CANADIAN HUMAN RIGHTS COMMISSION

NO ANSWER

A Review of Government of Canada Telephonic Communication with People Who Are Deaf, Deafened, Hard of Hearing, or Have a Speech Impediment

July 2005

The present study was conducted by Consulting and Audit Canada for the
Canadian Human Rights Commission.

This report is available on request in alternative formats
and on the Commission's website at:
www.chrc-ccdp.ca

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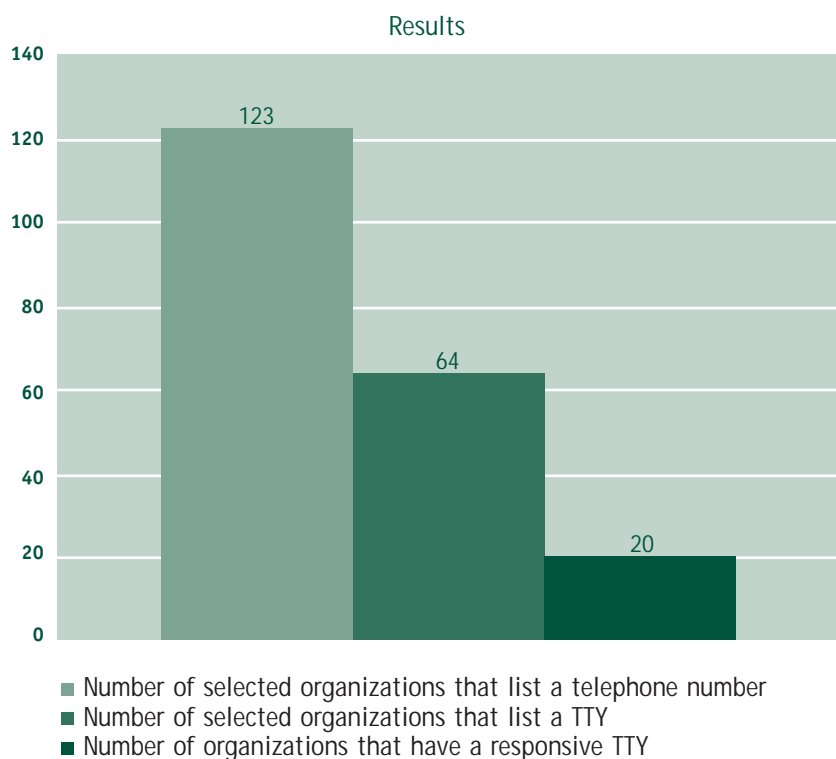
EXECUTIVE SUMMARY

The Government of Canada is failing to adequately accommodate the needs of Canadians who, as a result of a disability, cannot use the regular government telephone system.

Most Canadians take it for granted that they can look up the number of a federal department or agency in the blue pages of their telephone directory or on the Internet, make a phone call to that organization and get the information they are seeking within a reasonable period of time.

But this is often not the case for people who are Deaf, deafened, hard of hearing, or have a speech impediment and, as a result, cannot use the regular phone service. As this report documents, for them there is only a fifty-fifty chance that they will find a number listed for a TTY, the device they need to communicate with government offices. And when a TTY is listed, there is only a one-in-three chance that they will be able to complete a call successfully.

The following figure illustrates the key results of the study.

Results

- ■ Number of selected organizations that list a telephone number
- ■ Number of selected organizations that list a TTY
- ■ Number of organizations that have a responsive TTY

Based on this study, there appear to be two main reasons for the current situation:

- lack of adequate policies, procedures and guidelines to ensure that the right of equitable access is met; and
- failure to properly manage communications services for those who cannot use the regular telephone system.

Action is required to address this situation.

Following are the key recommendations of the study.

1. A Comprehensive Strategy

It is recommended that:

a. the Government of Canada develop a comprehensive strategy on the provision of telephonic communications services to people who are Deaf, deafened or hard of hearing, or have a speech impediment and that this strategy be announced by March 31, 2006;

b. each federal organization develop an internal policy on the provision of telephonic communications services that will comply with and complement the strategy;

c. the strategy include specific reference to the duty to accommodate short of undue hardship as provided under the *Canadian Human Rights Act*;

d. Treasury Board Secretariat, or such other federal organization as may be appropriate, develop model standards or guidelines with regard to the provision of telephonic communications services; and

e. in developing policies, procedures and guidelines, and in purchasing equipment, relevant federal organizations consult people who have a hearing loss or speech impediment, and the manufacturers of, and experts on, assistive technologies.

2. TTY directory

It is recommended that the Government of Canada publish a yearly directory of the TTY numbers of all federal organizations, that the directory be updated regularly, and that it include a TTY number to call to report inaccurate numbers or inadequate service.

3. New technology

It is recommended that the Government of Canada constantly assess new developments in communications technology to determine how they might improve telephonic communications services for people who cannot use the regular telephone system. In particular, the process of replacing land telephone lines with a Voice-over-Internet Protocol (VoIP) system should include, from the design stage, provisions for assistive technologies, such as computer-mounted TTY systems.

4. Other issues

It is recommended that the Government of Canada review other federal communications issues identified during this study, such as the availability of American Sign Language/langue des signes québécoise (ASL/LSQ) services, provision of real-time captioning at federal meetings and consultations, consideration of the special needs of hard of hearing people, and captioning of federally sponsored television feeds, videos and the audio portions of Web sites. It is also recommended that the government review these issues by establishing a group of experts similar to the 2001 Task Force on Access to Information for Print-Disabled Canadians.

1] INTRODUCTION

Canadian citizens make millions of telephone calls each year to federal departments, agencies and Crown corporations. Federal policies require that all communications with the public be accessible, courteous and effective, and that the differing communications needs of Canadians are taken into account. The *Canadian Human Rights Act (CHRA)* prohibits discrimination on the basis of disability in the provision of federal programs and services. It also requires that citizens' special needs arising from a disability must be accommodated to the point of undue hardship.

Canadians who are Deaf, deafened or hard of hearing, or have a speech impediment,[1] have special requirements with regard to telephone communication with governmental organizations, as they cannot use the regular telephone system to communicate. In recognition of this fact, many government agencies (but, as discussed later, not all) advertise the availability of a teletypewriter (TTY) line.

A TTY[2] is a device that enables Deaf, deafened and hard of hearing people, and people with a speech impediment, to communicate via telephone using a text-based system. TTYs have been in use for over 25 years.

TTYs are not the only way of communicating with people who are Deaf, deafened or hard of hearing, or have a speech impediment. The increasing use of e-mail and text messaging, among other technologies, has broken down many communications barriers. Emerging technologies will bring more progress in the future and may, in time, supplant the use of TTYs. At the moment, however, TTYs are still the most widely used devices for communicating with people who cannot use the standard telephone network. They are also the only devices currently available that can replicate the type of interactive communication of a regular telephone conversation.[3] TTYs and other available technologies are discussed in more detail in the Background section of this report.

It should be emphasised that the key issue, however, is communication between the government and its citizens and not the technological means by which that is to be achieved. Testing TTYs, as was done in this study, is a means of assessing the current level and quality of communication with citizens who cannot use the regular telephone system. This, however, does not imply that TTYs will remain the only or the best way to achieve the goal of effective communications.

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1   *These are distinct groups with differing communications needs and differing degrees of reliance on TTYs. "Deaf" people, written with a capital D, refers to those individuals who identify with and participate in the language, society and culture of Deaf people, which is based on sign language. "Deafened" individuals have grown up hearing or hard of hearing but their hearing has become non-functional. Their primary means of communication has become visual (lip-reading, print based) rather than auditory in nature. "Hard of hearing" individuals have a hearing loss ranging from slight to severe, and use primarily an auditory means of communication. Some hard of hearing use amplified telephones, others use a TTY. (Source: "What To Do When Your Client Can't Hear You" Sinclair, 1994)*

2   *TTYs make interactive, text-based communications possible by transmitting coded signals across the telephone network. TTYs are also called TDDs (telecommunications devices for the Deaf) or text telephones. They can comprise custom equipment, or a modem and software on a computer. What all TTYs have in common is their use of the Baudot code, as opposed to computer ASCII code (although some use both).*

3   *Text messaging and on-line chat services provide this capability, but they generally cannot yet be used within a government technology environment because of computer security concerns.*

Studies carried out by the Canadian Human Rights Commission (CHRC or the Commission) and other groups in the 1980s and mid-1990s showed that although the availability of TTY services was advertised to the public, only a few of these TTY lines were operational (as revealed when test calls were made to these services).

The Canadian Association of the Deaf (CAD) carried out its own studies, which indicated similarly discouraging results. CAD brought its concerns to the attention of the Commission and requested that the Commission see what could be done to improve this situation.

The Commission subsequently contracted with Consulting and Audit Canada to conduct a study, reported on herein, to determine the effectiveness of TTY services offered by federal departments, Crown corporations and agencies.

1.1 Objectives

The objectives of this study are two fold:

- provide objective baseline data on the availability, accessibility, effectiveness and quality of TTY services provided by federal organizations; and
- make recommendations for improving the provision of telephonic communications services for people who cannot use the regular telephone system.

1.2 Scope

The assessment of the availability, accessibility, effectiveness and quality of TTY services provided by federal organizations included the following:

- consulting advocacy groups;
- hiring qualified experts who understand the communications needs of people who are Deaf, deafened or hard of hearing, or have a speech impediment, and who have experience in using telephonic systems of communication designed for these groups; and
- evaluating a sample of federal departments and agencies to determine whether they provide TTYs and whether their TTY service operates effectively.

1.3 Report Structure

The next section, Background, discusses previous studies done in this area, current statistics related to Deaf, deafened and hard of hearing people, and available communications technology.

The Legislative and Policy Authorities section examines applicable legislation and policies, and attempts to identify some of their limitations.

The Approach and Methodology section describes this project in more detail, especially the steps taken to review government communication with people who are Deaf, deafened or hard of hearing, or have a speech impediment.

The results of this review and the analysis of these results are presented in sections 5 and 6, respectively.

Section 7 lists recommendations.

Brief descriptions of advocacy groups and their missions are included in Appendix A.

The response form used in recording successful calls is provided in Appendix B, and a glossary of abbreviations can be found in Appendix C.

2.1 Previous Studies

Quite a few studies have been done in the area of availability and accessibility of TTY services.

In 1988, the Canadian Coordinating Council on Deafness randomly checked listed federal telephone device numbers for people who are Deaf, deafened or hard of hearing, or have a speech impediment. It found that 85% of the calls could not be completed, due to either equipment malfunction or lack of response.

After informal reports suggested continuing problems, the CHRC decided to find out whether the situation had improved since the 1988 random check. That decision led to the CHRC's 1991 survey, *Availability of TDD Services by Federal Departments*. In that study, the CHRC surveyed 55 offices of 31 federal departments and agencies, and found that almost 70% of calls placed by CHRC staff were not answered on the first attempt. While the response rate increased with multiple calls, fully one third of the surveyed offices did not respond at all to the calls.

The CHRC completed a follow-up survey of TTY lines in 1994 and presented its findings in a report called *Availability of TTY Services from Federal Departments and Private Sector Organizations*. That survey had a public sector sample of 39 government offices with 56 TTYs and results indicated little progress since the 1991 survey. Specifically, out of the 56 TTYs called, only 46.4% answered the first time and 35.7% never answered.

The four studies the CAD conducted between 2002 and 2004 on the accessibility of federal government services confirmed the findings of the CHRC. These studies examined whether government departments and agencies provided TTYs, and whether TTYs listed on federal government Web sites, in blue page listings, in print advertising and in closed captioning of TV commercials sponsored by the Government of Canada provided adequate access to government services.

In the first study, researchers accessed 348 Web sites through the Government Electronic Directory and searched them for contact information. If no telephone number was provided, the Web site was no longer considered (of the 348 Web sites accessed, 84 did not list any telephone number). If a telephone number was listed on the Web site, the search continued for a TTY number (193 Web sites listed a telephone number but no TTY number). Listed TTYs were tested to see whether they were operational. Overall results confirmed a lack of adequate service.

The blue page listing study examined telephone blue page listings in three Canadian cities (Ottawa, Toronto and Calgary). This study used the same methodology as the Web site study; in other words, researchers expected to find TTY numbers for all telephone listings. However, in 46% of the cases, no TTY was listed for any city. In 26% of the cases, a TTY number was listed in the blue pages of at least one city, and in only 28% of cases were matching TTY numbers listed in all three cities. No government department had a one-for-one TTY listing for all its phone numbers. Listed TTY numbers were not tested.

2.2 Statistics

The 2001 Statistics Canada Participation and Activity Limitation Survey (PALS) concluded that 2.8 million Canadians reported a hearing disability (in other words, that they were Deaf, deafened or hard of hearing).

Advocacy groups have expressed concern about the PALS survey, noting that the survey was based on self-identification that may have resulted in under-reporting. They estimate the true number of people with a hearing disability may be closer to 3.1 million. Approximately 10-15% of people with a hearing disability are Deaf or deafened. This is the group that makes most use of TTYs.

2.3 Available Technology

TTY is the proper acronym for the special devices used by Deaf, deafened, hard of hearing and hearing people to communicate with each other through the telephone system. TTY users type their messages on a keyboard and receive messages via a computer monitor or light emitting diode (LED) display. This technology has been around for a long time and it is still the standard method of telephonic communication.

Figure 1: Desktop TTY

There are different types of TTYs, with desktop TTYs being the oldest. Desktop TTYs use the Baudot code (also used by telegraph systems). They connect to other TTY devices, or to regular phones via relay service (explained later in this section), using a regular analog telephone line. These desktop TTYs allow people who don't have a hearing loss to communicate directly with TTY callers.

Stand-alone and distributed computer TTYs form the other category. They are computer-mounted TTYs, meaning that they use a modem to connect to the regular telephone line. Modems convert digital signals to analog signals and the Baudot code used by desktop TTYs to the ASCII used in computers, and vice versa. These TTYs are multi-functional. They let users make or answer a call directly from their PC; provide a pop-up visual ring alert, a message system and an answering machine; and allow users to save and print TTY conversations. These systems also allow people who don't have a hearing loss to communicate directly with TTY callers.

Distributed computer TTYs have controlling software installed on the computer server and distributed to individual workstations. This network-based communications system for text, voice chat and messaging makes enhanced instant messaging and other services available to every user, while providing specialized services for people with a hearing loss. It can "TTY enable" each of its users to make or accept calls from people who are Deaf, deafened or hard of hearing, or have a speech impediment. Unlike some text messaging systems available on the Internet, both stand-alone and distributed computer TTY products offer security protection, either by sending message traffic in Baudot code or by encrypting message traffic with the operating software working behind the firewall.

The federal government is currently looking at converting the whole government telephone service to Internet Voice, also known as Voice-over-Internet Protocol (VoIP) technology. VoIP allows users to make telephone calls using a broadband Internet connection instead of a regular telephone line. It converts the voice (analog) signal from the telephone into a digital signal that travels over the Internet, and then converts it back at the other end so the user can speak to anyone with a regular phone number.

As illustrated by Figure 2, some VoIP services only work over a computer or a special VoIP phone, while other services allow the user to use a traditional phone equipped with an adapter.
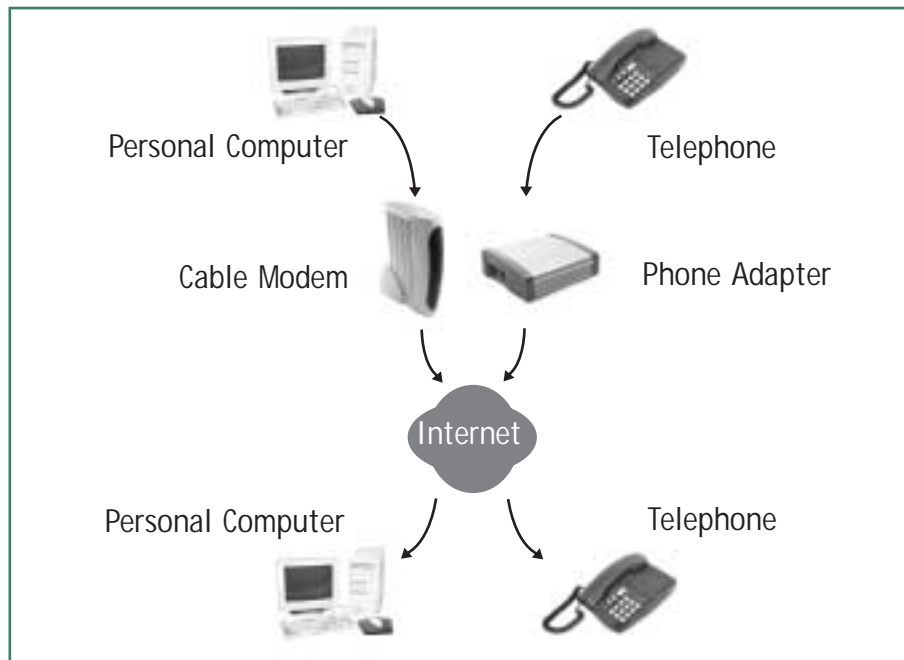

Figure 2: VoIP (Source: Federal Communications Commission)

Since computer-mounted TTYs already use digital signals, they could easily be incorporated into a VoIP system. This possibility should be further investigated and, thus, it is one of the recommendations of this report.

Another available communications technology is relay service, an operator-assisted system. A person who is Deaf, deafened or hard of hearing, or has a speech impediment, uses a TTY to type his or her conversation to a relay operator, who then reads the typed conversation to a hearing person using a regular telephone. The relay operator then types the hearing person's spoken words back to the TTY user. Privacy and confidentiality issues and the slowness of the method are usually of concern to relay service users. In addition, there are legal issues, as some departments cannot use relay service without a signed release. The service also has shortcomings if conversations contain any technical jargon the relay operator is unfamiliar with.

Captioned telephones (CapTel) work like traditional telephones, except they also display written, word-for-word captions of everything the caller says. CapTel users can listen to the caller and can also read the captions in the CapTel's display window.

Figure 3: Relay Service

Since CapTel requires captioning service operators, it is essentially a relay service and, therefore, involves the same privacy and confidentiality concerns. This technology is currently not available in Canada. Voice carry over (VCO) technology lets individuals with a hearing loss speak directly to the person they are calling, and then read that person's response on their TTY or VCO display, as transmitted by a relay operator. Amplified telephones increase the volume of a traditional telephone call, helping the user understand more clearly over the phone. However, these two technologies are useful only to some hard of hearing individuals, not to the deaf community in general.

Other alternatives to the telephone include e-mail, instant messaging, captioning, computer-assisted real-time transcription (CART)—sometimes called communication access real-time translation or simply real-time captioning—wireless text messaging, video messaging (such as video conferences, video mail and Web-stream video) and video relay. Current video relay technology includes video relay service (VRS) with video interpreting (VI), where users use American Sign Language (ASL) instead of typing to talk to a relay operator. The relay operator, called the video interpreter, translates and voices the user's signs to the called party. VRS is not yet commercially available in Canada.
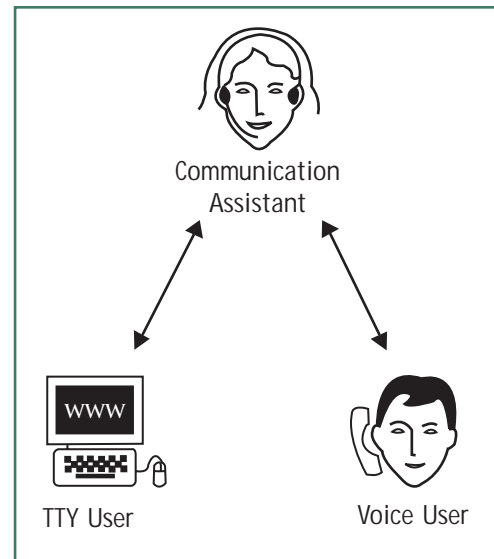
3] LEGISLATIVE AND POLICY AUTHORITIES

This section describes all legislation and policies applicable to the availability and accessibility of services for people who are Deaf, deafened or hard of hearing, or have a speech impediment. In particular, it looks at legislation and policies that regulate service provision to the public, which includes the deaf community.

3.1 Federal Legislation

Canadian Charter of Rights and Freedoms

Equality Rights
15. (1) Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination…
(2) Subsection (1) does not preclude any law, program or activity that has as its object the amelioration of conditions of disadvantaged individuals or groups including those that are disadvantaged…

Canadian Human Rights Act

Section 2 of the *Canadian Human Rights Act* states that the purpose of the Act is as follows:

> …to give effect… to the principle that all individuals should have an opportunity equal with other individuals to make for themselves the lives that they are able and wish to have and to have their needs accommodated, consistent with their duties and obligations as members of society, without being hindered in or prevented from doing so by discriminatory practices.…

Among the 11 prohibited grounds of discrimination is disability.

The duty of accommodation short of undue hardship is a fundamental principle of human rights law, especially with regard to the special needs of persons with disabilities. The 1997 Supreme Court decision in the case of *Eldridge v. British Columbia (Attorney General)* dealt with the duty to accommodate the needs of deaf citizens.

The case concerned a Deaf couple who had a baby in a B.C. hospital. The hospital did not provide ASL interpreters to enable the mother and father to communicate with the medical staff. The Court found that the lack of ASL services contravened the couple's right to "equal protection and equal benefit" of the law as provided under section 15 of the Charter.

In rendering the decision, Mr. Justice La Forest commented on the special needs of deaf citizens and the obligation of governments to accommodate these needs:

> "...For many hearing persons, the dominant perception of deafness is one of silence. This perception has perpetuated ignorance of the needs of deaf persons and has resulted in a society that is for the most part organized as though everyone can hear. ... Not surprisingly, therefore, the disadvantage experienced by deaf persons derives largely from barriers to communication with the hearing population."

Mr. Justice La Forest went on to note the following:

> "The principal object of certain of the prohibited grounds is the elimination of discrimination by the attribution of untrue characteristics based on stereotypical attitudes relating to immutable conditions such as race or sex. In the case of disability, this is one of the objectives. The other equally important objective seeks to take into account the true characteristics of this group which act as headwinds to the enjoyment of society's benefits and to accommodate them. Exclusion from the mainstream of society results from the construction of a society based solely on "mainstream" attributes to which disabled persons will never be able to gain access. Whether it is the impossibility of success at a written test for a blind person, or the need for ramp access to a library, the discrimination does not lie in the attribution of untrue characteristics to the disabled individual. The blind person cannot see and the person in a wheelchair needs a ramp. Rather, it is the failure to make reasonable accommodation, to fine-tune society so that its structures and assumptions do not result in the relegation and banishment of disabled persons from participation, which results in discrimination against them."

Other human rights jurisprudence has established key principles to be followed in devising appropriate accommodation. The most important of these is that accommodation must, to the extent possible,

- maximize the dignity of the person(s) receiving the accommodation; and
- ensure that accommodation is as similar as possible to the services provided to people without a disability.

In light of the legal requirements noted above and the jurisprudence, it is clear that if federal departments and agencies make information available via telephone, they must have services in place to ensure that persons who cannot use a telephone because they are Deaf, deafened or hard of hearing, or have a speech impediment, are accommodated through comparable alternative means of communication.

The duty to accommodate is required to the point of "undue hardship." Canadian courts have yet to fully define the limits of undue hardship, but they have clearly put a very high value on the obligation of accommodation. In the context of the overall communications activities and budgets of the Government of Canada, it is unlikely that the marginal cost required to ensure adequate communication with people who cannot use the regular telephone system would constitute undue hardship.

Telecommunications Act

In 2001, the CAD applied to the Canadian Radio-television and Telecommunications Commission (CRTC) to examine the issue of access to pay telephones equipped with TTYs. The CAD submitted that deaf consumers were being unjustly discriminated against, contrary to subsection 27(2)[4] of the *Telecommunications Act*, because they were denied access to pay telephones in Canada. In the CAD's view, access to pay telephones meant that deaf consumers should be able to arrive at a pay telephone with nothing other than the means of payment and be able to place a call in the same manner as a hearing user.

The CAD submitted that the CRTC's interpretation of subsection 27(2) of the Act must be consistent with the equality protections of the *Canadian Charter of Rights and Freedoms* and the *Canadian Human Rights Act*.

In Telecom Decision 2004-47 (July 15, 2004), the CRTC ordered all telephone companies in Canada to provide equitable access to pay TTY service by requiring that by December 31, 2007, any bank of two or more pay phones include one pay phone equipped with a TTY. Locations where there is only one pay phone, will be equipped with a TTY if there is verifiable need for the service, no later than December 31, 2010.

The CRTC decision applies only to provision of pay phones by telephone companies and therefore is not directly relevant to the TTY services provided by federal departments and agencies. Nevertheless, it underlines the legal requirement to accommodate the legitimate communications needs of people who rely on TTYs.

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4   *27(2) No Canadian carrier shall, in relation to the provision of a telecommunications service or the charging of a rate for it, unjustly discriminate or give an undue or unreasonable preference toward any person, including itself, or subject any person to an undue or unreasonable disadvantage."*

3.2   Federal Government Polices, Studies and Programs

This study could not identify any federal government policies, studies or programs that deal specifically with the provision of TTYs by federal departments and agencies. This in itself is a significant deficiency, and it is addressed in this study's conclusions and recommendations.

Although they do not make direct reference to the communications needs of Deaf, deafened, hard or hearing or speech-impaired citizens the following initiatives should be noted:

Communications Policy of the Government of Canada

The Communications Policy of the Government of Canada is the official Treasury Board (TB) policy governing how federal departments and agencies carry out their responsibilities to communicate with Canadians. The Policy makes no reference to communication with Canadians who cannot use regular telephone systems, although it does make several positive references to the need to communicate effectively using a variety of modes with all Canadians. The Policy requires the Government of Canada to do the following:

Employ a variety of ways and means to communicate, and provide information in multiple formats to accommodate diverse needs.

Government information must be broadly accessible throughout society. The needs of all Canadians, whose perceptual or physical abilities and language skills are diverse, must be recognized and accommodated. Information must be accessible so citizens, as responsible members of a democratic community, may be aware of, understand, respond to and influence the development and implementation of policies, programs, services and initiatives. Information must be available in multiple formats to ensure equal access. All means of communication—from traditional methods to new technologies—must be used to reach and communicate with Canadians wherever they may reside. Modern government requires the capacity to respond effectively over multiple channels in a 24-hour, global communications environment....

Consult the public, listen to and take account of people's interests and concerns when establishing priorities, developing policies, and planning programs and services.

The government's obligation to reach out and communicate with citizens is concomitant with the right of citizens to address and be heard by their government. In a democracy, listening to the public, researching, evaluating and addressing the needs of citizens is critical to the work of government....

Deliver prompt, courteous and responsive service that is sensitive to the needs and concerns of the public and respectful of individual rights.

Information services must be managed in a citizen-centered and client-focused manner that achieves results for Canadians. Timely and convenient access to government information and services must be available to the public.... Canadians value freedom, openness, security, caring and respect. It is important for their government to communicate in a spirit that reflects those values....

This policy...applies to all institutions of the Government of Canada identified in Schedules I, I.1 and II of the *Financial Administration Act*.

Accessibility Domain Architecture

The objective of the Accessibility Domain Architecture initiative of the Chief Information Officer Branch of TBS is to make information technology accessible to all. The Web site of the initiative describes its purpose as follows:

> … is to facilitate the creation of a human-empowering infrastructure that recognizes that human beings are diverse and provides the opportunity for each of us to bring out our best – while making our impairments irrelevant. It is through the inclusion of **all** Canadians – regardless of the type, severity or complexity of the disability that they may happen to have – that true innovation can occur …[5]

This is a positive objective. However, a review of the documents on the Web site of the Accessibility Domain Architecture shows no specific reference to the telephonic communications needs of persons who cannot use the regular telephone system despite the fact that, as noted above, there are now many computer-based systems that have the potential to significantly improve access for citizens and employees who are Deaf, deafened, hard of hearing or who have a speech impediment.

Results for Canadians: A Management Framework for the Government of Canada

Treasury Board has approved a five-year Service Improvement Initiative (2000-2005), which commits the Government of Canada to achieving a significant, quantifiable improvement in client satisfaction with its services through Results for Canadians: A Management Framework for the Government of Canada. This initiative is a key component of the government's commitment to citizen-centered service delivery, and includes provisions for the following:

- easier, more convenient, more seamless *access* to government services; and
- higher levels of *quality and performance* in service delivery by government organizations.

This five-year initiative is drawing to its conclusion in 2005. Since the results of this project (discussed in more detail in section 5 of this report) confirm the findings of previous studies, this initiative has obviously not helped improve services for Canadians who are Deaf, deafened or hard of hearing, or have a speech impediment. Improved service should be provided to all Canadians without any discrimination, an objective that constitutes another recommendation of this report.

Task Force and Council on Access to Information for Print-Disabled Canadians

The Council on Access to Information for Print-Disabled Canadians provides advice, identifies funding requirements, monitors progress and makes recommendations regarding the implementation of *Fulfilling the Promise: The Report of the Task Force on Access to Information for Print-Disabled Canadians.*

It should be noted that while the Council on Access to Information for Print-Disabled Canadians exists, there is no equivalent government body protecting the rights of deaf Canadians.

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[5] *http://www.cio-dpi.gc.ca/fap-paf/documents/accessibility/accesstb_e.asp*

The Employment Equity Act and the TBS Policy on the Duty to Accommodate Persons with Disabilities in the Federal Public Service

The *Employment Equity Act* and the *Policy on the Duty to Accommodate Persons with Disabilities in the Federal Public Service* do not apply directly to the public (including the deaf community) but rather to candidates for employment or employees of the federal government. Nevertheless, they do incorporate the principle of the duty to accommodate and the need to remove barriers to the full social and economic integration of persons with disabilities.

3.3 United States Law

In Canada, no federal statutes or policies deal specifically with the right of people who, as a result of a disability, are unable to use the regular telephone system to communicate with the government. In contrast, the United States has two laws of relevance, as follows.

Public Law 100-542, of the Telecommunications Accessibility Act of 1988

Public Law 100-542, of the Telecommunications Accessibility Act of 1988 created the United States Federal Relay Service (FRS). The FRS provides communications assistants (CAs), who act as intermediaries for telecommunication between hearing individuals and individuals who are Deaf, deafened or hard of hearing, or have speech disabilities. Any member of the general public can use FRS to contact federal departments and agencies 24 hours a day, 365 days a year. The FRS also provides new technologies, such as voice carry over and video relay, to further facilitate communication.

Although relay services are no longer seen as an optimal means of communicating with the deaf community, the U.S. law is nevertheless a tangible commitment to communications access for all citizens.[6]

The law also requires the U.S. government to maintain a directory of all federal government TTY numbers. The directory is posted on-line and is updated regularly (see ***www.fts.gsa.gov/frs/ttydir.htm***). The Government of Canada should develop, publish and maintain a similar comprehensive and accurate TTY directory, including a TTY number for reporting incorrect TTYs and inadequate service delivery. This recommendation forms yet another recommendation of this report.

Section 508 of the U.S. Rehabilitation Act: Electronic and information technology

In 1998, the U.S. *Rehabilitation Act* was amended by the addition of Section 508, Electronic and Information Technology. The law requires all U.S. federal agencies to make their electronic and information technology accessible to people with disabilities. Standards have been established to ensure that all current and future technology used by the government, including phone systems, is accessible to persons who cannot use the regular telephone system.

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6   *Many TTY users oppose the use of relay services because of the inherent lack of privacy and the stilted flow of communication resulting from the use of a CA to conduct the call. Such services are generally not seen as viable alternatives to effective TTY access.*

4] APPROACH AND METHODOLOGY

As described in section 1 of this report, the assessment of the availability, accessibility, effectiveness and quality of TTY services provided by federal organizations included the following:

- consulting advocacy groups;
- hiring qualified experts who understand the communications needs of people who are Deaf, deafened or hard of hearing, or have a speech impediment, and who have experience in using telephonic systems of communication designed for these groups; and
- evaluating a sample of federal departments and agencies to determine whether they provide TTYs and whether their TTY service operates effectively.

4.1 Consultations with Advocacy Groups

Advocacy groups represent people who use TTYs daily. They have expert knowledge and understanding of the special communications needs of people who cannot use the regular telephone system, as well as valuable insights into technology alternatives and modifications to TTY systems to enhance communication. In the case of the Canadian Association of the Deaf, they have also done extensive work on the specific issue of TTY access within the Government of Canada. It was therefore considered essential to seek their views on this important issue.

Meetings were scheduled and carried out with three advocacy groups: the Canadian Association of the Deaf (CAD), the Canadian Hearing Society (CHS) and the Canadian Hard of Hearing Association (CHHA).

Issues raised by advocacy groups regarding the provision of TTY services

Advocacy groups raised the following TTY-related concerns:

- a lack of TTY numbers for certain services, federal organizations or regional offices;
- incorrect listings of TTY numbers;
- the high number of non-operational TTY numbers;
- confusion arising from the inconsistent approach federal organizations are taking to providing TTY services; and
- a consequent lack of trust in TTY services.

The advocacy groups also expressed a general frustration with the pervasive lack of knowledge and understanding of deafness and hearing loss, and the special needs that arise from these conditions. Sign languages are true languages, with their own grammar and syntax. What some people interpret as lack of English or French literacy is often nothing more than a person using ASL/LSQ grammar in translating their message to English or French. This misinterpretation shows that people communicating with deaf citizens need more training in using the technology and understanding the unique communications needs of the deaf.

Effective use of a TTY also involves knowledge of the appropriate protocols and etiquette of communicating via a text based system. For example, when using a TTY it is customary to type "GA" (for Go Ahead) to indicate that it is OK for the other party to type their response. Proper TTY etiquette is not complicated but when it is not observed, effective communication is hampered.

As a result of the above issues, deaf people are asking advocacy groups, hearing family members or hearing friends for assistance with government services, rather than contacting the government directly.

Other issues raised by advocacy groups

Advocacy groups raised other important issues during the consultations. Although these issues (noted below) are not within the scope of the current study, they may indicate that the lack of effective TTY services documented in this study is part of a broader issue related to government communication with Deaf, deafened and hard of hearing Canadians in a variety of settings.

Meeting with the CAD

The CAD said the federal government failed to provide adequate access to printed media written in plain language and ASL (or LSQ) interpreters. Also, the CAD emphasized that the confidentiality concern was the main reason people were reluctant to use relay services. The third issue that came up during this meeting was the new, decentralized system for arranging ASL (or LSQ) interpreters, which had not been communicated properly to individual federal departments. Thus, departments and agencies were not aware of the available funding and of procedures for arranging for ASL (or LSQ) interpreters.

Meeting with the CHS

Since TTYs are still a basic means of communication used by a wide range of people to communicate with the federal government, the CHS recommended that people with low English literacy levels test them. It also recommended that the government explain available services and applicable policies more clearly by TTY, especially the steps needed to book an ASL interpreter. The CHS also recommended better training for personnel who deal with deaf people. Another communications-related issue mentioned was the security glass in front of some office reception desks. This security feature, although very useful, makes it impossible for a hard of hearing person to lip-read the receptionist. In addition, the CHS emphasized that when people need service or have a complaint about inadequate access, they usually turn to advocacy groups rather than to the Government of Canada.

Meeting with the CHHA

Many hard of hearing people can use a modified regular telephone; however, they still experience significant barriers. Their concerns involve difficulty listening to automated messages and voice mail, and waiting for a call back. Also, they rely on print interpretation and real-time captioning, if these services are available. They would appreciate a hearing loss help line, a Government of Canada line dedicated to providing information by trained personnel on all government services for deafened and hard of hearing people.

4.2 Experts

In the course of this project, qualified experts were hired who understood the communications needs of deaf people, and who had experience in using telephonic systems of communication designed for deaf people. This approach ensured that issues surrounding complaints of discrimination in service delivery were well understood. The experts' input and suggestions have been useful in designing the testing protocol and finalizing this report. These experts carried out the actual tests. One expert is Anglophone and the other is Francophone. As well as being technical experts, both are deaf and have direct experience in using TTYs.

4.3 Sample

The Government of Canada's official Web site (*www.canada.gc.ca*) lists 181 departments, agencies and Crown corporations. For the purpose of testing the availability, accessibility, effectiveness and quality of TTY services provided by federal organizations, small organizations and those that do not serve the public directly were removed from that list, leaving 129 federal organizations.

The next step consisted of searching the Web sites of the 129 organizations for a telephone number. Also, researchers searched the blue pages of the Ottawa-Gatineau telephone book and Vancouver telephone book (available on the Internet) for telephone numbers of the selected 129 organizations. If a telephone number was not listed, the organization was not considered further. The reasoning behind this elimination was the notion of equal access. In other words, if a telephone number was not listed, a TTY should not have been expected, either. This step eliminated six of the 129 organizations.

Researchers then searched the Web sites and blue pages listings of the remaining 123 organizations for a TTY number. Only 64 organizations (52%) had at least one listed TTY number. The sample was prepared using the listed TTYs of these 64 organizations.

When preparing the sample, the following factors were taken into account:

- the number of TTYs listed on the Web site or in the blue pages for each organization;
- the size of the organization (if more than one TTY was listed, larger organizations had more TTYs in the sample than did smaller organizations);
- services provided by the organization (if more than one TTY was listed, organizations dealing more frequently with the public had more TTYs in the sample than did organizations dealing less frequently with the public); and
- national coverage (if more than one TTY was listed, organizations in the regions had more TTYs in the sample than did organizations located mainly in the National Capital Region [NCR]).

The sample consisted of 118 TTY numbers, from which 20 TTYs were selected for the pre-test, to check whether the testing protocol was satisfactory. The remaining 98 TTYs were tested after the pre-test. There were no changes to the testing protocol, nor to the sample, after the pre-test, so the pre-test results were incorporated into the final results. Section 4.5 of this report explains the pre-test and test in more detail.

4.4 Testing Protocol

The testing protocol has been designed to test whether Government of Canada institutions have operational TTYs and knowledgeable operators, and whether they receive TTY calls. When a TTY call was successful, the experts asked the following two questions:

- What do you do when you get a TTY call requesting service or program assistance?
- What is the most common question you get asked?

To ensure transparency, the experts used the following script:

> "Consulting and Audit Canada, on behalf of the Canadian Human Rights Commission, is currently undertaking a study on TTY lines listed by federal government departments and agencies. To complete this study, I am asking for your help in providing me with the following information...."

Also, the experts provided contact information for Consulting and Audit (CAC) for departmental records or in case someone wanted to discuss the test.

After each call, the experts were asked to complete a response form, recording the following:

- date and duration of the call;
- type of response:
  - text—the response was received from a TTY (the expected response),
  - voice—the response was received from a traditional telephone (not acceptable),
  - machine—an answering machine responded to the initial call (acceptable only if the call was returned within two working days) or
  - no response (not acceptable);
- call response time, if the caller had to leave a message on an answering machine (response within one, two or more than two working days, or no response at all); and
- the quality of the interaction—which included an assessment of courtesy, control of interaction, understanding and accuracy of information, use of proper TTY etiquette, other call-specific issues and overall quality—as rated on a five-point scale from one (very poor) to five (very high).

A call was characterized as responsive if it resulted in a text response or call return within two working days.

The complete response form is included in Appendix B of this report.

4.5 Test

As reported in section 4.3, experts called 20 TTYs during the pre-test. Interestingly, two of these TTYs were listed under multiple departments, agencies and services; one was listed under five completely different organizations. The breakdown of the 20 TTYs called in the pre-test is as follows:

- 10 toll-free numbers;
- five numbers from the NCR;
- two numbers from Quebec (outside the NCR);
- one number from Western Canada;
- one number from Atlantic Canada; and
- one number from Ontario (outside the NCR).

The pre-test, conducted in the second week of February 2005, did not result in any changes to the testing protocol or the sample. Therefore, it was possible to incorporate these results into the final results, which are presented in section 5 of this report.

The actual test took place during the third and fourth weeks of February 2005 and included testing of 98 TTY numbers, as follows:

- 36 toll-free numbers;
- 47 numbers from the NCR;
- two numbers from Quebec (outside the NCR);
- six numbers from Western Canada;
- four numbers from Atlantic Canada; and
- three numbers from Ontario (outside the NCR).

Of the 98 TTYs, testing could not be completed for 12 TTYs, as one number was listed only partially and 11 TTY numbers were provincial toll-free numbers that could be called only from the specified province. However, eliminating these provincial TTY numbers did not completely eliminate any organization that was represented in the original sample.

5] RESULTS

5.1 Results by Total Calls Made

Test calls were made to 106 TTY numbers.[7] Only 25 TTYs (24%) were responsive.[8]

5.2 Results by Quality of Interaction

The 25 responsive TTYs were rated on the quality of interaction scale, as explained in section 4.4 (Testing Protocol). These results are presented in Figure 4.

Figure 4: Quality of Interaction Results

	Courteous	Interaction	Information	TTY skills	Overall
1	5	5	5	5	5
2	4	4	4	1	3
3	4	4	4	1	3
4	3	4	2	1	3
5	5	5	4	5	5
6	4	5	5	5	5
7	5	5	4	5	5
8	5	5	4	5	5
9	5	4	4	5	4
10	5	5	5	5	5
11	4	4	4	4	4
12	5	5	5	4	5
13	0	0	0	0	0
14	4	4	3	1	3
15	4	3	3	3	3
16	5	4	5	4	5
17	5	4	5	4	5
18	5	4	5	4	5
19	3	2	3	1	2
20	3	2	3	3	3
21	3	2	4	1	2
22	4	4	4	4	4
23	5	5	5	4	5
24	5	5	4	4	5
25	0	0	0	0	0
Average	4.17	3.92	3.92	3.29	3.80

Legend: 1 = Very Poor Quality
          2 = Poor Quality
          3 = Neutral
          4 = High Quality
          5 = Very High Quality
          0 = TTY incompatible

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[7]   As mentioned in sections 4.3 and 4.5, a total of 118 TTY numbers were included in the sample. Of these 118 TTYs, 12 could not be tested, as one TTY was partially listed and the other 11 were provincial toll-free numbers.

[8]   A call was considered responsive if it resulted in an actual response or call return within two working days. Although calls were monitored after the two working days cut-off time, no other calls were received.

5.3 Results in Federal Organizations

The 25 responsive TTYs belonged to 20 different federal organizations. In some cases, more than one TTY number was tested for an organization, since some organizations had more than one TTY listed on their Web site, or in the blue pages of the Ottawa-Gatineau or Vancouver telephone book. An organization was characterized as responsive if at least one of its listed TTYs was responsive.

5.4 Other Findings

While developing the sample and conducting the test calls, the experts made these additional observations:
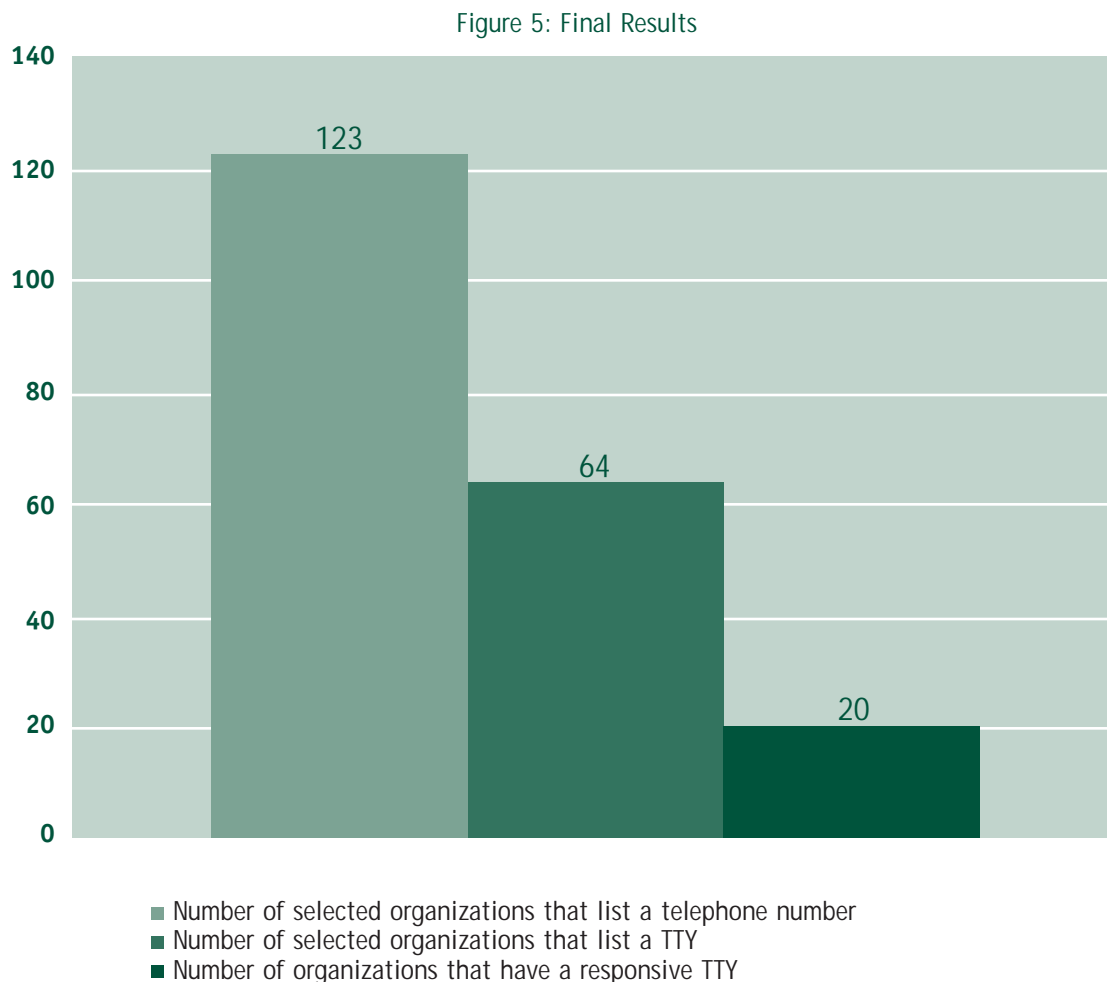
- TTY numbers were sometimes listed in telephone book but not on the Web site, or vice versa.
- Incorrect TTY numbers were listed.
- Voice or fax numbers were listed as TTY numbers.
- The same TTY number was listed for multiple departments or different services.[9]
- The relay service number (711) was listed, without indicating the actual number to call.
- Different and inconsistent terms were used to refer to TTY service—in particular, TTY lines were identified as being for the "hearing impaired", a term unacceptable to the Deaf community and which has generally fallen into disfavour.

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[9]   The use of centralized TTY numbers for many departments or services may indicate a lack of the type of individualized service available to voice callers.

5.5 Summary

- In the sample, 123 organizations listed a telephone number.
- Of these organizations, 64 (52%) also listed one or more TTY numbers.
- The test sample comprised 106 TTY numbers from 64 organizations.
- Only 24% of the 106 test calls could be completed successfully.[10]
- The quality of completed calls was high or slightly less than high.
- Only 20 (31%) of the 64 organizations that listed a TTY number had at least one operational TTY, which equates to 16% of all 123 organizations that listed a telephone number.

Final results are illustrated in Figure 5.

Figure 5: Final Results

■ Number of selected organizations that list a telephone number
■ Number of selected organizations that list a TTY
■ Number of organizations that have a responsive TTY

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10 *It should be noted that the test did not take into account the volume of calls to any one number.*

6] ANALYSIS AND CONCLUSIONS

The average Canadian takes it for granted that he or she can look up the number of a federal department or agency in the blue pages of the telephone directory or on the Internet, make a phone call to that organization, and get the information sought within a reasonable period. The results of this study show that is not the case for Canadians who, as a result of a disability, cannot use the regular telephone system. For them, there is only a fifty-fifty chance that they will find a TTY number listed. And when a TTY is listed, there is only a one-in-three chance that they will be able to complete a call successfully. The results of this review confirm previous test results.

This inadequate level of service persists despite the fact the Government of Canada has publicly committed itself to providing, and is legally required to provide, equality of service for all.

- Results for Canadians: A Management Framework for the Government of Canada commits the Government of Canada to achieving a significant, quantifiable improvement in client service satisfaction.
- The Communications Policy of the Government of Canada commits all federal departments and agencies to providing communications services in an equitable and accessible manner, taking into account the differing needs of the Canadian public.
- The *Canadian Human Rights Act* and the *Canadian Charter of Rights and Freedoms* prohibit discrimination based on disability and require accommodation of special needs short of undue hardship.

During this study, some federal organizations indicated that demand for TTY service was low. This is an interesting observation, but it is not a justification for not providing equitable service access. Advocacy groups indicated that TTY users have become so frustrated with trying to make TTY calls that they have simply given up. Instead, they ask the advocacy groups, or a hearing friend or family member, to make calls for them.

Even if true demand was low, and there is no proof of this, that would not be justification for providing inadequate services. The law and jurisprudence on this issue are clear: the number of people requiring accommodation does not determine whether accommodation should be provided. Only undue hardship is recognized as a justification for not accommodating a legitimate need. As noted earlier, the marginal cost of ensuring adequate communication with people who cannot use the regular telephone system is small and unlikely to pose undue hardship to any federal organization.

Based on this study, there appear to be two main reasons for the current situation.

- *Lack of adequate policies, procedures and guidelines to ensure that the right to equitable access is met*: As noted previously, the Charter, the *Canadian Human Rights Act* and TBS policies all include requirements for equitable access to government programs and services. However, there are no clear laws, policies or guidelines governing the provision of communications services specifically to people who cannot use the regular telephone network. In the absence of such rules, federal organizations do not know what is expected of them and citizens do not know what they can expect of the government. There is a lack of accountability. As a result, citizens have little or no recourse when they fail to receive adequate service.

- *Failure to properly manage communications services for those who cannot use the regular telephone system*: In the study, among the 64 organizations that listed a TTY number, only 30% had lines that actually worked when a test call was made. This is obviously an unacceptable service level that would certainly not be tolerated in any other aspect of a federal organization's operations. The study indicates that operators are inadequately trained in the use of TTY, that they sometimes do not know the common protocols of TTY communication, and that little or no effort is made to ensure service quality. Despite the fact that many new technologies exist that could facilitate or complement TTY communication, little progress has been made in introducing these new technologies.

In summary, the problem of inadequate availability and accessibility of services for people who are Deaf, deafened or hard of hearing, or have a speech impediment, still exists. Since there is no standardized framework of guidelines or best practices, each institution uses its own approach, which creates inconsistency and confusion.

Recommendations are presented in order of importance and not in the order they appear in this report.

1. Comprehensive Strategy

It is recommended that:

a. the Government of Canada develop a comprehensive strategy on the provision of telephonic communications services to people who are Deaf, deafened or hard of hearing, or have a speech impediment and that this strategy be announced by March 31, 2006;

b. each federal organization develop an internal policy on the provision of telephonic communications services that will comply with and complement the strategy;

c. the strategy include specific reference to the duty to accommodate short of undue hardship as provided under the *Canadian Human Rights Act;*

d. treasury Board Secretariat, or such other federal organization as may be appropriate, develop model standards or guidelines with regard to the provision of telephonic communications services; and

e. in developing policies, procedures and guidelines, and in purchasing equipment, relevant federal organizations consult people who have a hearing loss or speech impediment, and the manufacturers of, and experts on, assistive technologies.

2. TTY directory

It is recommended that the Government of Canada publish a yearly directory of the TTY numbers of all federal organizations, that the directory be updated regularly, and that it include a TTY number to call to report inaccurate numbers or inadequate service.

3. New technology

It is recommended that the Government of Canada constantly assess new developments in communications technology to determine how they might improve telephonic communications services for people who cannot use the regular telephone system. In particular, the process of replacing land telephone lines with a Voice-over-Internet Protocol (VoIP) system should include, from the design stage, provisions for assistive technologies, such as computer-mounted TTY systems.

4. Other issues

It is recommended that the Government of Canada review other federal communications issues identified during this study, such as the availability of American Sign Language/langue des signes québécoise (ASL/LSQ) services, provision of real-time captioning at federal meetings and consultations, consideration of the special needs of hard of hearing people, and captioning of federally sponsored television feeds, videos and the audio portions of Web sites. It is also recommended that the government review these issues by establishing a group of experts similar to the 2001 Task Force on Access to Information for Print-Disabled Canadians.

Advocacy Groups

Canadian Association of the Deaf (CAD)

The CAD provides consultation and information on Deaf needs and interests to the public, business, media, educators, governments and others. It conducts research and collects data regarding Deaf issues; issues reports on these studies and provides expertise related to them; and develops and implements pilot programs. It offers assistance to Deaf organizations and service agencies across the country, and provides a major library and resource centre on deafness at its office in Ottawa, Ontario.

For more information about the CAD or to contact them see their website at: http://www.cad.ca

Canadian Hearing Society (CHS)

The CHS, based in Ontario, provides services that enhance the independence of Deaf, deafened and hard of hearing people, and that help prevent hearing loss. Some of the services the CHS provides are American Sign Language (ASL) classes and teacher training; audiology and speech-language pathology services; educational support services; employment services; general social services (counselling); hearing aid program; hearing help classes; hearing care counselling programs for people 55 and over; interpretation services (signing); literacy and life skills training; corporate communications; counselling; a technical devices program; tinnitus retraining therapy; videoconferencing services; support of consumer groups in advocacy; consultation and training; mail-order assistive devices and educational materials; and public education.

For more information about the CHS or to contact them see their website at: http://www.chs.ca

Canadian Hard of Hearing Association (CHHA)

The CHHA is a consumer-based organization formed by and for hard of hearing Canadians. It works cooperatively with professionals, service providers and government bodies, and provides information about hard of hearing issues and solutions. The philosophy of the CHHA is to produce knowledgeable hard of hearing consumers who understand how to have their needs met. Its mission is to promote the integration of persons who are hard of hearing into Canadian society, to raise public awareness of issues important to them, to remove any barriers to their participation and to generally make every community in Canada a better place for persons who are hard of hearing.

For more information about the CHHA or to contact them see their website at: http://www.chha.ca

Response Form

Number: _____

Department/Branch: _____

Caller: _____
Telephone number: _____

Date of call: _____
Start of call: _____
End of call: _____
Duration: _____

Type of Response
- 1) Text
- 2) Voice
- 3) Machine*
- 4) No response

*Call Response Time
1) Within one working day
2) Within two working days
3) More than two working days
4) No answer

Scale:

1) Very low quality 2) Low quality 3) Neutral
4) High quality 5) Very high quality 6) N/A

Courtesy: ____ Control of interaction: ____ Understanding of information: ____

TTY etiquette: ____
Other (specify): _____

Overall: _____
_____

Notes: _____
_____

Glossary of Abbreviations

ASL   American Sign Language

CAC   Consulting and Audit Canada

CAD   Canadian Association of the Deaf

CapTel   captioned telephone

CART   computer-assisted real-time transcription

CHHA   Canadian Hard of Hearing Association

CHRA   *Canadian Human Rights Act*

CHRC   Canadian Human Rights Commission

CHS   Canadian Hearing Society

CRTC   Canadian Radio-television and Telecommunications Commission

LED   light-emitting diode

LSQ   langue des signes québécoise

N/A   not applicable

NCR   National Capital Region

PALS   Participation and Activity Limitation Survey (Statistics Canada)

PC   personal computer

TB   Treasury Board

TBS   Treasury Board of Canada, Secretariat

TDD   telecommunications device for the Deaf (not in use anymore)

TTY   teletypewriter

VCO   voice carry over

VI   video interpreting

VoIP   voice-over-Internet protocol

VRS   video relay service