackberry.

> "Companies need to learn how to target their markets too, it was Henry Vlug who said that the Blackberry started to be really popular in the deaf community and RIM didn't even know about that. Well today I just found out that the newest Blackberry—The Pearl—has voice activated dialling and it will actually tell you the status of the battery and the network. I didn't know that until today because RIM isn't putting that out in their advertising it's not being widely made known. I think that you're losing out on some of your audience for your products. If you could find that audience and they would tell their friends, and their friends would tell their friends, and all of a sudden the bottom line would become even more lucrative if you can just tap into that market."

Phyillis Gordon responded to this by adding that Australia has begun to implement a standard that requires the inclusion of "an accessibility sheet in every product, so you can look at when you buy a product and all the various accessibility features are itemized, which is a useful way of letting people know what's out there and one that should not be so hard to institute."

David Donovan (Service Canada) observed that regulation and procurement policies can sometimes lead to innovation.

"It was interesting to hear you focus on policy and regulations in your discussion, and to hear David talk about customer driven needs and mention Section 508, and how that seems to have been a successful set of regulations to allow RIM to innovate and create accessible solutions. I think that regulation and guidelines can promote innovation, because without companies being able to meet those regulation guidelines and capitalize on say procurement policy, there will be other companies that will come along and innovate and capitalize on providing accessible solutions if those regulations are in place."

Donovan asked David Dougall if he could provide examples. Dougall offered three examples of how regulation has resulted in innovation at RIM. First, Dougall explained, "In order to meet certain requirements, we didn't previously have the hardware horsepower, or the software support to provide it," which forced RIM to look at whether they could provide the support the regulation required through a tweak to the current product or if a fundamental change was necessary.

Second, he said that regulation has led Research in Motion to align itself with third party companies who are experts in the accessibility field and to "look at input/output peripherals and customized software solutions such as IP relay solutions that can go a long way toward providing the overall package."

Thirdly, Dougall explained that regulations have led to feedback from "individual customers and from some of the regulatory agency Section 508 coordinators which lead to ideas about what we can do in the product for the future."

Cathy Moore (CNIB) suggested that although there may still be a lack of market incentive for companies to develop accessible information technologies, it might be useful to look at ways of subsidizing their development. She said, "the fact that development of certain accessibility products may not in fact be meeting the market incentive at the moment doesn't mean they can't happen within a framework that might allow for, dare I say it, subsidization of that type of development." She used the example of closed captioning and the cable television industry: "Closed captioning was paid for by one, two cents added to cable bills, for example. One or two cents added to a telephone bill, again. What I'm suggesting is that there are ways that to enable industry to implement more comprehensive accessibility solutions without footing the whole bill while, we, the end users of accessible telecommunications, are enabled to develop the capacity to effectively communicate our accessibility needs in a way that industry can understand and incorporate."

Moore concluded the panel discussion by encouraging everyone to keep the ideas covered in this panel in mind for further discussion of the development of action plans. She also

asked the audience to heed Phyllis' Gordon's plea to pay attention to the implementation of the Telecommunications Policy Review, particularly in the emerging area of internet neutrality.

RESEARCH FINDINGS: "Findings from research conducted by the Disability and Information Technologies (Dis-IT) Research Alliance"

Retail and Public Services: Gary Birch (Neil Squire Society) and other team members

Gary Birch (Neil Squire Society) began his presentation of the Retail and Public Services research theme's findings by acknowledging the key organizations that participated in the research, which included the Neil Squire Society, the British Columbia Institute of Technology, The University of Manitoba, Laval University, Simon Fraser University, The Royal Bank of Canada, Industry Canada (particularly Assistive Devices Industry Office), IDEAL Group, and NCR Corporation.

Birch explained that the research focused on "persons with fairly severe mobility impairments and those with visual impairments." Focus groups were held to gain the input of participants on public information and communication technologies and to discover what the participants "felt were the challenges, barriers and, of particular interest, their thoughts on potential for wireless solutions to these accessibility problems and challenges." Birch said these focus groups revealed:

> "The top three automated services that were identified were banking, retail—which really meant electronic commerce or electronic payment—and transit…The macro issues of getting around were generally brought up by those with visual impairments and micro issues dealing with the actual hardware tended to come up more often with people mobility impairments. There was a general consensus that wireless had a promising potential to enable access."

Birch showed segments of a video the research team produced to help the focus group participants understand the potential uses and inform the participants to stimulate discussion. The images were used to demonstrate how it is possible to turn "this new emerging technology, which often if not always, more of a barrier into an enabler." Birch narrated the video. He said the first clip showed "a quadriplegic in a wheelchair with his personal digital assistant (PDA) that has an interface that he can use to activate the automated door opener."

The second clip showed "a mocked-up picture of a person with a visual impairment using his smart phone handheld wireless device to get information about a menu in a fast food

type situation. They'd also get the menu as well as perhaps the ability to order the item and pay for it." Birch explained that these images demonstrate how, if these technologies could be properly harnessed they could provide "a dramatic opportunity to level the playing field for people with disabilities."

The third clip showed "how awkward, in fact impossible it is for a man (with a mobility impairment) to use an automated ticket kiosk." The second part of this clip showed a simulation of a possible interface that worked well for that individual.

The fourth clip showed "a sequence in which a person using a wireless PDA using it like it was intended; the ability to retrieve an email and then place a call and have that call made for him." The clip also showed the man using the same wireless device to interact with an automated bank teller. Birch explained that, with such a device, "He has the ability to enter his PIN number, answer a bunch of questions using the touch-screen, and then, in this case, withdraw e-cash. Now whether e-cash will ever catch on we don't know but that's still a problem with an automated banking machine: you can't actually physically pull the cash out of the machine." This clip also showed the same man in a retail setting where he was able to use the wireless device to purchase something rather than using the debit machine which was not accessible to him. The same man then used the wireless device to buy a ticket at a transit ticket kiosk. Birch explained the clip demonstrated that "now instead of struggling and almost losing his credit card, he is able to purchase that ticket directly using his wireless device and actually ends up with an electronic receipt on his device and is able to carry on." Finally, the man was shown using the wireless device to call an elevator and select the floor once he was inside.

The fifth clip showed "a picture of a person with a high level of physical disability who also used a wireless device with a pointer system that allowed him to move a cursor with a mouth-driven joy stick. Using that he can select the different menu items off that device and control—in this case there's a picture of him controlling his home environment but everything we saw that other fellow do he could also do in his external environment as well."

> "The Retail and Public Services research team contacted PICT [public information communication technologies] manufacturers and other industry representatives to gain a better understanding of such things as what priority they place on making their products accessible to disabilities, and what factors affect the adoption of accessibility in PICT's. Generally speaking, we found it difficult to get the participation of these industries. A tremendous amount of time and effort went into just trying to engage them in the surveys. Of the few that did participate, it became

fairly clear that the issues around persons with disabilities weren't really a high priority."

He explained that in their interactions with the wireless industry, they focused on creating a positive user experience for all: "we tried to help them understand that accessibility will improve user experience for everyone." Birch said that when talking to industry about creating accessible information and wireless technologies it was important to stress the overlap between accessibility for people with disabilities and improved service and function for the general population.

> "There are a tremendous number of examples where innovation from solving what appears to be a difficult problem for a person with a disability ends up in an innovation that's useful for a wide range of people. It's important for service deliverers of wireless and other types of technologies to have better service for persons with disabilities. In talking with them we found that there was some appetite, some interest in them staying ahead of the regulation curve."

According to Birch, a significant accomplishment that occurred during the process of engaging industry in discussions about accessible wireless technologies was that, "we were able to engage [cell phone manufacturer] Nokia and actually ended up with a contract to work on an accessibility accessory that would go with a line of their phones to allow a person with a severe disability to actually control and use their phone." Birch noted that the researchers would continue their efforts to engage industry, particularly cell phone manufacturers, and a particular company that provides cell phone banking and payments, as well as a Vancouver company working on [Wi-Fi](#) access to bus schedules.

Birch then discussed a tool developed by the research team called "PAT which stood for the PICT Accessibility Tool." This tool can be used by "individuals or groups to rate the level of accessibility of a given PICT in their community, such as an automated banking machine or a series of automated ticket dispensers, etc." Birch explained the tool was designed to be user friendly for people with disabilities to assess accessibility of Public Information and Communication Technologies (PICT's).

> "To allow individuals or groups to rate the level of accessibility of a given PICT in their community, that would be an automated banking machine or a series of automated ticket dispensers, whatever… It's designed to rate both the macro—that would be getting to the device issues—and the micro environment—that's actually using the device itself. The PAT has been tested by persons with disabilities to help ensure that the questions are relevant, understandable, and valid and currently the work is focused on evaluating the reliability of the PAT."

Birch added that future plans for the PAT include seeking resources to convert it to an accessible, electronic format, and exploring an opportunity to have it utilized in community assessments that will occur in British Columbia, and perhaps throughout Canada, in association with Legacies NOW. Legacies NOW is an organization that assists communities in developing inclusive social and economic opportunities leading up to, during and beyond the 2010 Vancouver Olympic and Paralympic Winter Games.

Birch explained another element of the work done by the Retail and Public Services research team which investigated how people with disabilities interact with wireless technology, particularly wireless e-commerce applications. A mock restaurant environment was created for this purpose.

> "We had participants from the focus groups as well as some new recruits…use a cell phone based device that we mocked up and simulated for this study and a PDA based device for people with mobility impairments. [With these devices] they were able to obtain menu items, order service, and pay. Generally we found participants were very excited about this type of technology and stated that they would gladly use it if available."

Birch added that the researchers will be "following up with the consumers who participated in our focus groups and simulation studies to help them understand what we've learned from the industry, what the industry trends are, and get some more feedback from them."

eLearning Research Team: Catherine Fichten, Jennison Asuncion, Joan Wolforth, Maureen Hewlett, and Chris Gaulin

Catherine Fichten (Adaptech Research Network, Dawson College) began the presentation of the eLearning research team's findings by acknowledging the partner organizations that participated in the research:

- Adaptech Research Network
- Canadian Association of Disability Service Providers in Post-secondary Education (CADSPPE)
- National Education Association of Disabled Students (NEADS)

Fichten then provided the research team's definitions of eLearning and accessibility.

> "We defined 'eLearning' as the range of information and communication technologies that professors use when teaching in the classroom, online or a

combination. Examples are things like PowerPoint, online tests, CD-ROMs, WebCT. For us the definition of accessibility is the ability of learners, regardless of their disability, to easily and independently use eLearning. Of course, for some students this means the use of adaptive technologies."

She noted that students with disabilities "are future leaders and post-secondary education is as important for somebody with a disability as it is for Canadians without disabilities. It's the path to independence, leadership, and making a living."

The objectives of the research were to identify eLearning barriers and facilitators experienced by a variety of post-secondary students with disabilities, and to develop good or best practices guidelines for the higher education community and the post-secondary publishing industry. Some of the research questions were:

- How accessible are different types of eLearning to students with various disabilities?
- What accommodations are presently being made for students with disabilities?
- Are there differences between English and French speaking institutions?
- What are the barriers?
- What are good solutions?

In order to find out more about what students with disabilities experience using eLearning in colleges and universities across Canada, the research team conducted 22 key informant interviews with individuals from five groups:

1. students with disabilities
2. disability service providers on campus
3. faculty who have used eLearning and have taught students with disabilities using eLearning
4. eLearning specialists on campus
5. others involved in eLearning, including vendors of post-secondary ePublishing materials

Like some of the other Dis-IT research themes, the eLearning researchers had difficulty getting interviews with industry representatives.

"We called lots of them, but it didn't work out very well. They were too busy. They didn't know about company policy on these matters and so on. Basically our story about engaging business is the same as that of many of the themes. They basically said that accessibility was not a high priority for them. It didn't make any money."

Fichten and the other members of the eLearning research team now advise university and college faculty to inform publishers that they will only adopt a book if the publisher provides it in accessible formats.

The information from the key informant interviews was used to develop web-based surveys in English and French. The surveys were completed by 245 students with disabilities, 77 campus-based disability service providers, 39 professors, and 45 eLearning specialists. Jennison Asuncion (Adaptech Research Network) provided an overview of the findings from the 245 students.

> Two-thirds were female and one-third male. The mean age was 27 with a range of 19 to 59 years. Most (60 percent) were university students. All provinces except Prince Edward Island and the Territories were represented.

When the students were asked to self-identify their disabilities and impairments, the top five were:

1. Learning disabilities
2. ADD and ADHD
3. Psychological and mental health disabilities and impairments
4. Mobility impairments
5. Health or medically related impairments

Asuncion pointed out that 44 percent of the participants had more than one impairment or disability. He also noted that the research team had not yet analysed its data for individual disability groups, but that was part of the future research plan.

When the students were asked to rank the accessibility and the inaccessibility of 18 different types of eLearning technologies, the top five ranked most accessible by the entire sample were email, course-related files in Word or PowerPoint, WebCT or Blackboard, course web pages, and in-class presentations using PowerPoint. The top five least accessible forms of eLearning were videoconferencing, live voice-based chat, online audio recordings of lectures, online content using Flash, and CD-ROMs used in labs.

The survey provided an open-ended opportunity for students to describe the benefits of eLearning to them. Asuncion reported that the most frequent response was "availability of online course notes" (40%). Other common responses were "helps learning and academic success" (21%), "helps understand course material" and "ability to work at one's own pace."

Asuncion explained that the survey also asked the students to identify problems they had encountered using eLearning.

> "Inaccessibility of websites and course management systems was the highest ranked, followed by technical problems and poor use of eLearning by Professors—which is an interesting one which we'll want to dig into our data a little deeper. Difficulty connecting to websites and course management systems was also sited as a big problem."

Asuncion also said that when asked if they had found solutions to these problems, "67 percent of the students told us that at least one of the problems they reported was unresolved."

Asuncion concluded by saying that "eLearning has many benefits for students with disabilities. Many forms of eLearning are, thankfully, accessible, but it does vary by disability and impairment type, and we'll be able to figure that piece out." He said that the research team's recommendations will include:

- universal instructional design is key to the success of accessibility eLearning
- better availability of needed technology on and off campus
- better technical support
- training in the use of adaptive technology and eLearning.

Workplace Research Theme: Aldred Neufeldt, Denise Buchner and Monica Ackermann

Aldred Neufeldt (University of Calgary) began the presentation of Dis-IT's workplace research theme's findings by outlining the goals and focus of the research.

> "One goal was to examine workplace adaptations to support employment of people with disabilities with particular attention role of ICT's. We were particularly focusing on examples of good practice. There are lots of horror stories that could be told, and we could focus on horror stories, but we've decided that if we're going to learn something lets take a look at the good practices, and so we've given particular attention there. We had a second question which was to determine whether, and if so how, employers might capitalize on such innovations to achieve other objectives. This is one of Steve Jacobs' themes, that something good for disabled people ought to be good for lots of other folk and so we were interested in taking a look at that."

Neufeldt said the research team conducted a literature review on the meaning and impact of the concepts of "the new economy" and "knowledge economy." These terms simply

mean that employment is now being heavily affected by the use of new information technologies. Neufeldt explained that in the workplace, the study focused on what he referred to as both "hard technologies" and "soft technologies."

> "Hard technologies were equipment and adaptations used to support employees in the workplace. Included within the definition of hard technologies, were software that makes those technologies accessible. So, our use of the term soft technologies doesn't refer to software, it refers rather to modifications to make work feasible, such as flexible work time, job carving and so on."

Neufeldt explained that these two categories were identified because the process of the research revealed that "hard technology" adaptations rarely occurred in the workplace without "soft technology" adaptations accompanying them. "Almost invariably these were flipsides of the same issue, and of course that's how it should be, if we're really going to have a diverse workforce, you have to think about ways that we use time."

The research team had intended to interview 60 to 70 key informants, then conduct 20 interviews with companies that were good practice examples, and then drill down to individual employees with disabilities there to find out what their situations were. However, the researchers faced more difficulty identifying the kinds of employers than they had anticipated. Neufeldt said, "As per the last conference and the panel that we did with Gary Birch's group, it was incredibly difficult to find the employers in the first place. In fact, we did a whole analysis of that and there's a paper on that…In the end, of course, with persistence, we did find a good number and we did find some excellent examples."

Neufeldt explained that the examples used in the research came mostly from Central and Western Canada, and focused on employers in "the government service sector, financial services, ICT, non-governmental organizations, oil and gas industry, education, financial service sector, and some others."

Aldred Neufeldt, along with Denise Buchner (University of Calgary) and Monica Ackermann (Assistive Vocational Technology Associates, York University), presented a number of case studies and analysed them for common themes in the context of the new economy and the role of technology in the employment of people with disabilities. The first theme described was a debate over revolution versus evolution. "There is a debate about 'is the new economy's impact on employing people with disabilities an evolution or revolution?' You can argue it either way, there are some, certainly some revolutionary parts of it, but there certainly are also evolutionary parts."

The second theme Neufeldt discussed was barriers created by information communication technologies.

> "The barriers introduced to employment by ICT's are virtual, they're not structural. The structural ones are still there to be dealt with, but the virtual ones are the new ones. And as you've seen from the two cases, this notion of universal design is starting to appear. The financial services sector is saying, 'We want to have software that is transportable across all platforms,' and it's not there yet, but we're going to be paying attention to that."

The third theme was the phenomenon of mixing and matching technologies.

> "The mixing and matching of technologies is probably the innovation. Where at one time any one of these technologies was the innovation, nowadays they're sort of common place and what is important is mixing and matching these to fit the individual situation."

The fourth theme was the movement of adaptive technologies towards becoming more mainstream.

> "We're getting to this, moving back and forth, accessible technologies becoming mainstream and mainstream technologies becoming adapted for accessibility. That's happening in quite a few places."

The fifth theme discussed was the trend toward broadening of opportunities for people with disabilities and the tendency for best practice employers to adopt a 'disability blind' perspective. "They take the diversity philosophy, "we'll do whatever it takes to make a person employable and be able to do their job." That said, the flipside of that is the problems we had in getting into employers in the first place."

The final theme Neufeldt identified in best practices was "the importance of buy-in from senior leadership in places of employment, that's critical, and in good practice sites it was also important for co-workers to participate in making the workplace receptive."

Neufeldt concluded the report by mentioning the next steps for their research, including acquiring feedback on their findings from the disability organizations that had participated in the initial phase of the research along with publishing the results.

eDemocracy Theme: Deborah Stienstra and Christine Kelly

Deborah Stienstra (University of Manitoba) described the purpose of Dis-IT's eDemocracy research as "trying to understand, generally, how we can use information and communications technologies to ensure the democratic participation of all citizens, including citizens with disabilities." The research team defined eDemocracy as "that basket of 'e' terms where democratic participation is facilitated through information and communications technologies (ICT)." It defined eConsultation as the use of ICT "as one way to interact and get consultation or input from populations and citizens within government."

The research team looked at the research topic from two angles:

- How do governments use information and communications technologies for their policy development, and to what extent do they promote democratic participation or inclusive and accessible technologies?
- How do disability organizations in Canada use information and communications technologies to engage their memberships in policy development?

A variety of organizations of people with disabilities were involved, including; the Canadian Association for Community Living, the Council of Canadians with Disabilities, Alliance for Equality of Blind Canadians, and the Canadian Association of Independent Living Centres.

There were three main activities in the eDemocracy research:

1. Case studies of two federal government e-consultations
2. Interviews with Internet users with disabilities about e-consultations
3. Development and evaluation of the Disability-Related Policy in Canada website

Case Studies of eConsultations

The two case studies were the former Liberal government's e-consultation on its Innovation Strategy and the e-consultation on the disability portion of the Canada Pension Plan. Stienstra noted that the findings of the case studies were published in the journal *Disability Studies Quarterly* in 2005.

The researchers conducted key informant interviews with government officials and leaders in the disability movement. They also reviewed documents and the websites from each of the e-consultations. After reviewing all this data, Stienstra said they found that "neither e-consultation would win an accessibility award," but the Canada Pension Plan e-

consultation, which was targeted at people with disabilities was more accessible than the Innovation Strategy e-consultation.

Three main conclusions were drawn from this part of the eDemocracy research. First, Stienstra explained, accessibility is not the same thing as usability.

> "Even if a web site is technically accessible, it doesn't necessarily mean it's usable by all people. It's important to always remember that technical access – things like website guidelines – don't address broader, more structural issues that may relate to issues of privacy, issues of comfort, issues of appropriate supports to access it, issues of poverty, etc."

The second conclusion was that technical accessibility is not enough to bring Canadians with disabilities into e-consultations. Stienstra noted that "guidelines like the Common Look and Feel guidelines for the federal government websites don't cover all disabilities; they don't cover all the issues that people with disabilities require to bring them into it." Finally, the research team concluded that including people with disabilities in e-consultations is simply good public policy.

Interviews with Internet Users with Disabilities

During 2005, the eDemocracy research team conducted interviews about e-consultations with 50 Internet users with disabilities. The interviews dealt with questions of their access to and familiarity with computers, their knowledge and feelings about e-consultations, as well as their involvement with government. Christine Kelly ([University of Manitoba](#)) explained that these interviews led to the development of a set of guidelines for conducting effective e-consultations for people with disabilities. These guidelines were grouped under three broad areas:

1. technical access
2. inclusion
3. accountability

Kelly described guidelines for technical access as things like web accessibility standards, as well as non-technical supports/flexibility, such as being able to save a contribution and return a number of times to complete it. As examples of guidelines for inclusion, Kelly said people with disabilities should be involved in the planning of e-consultations, and e-consultations should be advertised in multiple media. "It was clear that the e-consultations we looked at in the case studies didn't reach a large group of the population. Hardly anybody we interviewed knew about those e-consultations."

For accountability, Kelly said, "When people make a contribution to an e-Consultation, they want to know that it was received, and that it's going to be incorporated. They don't just want to send in an email or post a message on a message board and have no idea what happens to it. And they want the final report to be posted."

e-Democracy Website: www.disabilitypolicy.ca

The third part of Dis-IT's eDemocracy research was the development and evaluation of www.disabilitypolicy.ca, a web site on disability-related policy in Canada. Stienstra explained that this research was concerned with "how the disability community uses information technologies to engage its own members in policy development."

The web site initially began from an initiative of the Council of Canadians with Disabilities and the Canadian Association for Community Living funded by the Voluntary Sector Initiative. Its purpose was to create capacity within the disability community to talk about some of the key policy initiatives at the federal level, building on policy statements that federal, provincial, and territorial ministers had made concerning three priority areas: employment, disability-related supports, and income.

When that project ended, Stienstra said that Dis-IT's eDemocracy theme "realized that there might be a way to transfer some of that knowledge and capacity building online, so we created this website."

The website was developed with three goals:

- To build the capacity of people with disabilities and organizations of people with disabilities to respond effectively to disability policy in Canada
- To be jointly owned by many organizations of people with disabilities for the purpose of knowledge sharing, communication and mobilization
- To facilitate research and knowledge dissemination about how information technologies can be used within the disability community in eDemocracy initiatives.

Stienstra said, "this initiative illustrated to us how much work is required to engage the disability community in using information technologies effectively for policy development. We're not nearly there yet and it's going to take some significant work and the moments have to be right and it has to mesh with the policy agenda which changes incredibly rapidly, especially when you have a federal government election in the middle of it all." More information about www.disabilitypolicy.ca was presented during the October 26 afternoon session on engaging communities in accessible IT.

In closing, Stienstra took some time to talk about an upcoming special issue of the journal *The Information Society* that will focus on accessible and inclusive information technology. It is guest edited by Gary Annable, Gerard Goggin, and Deborah Stienstra and will feature the following six articles written by Dis-IT researchers and others who have been involved in Dis-IT's activities and previous events:

- A Three-Way Dance: The Global Public Good and Accessibility in Information Technologies (Deborah Stienstra, James Watzke, and Gary Birch)
- The Business of Digital Disability (Gerard Goggin and Christopher Newell)
- Engaging the Business/Industrial Sector in Accessibility Research: Lessons in Bridge Building (Aldred H. Neufeldt, James Watzke, Gary Birch, and Denise Buchner)
- Accessibility and Product Ecologies (Jim Tobias)
- Crossing the Digital Divide: Possibilities for Influencing the Private Sector Business Case (Helen Maskery)
- Working for Barrier Removal in the ICT Area: Creating a More Accessible and Inclusive Canada (April D'Aubin)

Stienstra said that conference participants will be advised when this special issue is published in spring 2007.

QUESTION AND ANSWER PERIOD:

Jim Tobias ([Inclusive Technologies](#)) commented first on the Retail and Public Services research team's presentation:

> "I was fascinated by the Retail and Public Services research. It's absolutely amazing; it needs the widest possible dissemination. Those videos need to be shown to tens of thousands of developers and marketers because, for exactly the reason you say, it's not clear to them what our issue is and what it is we're trying to get across to them. Those videos do a great job of it.

> Speaking to that point that you raised about the lack of responsiveness from industry, my question is, to the extent that your project is ongoing, what are your plans to improve that liaison and where do you see potential openings?"

Gary Birch elaborated on the research team's future plans and strategies for engaging industry.

> "We're focusing on the wireless industry itself, and primarily on the handset makers, the companies that make the devices. It's a very painful and expensive and

hard to fund process of building relationships with these companies, so that we can engage them in discussion. We engage them in the discussions, show them the videos and slowly get them out of their kind of rigid framework that they have around disability and inclusion and accessibility and start to show them that these things probably aren't very tough, they just have to be thought about at the concept stage and built into their thinking as they're bringing new products and services out…It's helping them identify why it makes sense for their company to get more involved and it ranges a little bit from a business case through good corporate citizenship through staying ahead of regulation."

Jim Roots asked Gary Birch about the selection of specific disabilities, specifically upper mobility, and visual impairments over others in the retail theme's focus.

"There were no Deaf or hard of hearing people included. I'm wondering why there was not consultation with the deaf or hard of hearing community? I'm noticing that your examples also apply to us. For example, when you're talking about going into a restaurant, there's always the communication barrier, even if you want to get a cup of coffee. Deaf people have that experience. We go into restaurants, fast food for example, kiosks. You have to come up, you have to point, and they ask 'what do you want in your hamburger? Do you want the large super size?' There's all kinds of miscommunication. This PAT device know would be wonderful and deaf people can use that to evaluate accessibility."

Gary Birch responded to Roots' question by assuring him that these were not the only groups included in the development of the PAT tool.

"When it came to the focus groups and the simulation studies, we had to make a decision for resource reasons. So we did focus on those two disability groups, knowing full well that there were many other disability groups, including the deaf and hard of hearing that could likely make really good use of this technology as well. So really, that's just outstanding research that has to be done. When we developed the PAT, the tool to use in the communities we used people with disabilities from a much wider range of groups of disabilities, including those with deaf and hard of hearing disabilities."

Roots asked Birch to explain why the simulations did not include research on how these technologies could be useful for the deaf and hard of hearing community as well.

"When you talk about cell phones in particular and the compatibility to the PAT, why not approach RIM? Deaf and hard of hearing people love the Blackberry

device. All three Deaf participants here have the Blackberry on us; we're all currently using that. So if RIM was involved in the assessment you'd also have deaf people benefiting widely by that application."

Birch reassured him that the research team was currently engaged with RIM and that they hoped the future would bring fruitful innovations out the partnership.

"Its very clear in my mind as we go forward and engage industries, I want to engage them at their concept level when they're first coming out with a new concept around a product and to ensure that they have the focus groups and interaction, the actual testing of prototypes with the full range of persons with disabilities, whether they're deaf or blind, to make sure that they're getting that input from across those constituencies, so that when they bring their device or service out, those things are all covered."

Steve Jacobs (IDEAL Group, Inc.) also commented the applicability of wireless technology to control technology in the home. He stated that through the internet, PDA's can remotely control appliances in homes. For example he is able to remotely control a camera in his house. He then asked Birch "How do you see this technology helping solve the problems that you're looking at and is that going to be part of future research?"

Birch agreed that this kind of technology is likely to be the means through which their ideas for using technology to create a more accessible retail environment will be realized.

"Part of the trick of this is to work alongside and keep up with the industry itself and find out what wireless technologies, are going to be used for these services. We're not trying to build special services here. We're just trying to make sure that, as these services come on line, they're enabling tools for people with disabilities as well."

Friday, October 27, 2006

PANEL DISCUSSION: "Creating a climate for accessible ICT: Telecommunications as a case study."

Moderator: Jim Tobias (Inclusive Technologies)

Panelists: Lana Kerzner (ARCH Disability Law Centre), Bill Abbott (Bell Canada), Henry Vlug (Canadian Association of the Deaf), Gary Birch (Neil Squire Society)

In February 2006, the Canadian Radio-television and Telecommunications Commission (CRTC) ordered Bell Canada, Telus, and Canada's other "incumbent local exchange carrier" (ILEC) telephone companies to spend $32 million improving the accessibility of telecommunications services in Canada. That decision was one result of a 2002 CRTC decision that capped the rates the ILEC companies could charge for local telephone services. The purpose of that price cap was to encourage competition by keeping local telephone rates artificially high so that new entrants, who would need to charge high rates to recoup their initial investments, could not be undercut by the established ILEC companies. ILEC's that could have charged less than the price cap were required to put their operational savings into "deferral accounts" rather than passing those savings on to consumers through lower rates.

In 2004, the CRTC initiated a review and public consultation to determine how the funds held in the ILEC companies' deferral accounts should be spent. By 2006, over $652 million had been set aside in those accounts, mostly held by Bell Canada ($481 million) and Telus ($125 million). After reviewing a variety of proposals from ILECs, new companies, mainstream consumer groups, and disability advocacy organizations, the CRTC directed the ILEC companies to spend at least five percent ($32 million) of their deferral account funds improving the accessibility of telecommunications services for persons with disabilities, and the remainder on expanding high-speed Internet services to rural and remote communities (CRTC Telecom Decision 2006-9). The companies were directed to submit proposals to the CRTC by June 30, 2006 (later extended to September 1, 2006).

This initiative, which is informally known as the "deferral account decision," also ordered the ILEC companies to consult with organizations of people with disabilities in the development of their proposals to improve accessibility. Representatives of national disability advocacy organizations formed a working group in the spring of 2006, and spent two days meeting in Toronto in June 2006, first amongst themselves then with representatives of the ILEC companies. The working group subsequently formed a smaller "technical task force" composed of working group members with the greatest technical expertise. That task force held several conference calls with the ILEC companies during the summer of 2006.

This panel discussed the deferral account decision as well as other regulatory and non-regulatory strategies for improving telecommunications accessibility as a case study for working towards more accessible and inclusive ICT.

Panelist: Lana Kerzner (ARCH Disability Law Centre)

Kerzner explained that the CRTC's "public notice" on the deferral accounts did not specifically deal with disability until the CRTC received submissions from ARCH, the Canadian Association of the Deaf, and individuals with disabilities.

> "ARCH had been advocating for the interests of people with disabilities in other proceedings before the CRTC. The bottom line is that telecommunications weren't then and still are not accessible to many persons with disabilities. Our submissions have always focused on the joint legal obligation shared by the CRTC and the telecommunications industry to ensure that all telecommunications products and services are accessible to persons with disabilities. When we saw the public notice about the deferral account funds, we thought it would be a strategic opportunity to strongly recommend that the funds be allocated to initiatives to improve accessibility for persons with disabilities. Our argument was grounded in the Charter of Rights and Freedoms, the equality provision in particular, and the duty to ensure accessible telecommunications for all Canadians."

Kerzner explained that ARCH created a detailed submission outlining the allocation of funds for accessibility, and stressed that the deferral accounts were only one part of the efforts required to achieve accessible telecommunications in Canada.

> "We argued that the deferral account funds would not be the only initiative required to meet the legal obligations. The allocation of these funds would be a strategic opportunity and a major initiative to help move accessibility along. Our submission not only called for the allocation of funds for accessibility, but it also called for the companies to consult with persons with disabilities and disability advocacy organizations in coming up with proposals. We also made it clear that because maintaining accessibility in telecommunications is an ongoing process, expenditures that the telephone companies make regarding disability initiatives must also be ongoing and not limited to whatever funds might be allocated in the context of the deferral account proceeding."

Kerzner explained that the 2006 deferral account decision had two important aspects from a disability perspective.

> "One was that a minimum – and that's an important word that gets missed or overlooked – a minimum of five percent of the deferral account funds were to be spent on accessibility. The other very important aspect of the decision is that the incumbent local exchange carriers (ILEC's), which are the major local telephone companies, were directed to – and I'm using the words of the CRTC decision – they were directed to 'consult and work with the appropriate advocacy organizations for

persons with disabilities, prior to submitting proposals for approval.' As a result, a number of disability advocacy organizations got together and the ILEC's also took some initiatives."

Kerzner concluded her summary of the deferral accounts proceeding by noting, "both Bell Canada and mainstream consumer groups have appealed this decision on different grounds and it is now under appeal at the federal court. It's still up in the air as to how this is going to play out."

Panelist: Bill Abbott ([Bell Canada](#))

Moderator Jim Tobias asked Bill Abbott, a regulatory lawyer with Bell Canada, to begin his opening comments by answering the question "How significant an opportunity do you think the CRTC's deferral account decision offers for improving the accessibility of telecom in Canada?"

Abbott said that it was a significant opportunity, but added, "I do not believe that regulatory action is necessarily the best answer or the only answer." Abbott viewed the CRTC's decision as an opportunity for telecommunication companies to re-focus regarding accessibility issues.

> "I think it was an important watershed in the sense that Bell Canada and other telecommunications companies have been past leaders in accessibility on a number of fronts, certainly through the 1970's and 80's. For a variety of corporate and external reasons, there was not the same focus on accessibility in the 1990's. The deferral account proceeding was a good opportunity to sort of re-focus on what is a very significant issue."

Abbott stated that disability issues had also been ignored by government, and that advocates from the disability community had not used effective advocacy strategies in dealing with Bell Canada.

> "I think it's fair to say that just about everybody has been 'missing in action' on this file over the past ten years. It has not been the corporate priority that it should be, it has not been the priority before the CRTC that it should be. And at the risk of offending individuals in the room, I don't think it has been pursued appropriately by advocates for the disabled community in relation to companies like Bell Canada. Disability issues have just not been on our map. It wasn't in the business planning, it wasn't in the budget, it wasn't in the technology development, and it needs to be there."

Abbott stated that Bell Canada's submission about how to spend its deferral account funds proposed several positive changes regarding accessibility for people with disabilities. "2007 will be a good year for accessibility as far as the implementation of video relay service, improved customer service for various disabled groups; voice activated dialling, and a Bell accessibility fund." Abbott added that the deferral account decision has stimulated other accessibility initiatives at Bell Canada.

> "There's a lot very productive stuff happening now that was not and cannot be ordered by the regulator. For example, Bell University Labs, Bell Canada's research funding arm which has relationships with approximately 30 Canadian universities, is actively looking for research proposals relating to accessible telecommunications. I know that they've already received a number of proposals. In the past, accessibility was not much of a priority for them; now it is."

Abbott concluded by stressing that he felt building relationships is the key to moving the accessibility agenda forward. He described some of the challenges that occurred during meetings held between the ILEC companies and disability organizations following the deferral account decision.

> "The consultation resulting from the deferral account decision was a good starting point to start building some relationships. If it's going to work, it's got to be a long term process and we have to get to know each other. My feeling after the consultation process was that we were talking past each other. Regarding telecommunications, the disabled community and the corporate community don't really understand each other that well. We haven't been that engaged, with the exception of the groups that we deal with on a regular basis for the Bell message relay service. It's necessary to understand each other in order to make things go forward."

Panelist: Henry Vlug ([Canadian Association of the Deaf](#))

In his opening comments, Henry Vlug, a lawyer who represents deaf Canadians, agreed with Abbott that the 1970's and 80's were a better time for accessibility, but questioned the intentions of the telecommunications companies. "Bell Canada was doing well and used to be a leader in the 70's and 80's because CRTC told them to do so, not necessarily because the phone companies were well intentioned."

Describing the differences between Canada and the United States, Vlug echoed that at one point Canada was a leader in message relay services but is now lagging behind.

> "The relay services in Canada were set up well before those in the United States, which initiated their services after. Since that time they've well exceeded us, and we are lagging behind, desperately chasing those services. It's been incredibly frustrating in Canada."

Vlug said the deferral account decision was a great opportunity to increase the accessibility of telecommunications but expressed concern regarding about what might result. "My experience so far is that the phone companies are not necessarily seizing the moment, or taking that opportunity seriously." To support this statement, Vlug described the consultations that occurred between the disability community and the telecommunication companies in mid-2006.

> "The disability community set up a group to work with the phone companies on the specific details. We had a two day meeting in Toronto. The first day the disability organizations met, on the second day the phone companies joined in and we began the discussion. When the phone companies joined, they said 'sorry, we've already decided [the accessibility initiatives they were going to propose to the CRTC]. There's nothing you can do; we can't change what we've already set up.' I don't think that's what we would call consultation and it's not a good use of the opportunity. I'm hoping that that will change, however. If Bell Canada and other phone companies want us to work with them, then they have to work with us."

Vlug then pointed out that Bell was not the only company reacting this way and described a similar situation regarding the deaf community and Telus in British Columbia. "Telus called a consultation meeting with the deaf community in BC. It's screwed up completely; the whole Telus consultation in BC is not going well. It's extremely frustrating and that's not new to report."

Concluding his opening comments, Vlug stated that the negative experiences the deaf community has encountered with Bell's relay service advisory committee provokes human rights complaints and lawsuits.

> "Bell's relay service advisory committee is not an effective group and this has caused myself and other advocates across the country to give up on it. They call a meeting once or twice a year, just to allow the phone companies an opportunity to report to the deaf community what they're doing, and that's where the discussion ends. It's not about 'how can we improve or incorporate your suggestions?' It is committees like that and those experiences that caused us to go to human rights, the courts, and CRTC. I would prefer not to go that route, but what options do we have?"

Panelist: Gary Birch (the Neil Squire Society)

Gary Birch, an engineer and Executive Director of the Neil Squire Society, echoed some of Henry Vlug's comments about the consultations between the disability community and the telephone companies. Overall, however, he presented a more positive impression of the outcomes to date. Birch agreed with Vlug that the two day meeting in Toronto was frustrating.

> "As soon as we got in the room with the telephone companies, it was clear that although there might be a will to do some interesting stuff, they didn't want to talk about it because of proprietary issues and it was a competitive environment. It was really difficult to put a national agenda together."

Ultimately, however, Birch saw the experience – particularly the meeting of the disability advocacy organizations the day before the meeting with the phone companies – as a good thing for the disability community.

> "We [the disability advocacy organizations], by getting around the table, discussing our different priorities and what we were trying to accomplish was particularly useful. It allowed for us to coordinate our efforts and to speak with one voice as much as possible. It was a catalyst to bring us together and to focus on this issue. It helped us from a national perspective, around the consumer movement, to try to get a handle on what the cross cutting themes we all have in common are so that we can push forward."

Birch stressed the importance of regulation by citing the impacts that Section 255 of the 1996 Telecommunications Act, and section 508 of the Rehabilitation Act have had in the US, both on companies that provide telecommunications services as well as companies that manufacturer telecommunications equipment. He said, "I wish we didn't have to have regulation, but it's certainly one of the levers out there that causes some action to happen around accessibility. In the States the regulators are pointing to both the service providers and the manufacturers." In contrast, Birch stated "the regulation in Canada seems to be focused primarily or totally on the service providers" and are therefore less successful in achieving accessibility. Birch said that in Canada "we have no mandatory procurement regulations around accessibility. Even though the tools to make accessible procurement do exist, there's no political will to make it a requirement." As an example, Birch discussed a frustrating experience dealing with service providers and manufacturers.

> "There's a finger pointing that goes on between the telephone companies that are the service providers and the manufacturers of the handsets and other end

> equipment that people use. You have to get both involved and engaged. What often happens is service providers say 'that's not really our problem. It's because the handset manufacturers don't provide the accessibility features within their equipment. There's really not much we can do.' But when you talk to the manufacturers of the handsets, they say that they build them depending upon the specifications that the service providers ask for."

Birch concluded by agreeing with Vlug that he felt the telecommunication companies had largely made up their minds about what needed to be done prior to the consultations with the disability community. However, he was more optimistic than Vlug regarding the success of the June 2006 meeting in Toronto.

> "Through our discussions they were at least open to what we were trying to put forward. I believe they did respond to some extent in a way that tried to encompass the direction that we wanted them to go; this is reflected in some of the proposals that went forward. So, although it was a very frustrating exercise, I think we did get them to move from their original position."

DISCUSSION:

After each panelist provided opening comments, moderator Jim Tobias asked them to consider two specific questions:

- "What is it about the deferral account decision that offers an opportunity to improve how accessible telecom is practiced?"
- "How can it improve accessible telecommunications, programmatically and organizationally, in Canada?"

Bill Abbott stated that the major flaw of the deferral account process was that "it was the wrong venue to do this sort of thing." Abbott suggested that there were key players missing who are necessary to tackle the larger issues that the disability working group and task force brought to the table. "You didn't even have all the telephone companies there, only the major former monopoly telephone companies." He said that the reason that telecommunications is more accessible in the USA is because "the law applies to all the key players; it affects manufacturers, distributors, as well as procurement." In order to address these larger issues Abbott suggested that there needed to be more telephone companies, equipment manufacturers, and the Canadian Standards Association present. He suggested that [Industry Canada](#) may be a place where these issues can be addressed since the federal government has the ability to gather the appropriate players and make them act. Abbott

suggested that only imposing accessibility requirements on some companies gives their competitors a business advantage.

Abbott agreed that the consultation between the disability community and the telephone companies was a frustrating experience.

> "We had a very specific agenda, we needed concrete ideas that we could file in a few months in order to roll out in 2007. We turned up at the meeting saying, 'what do you want?' We had some ideas that were really enhancements of existing services, to sort of prime the pump. The response, and I'm summarizing at a very high level here, was, 'what've you got?' We don't really know what people want, and the sort of technologies that are available out there. Many of the telco's are not specialists in that."

Abbott reiterated that the companies were expecting concrete ideas regarding accessible technology that could be implemented for 2007. Instead, however, he said, "we came away with high level principles and a clear idea of where accessible technology should be in ten or twenty years. But as far as what I could file next year, I got nothing."

On a positive and reflective note, Abbott described what was learned from the consultation. He said that, in retrospect, the companies "came at it from the wrong end." He said, "relationships that have not existed for quite some time have to be rebuilt and there has to be an understanding of the strengths and weaknesses of each group and how they work. I think there's a misunderstanding of how each group works and what their jurisdictions are." Abbott stated that he believes having Bell Canada's technical staff collaborate with the University of Toronto's Adaptive Technology Resource Centre ([ATRC](#)) will be a useful in understanding what adaptive technology exists and how that technology can be incorporated to produce accessible telecommunication products. At the time of the consultations with the disability groups, Abbott believed that the groups would be presenting information about adaptive technology. Looking back, however, he acknowledged that was an unrealistic expectation.

Abbott argued that regulation is not the most effective method for producing accessible technology. He said, "it certainly can get things going, but it's not the answer. As long as accessibility continues to be largely a regulatory issue, it is not going to get the momentum it needs. When it becomes a business issue, that's when there's going to be real success." Abbott stated that making a business case for accessibility is a far more effective method.

> "When the technology development and marketing people in companies understand that there's a positive business plan behind this, and that it's good for

the disability community as well as everyone else, that's when things will really take off. I think as long as it's solely a regulatory issue, it's going to develop slowly."

In response, Gary Birch stated, "regulation does have an important role, but ideally we would really like to get away from that." He agreed with Abbott and said that building a business case for accessibility that makes sense is a more effective method. Birch explained that he has been attempting to build a business case and develop relationships with companies but has found it incredibly difficult.

> "Industry won't necessarily do all the profitable things; they'll do the most profitable things. We've been able to demonstrate that there might be a profitable business case to go after here, but it hasn't been the top one, two, or three priorities and hence it gets pushed to the back."

Birch reinforced the need to build relationships and explained a relationship he helped develop with cell phone manufacturer Nokia "eventually led into a fee-for-service contract where we're now building an accessory for a line of their phones that will make it accessible for people with very severe mobility impairments." Birch is pleased with this relationship, but emphasized that it is just a starting point.

> "They still don't really get it in terms of the big picture of where we'd like to go. I think they wanted to do it partly because it was the right thing to do and partly because I think they felt it would help them avoid regulation. They're a long way from that vision of involving disability groups and experts in the planning and the concept stage when products and services are first getting considered. These relationships take a long time to build, and they're very expensive and time consuming to create."

Birch then presented a promising method of creating a business case for accessibility that he had been recently exploring.

> "I think the way to grab the attention of the real decision makers within industry is if we can get them far enough along to do some controlled demonstrations on a public scale. In doing so, we can show what can be done when you build inclusive, accessible technology. People will not only see how this technology enables people with disabilities to utilize that technology, but they will begin to see the other spin-off benefits and usability in general, about how everybody likes these kinds of features. You can talk about it and describe it, but until they really see what can really happen in fairly concrete terms, that's when I've seen the most excitement happen."

Looking at the larger picture, Birch concluded by saying that "We just can't leave the conversation by saying we need to build a better business case. I realize that's part of the discussion, but we've got to get more sophisticated with that somehow. This is what we've been trying to do and it doesn't get traction."

Henry Vlug stated that the USA has been more successful in producing accessible technology because of the relationships that American companies have with the American disability community. Vlug commented that the US is far more advanced and if Canadian companies are looking for examples of accessible technology they should look to them.

He said that one factor which contributes to the successes in the United States is that U.S. companies and regulatory bodies employ more people with disabilities than their Canadian counterparts.

> "How many Deaf people are working in Bell Canada? I think there are a few who do data entry or janitorial, but that's probably it. Do you have any lawyers working for Bell Canada who are Deaf? The same is true of CRTC; all their staff is able-bodied people, there are no disabled people or deaf people. However, when you look across the border, the phone companies have deaf people working in senior management, they have deaf people in charge of relay services, and there are several Deaf lawyers working for the Federal Communications Commission in the US."

Bill Abbott acknowledged that Bell Canada does not employ enough people with disabilities and people who are Deaf. He noted, however, that the company has cut thousands of jobs in the last five years. With the exception of call centres, he said, "we're just not hiring a lot of new people. It just happens to be part of the cycle that we're in."

Henry Vlug argued that message relay services are more effective in the U.S. because those services are provided by specialized relay companies rather than the phone companies themselves.

> "All the U.S. phone companies contribute into a fund. The phone companies themselves do not provide the relay services; that is done by separate relay companies. These companies provide the services, and then they charge back to the account that everybody has contributed into. The eight or nine video relay service (VRS) companies are also now competing with one another and improving their services so that more deaf people and hearing people will use their services, so they can bill the fund more frequently. They have a for-profit incentive built in. In Canada we don't have that set up. Instead we have to rely on CRTC to mandate and/or force the phone companies to do this, that and the next thing. The phone

companies will do whatever it is that they are regulated to do, but not necessarily anything more."

Lana Kerzner reminded the panelists of industry's and governments legal responsibilities to provide accessible telecommunications.

"It is not the responsibility of the disability community to present a business case for accessibility to happen. There is actually a fundamental legal right to have telecommunications accessible to persons with disabilities on a non-discriminatory basis. That emanates from Section 15 of the Charter of Rights and Freedoms, which is the section which guarantees equality. There are human rights laws which established the right to equal treatment in federal industry. There are also important sections of the Telecommunications Act that address unjust discrimination. The fundamental policy section of the Telecommunications Act is what the CRTC often relies upon in their decisions to ground their directions relating to accessibility. I believe that they relied on that in the deferral accounts decision."

Bill Abbott suggested that dialogue between companies' technology staff and researchers in accessible and adaptive technology may be one way of bridging the gap between industry and the disability community. He also felt that a lack of understanding of existing adaptive technology, on both sides, was a major cause of the frustration at the May 2006 meeting in Toronto. Money, he said, wasn't the issue.

"There's been a certain amount of talk about how more needs to be done; more money needs to be spent. In the context of the deferral account, we [Bell Canada] came to the table with $24 million dollars, and we could only get ideas for half of that. We need to develop the relationships and the understanding to figure out how to spend the money."

Abbott also noted that many of the ideas presented by organizations of people with disabilities related to hardware that the companies do not produce themselves.

"There were a lot of ideas around the table, but many of them related to areas that we have absolutely nothing to do with. I think it comes as a surprise to some people that we're not in the terminal equipment business. We're not in the phone business. We haven't built the thing you hold in your hand for about 40 years. They were deregulated 25, 30 years ago, and we are a very small part of the distribution. Future Shop sells a lot more phones than Bell Canada. And if you wanted to change the way they're built, you talk to Future Shop and not us."

QUESTION AND ANSWER PERIOD:

Marcia Cummings ([Rogers Communications Inc.](), [Alliance for Equality of Blind Canadians]()) challenged Bill Abbott's account of the June 2006 meeting between the disability working group and the ILEC companies.

> "Bill said that we didn't give them specifics. I was at the two day meeting in Toronto in June, and we did have a list of specifics at the end of day one. But we decided to hang onto it, to have it presented to the ILECs by the [disability community's technical task force], rather than do it in the context of the big disability working group. At that meeting we thought that we would present the high level material and see if the ILEC'S agreed with us on the six different areas that we chose where money should be spent."

After hearing Abbott's account that the companies were looking for specifics, she acknowledged that the disability community may have taken the wrong approach by not presenting those ideas at the June 2006 meeting. She noted, however, that most of the specific ideas that were subsequently presented to the ILEC companies by the technical task force did not end up in the ILECs' proposals to the CRTC. From her perspective it appeared that "Bell Canada had their minds made up and they weren't going to take any of our input."

Abbott agreed that Bell Canada did receive that list, but said that it lacked detail and was received too late to implement.

> "I think there's a misunderstanding about what was meant by 'specifics.' There's a detailed list of about 50 items but there are things on it like 'make 911 more accessible for the disabled.' I'm thinking how? Which groups? What technology? I guess we needed to be clear about what it was we needed. We needed to understand the technology, the cost, that sort of thing. I think there was also a timing issue. We did get the list but it was within two months of the deadline for filing our proposal to the CRTC. It was just too late for us to be able to develop anything at that point. Looking back on it we probably needed the list in February, long before we even started the consultations. I came to the file assuming that there'd be a long list of well worked out proposals and we'd just be sorting out which ones are 'keepers.' I didn't realize quite where we'd be starting from."

Gary Birch agreed that the tight timeframe was a "huge problem."

"Because of the time it takes within each company to move forward on these things, they had really made up their minds about what they were going to put forward when they met with the disability working group – or were very close to making up their minds – and really had very little time to consider other things. As a working group we were trying to take a more systemic approach – not that there weren't a few specifics that we knew needed addressing right away—but generally we were trying for solutions that were going to lead to longer term systemic solutions. That takes a lot more thinking and working out work plans, etc. which there just wasn't time or capacity to do."

Phyllis Gordon (ARCH Disability Law Centre) noted that the Canadian disability community needs to be concerned about the mainstream consumer organizations that are appealing the deferral account decision. Those organizations are arguing that the deferral account funds should be rebated to consumers who paid artificially high rates.

"A huge issue for this community is that the Consumers Association of Canada doesn't understand that disability is relevant to their constituency. They think an $80 rebate is more important than a concerted disability strategy or accessibility strategy. People have to realize we have a huge outreach [challenge] not just to the phone companies but to the country at large."

Gordon also agreed with Bill Abbott's earlier comment that the deferral account decision's accessibility goals are hampered because it has no affect on non-ILEC companies providing local telecommunications companies (e.g., Rogers, Shaw), nor companies that manufacture telecommunications equipment.

"It is critical that we bring in the manufacturers and the competitors. We had always seen the deferral accounts as just being a kick start. Regulation is essential to bringing in those players, and the regulation that's missing – the kind of frameworks that exist in the States and Europe dealing with standards and regulations and manufacturing and procurement policies – is at Industry Canada. Those aren't the things that the CRTC is going to deal with."

Kurt Lynn (Canadian Hard of Hearing Association) stated that regulation regarding accessible technology in Canada is necessary simply because of the low numbers of people with disabilities compared to the numbers in the USA. "We have 3 million hard of hearing people in Canada; the US has 30 million. A market of 30 million is a significantly more actionable market than a market of three million. Market dynamics will always drive business. You've already seen businesses will address old age faster than they will address

blindness or hearing deficits. To my way of thinking, regulation is an important way to bend capitalism to address human rights."

He noted, however, that regulation has shortcomings. "It puts the energy onto compliance rather than to innovation. We have to look to innovation to come from the regulatory bodies and, unfortunately, if we're concerned about companies acting slowly or about disability organizations acting slowly, government acts even more slowly."

Lynn also offered several reasons for what Bill Abbott described as the two groups "talking past each other."

> "We're very different organizations. Bell Canada is a behemoth of an organization that is tightly structured, has very specific business plans, has very specific operating goals, as are each of the various telephone companies. Disability organizations, we're not quite that crisp. In fairness, we went into those hearings ill prepared. We did not have the time to be prepared.
>
> We should have somehow found a way to defer it [the meetings] by a year because, in fact, it would have taken that long to prepare a reasonable proposal. So we were already somewhat doomed from the start. It was all we could pull together to act as one voice, or close to one voice, let alone to get down to the specifics of some of these proposals. So we were talking past one another and, in the context of a compliance-oriented meeting, I don't think we have any choice but to talk past one another. The issue where that kind of discussion has to take place is more on the operational level down. It needs to be in Bell Labs down with your product managers, not with the lawyers."

Gary Birch agreed with Lynn that regulation stifles creativity and innovation. In response to Abbott's suggestion that researchers involved with disability issues could be the bridge between the disability community and telephone companies, Birch said the disability community has limited time and resources to make this work and suggested that government and industry may need to fund the disability community's participation.

Bill Abbott stated that Bell Canada was unable to come up with plans for $12 million of its deferral account funds, and proposed that money be put into a fund (the Bell Accessibility Fund) that "we can spend over three, four years, giving us the time to work things out, to build the relationships, and to find the right answers beyond the answers already in the Bell proposal."

Abbott also echoed Lynn's and Birch's comments regarding regulation and innovation.

> "As far as relying on regulation and law, you can quote me: regulation does have an important role to play, but I think there's a real problem with relying too heavily on regulation. It's already been said that you can't regulate innovation. Alexander Graham Bell invented the telephone to help the deaf, not because he was regulated to do so but because he was an innovative guy. You have to create an environment for innovation. As long as this is a regulatory issue and companies are being told 'you have to do this,' there's going to be a certain amount of reluctance. When it becomes a business issue and you engage marketing and technology people, that's when it's really going to take off. That's why I'm quite interested in universal design because some of our technology people are talking to Jutta Treviranus at the University of Toronto's Adaptive Technology Research Centre and they came back and said 'this is really cool stuff. It's not only good for accessibility, it's just good design period; it makes it easier for everybody.' I think that will be the breakthrough idea."

Henry Vlug noted that only Bell Canada's and Telus's proposals for spending their deferral account funds included video relay services (VRS), which will lead to regional inequities. "If you live in Manitoba, Saskatchewan, or Atlantic Canada, too bad: you're not going to get VRS. One would think you'd have to have some kind of standardized service in Canada."

Deborah Stienstra ([University of Manitoba](#)) commented that when building bridges between industry and people with disabilities, it is important to not get stuck in the technical issues.

> "When we think about building bridges, we need to not get stuck in technical issues. I think there's a place for structural engineers in building bridges; there's a real important place for getting the infrastructure, the technical issues correct. But what I learned at the meetings in June and overall throughout this process, is that what we keep missing is the relationship piece. And the relationship piece doesn't just happen at the technical level. If we focus just on the technical level, we're going to miss a really important capacity building to have long-term conversations about the directions of regulation, about how to move things through a telecom review panel. If we don't continue to have conversations at a high level, not just at a technical level, but at a high sophisticated level between lawyers and political scientists and engineers, we're just not going to move it forward."

Stienstra asked Bill Abbott if Bell Canada was willing to financially support the disability community to develop its capacity to work collaboratively with industry.

> "To what extent did the working group and Bell Canada, in its leadership role with the ILECs, consider developing the mechanism for this? It seems to me what the disability organizations have said consistently is 'we don't have enough capacity right now. We don't have any resources to give to this.' Bell Canada has $12 million extra. How much of that is going to go into helping us with our capacity and our resource issues, to engage in an ongoing conversation with you? Not to solve these initial problems, but to what extent can we use this to move forward the bridge building exercise?"

Abbott did not directly answer Stienstra's question, but commented that some key players were missing during the consultations with the disability working group and technical task force.

> "The companies had the mid-level managers there and I think it's fair to say that the disability groups did as well. We didn't have the technology people on our side and the researchers on the other side who would be able to talk to us about what's possible and specific ideas that could be brought into fruition. In retrospect we also didn't have somebody like a VP from marketing or at least somebody with some serious budgeting [authority], to buy into the business model and to see the opportunities.
>
> You need a strategy that's not dependent on one proceeding and what's coming up next year. You need a strategy, basically a business plan like we have for so many other things. I'm just one guy in regulatory and you've got to get buy-in before you raise expectations. You have to get buy-in from a whole bunch of groups. Bell Canada was referred to as a behemoth. It's more like a leviathan. It has a whole bunch of little bits and to get anything to happen a bunch of those bits have to agree. I'm already sold on the accessibility issue but there's a lot of work to be done internally."

Group Discussions: Reflections on the lessons of Dis-IT

Groups: People with disabilities, government, industry and service providers

Conference participants were separated into four separate small group discussions for each of the Dis-IT Research Alliance's four non-academic stakeholder groups: people with disabilities, government, industry, and service providers. Each group was asked to discuss the following questions:

1. Yesterday's program included two sessions on findings from the Dis-IT Research Alliance's work. What one research finding do you think could be of most use to your community or group?
2. What is one new thing that you've learned at this conference?
3. To achieve the goal of accessible and inclusive information technology what one action do you think is most needed within your community?
4. What one action do you think is most possible within your community?

The small groups gathered together to report on the results of their discussions. Because of time constraints, most of the discussion focused on questions 3 and 4.

Government group

Dave Brown ([Human Resources and Social Development Canada](#)) spoke on behalf of the people who attended the government group. He focused on the last question from the four posed.

> "One action we think is most needed is clear accountability for existing regulations. We felt that we have some decent regulations and policies but they're not being followed within the government. Our wish list is to get it more accountable so we can hold that over both new groups and within the government to get action done."

Brown said that the action that is most possible within government is the creation of accessible forms.

Service Provider group

Maureen Hewlett ([University of Northern British Columbia](#)) and Joan Wolforth ([McGill University](#)) reported on the discussion from the service provider group. Wolforth said the one action most needed was improved transmission of information. She stated that service providers have difficulty keeping up with a rapidly moving field. This group concluded that there is a need to develop a framework that would improve the transmission of information.

Wolforth, who is also a member of the Canadian Association of Disability Service Providers in Post-secondary Education ([CADSPPE](#)), suggested one action most likely within CADSPPE was "organizing an AT subgroup where the people who actually do have expertise in the universities at the service provider level would begin with a fledgling group. This group would then expand out into other IT people in the university. There is a great deal to be gained from expanding out into expertise within communities. We have a

very concrete goal there to try and improve the environment and we will begin working on almost immediately on this initiative."

Hewlett concluded by stating the importance for "disability service providers to become knowledgeable about universal instructional design and work to have it pushed into curriculum. Talk to the computer science departments, marketing, business, and engineering. Give departmental workshops and learning modules on universal instructional design."

Industry group

Gary Birch (Neil Squire Society) reported on the discussion from the industry small group. The group identified three industry actions most needed to achieve accessible and inclusive information technology in response to the third question. The first was a need for corporate leaders that can champion accessibility within their companies. Secondly, Birch stated that bridging the gap between industry and people with disabilities requires industry to develop "a better understanding of what the needs of the disability community are and what their particular product or service can do for people with disabilities." The industry group's third action was the development of products with "open platforms which enable third party groups to develop accessibility solutions."

Birch emphasized, however, that the industry group felt that the original manufacturer of a product has a shared responsibility for making third-party solutions work.

> "Manufacturers can't simply put out a product and say 'good, there are small third party groups out there that will come up with [accessibility] solutions.' It really has to be proactively supported by industry to make things happen, particularly when you're looking at solutions that might affect the smaller user groups within the disability community."

Birch explained that the industry group decided to discuss what is most important to do first rather than answering question 4 ("what one action is most possible in your community or group?") They felt that the priority was identifying a process to allow companies in a variety of IT industries to develop a better understanding of the needs of people with disabilities.

> "The basic concept was that industry needs to develop a cross-cutting, inclusive kind of understanding of the disability market. Practical demonstrations can be really powerful. Demonstrations in the real world can show industry how a certain technology can be utilized by a range of people and, while it certainly will help

people with disabilities, they'll be surprised at how other users will find that those kinds of things are really useful to use as well."

Birch also reported that this group felt it was important for industry to be involved in the discussions that arise at conferences like Hard-Wiring Inclusion.

> "Something we have learned at Dis-IT, and would not always have the capacity or the resources to deal with, is that we have to help them [industry] to come to conferences like this. They need to know well ahead, and they have to understand the cost-benefit for them to be here. The bottom line is we need industry here. Industry needs to show up. We need to make that a priority."

People with Disabilities group

Roger Jones ([World Accessibility](#)) reported back for the disability group. This group recognized that people with disabilities are not a priority with industry. Collectively, the group came up with three ways to get business to produce accessible technology.

First, they decided that there is a communication barrier between industry and the disability community. Jones explained, "there is an onus on us as people with disabilities not to expect industry to come to us with solutions but rather that we have to be proactive." Jones explained that education is needed to bridge this gap. "People with disabilities need to start to understand the language of business and technology and if we could understand that language then we could communicate effectively. Jones stated that:

> "We should start training our people in technology as well as in business. It was pointed out that there are standards groups out there but we don't necessarily have people that we can put at the table that can speak regarding technology or business. We can start sending people to business schools or concentrating in those areas again so that we could communicate with industry."

Another technique to increase the development and production of accessible technology identified by this group was to develop relationships with small companies. Jones explained that by "targeting and working with smaller companies that specialize in certain types of technology, then perhaps they would grow with us as a community."

PANEL DISCUSSION: "Moving forward: Mobilizing knowledge for accessible/inclusive ICT"

Moderator: Jennison Asuncion ([Adaptech Research Network](#))

Panelists: Laurie Beachell (Council of Canadians with Disabilities), Gary Birch (Neil Squire Society), Dave Dougall (Research in Motion), Dave Brown (Human Resources and Social Development Canada), Claire Atherton (University of Manitoba - Disability Studies), Deborah Stienstra (University of Manitoba)

The members of this panel were asked to reflect on concrete ways to move forward what had been established through Dis-IT's research and the discussions that occurred during the conference.

Moderator Jennison Asuncion began the discussion by asking, "given the current context and climate, how do we sustain the momentum that this conference and the Dis-IT research itself has generated?"

Panelist: Laurie Beachell ([Council of Canadians with Disabilities](#))

Laurie Beachell discussed how a federal disability act could help to make accessible and inclusive ICT a reality. He began by emphasizing the challenges of working within the current federal political environment.

> "Moving anything forward in the current climate is extremely challenging because it is extremely unpredictable and unclear. As you know, when this new federal government was elected, it had certain priorities. As a community, we did not fit easily within those priorities. But there have been some indicators that they have an interest in disability. The clearest one was in the policy platform that committed to the establishment of a national disability act that would address issues around medical services, transportation, employment, housing, etc."

Beachell noted that there are contradictions in the Harper government's platform statement about a disability act, particularly because it addresses some issues that are within provincial rather than federal jurisdiction. Nevertheless, it was in the government's election platform and Beachell observed, "if there is anything this government wants to do, it wants to say 'we said we would do this and we did it.'"

The Council of Canadians with Disabilities (CCD) contracted Phyllis Gordon ([ARCH Disability Law Centre](#)) to develop a paper on the opportunities and challenges of a federal disability act. Although CCD does not necessarily support a federal disability act, and remains focused on investments in disability-related supports and the reduction of poverty, Beachell explained that a national disability act could be a useful tool in the area of technology.

"It has particular relevance to the whole area of technology and access. We are presenting as options things like a universal design accessibility centre within government that would be the knowledge base on new technologies, on new standards, on the capacity to remove barriers and create full access for people with disabilities. We talk about the creation of a Commissioner on Disability that would have the capacity in the federal government to require accessibility plans from departments, to conduct audits of programs to ensure that they are meeting standards of full inclusion, etc. We talk about a policy centre within government that is focused on the principles of inclusion and accessibility, and how that might have impact interdepartmentally on a variety of initiatives, from IT, telecommunications, broadcasting, transportation, justice, etc. The paper talks about mechanisms like regulation versus guidelines; it talks about mechanisms like omnibus legislation that would redraft legislation that discriminates on the basis of disabilities; and it talks about government procurement policy. So I think there is capacity within a federal disability act, and I think it is strategically smart of the community to be well out in front of the federal government's drafting of a bill. What we have done in this paper is to propose what it might encompass."

Beachell emphasized that a federal disability act would not likely have a major impact on poverty, employment, or the provision of disability supports. But in the area of information and telecommunications technology, the federal government has the ability to exert considerable leadership and to even attach principles and standards of access and inclusion to initiatives which involve transfers of funds from the federal government to provinces and municipalities.

"For example, the federal government is going to dole out a huge pot of money to provinces for establishing new infrastructure networks, everything from roads and sewers to transportation systems to, I assume, information technology capacities. If we are able to establish principles around accessibility as part of the contractual agreements between federal and provincial governments, then we will be able to advance our agenda."

Beachell also noted, "industry needs to engage us in the same way [as government]. Industry needs to find ways to tap the knowledge base that exists within our community and to help build that knowledge base. Frankly if we don't find you doing that, our choice will be to push government to regulate you to do it."

Beachell observed that there were a number of members of the current government who have a personal experience with and interest in disability and accessibility issues.

> "The Minister of Finance has a political interest in disability, and I've recently had discussions with him and his officials around this. There are interests of a personal nature at the senior policy level in this government. As you know may know, Diane Finley, Minister of Human Resources and Social Development, is now wearing dark glasses in the House of Commons. She has a visual impairment, and she has experienced disability for the first time and it is affecting how she does business. Steven Fletcher has a particular interest: he would like an accessible Blackberry."

In closing, Beachell noted that it is possible other issues will take priority over the development of a federal disability act, and that another federal election will likely occur before the Harper government tables such an act. Therefore, he said, the disability community should focus its energy on all political parties to ensure that each party has a commitment to removing barriers for people with disabilities.

Panelist: Gary Birch (Neil Squire Society)

Gary Birch discussed future possibilities for demonstration or pilot projects that would "show industry that there's a business case [for accessible technology] and demonstrate that there's more than just accessibility for people with disabilities, because when we do a demonstration in a controlled way in a real environment we'll learn all sorts of things that some of us won't even have thought of before going into the demonstration."

To support these types of projects, Birch said, "we're going to need resources to make it happen and I'm very pessimistic about government helping there, so I need to look to industry. I think industry needs to step up and figure out a way to support us to do this. I think they will ultimately be one of the winners, if we do it right."

Demonstration projects like these could also be useful in building relationships and dialogue between the disability community and industry. He said "we need to continue to build our relationships with industry on a cross cutting way and in a unilateral way too, with various industries, so that we're able to understand each other's language and help them build their corporate leadership around accessibility."

Birch also discussed the dissemination of the information and knowledge acquired through the research done in the Dis-IT Research Alliance. He suggested that this dissemination should be very focused on the relevant stakeholders, in the form of "discussion papers on what we've learned that are very focused on industry, which will speak to industry, so they can understand some of the results that we've got and some of the implications that are there for them. In addition, there should be some two way discussions with the disability community to help them understand whatever we've been able to discover and get real

time feedback from them as well." He also suggested that accessible government procurement policies have the potential to make "a huge difference."

In closing, Birch argued that there is a need for more grass roots awareness rising among both people with disabilities and the general public. The purpose of this, he said, would be to demonstrate to people the "connections between some of the decisions that are being made politically and how it really affects their lives in the case of access to technology," to raise people's awareness of these issues, and become vocal about their own interests in maintaining access to technology for all.

Panelist: Dave Dougall ([Research in Motion](#))

Dave Dougall agreed with Gary Birch that there is a need to develop communication and relationships between the various stakeholders and in the areas of "awareness and training." In particular, he said the relationship between industry and various stakeholders in the disability community requires further development.

> "I think there are several different levels we need to consider here. One is definitely between industry and the disability community and the various stakeholder groups [within the disability community], because you each have unique requirements that will relate directly to the future functionality of the various information technology components. Understanding those better and having that open dialogue goes a long way to doing that."

Dougall said that the two Dis-IT events he attended in 2005 and 2006 were important in helping him establish connections with key representatives from the Canadian disability community.

> "They [Dis-IT events] have been incredibly productive for myself in terms of understanding what is happening, as well as meeting a lot of the individuals and players, such that we can have proactive follow up discussions with people such as Henry [Vlug], Jim [Roots], Kurt [Lynn], Phyllis [Gordon], etc. who I had not had an opportunity to meet in person before this conference."

Dougall also suggested having more frequent meetings to continue the relationship building and dialogue begun here. "I know we can't necessarily have everyone join in the same room on a more frequent basis, but maybe having this group meet regionally and come into central sessions, and meeting quarterly or even twice a year might help to share dialoguing and continue the discussions."

Dougall explained that a major way the Dis-IT events had helped him personally is in finding information about the disability community. Previously, he "found it difficult from an industry perspective to know what the organizations were, how to contact them, who the players were, and I think that's something as a take away that we can work together to better understand.".

Dougall also discussed the usefulness of demonstrations like those presented by Gary Birch's research team. He noted that industry needs help from the disability community.

> "To bridge the gap in terms of understanding what the end goal is, for example. Some of the elements that really jumped out in Gary's video, like ordering food at a fast food counter, those are things that our engineering department hasn't thought of as a technical challenge that the BlackBerry may be able to help with. But they would love to probably tackle that as an issue, and framing the problem in that context to them can go a long way."

Dougall also noted that understanding innovations, standards, and regulations in other countries is important.

> "We need to look at leveraging the efforts of the respective organizations in other countries, where a lot of additional work has already been done. There may be [relevant] guidelines, standards, etc. in place. To go back to the aspect of thinking it through in terms of harmonization of global standards, guidelines and regulations, your needs are not necessarily unique on the Canadian front versus the US front, versus Europe, versus Australia, etc. I think to the extent that we can share and leverage that information more effectively, that's very important because the last thing we want to do in Canada is create a situation in which a particular policy could create a barrier to market entry for new products or force a situation where a certain product may have to be taken off the market due to a particular policy."

Dougall added that this is an important part of understanding the desire of industry to protect innovation and ensure that products are commercially implementable. Understanding this, he said, can help engage industry in dialogue about accessible IT.

Dougall ended his comments by noting the technological changes that are occurring offer major opportunities for people with disabilities.

> "Gary [Birch] and I have had several discussions on the concept of developing demonstrations about what is possible and how it can move forward with the technology. Clearly, in my mind, the technology convergence that's happening at

this point in time represents incredible promise for the accessibility community. We really need to focus on connecting the dots in terms of understanding what is required and what is possible in bringing those together."

Panelist: Dave Brown ([Human Resources and Social Development Canada](#))

Dave Brown, speaking from the government perspective, noted how important it is to makes sure that meetings like this conference, which often produce a lot of ideas and excitement, actually continue to generate action once everyone has gone back to their work.

Brown discussed the role of the Internet in providing a space to produce knowledge and share information about accessible information technology. He suggested that using a model like Wikipedia, where anyone who has knowledge on a subject may contribute to a constantly expanding bank of knowledge available on the Internet to the public would be useful. This would be a site where "we can post information and then all of us that have expertise and know people can get in and edit and clarify and perhaps that can be a venue where we can all go back to."

He also suggested "an email action list" and encouraged everyone who receives emails on the Dis-IT team and developments in the field to please open and read them, to keep awareness up. If we could all do this, Brown said we could "see if we can keep our individual groups in a way, alive, and this is what we've done to move forward our action list and what have you done, and I think if we can keep doing that and all of us take a little bit of ownership and pride in it, I think we'll go a long way to get some action."

Panelist: Claire Atherton ([University of Manitoba Disability Studies](#))

Claire Atherton presented ideas brainstormed by the students from the [University of Manitoba Disability Studies program](#) who attended the conference. She raised four main points about directions for the future. She began by suggesting that a focus on broadening the appeal and relevance of accessible technology by emphasizing that people without disabilities are only temporarily able-bodied would be useful to both advocates in the disability community and in creating a larger market for industry.

Next, Atherton discussed the need to build relationships amongst the stakeholder groups. Like Dave Dougall, she felt meetings like this conference should happen more frequently, and suggested that two stage meetings could be more effective rather than multi-day events.

> "Instead of having one two day meeting, it might be more productive to have one meeting to start developing ideas between stakeholders such as the disability community, industry, government and researchers, then a second meeting later where stakeholders could come back together to share concrete ideas about how to make their original concepts a reality."

Atherton also suggested that future research should focus on building on the existing strengths of the disability community by identifying resources that already exist in the community, such as a website for resources, and then building on that. Rather than recreating, again and again, a number of similar websites, it would be better to help establish one comprehensive resource that has already proven to be sustainable.

Atherton's final suggestion was that future research should focus on changing attitudes because that was a repeated theme throughout the discussions at this conference. Research should be done on how to change attitudes in each of the stakeholder groups, including government, industry, the disability community itself as well as the wider public. This kind of research should not just focus on extracting information but should be proactive in helping to change attitudes and develop strategies for doing so.

Panelist: Deborah Stienstra ([University of Manitoba](#))

During the final session of the May 2005 Dis-IT Research Institute in Winnipeg, Stienstra talked about the "paradoxes" of working in an alliance of diverse stakeholders which have "seemingly oppositional positions that create seemingly unmovable tensions." She felt that significant progress had been occurred since then.

> "I went away last year wondering where we would be this year around the paradox between human rights and bottom lines, between industry imperatives, regulation, and community initiatives. I don't feel like we're in a paradox any longer, and I think we've made some real strides in creating a different space to have a conversation between communities that aren't entirely clear about common goals or purposes."

Stienstra explained that the Dis-IT Research Alliance had undergone a mid-term review by the Social Sciences and Humanities Research Council of Canada ([SSHRC](#)) in early 2006. One of the messages from that review was to ensure that Dis-IT shared the results of its research in creative ways beyond traditional academic methods of sharing information.

> "The Social Sciences and Humanities Research Council is involved with what they call knowledge mobilization, which is a process of not just creating knowledge with

stakeholders, but making sure the knowledge is useful and used by a variety of stakeholder groups. SSHRC isn't very good at giving examples of how to do this, so we have to figure it out for our particular case. How do we, in light of the structural constraints, the political environment, the realities of working with industry, with service providers, with government, with being researchers, take what we've learned through this Dis-IT Alliance, through these meetings, through these relationships and make it into something that has use and value to the communities that are represented here?

There needs to be a structural and sustainable response that allows us to continue these conversations. I heard quite consistently that we need to have spaces and places—whether they've virtual, whether they're in person—we need to keep talking. Our conversations have just begun, we're just starting to understand each other's languages, so don't cut off the conversations, don't stop the relationship building."

With Dis-IT moving into its final year, Stienstra pondered where new resources to sustain this work would come from.

"The disability community has no money to do this. They come to the table with a great deal of goodwill and willingness to ante up with expertise and their knowledge, but frankly they don't have the money to bring people, to spend their time…So I'd like to challenge industry, since I think you folks have the most money. I think government has a responsibility here too. I'm not sure if it's Office for Disability Issues or Industry Canada that has a responsibility, but I think there has to be a sustained response to creating and sustaining these relationships."

Stienstra also pointed out the importance of ensuring that the disability community has choice and control of the places and spaces for the purposes of sustaining dialogue.

"Let's make sure that the disability community gets to choose who sits at the table, gets the resources to facilitate their participation, and gets to do this appropriately. Let's not put things on the table and then hand pick who is going to be there. I think it's really important, that notion of the community being able to do what it needs to do and what it thinks is most important."

Stienstra also discussed the pivotal role that researchers can have in creating dialogue and being a part of making change. Future research in this area should follow along the lines set out by the Dis-IT project.

> "We don't need research necessarily that speaks abstractly about things, but we need to speak to people's lives and to the needs that are in people's lives. But we also need to understand all of people's lives, not simply little bits of it, and that gets back to some of the notions of how to understand technology and access and inclusion and how it needs to be broader than simple technical access. So I think the role of researchers also needs to be rethought in doing these things."

The political environment is always an important factor in trying to bring about changes. In the context of the current Conservative federal government, Stienstra noted, "the climate right now is not very hospitable to disability rights advocacy and to access and inclusion in general. And I think that may require of many of us, more political activity than we're used to." She pointed out that in this environment the role of regulations and accountability need to be more developed. Currently, she said, "there are regulatory mechanisms, but there's no accountability, and it seems to me if we want accessible and inclusive information technologies on the table, we need to speak to that environment and challenge the people that lead us in that environment."

QUESTION AND ANSWER PERIOD:

Kurt Lynn ([Canadian Hard of Hearing Association](#)) offered a number of caveats to the optimism expressed during the panel. First, he said, there were some disability groups, particularly mental health, not represented at this conference whose needs may not have been addressed. Second, he argued, "the concept of universal design is largely mythical. It's a goal for all of us, but if we have to wait for universal design, it's going to be a problem." Lynn stated that he believed the real issue was not a lack of technology, but information and communication.

> "There's plenty of technology to go around that will address all our problems. At the end of the day, it's about requirements more than technology, and being able to articulate those requirements. The message I'm taking to our organization is that we have to reinvent ourselves. The onus is on us, in terms of working with industry, to try to show industry why it's desirable to work with us. We have to be able to articulate our needs very specifically, and very meaningfully, in concrete terms that are actionable by industry."

Lynn argued that people with disabilities need to add value to industry. He said this could be done by providing information such as market analysis, requirements that are usable by industry, and making the market accessible to them. If the disability community doesn't do that, he said industry will pursue more available markets before addressing the needs of people with disabilities.

> "I think what it boils down to is—my kids used to watch a TV show called The Care Bears. The Care Bears always ended by saying 'to have a friend, you have to be a friend.' I would argue that if we want to partner with industry, to have a partner we have to be a partner. That's the type of reinvention I think the Canadian Hard of Hearing Association is going to have to look toward in terms of working with industry. We don't have obvious resources for doing that, so one of the things we're going to have to do is seek resources to fund our ability to be able to do that. Certainly we can find some of the resources amongst our volunteer organization, but we're also going to have look for patrons – whether they be government or industry – that are willing to fund our ability to do those things."

Bill Abbott (Bell Canada) added to Kurt Lynn's observations by emphasising the need for the disability community to work together to present a more unified, clear and focused case to industry. He said, "If we meet with ten groups and we get 30 different priorities, we walk away thinking, 'they have no idea what they want.' Whereas if you work it out and, as far as possible, aggregate, consolidate and prioritize, you can give a clear message." He used the example of the Canadian Association of the Deaf and the Canadian Radio-television and Telecommunications Commission (CRTC) deferral accounts decision. "They knew the technology they wanted: video relay service. They knew where it was at in the States, that it could be done here. And that made a big difference; that was why video relay was the lead proposal in Bell's deferral account submission to the CRTC."

In addition Abbott suggested that when attending these kinds of events, it is important for people with disabilities to come prepared to deal with the details as well as the principles, and to make a commitment. "Both sides are going to have to make some compromises. Once we've come to a commitment, you've got to be prepared to deliver some value to industry; to go to the public, and to the government and say 'we work together and we're happy with the outcome.'"

Abbott also referred to the students' comments on having meetings with steps built in where ideas can be developed together over time. He said, "that's the way you develop a product, that's the way you develop a marketing plan, this should probably be the same thing." Abbott explained that in meetings between industry and the disability community the strategy has been to "boil the ocean in a single meeting." Instead, he said, "we need a process and we need regular meetings to develop the relationships and the understanding, and to also see things through over a period of time, because they take a period of time."

Dave Dougall expanded on Kurt Lynn's comment about providing market information to industry. He stated that "I think that it's important to recognize that if a market isn't

currently supported it is not that we won't do it, but it's important that I can go to my VP and say 'these are the numbers of people's lives that we can impact by doing this.' If it's 1,500, 15,000, or 15 million, that's still a statistic that business people think about, and it frames a context, and that's an important consideration."

Dougall also pointed out that the definition of 'industry' has been somewhat vague and the solutions people with disabilities require will be different depending on the industry, manufacturer, or product. He argued that there are many different types of industries that need to be engaged in this discussion.

> "I'm sitting here thinking through the different technological requirements that will be needed to put in place the solutions you're looking for, and they're going to be very different between the wireless manufacturer that I represent versus Bill Abbott as a wire line service provider, versus a wireless carrier, versus a bank, versus medical services, broadcasting, desktop PC's, transportation. All of the elements are not necessarily transferable across the board. The solutions may be unique for each of those different aspects. I think that it's important to frame up in more concrete terms, when you say you're looking for an industry response that you appreciate that there are going to be many different types of industries that will need to be engaged here. I would love to be able to talk to my compatriots from the other industry representatives, but even understanding who those are and which ones we need to be engaged with is an important step."

Dougall also pointed out that Canada does have "some incredibly valuable and leading edge assistive technology companies" that did not attend this conference despite the fact that they were invited, and that hearing their insight would have been valuable for the conference attendees.

Marcia Cummings (Rogers Communications Inc., Alliance for Equality of Blind Canadians) commented that she did not believe it is the responsibility of people with disabilities to beg industry to provide what they need. She argued, "we all have a right to access the same things as everyone else. People with disabilities don't need anything different from everyone else; they simply need to access it differently. The question then, is not what is needed but how to make it happen."

In contrast, Kier Martin (Canadian Association of Independent Living Centre) described how he believed his understanding of his role changed as a result of what he learned at the conference. His work with people in the community should focus more on developing tools and strategies for individuals to articulate their needs directly to service providers rather than having people like himself champion their case. Martin discussed the need to

define what is meant by "information technology" and how it is being used among and within disability groups, whether it is web pages, cell phones, etc. He pointed out that technology itself is constantly growing and changing; and this needs to be faced up to by organizations and their accessibility programs and champions.

CLOSING COMMENTS:

Laurie Beachell explained that people with disabilities have had many bad experiences with industry, and may be hesitant about cooperating with industry because it is not a relationship of equals.

> "We're talking about a disadvantaged sector of Canadian society, a sector that has known exclusion, isolation, poverty, and stigma. And this whole thing of 'to get a friend you have to be a friend,' I understand that. I've had political advisors telling me, 'you have to be more encompassing, you have to be engaged more, you have to bring everybody into the circle.' Well the circle has been closed for a long time. In other industries that we have worked with for many years, like transportation, banking, etc., we are not seeing advancements; we are seeing more circling of the wagons, greater exclusion, and greater isolation."

Beachell noted that the Canadian disability community has spent six years and "upwards of $250,000" fighting Via Rail's purchase of inaccessible passenger rail cars all the way to the Supreme Court of Canada. He also noted that industry often justifies inaccessible technology by arguing that alternatives to the technology-based service are available.

> "When we lodge complaints, we end up with industry saying, 'well it's good enough that you can go to the ticket counter at the airport,' or 'it's good enough that you can go to the teller in the bank.' Well it isn't good enough. The rest of the world has access to banking 24 hours a day, and our community has to put up with the hours when tellers are on duty. I'm sorry, [that's not good enough]."

Beachell argued that if the IT and telecommunications industries want to avoid litigation and regulation, they need to work collaboratively with people with disabilities and support that collaboration, as well as recognize the technical limitations of the disability community.

> "You have to find a way to work with us, in ways that support us and include us and engage us. We will be good at identifying need; we will not be good at identifying solutions. There are few within our community that have the knowledge

and skill on the technology side to be able to put clear solutions on the table, like how you can make the ticket dispenser that gives me a boarding pass accessible to Marcia [Cummings]. Do we need to be a friend to get a friend? Yes. Will you find us collaborative? Yes. Do we have knowledge? Yes. But it has to be supported, and if industry is not coming to the table to engage the disability community, know that our only option is to seek regulation and to seek litigation."

In his final statement, Gary Birch noted that though some may think that the needs of people with disabilities are obvious, his past discussions have shown that many people with disabilities are unclear about what information technology can do for them. He suggested that the key to helping people develop ideas of what technology can do for them is to plant seeds from which people articulate their needs.

Deborah Stienstra followed this comment with a challenge to the disability community.

"I think we've been pretty forthright with industry and a little softer on government which always surprises me. But I think the community itself needs to remember, as Bill Abbott pointed out, that we need to speak better collectively. We need to understand what we see as priorities and they need to fit into an agenda that we can all move forward...

I actually disagree with Laurie that we don't innovate and that we don't have solutions. I think what I've learned in the last three years of this research project, is that if you want to understand how to deal with inaccessible information technologies, the best people to talk to are those who innovate on a daily basis their access to IT. I think the eLearning initiative around free and inexpensive technology is one of those indicators. I think the Canadian Association of Independent Living Centres could take on identifying innovators from the grassroots, people who use technology successfully and share those with industry because industry's solutions are often new versions, new technology, higher sophistication, more complexity, when our innovative strategies in the disability community are lower technology, technology that costs less because we've had to do without high-end expensive modifications. And I think those innovations need to be celebrated more. I don't think they're going to provide all the solutions, but I think they'll teach us that we do have some solutions to some of these issues."

Jennison Asuncion urged all of the conference participants to continue the new avenues of discussion opened up during this conference "whether it's by email or thinking of new sessions and meetings and other ways that we can consult." Asuncion closed the panel

discussion by thanking the participants for their candour and the audience for their involvement.

Appendix 1: Participants

- Bill Abbott ([Bell Canada](#))
- Monica Ackermann ([Assistive Vocational Technology Associates](#), [York University](#))
- Barbara Anello ([DAWN Ontario: DisAbled Women's Network](#))
- Gary Annable ([Dis-IT Research Alliance](#))
- Jennison Asuncion ([Adaptech Research Network](#))
- Claire Atherton ([University of Manitoba](#))
- Laurie Beachell ([Council of Canadians with Disabilities](#))
- Gary Birch ([Neil Squire Society](#))
- Dave P. Brown ([Human Resources and Social Development Canada](#))
- Denise Buchner ([University of Calgary](#))
- Sheila Carlin
- Francis Charrier ([Centre Interdisciplinaire de Recherche en Readaptation et Integration Sociale](#))
- Marcia Cummings ([Rogers Communications Inc.](#), [Alliance for Equality of Blind Canadians](#))
- April D'Aubin ([Council of Canadians with Disabilities](#))
- David Donovan ([Service Canada](#))
- Dave Dougall ([Research In Motion](#))
- Tanya Ferguson ([Norquest College](#))
- Catherine Fichten ([Adaptech Research Network](#), [Dawson College](#))
- Al Filleul ([City of Winnipeg](#))
- Chris Gaulin ([Adaptech Research Network](#))
- Phyllis Gordon ([ARCH Disability Law Centre](#))
- Sara Harms ([University of Manitoba](#))
- Maureen Hewlett ([University of Northern British Columbia](#))
- Steve Jacobs ([IDEAL Group, Inc](#).)
- Roger Jones ([World Accessibility](#))
- Christine Kelly ([University of Manitoba](#))
- Lana Kerzner ([ARCH Disability Law Centre](#))
- Doris Koop ([Access Advisory committee - City of Winnipeg](#))
- Patti Langlotz ([MTS Allstream Inc.](#))
- Mary-Frances Laughton ([Industry Canada](#))
- Kurt D. Lynn ([Canadian Hard of Hearing Association](#))
- Kathy Marshall ([Independent Living Resource Centre – Newfoundland](#))
- Kier Martin ([Canadian Association of Independent Living Centre](#))
- Tim McIsaac ([University of Manitoba](#))

- Cathy Moore (CNIB)
- Aldred Neufeldt (University of Calgary)
- Vic Pereira
- Curtis Pineiro (Trent University)
- James Roots
- Allison Sandercock (Service Canada)
- Glen Sepke (Canadian Council of the Blind, Manitoba Division)
- Nick Slonosky (MTS Allstream Inc.)
- Eric Snow (eSnow.biz Toronto)
- Dale Stevenson (University of Manitoba)
- Deborah Stienstra (University of Manitoba)
- Jim Tobias (Inclusive Technologies)
- Henry Vlug (Independent)
- George Wilhelm (Reaching E-Quality Employment Services)
- Joan Wolforth (McGill University)