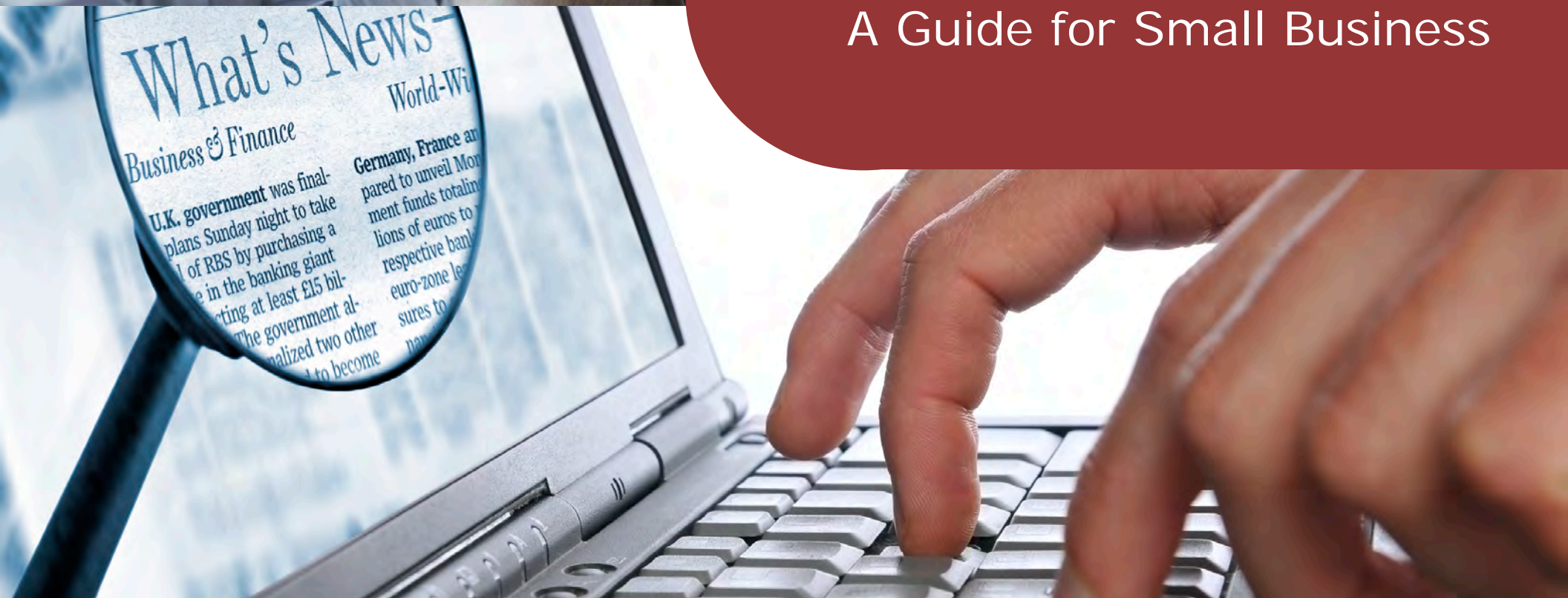




Accessible Information and Communication

A Guide for Small Business



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1.0 Introduction

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- 1.4 The Importance of Employee Training

1.1 Accessible information and communication . . . what does this mean for your business?

As a small business operation offering design services to your clients, the last thing you're thinking about adding to your 'to do' list is making your promotional materials, telephone system or website accessible to people with disabilities. However, it could be a very good business decision!

In fact, in Canada one in seven people have a disability. In the coming 20 years, that number will increase to one in five as our population ages; that's about 7,000,000 people! With the wealthiest retirees in history, you wouldn't want to miss out on such a business opportunity.

A recent Royal Bank of Canada study estimated that presently Canadians with disabilities account for an estimated \$25 billion a year in consumer spending. The study also found that every person with a disability may influence the spending decisions of another 12 to 15 people; those who are colleagues, family members, business owners and other service providers.

This Guide will help you take stock of the accessibility and usability of your existing information and communication systems and provide you with the information and resources you need to enhance access to **your services for clients**. It will also explain your obligations under the Accessibility for Ontarians with Disabilities Act (AODA) to provide access to your **business'** information and communication systems.

In this chapter you will be introduced to some tools to help you evaluate your firm's existing information and communication systems. Also discussed is the concept of creating a Statement of Organizational Commitment. Jump to [Chapter 2](#) if understanding your obligations to provide usable systems and technologies under



Making your business accessible means more clients!

"Accessibility is good for our economy and our society. It means a bigger talent pool for Ontario's workforce, more customers for our businesses and communities that include people of all abilities."

*Ontario Community and Social Services Minister
Madeleine Meilleur*

the AODA is your primary concern. For those anxious to learn specifically about the types of accessible information and communication systems available, [Chapter 3](#) presents some of the many options. [Chapter 4](#) presents some of the resources available to assist you make your business more accessible to more clients. Refer to [Chapter 5](#) for clarification of the technical terms that will inevitably be encountered when looking into information and communication systems.

It should be noted that this Guide is not intended to be a technical 'how to' manual. However, it will help you understand the various components of accessible information and communication, your obligations under the AODA, and where to find help with implementation.



What about your web site?

If you have a website, you have the potential of serving clients from all over the world. Did you know that making your site accessible helps not only your clients with visual disabilities to use it, but also for search engines like Google to find it?

An accessible website is simple and intuitive, easier to navigate, uses less bandwidth, is easier to translate... and fully capable of showcasing top quality design and innovation.



1.2 Assessing Your Current Information and Communication Systems

How do you measure your company's ability to offer accessible information and communication systems to your clients and employees? There may be things you are already doing to make your services available to people with disabilities; there will almost certainly be areas where improvements can be made. It can be hard to decide where to start.

Before embarking on any upgrades or additions to your information and communication systems, you should take stock of your existing practices and resources. The following checklist has been developed to assist you with this task. It will help you to discover what practices and resources your firm already has in place, as well as what needs to be done under the AODA, or what could be done to make your business accessible to everyone.

The checklist is organized under four topics:

1. Written policies and procedures
2. Information systems
3. Communication systems
4. Training employees



1.2.1 Assessing Your Firm's Written Policies and Procedures

How appropriate are your company's accessibility policies?

Current Status	Yes √	No X	AODA Obligations	Possible Strategies	Sample Resources
My firm has developed a statement of commitment to provide accessible information and communication technologies for our clients			None Sort of	Section 1.3 Page 9	Section 1.3 Page 9
My firm has a policy in place for how requests for information and communications in accessible formats will be dealt with			Section 2.3 Page 19	Section 2.2 Page 15	Section 4.2 Page 59
My firm has established procedures on how requests for communication supports and services will be dealt with			None	Section 2.3 Page 18	Section 4.2 Page 59
My firm has developed an Accessibility Plan on meeting its information and communications requirements			Section 2.3 Page 20	Section 2.6 Page 24	Section 2.6 Page 24
My firm has created criteria to determine what information and communications will be made available in plain language			None	Section 3.1.1 Page 32	Section 4.2 Page 59
My firm has a purchasing policy in place which addresses accessibility requirements			None	Section 4.4 Page 74	Section 4.4 Page 74

Found something you are missing? If you answered "no" to any of the questions, the checklist refers you to related information, AODA requirements and resources.

1.2.2 Assessing Your Firm's Current Information Systems

How accessible are your company's information components and systems?

Current Status	Yes √	No X	AODA Obligations	Possible Strategies	Sample Resources
My firm's promotional materials are available to our clients in accessible formats			None	Section 3.1 Page 30	Section 4.2 Page 59
Website is accessible to WCAG 2.0, level AA			Section 2.2 Page 17	Section 3.1.2 Page 36	Section 4.3 Page 70
Firm's information is capable of being delivered in accessible format or with a communication support on request			Section 2.2 Page 17	Section 3.1.2 Page 36	Section 4.3 Page 70
My firm has made it clear to our clients, that information is available in a variety of accessible formats, suitable for use by persons with a variety of disabilities			Section 2.2 Page 16	Section 3.1 Page 30	Section 4.2 Page 61
My firm makes public safety information available to the public and employees in accessible formats, and can provide related communication supports and services as required			Section 2.2 Page 15	Section 3.3 Page 56	Section 4.2 Page 59
My firm has procedures in place to make new and/or additional information related to emergency and public safety, available to persons with disabilities at the same time as it is made available to others			None	Section 3.3 Page 56	Section 4.2 Page 59

Found something you are missing? If you answered "no" to any of the questions, the checklist refers you to related information, AODA requirements and resources.

1.2.3 Assessing Your Firm's Current Communication Systems

How appropriate are your company's accessibility policies?

Current Status	Yes √	No X	AODA Obligations	Possible Strategies	Sample Resources
My firm's telephone system incorporates accessible alternates for persons who are deaf, deafened, hard of hearing, or who cannot speak			None	Section 3.2.5 Page 53	Section 4.3 Page 67
My firm has access to an assistive listening system for use by persons who are deaf, deafened or hard of hearing			None	Section 3.2.3 Page 50	Section 4.2 Page 66
My firm's design collaboration software (where used), incorporates communication features that are usable by persons with disabilities			None	Section 3.2.5 Page 53	Section 4.3 Page 68
My firm's video conferencing software (where used), incorporates communication features that are usable by persons with disabilities			None	Section 3.1.3 Page 38	Section 4.3 Page 68
My firm has made it clear to our clients, that our communication systems incorporate a variety of measures, suitable for use by persons with a variety of disabilities			None	Section 3.1 Page 30	Not Applicable
My firm has a feedback process which permits people with disabilities to identify their communication needs and to communicate using accessible formats, communication supports and services			None	Section 3.1 Page 30	Not Applicable

Found something you are missing? If you answered "no" to any of the questions, the checklist refers you to related information, AODA requirements and resources.

1.2.4 Assessing Your Firm's Training for Employees

How appropriate are your company's accessibility policies?

Current Status	Yes √	No X	AODA Obligations	Possible Strategies	Sample Resources
My firm provides training on the accessibility requirements of the Integrated Accessibility Standards Regulations and on the Human Rights Code as it pertains to persons with disabilities			Section 2.3 Page 21	Section 1.4 Page 11	Section 1.4 Page 11
My firm provides training to staff on our company's policies, procedures and practices for providing accessible information and communications to and from persons with disabilities			Section 2.3 Page 21	Section 1.4 Page 11	Section 1.4 Page 11
My firm provides training to staff on information and communication barriers and awareness of persons with disabilities			Section 2.3 Page 21	Section 1.4 Page 11	Section 1.4 Page 11
My firm provides training to staff on our company's resources and tools for providing accessible information and communication supports and services to persons with disabilities			Section 2.3 Page 21	Section 1.4 Page 11	Section 1.4 Page 11
My firm provides training to staff on how to communicate with persons with disabilities in emergency and crisis situations			Section 2.3 Page 21	Section 1.4 Page 11	Section 1.4 Page 11

Found something you are missing? If you answered "no" to any of the questions, the checklist refers you to related information, AODA requirements and resources.

1.3 A Statement of Organizational Commitment

Creating a Statement of Organizational Commitment is a great starting point for the development of policies for providing accessible information and communication. Such a Statement defines the high-level goals with respect to accessibility, as well as the firm's willingness to work toward their implementation over time.

A Statement of Organizational Commitment does not have to be lengthy or complicated, but it should clearly state the firm's 'buy-in' to enhancing client access to their information and communications components, systems and services. Here is an example of a Statement of Organizational Commitment from a design firm:



Commitment of Huang Design Group to provide Accessible Information and Communication Supports for their Clients

The Huang Design Group will strive at all times to provide its services in a way that respects the dignity and independence of people with disabilities. We are also committed to giving people with disabilities the same opportunity to access our services and allowing them to benefit from the same services, in the same place and in a similar way as other clients.

The Huang Design Group is committed to excellence in serving all of our clients, including people with disabilities. When providing information to, or communicating with, a person with a disability, we will provide the information and communication in a manner that takes into account the person's disability.

The Huang Design Group will provide training to applicable staff about the provision of accessible information and communication to persons with disabilities and all those who are involved in the development and approvals of related policies, practices and procedures.



Better access in a global industry!

The design industry is becoming increasingly global. More firms are working cooperatively across town, across the country and around the world. The sharing of information across networks and the ability to communicate with clients and colleagues across the country and around the world are now a basic requirement for almost every design office. Accessible information systems such as documents and websites will enhance usability for all clients and colleagues – not just persons with disabilities. Similarly, communication systems that are simple and intuitive to use, provide users with choices on how to communicate, are more flexible, efficient and user-friendly for everyone.

“Accessible websites get higher Google rankings... It cares about headings and titles, not about fonts and bold elements. Accessible, standards based designs routinely rank higher in Google searches.”

John Allsopp, one of Australia's top accessibility gurus



1.4 The Importance of Employee Training

Without appropriate and timely employee training, the development of accessibility policies in themselves will not enhance client access to your business. The people in your firm who interact with your clients need to know why accessible information and technology is needed, and how to use it to benefit your business. They also need to know what resources are available within your firm to help them provide information to, and interact with persons with disabilities.

Training strategies and the design of training programs and resources are beyond the scope of this Guide. Firms are encouraged to work with training organizations that have expert knowledge on accessibility issues and strategies . . . including people with disabilities themselves. Some organizations that can be contacted for information on training related to accessible information and communication are:

1. Global Alliance on Accessible Technologies and Environments (GAATES) www.gaates.org
2. Accessibility Consultants Association of Ontario (ACAOntario) www.acaontario.ca
3. Association of Municipal Managers, Clerks, and Treasurers of Ontario (AMCTO) www.amcto.com





2.0 AODA Requirements for Accessible Information and Communications Supports

2.1 Overview

2.2 Technical Requirements

2.3 Requirements for Policies and Employee Training

2.4 Timelines

2.5 Compliance

2.6 Sample Information and Communications Accessibility Plan

2.1 Overview

The Accessibility for Ontarians with Disabilities Act (AODA) was enacted in 2005, with the overarching goal of making Ontario accessible for people with disabilities by the year 2025. Under this legislation, an accessible Ontario is to be achieved through the development and implementation of accessibility standards in five key areas:

- Customer Service
- Information and Communications
- Transportation
- Employment
- Built Environment

So far standards have been developed in the first four areas.

The Accessibility Standard for Customer Service (O. Reg. 429/07) is the first accessibility standard under the AODA and came into force January 1, 2008. The standard sets out the rules that businesses and other organizations in Ontario must follow to provide customer service that is accessible to customers with disabilities.

The next three standards - information and communications, employment and transportation - have been combined under one regulation, the Integrated Accessibility Standards Regulation (IASR).

The accessibility standard for the built environment (buildings and outdoor spaces) is in development and not yet law.

Does my firm need to comply with the accessible information and communication requirements of the Integrated Accessibility Standards Regulation?

The requirements of the Integrated Accessibility Standards Regulation will apply to all Ontario firms, with at least one employee, that provide goods or services to clients. Essentially this means that, unless you offer your design services as a sole practitioner, you are obligated by law to provide accessible information and communications systems for your clients.



The standards and their requirements are being phased-in, to ensure that services and systems, as well as related infrastructure, are truly accessible to persons with disabilities.

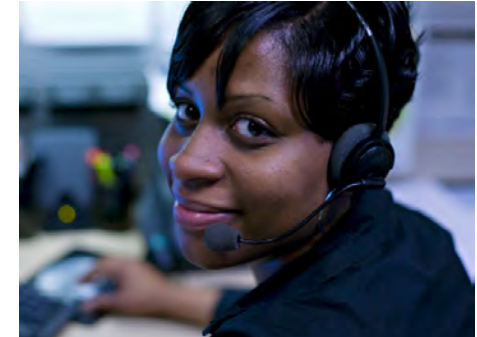
Organizations in the private sector, including non-profit, with one or more employees had to comply with the Accessibility Standard for Customer Service by January 1, 2012. Those with 20 or more employees will also have to file a report by December 31, 2012.

Between now and 2021, businesses and other organizations will be required to gradually meet requirements specific to each of the standards under the IASR - information and communications, employment, transportation - as well as requirements that are common to all three such as training.

Design firms also have current and ongoing obligations under the Ontario Human Rights Code respecting non-discrimination. It is important to note that the Accessibility for Ontarians with Disabilities Act does not diminish your existing legal responsibilities under the Ontario Human Rights Code, with respect to providing accessible information and communications systems to your clients. The AODA does, however, more clearly define your obligations.

The remainder of this section of the Guide will focus on your requirements under the Information and Communications Standard, as well as some of the requirements that are common to all three standards under the IASR. These components of the IASR have been selected as they will impact the way small businesses inform and communicate with their clients.

It should be noted that the complete set of regulatory requirements are not presented. This document cites only those parts of the IASR that relate to the delivery of accessible information and communication supports by small design businesses.



2.2 Technical Requirements

The Integrated Accessibility Standards Regulation requires firms to provide clients with accessible information and communication supports. In some instances the information must be made available to everyone at the same time, such as on websites. In other cases, accessible information must be made available on request, such as public safety information.

The following questions address the most common technical requirements.

What types of accessible formats or communication supports does my firm need to provide?

The Integrated Accessibility Standards Regulation is not specific about the types of formats or supports that need to be provided, only that it needs to be suitable for the person requesting the information. Firms will be required to provide information in an accessible format or with a communication support, on request and in consultation with the person making the request. Although the regulation is not specific about types of accessible information formats, some of the most commonly-requested formats include electronic copies of printed documents, large print documents, and text documents describing the content of graphic images.

Implementation procedures to provide information in accessible formats or communication supports to your clients needs to be in place by January 1, 2016 for organizations with 50 or more employees, and January 1, 2017 for smaller organizations.

What about Emergency and Public Safety Information? Is it required to be accessible?

Yes . . . where emergency and public safety information is publicly available, upon request it will also need to be available in accessible formats or with communications supports.

Emergency and public safety information is required to be available, upon request, in a manner accessible to people with disabilities by January 1, 2012.

Does my firm need to make it known that accessible information and communication supports are available on request?

Yes . . . you are required to provide notification to your clients and members of the public, that documents and other information are available in accessible formats or with communication supports, on request. This can be done by posting a notice in a conspicuous place in your premises and on your firm's website.

Notification systems on the availability of information in accessible formats need to be in place by January 1, 2016 for organizations with 50 or more employees, and January 1, 2017 for smaller organizations.

Can I charge my clients for the cost of preparing information in accessible formats?

No . . . firms cannot charge any more for information provided in accessible formats or communication supports than the regular cost charged to other persons.

Are there information or communication items that are exempt from the Information and Communications standard?

With some exceptions, the standard does not apply to product labels, unconvertible information or information that your organization does not directly control. An item may be considered unconvertible if it is not technically feasible to convert it or the technology to do so is not readily available. In these instances, your organization must be prepared to provide the person requesting the information with an explanation as to why it can't be converted and a summary of that unconvertible information.

Does my firm have to provide a way for our clients to provide feedback on our accessibility procedures?

Yes . . . organizations that have a process for receiving and responding to feedback must ensure that the procedures are accessible. Upon request, accessible formats or communications supports must be provided or arranged to be provided. The public is to be notified of this availability of accessible formats and communications supports. These requirements do not detract from the feedback requirements of the earlier Accessibility Standards for Customer Service.

Your firm is required to make its feedback process accessible upon request by January 1, 2015 if you have 50 or more employees, and January 1, 2016 for smaller organizations.

Does my firm's website need to be accessible?

Perhaps . . . it depends on the size of your firm. Companies with 50 or more employees will be required to take specific measures to make their websites accessible. Although smaller firms are exempt, accessible websites have many advantages beyond just accessibility, and should be considered by all firms.

For a website to be considered accessible, initially it will be required to comply with the World Wide Web Consortium WCAG 2.0 Level A, subsequently increasing to Level AA.

The Integrated Accessibility Standards Regulation requires new websites and new Web content on those sites to be dealt with first – compliance with Level A is targeted for January 1, 2014. All websites and Web content, with the exception of live captioning and audio description, should achieve Level AA compliance by January 1, 2021. Organizations will not have to make content posted prior to 2012 accessible on their website, but they will have to make the information available in an accessible format or with a communication support on request starting in 2016.

Note: Web content includes, but is not limited to, documents, videos, audio files, records and archived materials.



My firm has an Information Kiosk for client use. Does it have to be accessible to persons with disabilities?

No . . . although the Integrated Accessibility Standards Regulation requires all organizations to consider accessibility features when procuring, acquiring and/or designing new self service kiosks.

Accessibility features must be considered when designing and acquiring kiosks by January 1, 2014 for organizations with 50 or more employees, and January 1, 2015 for smaller organizations.

My organization is involved in the design of education and training materials. Are there specific requirements related to this?

Yes . . . the Information and Communications standard specifically addresses educational or training institutions; training of educators; libraries and the producers of educational or training materials. It provides specific requirements for each of these.

For more information on these specific requirements visit ontario.ca/AccessON.

2.3 Requirements for Policies and Employee Training

The Integrated Accessibility Standards Regulation (IASR) requires firms to develop accessibility policies that demonstrate how they are meeting their requirements under the regulation. Relevant staff must also be trained on the implementation of the policies.

The following questions address the most common policy and training requirements.

Does my firm have to develop accessibility policies?

Yes . . . and they must be in writing if your organization has 50 or more employees. The good news is that it's very easy to do and there are resources available to assist at ontario.ca/AccessON. You could also do a Web search for the type of policy you want to create (i.e. training) and "accessibility".

Under the Integrated Accessibility Standards Regulation, your firm will be required to establish, maintain and implement policies demonstrating how it is meeting its requirements.

You don't need to develop a policy on each of your requirements under the IASR. The regulation provides you with flexibility to determine the areas of the regulation you would like to create a policy to address.

As part of the Information and Communications standard organizations must be able to deal with client requests for accessible information and communication supports. As a result, your organization may wish to develop a policy on the provision of accessible information and communication systems to its clients.

Private and not-for-profit organizations with 50 employees or more will also have to develop a statement of commitment for meeting the needs of persons with disabilities in a timely manner.

Larger firms (50 or more employees), will be required to prepare at least one written document describing its policies, and be able to provide a copy of the document to any person who requests it. The document must be made available in a format that meets the person's needs (more below). Although private and not-for-profit organizations with less than 50 employees don't need to put their policies in writing, they will still need to verbally communicate their policy to staff so their firm knows how to meet the needs of its clients and employees with disabilities.

Organizations have the flexibility to integrate their accessibility policies into existing policy documents, or create entirely new ones.

Overall accessibility policies addressing all requirements of the IASR are to be in place by January 1, 2014 for organizations with 50 or more employees and January 1, 2015 for smaller organizations. However, organizations may not have a policy specifically about the provision of accessible information in place until 2016 or 2017 since the compliance timelines for providing accessible information upon request aren't until 2016 if they have more than 50 employees or 2017 if they have under 50.

Does my firm have to develop an Accessibility Plan?

Perhaps . . . it depends on the size of your firm. Companies with 50 or more employees will be required to develop a multi-year accessibility plan that outlines its strategy to meet its requirements under the IASR and prevent and remove barriers. Smaller organizations are not obligated by the Integrated Accessibility Standards Regulation to prepare an Accessibility Plan.

The plan is required to include your firm's intended timeframe for implementing the requirements. The accessibility plan is to be posted on the company's website, if you have one, and provided in accessible formats on request. At least once every five years the plan must be reviewed and updated. Accessibility Plans are to be in place by January 1, 2014 for organizations with 50 or more employees.



There are resources available to assist you in developing your multi-year accessibility plan at ontario.ca/AccessON.

This Guide will help you develop your strategy to meet accessible **information and communication requirements** of the regulation. A sample business Information and Communication Accessibility Plan is included in Section 2.6.

Although firms with less than 50 employees will be exempt from developing accessibility plans, it is still a very good idea to have such a plan in place, so your firm has a clear strategy on how it intends to implement the information and communication requirements of the Integrated Accessibility Standards Regulation.

Does my firm have to provide training to its staff?

Yes . . . and you have to maintain a record of your training policies if your organization has 50 or more employees. All firms will have to provide training to staff, volunteers and all others that provide goods, services or facilities on behalf of your firm. Training is also required for staff persons that are involved in the development and maintenance of your firm's accessibility policies. Training should be provided at a level suitable for the duties of the employee.

Training is to be on the accessibility requirements of the Integrated Accessibility Regulation Standards and on the Human Rights Code where it relates to persons with disabilities. School boards or educational or training institutions have additional training requirements specific to the Accessible Information and Communications Standards.

Training your staff on providing accessible customer service and on your accessibility policies is also a requirement under the Accessibility Standard for Customer Service. To learn more about the importance of employee training refer back to Section 1.4.

For more information on your training requirements and for free resources to help you get started, visit ontario.ca/AccessON.

Training is to be done as soon as practicable and on an ongoing basis. Organizations with 50 or more employees must comply by January 1, 2015 and small organizations by January 1, 2016.

2.4 Timelines

Timelines for Large and Small Organizations		
	Large Organization	Small Organization
Emergency and public safety information	2012	2012
Accessibility policies and practices	2014	2015
Accessibility plans	2014	
Kiosks	2014	2015
New Internet websites and Web content published after January 1, 2012 conforms with WCAG 2.0 Level A	2014	
Training	2015	2016
Accessible feedback processes	2015	2016
Accessible formats and communication supports	2016	2017
All Internet websites and Web content published after January 1, 2012 conforms with WCAG 2.0 Level AA other than live captions and pre-recorded audio descriptions	2021	



2.5 Compliance

Are there penalties for not complying with the Integrated Accessibility Standards Regulation?

Yes . . . a Director's order to comply or pay an administrative penalty can be issued for non-compliance with accessibility standards. The amount of an administrative penalty is different for individuals or unincorporated organizations than for corporations. Penalty amounts range from \$200 to \$2000 for individuals or unincorporated organizations and \$500 to \$15,000 for corporations.

The amount of the penalty is based on the impact of the contravention and the organization's contravention history. If a contravention is determined to have a major impact and there is a contravention history that is also major then the penalty can be \$2000 daily to a maximum of \$50,000 for an individual/unincorporated organization and \$10,000 daily for a corporation to a maximum of \$100,000. Penalties must be paid within 30 days.

How is the severity of the impact determined?

A minor contravention is one that is related to an administrative requirement. A moderate contravention is related to organizational preparedness. A contravention is considered major when it involves a priority requirement such as one that relates to health and safety risks to persons with disabilities.

Can the penalty be appealed?

Yes . . . a Director's review of the order to pay an administrative penalty or an appeal of the order can be made to the tribunal. A written submission to request a review must be done within 30 days of receiving the order and contain an explanation as to why the review is sought. A director other than the director who made the order will review it and may reduce the amount of the penalty but cannot increase it.

An organization who receives a director's order has the right to appeal that order in writing to the Licence Appeal Tribunal - Ontario.



2.6 Sample Information and Communications Accessibility Plan

Sample Information & Communication Accessibility Plan for a Small Business				
Accessible Information & Communication Requirement	AODA Target Date	Accessibility Strategy for Implementation	Company Target Date	Staff Responsible
Accessibility Plan	None	Create and adopt accessibility plan	March 2011	J. Lam
Emergency & Public Safety Information	January 1, 2012	Prepare emergency & public safety information in a format that will allow it to be easily available in accessible formats	June 2011	Health & Safety Rep.
		Develop process for providing communication supports and services	June 2011	Health & Safety Rep.
		Develop procedure for new/additional information to be available to persons with disabilities at same time as others	June 2011	Health & Safety Rep.
Accessibility Policies & Practices	January 1, 2016	Develop a statement of commitment	January 2013	J. Lam
		Develop a process for responding to requests for accessible formats	September 2013	J. Lam
		Develop a process for responding to requests for supports and services	September 2013	J. Lam
		Develop criteria to determine what materials will be made into plain language	September 2013	J. Lam

Sample Information & Communication Accessibility Plan for a Small Business

Accessible Information & Communication Requirement	AODA Target Date	Accessibility Strategy for Implementation	Company Target Date	Staff Responsible
Accessibility Policies & Practices	January 1, 2016	Institute a practice that documents be created in a structured electronic format to allow for easier conversion to accessible formats	September 2014	J. Lam
		Institute a company standard for documents that will be as accessible as possible without need for accessible formats (eg font style, font size, colour contrast)	November 2014	J. Lam
Training	January 1, 2016	Research options for providing training	January 2014	K. Smith
		Provide staff training	March 2015	K. Smith
		Track new staff and staff that missed training and coordinate additional training sessions	Ongoing	K. Smith
Accessible Feedback Processes	January 1, 2016	Develop a feedback process to allow people to identify communication needs and communicate using accessible formats, communication supports and services	June 2015	K. Smith

Sample Information & Communication Accessibility Plan for a Small Business

Accessible Information & Communication Requirement	AODA Target Date	Accessibility Strategy for Implementation	Company Target Date	Staff Responsible
Websites	None	Test website for: <ul style="list-style-type: none"> • simple & intuitive use • ability to be accessed by screen readers • ability to be navigated without use of a mouse 	January 2013	F. Desai
		Train in-house Web designer or secure services of Web designer that is knowledgeable of accessibility	January 2013	F. Desai
	January 1 2014	New Internet websites and Web content on those websites conforms with WCAG 2.0 level A	June 2013	F. Desai
	None	All new documents and forms on Internet websites conforms with WCAG 2.0 level A	June 2014	F. Desai
	None	Production and deployment of new I+IT solutions developed in-house conforms to WCAG 2.0 level A where technically feasible	June 2014	F. Desai
	None	Internet websites and Web content conforms to WCAG 2.0 level AA, excluding live captioning and audio description. Content published prior to 2012 available in an accessible format upon request	June 2017	F. Desai
	None	Internet and intranet websites and Web content conforms to WCAG 2.0 level AA (including live captioning and audio description). Content published prior to 2012 available in an accessible format upon request	June 2019	F. Desai

Sample Information & Communication Accessibility Plan for a Small Business

Accessible Information & Communication Requirement	AODA Target Date	Accessibility Strategy for Implementation	Company Target Date	Staff Responsible
Accessible Formats and Communication Supports	Jan 1, 2017	Post a notice on the website and on premises that information is available in a variety of accessible formats	November 2015	M. May
		Create promotional materials in accessible formats	January 2016	M. May
		Develop accessible alternates to telephone system for those that are deaf, deafened, hard of hearing or cannot speak	March 2016	M. May
		Arrange for human review of the various accessible formats	June 2016	M. May
		Establish third-party contacts for outsourcing materials for captioning, video-description and conversion to Braille or audio as well as any other formatting that is not feasible to do in-house	September 2016	M. May
		Familiarize with sources and time-frames associated with booking sign-language interpreters, intervenors or captionists	September 2016	M. May
		Appoint a staff person to be familiar with logistics of planning meetings or presentations where persons with disabilities may be attending	September 2016	M. May

Sample Information & Communication Accessibility Plan for a Small Business

Accessible Information & Communication Requirement	AODA Target Date	Accessibility Strategy for Implementation	Company Target Date	Staff Responsible
Accessible Formats and Communication Supports	Large Org: Jan 1, 2016	Acquire a portable assistive listening system	September 2015	M. May
	Small Org: Jan 1, 2017	Test any design collaboration and video-conferencing software for accessibility	October 2015	M. May
		Develop an in-house process or make necessary contacts to be able to present design concepts to persons with limited vision or who are blind	November 2015	M. May

3.0 Implementation Strategies

3.1 Providing Information in Accessible Formats

- 3.1.1 Print Information
- 3.1.2 Web-Based Information
- 3.1.3 Broadcast Information
- 3.1.4 Techniques for testing the accessibility of information

3.2 Communicating Accessibly with Clients, Employees & Suppliers

- 3.2.1 Greeting and Receiving
- 3.2.2 Face-to-Face Discussions
- 3.2.3 Planned Meetings and Events
- 3.2.4 Making Presentations
- 3.2.5 Remote Discussions
- 3.2.6 Presenting Design Concepts, Ideas and Illustrations
- 3.2.7 Advertising

3.3 The Importance of Accessible Information and Communication within Emergency and Public Safety Systems and Procedures

3.1 Providing Information in Accessible Formats

How do you provide information about your company and services to your clients? Do you have printed brochures or catalogues? Do you have a website? Do you advertise on television or radio?

In this guide, we distinguish between the act of communicating or doing business in person with your customers and the act of providing them with information – tangible (or temporary) “things” they can take away to refer to later. We make this distinction because, quite often, the techniques for making “information” accessible differ from those you will use to communicate in person. The underlying principles are the same, however: people have differing abilities that should be accommodated.

When you decide to use a particular method - or medium - to provide information, you should carefully consider whether anyone will have difficulty understanding, or be unable to perceive, your important message. In the following sections we examine the “traditional” methods of providing information and suggest additional or alternative methods that will enable your message to reach many more people and potential clients.

Each information delivery medium raises its own set of barriers that make it unsuitable for and unusable by some segment of the population. Print has to be seen, and sometimes held, in order for us to have a chance of perceiving the content. Pictures and video are meaningless if we can't see them. Audio needs to be heard to deliver its messages. Technologies like television, computers and modern mobile devices can aggregate all these (text, pictures, sound), but controlling these devices often requires a good deal of manual dexterity as well.

We are fortunate that technologies exist that can reduce the accessibility barriers raised by most inaccessible formats.



For example, text can be made accessible to someone who can't see or read it by conversion to an electronic format that itself can be automatically converted to audible synthetic speech. This process can work either for printed material or computer-based text.

Many of our modern information and communication technologies allow "add-ins" or accessible alternatives to be automatically delivered to a person who needs or wants the information in a different format. But technology by itself is generally not sufficient to remove the barriers completely. In most cases, some human intervention is required to aid the process of accessibility. Some examples include:

- captioning of broadcast program materials to provide visual information for persons who are deaf, deafened or hard of hearing
- described video to provide a synchronized verbal description of the visual action (usually interjected in pauses in the audio dialog) to provide a better understanding of visual context of the dialogue for persons who are blind or with vision loss
- 'tagging' of screen text in Web pages to provide meaningful information about the structure of the content and its context in the surrounding page
- embedding information within Web pages to allow easy navigation by using only keyboard commands, which is very helpful for persons who may not have the dexterity to use a mouse
- including text alternatives for graphic content within a Web page, allowing screen reading software to describe the graphics for persons with vision loss

Each of these "fixes" requires some human intervention at some point in the creation process to ensure that the alternate, accessible features are available.

While technologies do exist to reduce most of the barriers to accessibility, there is no guarantee that any particular person who may be affected by a barrier owns, or has access to, any or all of the possible solutions. Some assistive technology is prohibitively expensive, or the need for an assistive device might be short-term and not worth the investment of time or money. Some modern accessibility barriers can only be removed with the 'latest and greatest' technologies - but most people don't have the resources or knowledge to acquire and use the newest technology.

Implementing the suggestions and best practices described in this Guide will ensure that your important information can be understood and used by all of your current and potential clients. You will learn what you, as an originator of information for your company, should do to ensure that your end products are as accessible as possible.

3.1.1 Print Information

For nearly 500 years, print reigned as the number one method for presenting and preserving information, and in spite of relatively recent inroads made by broadcast and electronic media, print is still ubiquitous. You create a brochure with word processing software then send it to a commercial printer; you receive an e-mail and print it for your files; or you find a product description on a website and print it to refer to later. And yet, there are many people for whom print presents difficulties – this group is sometimes referred to as “print-disabled”. It is important to note however, that it is the print medium that presents the barrier to accessibility, NOT a person’s functional limitation.



Why is print inaccessible to some people?

- **You have to be able to see it**, and if you can see it, you have to be able to see it clearly – this impacts people with blindness or low vision, as well as people who are using their vision for other purposes (like driving a car);
- **You may have to be able to hold it** in order to see it, or turn pages to access it – this impacts people with little or no dexterity (perhaps due to paralysis or missing limbs, or temporary injury) or because their hands are in use performing some other task;
- **You have to be able to understand what's written** for it to be useful – this impacts people who don't or can't read the language of the printed text, or who have limited literacy, or who have a range of cognitive or learning disabilities. Even people who are not print-disabled may have difficulty with text if it's too complex, or written in the terminology of a technical discipline. Use plain language that is as simple and clear as possible but that is also suitable for the intended audience. Clarity of information is the most important feature in effective communication.



Creating information for printing

First, let's look at the difference between structured and unstructured text. Consider a printed book. It has a cover with a title. Open the book and you may find a table of contents. Following that, the book may be subdivided into main chapters. Chapters may be subdivided by sub-headings. Between headings may be paragraphs, lists, tables, quotes, citations, pictures and captions, and so on. Visually, this "structure" is easy to identify, and aids your navigation and understanding of the document. Electronically, this "structure" can be created in two ways: visually, or by using special style and formatting commands that have extra meaning.

Visual structure may be created by using different font sizes, highlighting (italic, underlining, bold), or colours for different headings. New paragraphs may be identified by indenting or by the addition of white-space. The problem is that visual "structure" may not be retained when a file is converted into other formats. If that structure is lost, then anything other than the simplest text might become unusable, or at least, very difficult to use.

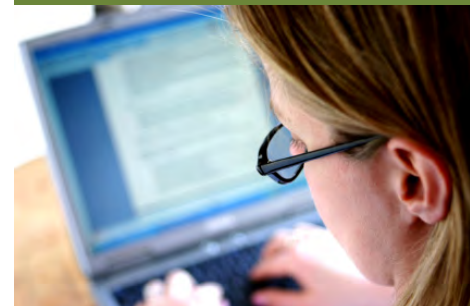
All modern word processing software allows you to identify document structure using "semantic mark-up". In fact, it is imperative that you use these features of your word processor when creating any document otherwise you will be at risk of creating plain text. In other words, do NOT make a title simply by using a larger font size. Instead, use a built-in style command that identifies the text as an appropriate "heading" or "title".

The benefit of explicitly identifying these structures is that if you later convert from a word-processing file to a Web format (e.g. HyperText Markup Language (HTML)) that structure is preserved; if you convert to a print-ready format (e.g. Adobe™ Portable Document Format (PDF)) that structure is also preserved.

It should be noted that simple electronic text (e.g. a text file) is NOT considered to be very accessible! Simple text files are usually unstructured (or only structured visually). On a Windows™ based computer, if you use the Notepad application to create a text file, then that text is unstructured. If you use Microsoft Word™ and use no special style and formatting commands, then that text is also relatively unstructured.

THE #1 RULE for Creating Accessible Print Documents

Create and archive
important information in
a structured electronic
format.



Information created in a structured electronic format is much more easily converted to any other (accessible) format than the reverse. Electronic text can be automatically converted to print, large print, Braille, other languages, other electronic formats, spoken words, and sign language. Wherever possible, create and archive important information in a structured electronic format.

In many jurisdictions, evolving legislation is giving people the right to be provided with information in a format that they can read and understand. As such, it always makes good business sense to keep a structured electronic version of your information that can be transformed easily to accessible formats, on demand . . . in other words, don't keep only the final print-ready PDF file!

Making printed material more accessible

The use of large text, colour contrast and print clarity are key considerations in the production of accessible printed documents.

For every point you increase the size of the printed characters in your document design, your document will become accessible to a wider audience. Small print is usually inappropriate, not only because of its stereotypical connotation of "hiding" important information, but because some people just cannot read it without the aid of assistive devices such as reading glasses, magnifying glasses, or camera enlarging systems, etc.



With this in mind, consider the following:

- Design print communications from the outset to feature the largest print practicable, or be prepared to produce large-print versions of documents on demand. Any modern printer is capable of printing whatever is sent to it from the word processing/publishing software, so this should not require extra/upgraded hardware.
- If printing on coloured stock, ensure that the contrast between the text colour and the background is sufficient to be readable. Choose appropriate colours. Avoid printing text on busy or confusing background images.

- Ensure that your choice of print stock (paper) limits “bleed-through”. This is the situation where print on the reverse of the page shows through to the front.
- Since using large print may increase the amount of paper needed for print-runs, extra cost should be considered.

Alternatives to printed information:

Making print information available in accessible formats will ensure that all of your clients can read and understand your important documents. There is no single ‘standard’ accessible format . . . different people will require information in different formats. The most common accessible formats for printed documents are structured electronic files, Braille, and audio.

- **Structured electronic files:** Since the accessibility of electronic formats varies enormously it is important to know the limitations of those commonly available. Formats like HTML, PDF and common word processors are discussed elsewhere in this document.
- **Braille:** While it is possible to acquire Braille embossing machines (“Braille printers”) and text-to-Braille conversion software this is not the recommended route for most offices that do not have a dedicated knowledgeable Braille-reading employee(s). The quality and formatting of Braille is critical to its readers and there is no way for the non-Braille reader to perform the necessary quality control. It is strongly recommended that you provide structured electronic content to a third-party qualified to produce Braille-on-demand.
- **Audio formats:** Historically this was provided on specially formatted cassette tape, but now almost exclusively in a format known as DAISY which is an acronym for “Digital Accessible Information System”



3.1.2 Web-Based Information

Almost every organization now supplies a significant amount of information to clients, employees and the general public via the Web. Unlike printed information, Web-based content can be updated rapidly. Website designs range from the very simple to the very complex, and the ease of management of your site's content will be influenced by many factors.

If your website is accessible to persons with disabilities, that probably didn't happen by chance. Most website designers are not intimately familiar with the need for, or the techniques available to make a site accessible. And, while most of the tools commonly used to design websites are capable of supporting some level of accessible design, you should not assume that your designer knows how or why to use the accessibility features. Unless you specifically asked your developer for an accessible design, and specify your detailed requirements, it is unlikely that either in-house or third-party designs will meet the minimum standards for accessibility.

"Web accessibility" should take into account, not just the accessibility and usability of the basic Web page, but also of any other content being delivered via the Web such as images, PDF files, streaming media, and other dynamic content. When preparing content for the Web, you have to consider the inherent accessibility limitations of each format you intend to use. Depending upon the type of content in your website, here are some usability questions to consider:

- How do you describe, in words, the information contained in an image so that someone who can't see the picture is not excluded?
- How can you make the audio of a recorded presentation available to someone who can't hear it?
- How can you make an interactive feature usable if someone can't use a computer mouse?
- How do you ensure that important automatic or interactive changes to a Web page are noticed by the end-user?
- How can you determine if people can find what they need or want to know about your products or services?



Interactive Web “applications” such as Facebook, Office On-Line or proprietary in-house systems, should also be designed accessibly.

Whether produced internally or contracted to a third party, Web content must meet all applicable standards. In Ontario, the AODA Information and Communication Standard specifies, for most organizations, that Internet websites and Web content conform with W3C WCAG 2.0, initially at Level A, and increasing to Level AA. These requirements are a subset of the most up-to-date recommendations from the World Wide Web Consortium’s (W3C) Web Accessibility Initiative (WAI), specifically the Web Content Accessibility Guidelines v2.0 (WCAG 2.0) and the draft Accessible Rich Media Accessibility Guidelines (WAI-ARIA).

The following should be considered when designing or updating your company website:

- The Web designers should be aware of the accessibility requirements and either be capable of coding appropriately by hand, or be provided with Web authoring tools that support the creation of accessible Web content.
- The accessibility of all components of your website should be reviewed. There are some software tools that can be a helpful start, but as they are generally not comprehensive or rigorous, a full review will have to be completed by knowledgeable users of assistive computer technologies.
- There is a widely held, but generally incorrect, belief that it is enough to provide an alternative “text only” website for a visually complex interactive or image based Web page. This is only true if no effort at all has been made to making the complex page accessible as most Web page layouts can be designed to be accessible.

Generally speaking, the more complex a website design is, the more complex the techniques will be to ensure its accessibility. It is best to seek out Web designers with experience in accessibility and get their input early in the process.

Why alternate text-only websites are usually an unacceptable alternative.

- They are rarely presented to visitors as the default page so the visitor will have to discover that the alternative exists and then request it (sometimes have to read through all the links on the page).
- They create a problem for Web masters and companies to maintain as any changes to the content or function of the original page will need to be immediately reflected in the text only version.
- If the text-only version is unstructured, it may be just as inaccessible as the completely inaccessible version it is replacing.
- Steering visitors to a separate "text only" site does not promote a spirit of inclusion and equality. One website that is accommodating of all visitors will reflect more positively on your organization. While there are some instances where a specialized or alternate format is the best way to accommodate a person's disability the design of a website is an opportunity to create something more universal.
- The principles of accessible Web content design are described well in various places, but the knowledge of how to effectively apply these principles usually costs more.
- Typically each of the many Web formats, such as Flash, PDF and other multi-media content, has its own suite of development tools. While it is increasingly possible to make these formats accessible, the methods to do so vary greatly with different levels of success.

3.1.3 Broadcast Information

Tools such as video description, open captioning or closed captioning can make broadcasts more accessible to those that may have difficulty seeing the visuals or hearing the audio of broadcast information. Open or closed captioning should be factored in to the production of the audio content of media intended for delivery to television, web-tv, or web-based multimedia. Captioning is essentially a text transcript of the spoken language, synchronized with the video portion of the media.



Where existing media is not captioned, the availability of a separate text transcript will provide a basic level of accessibility.

Captioning can be added to pre-recorded material, either manually, by automated techniques, or done in real time using a human captioner or automated technology.

Video description should be factored in to the production of the video content portion of media intended for delivery to television, web-tv, or web-based multimedia. Video description is a separate audio track that describes – usually during pauses in the spoken soundtrack of a program – the salient visuals or non-verbal action occurring on the screen. This track must be synchronized with the action. Video description might be compared to a TV sports announcer describing the play-by-play activities of a game.

Captioning and video description are typically beyond the capability of small organizations and are probably best done by a hired specialist.

3.1.4 Techniques for testing the accessibility of information

How can you tell if your information products are accessible and usable?

There are generally two basic methods which can be used singly or in combination: human review and automatic (computer assisted) audit/evaluation.

The first level of human review should be by the information creator – perhaps following a checklist to ensure that all applicable techniques have been used. However, review by the developer is often less than optimal because he or she “knows” how the product is supposed to work. Such bias may cause the developer to overlook accessibility and usability barriers.

It is therefore important for a second level review to be undertaken by the end users who experience barriers in daily life. While it is possible for a developer without a disability to use assistive technology for testing a



product, it is rare for them to use the assistive devices in the same manner as experienced users.

Human review is absolutely necessary for verification of:

- Print accessibility
- Broadcast or Web-based captioning quality
- Broadcast or web-based video description quality
- Usability of electronic formats
- Braille (embossed or electronic) quality

Human review is strongly recommended for verification of:

- Accessibility of all electronic formats
- Accessibility of (computer or Web-based) software applications

For some information products, especially computer based formats like Web pages and PDF files, automatic software tools exist that can provide feedback on some aspects of overall accessibility. Such tools are often very good at catching technical violations of standards and identifying the exact locations of errors in your pages. However, since some accessibility guidelines are more subjective, automated checking can be problematic. For example: an automated audit may report that all images in a Web page meet the requirement of including alternative text - however, there is no way for these software tools to evaluate if the description you provide is relevant and accurate.

Although automated tools are becoming more sophisticated, there are many aspects of accessibility and usability that cannot be automatically verified. It is almost always beneficial to supplement software verification with human review.



Automated (software based) audit/verification is especially valid as an aid for developers of:

- Web pages
- PDF documents

CASE STUDIES - Creating Accessible Information

100% outsourced

Smith-Wong Design is looking to retain an advertising company to develop, produce and manage their firm's information products. They use the procurement process to clearly specify their requirements for accessibility, having obtained the accessibility requirements from the CNIB Clear Print Guidelines and W3C WCAG 2.0 Standard.

As part of the bidder evaluation process, Smith-Wong ask to see examples of accessible content the potential suppliers have done for other clients. Smith-Wong also get involved in the production process to the extent that their expertise is needed to describe, verbally, the meaning of images that will aid accessibility of Web content.

Draft/basic content developed in-house

Pazik Architects wish to enhance the reach of their practice by planning a company brochure and a promotional campaign. While final production may be outsourced, the preliminary content development will be done in-house.

The onus will be on the staff at Pazik Architects to produce the content of the promotional materials in an accessible manner, and maintaining the level of accessibility throughout subsequent steps in the production process.

Hardware and software best-suited to creating accessible electronic content is provided to employees. Employees also take the time to learn, first hand, how to most effectively use the accessibility features that are available in common office computer application programs – most are loaded with 'hidden' accessibility features.

The writers learn how to:

- use available style commands to meaningfully structure a word processing or Web document, e.g. headers, list items, paragraphs, quotations
- provide images with alternative text (usually, short descriptions of images that are made available to users of assistive technology known as text-to-speech or screen-reader systems)
- fully describe, in words, more complex visual content such as charts, graphs, data tables

In some cases, photographs, drawings, and other specialized content are provided to the writers by others in the organization. To ensure accuracy of and usability of the graphic information and specialized content, the writers consult the originators for verbal descriptions to use as alternate text.

CASE STUDIES - Creating multiple formats?

Creating multiple formats from printed material:

Scenario: You have a printed document which a customer has requested in electronic format – but you no longer have the original computer file.

Do it yourself? Possible

Required: A document scanner, optical character recognition software, and word processing software. Knowledge of how to create structured word-processing documents is critical for effective conversion to other accessible formats.

Outsource? Look for companies that specialize in multiple format production.



Creating accessible formats for graphics and drawings:

Scenario: You have a design drawing which a client has requested in a format that can be read by a manager who is blind.

Do it yourself? Possible

Required: Create a tactile map (bas-relief) of the drawing using built-up layers of Bristol board, Foam core, or other sheet material – drawing graphics may have to be simplified. An alternative could be to make a 3-dimensional model of the design.

Outsource? Look for companies that specialize in creating tactile maps from 2-dimensional drawings (drawing graphics may have to be simplified).



Creating DAISY format Digital Talking Books or documents:

Scenario: a customer has asked for a DAISY format copy of an instruction manual that you regularly provide in an electronic format.

Do it yourself? Possible

Required: There are a range of free and commercial products available to create DAISY Digital Talking Book formatted documents. PC based solutions range from quick creation of synthesized speech files from Microsoft Word documents, to full featured “recording studio” applications. Free, software-based, DAISY reading software is also available on the web. Knowledge of how to create structured word-processing documents is critical for effective in-house DAISY documents. May be possible to do “while-you-wait”

Outsource? If high quality, professional books are required and in-house expertise or resources are not available, look for companies that specialize in multiple format production. Likely not a “while-you-wait” process.

Creating transcripts of spoken word media

Scenario: you have created a web based multimedia presentation without captioning. You want to provide a minimum level of accessibility through a structured-text transcript of the relevant audio content.

Do it yourself? Possible

Required: Word processing software, and the ability to play, replay and pause the digital media.
Outsource? Look for professional stenographer services/broadcast captioning services [“CART” services]

Captioning and/or Video description of Internet media

Scenario: A design firm has a video on their website which features a presentation by the principal of the company on the firm’s design approach. To reach a broader client base, captioning will be added to the video.

Do it yourself? Possible

Required: PC based audio/video editing software (optional), captioning/description integration software (free e.g. NCAM’s MAGpie, or commercial), text editor (word processor, XML editor), suitable media playback software (capable of mixing and playing captioning/description tracks – e.g. RealNetworks Realplayer; Apple Quicktime, Windows Media Player); some experience with XML would be an asset.

Outsource? Look for professional broadcast captioning companies (or “CART” which may also do this as a sideline).

Captioning and/or Video description of broadcast media

Scenario: Your firm is working on a large international project and needs to produce a broadcast-quality video presentation of the design.

Do it yourself? Unlikely

Required: Unless you are also a media production studio, captioning or video description of content for broadcast is probably impossible.

Outsource? Look for professional broadcast captioning companies.

3.2 Communicating Accessibly with Clients, Employees & Suppliers

Each and every one of us have heard that common saying, “a picture is worth a thousand words”. To someone who is deaf, deafened, hard of hearing or has a cognitive disability, that statement is surely true, however, if you have vision loss, it just might take a thousand words to communicate the details of a drawing, the description of a room, or the features of a photo.

Organizations and businesses should have the capacity to communicate in a manner that is accessible for everyone, including people with disabilities. While people with mobility limitations may have an obvious disability, communicating effectively with people who are deaf, deafened, hard of hearing, have speech impairments, cognitive or developmental disabilities or with vision loss can be more challenging as they may have disabilities which may not be so readily apparent.



Communication is a highly complex skill that we use in many different ways in our lives every day, perhaps the most complex that humans learn. Communication is more than spoken and written expression; it includes verbal and non-verbal elements such as tone of voice and facial expression. Many disabilities can affect the ability to speak and communicate, from the inability to saying sounds correctly to an inability to speak.

People of different language and cultures speak and communicate in different ways, similarly, not all people who are Deaf communicate the same way. People who are profoundly deaf may identify themselves as culturally Deaf or oral deaf. In Deaf culture, indicated by a capital “D”, the term is used to describe a person who has severe to profound hearing loss, with little or no hearing and whose preferred way of communication is sign language. Intelligence, personality, age of onset of deafness, language background, listening skills, lip-reading and speech abilities vary with each person who is deaf, deafened or hard of hearing and affects how they communicate.

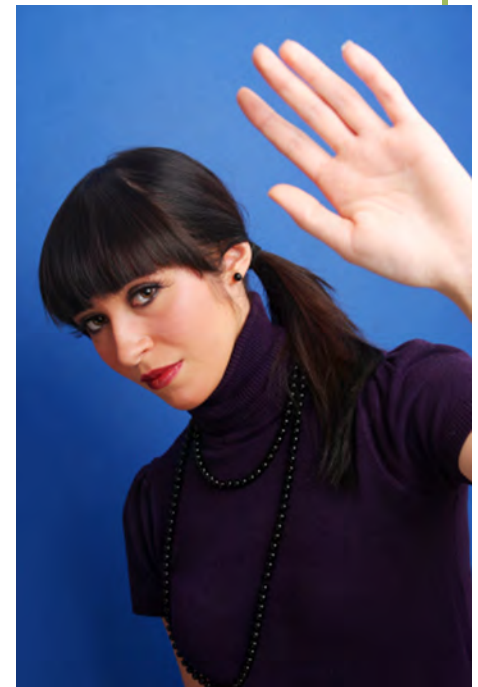
This section provides guidance on strategies for effective communication with persons with disabilities, organized around the typical office communication activities of:

- Greeting and receiving clients and other visitors
- Face-to-face discussions with clients, visitors and colleagues
- Planned meetings and other events
- Presentations to larger groups
- Remote discussions via telephone, voice and video conferencing
- Presenting design concepts and ideas
- Advertising to attract new business

3.2.1 Greeting and Receiving

In today's competitive business environment, greeting and receiving clients, potential clients and employees in a polite and positive manner is imperative to organizational and business' success. Having the communicative ability to reach out to everyone including people with disabilities is especially important, as not all disabilities are readily apparent.

People who are deaf are usually very adept at guessing meanings from gestures, the use of body language, and facial expressions. Effective communication with people who are deaf can be accomplished without any use of signs or sign training. Make sure that you have the attention of a person who is deaf or hard of hearing before you speak with either a tap on the shoulder, or a wave of your hand to gain their attention. Be prepared to use alternate means of communication, such as a pen and paper if necessary.



When communicating with people who are blind or with vision loss, speak in a normal tone of voice and identify yourself when addressing them. Do not be afraid to offer assistance and if you are unsure of when and how help should be offered, just ask! It is important not to assume that someone needs assistance and especially not to take the initiative of holding their arm to pull them along. If they oblige your offer of assistance, they will hold your elbow and follow your lead.

If you are providing directions to someone, be it in your office, a meeting room or conference area, provide clear and specific information such as warning of steps, changes in slope, or obstacles in the path. Do not simply say "here is a step", rather say "step up" or "step down". Be sure to lead your visitor directly to a seat or other landmark, do not leave them in the middle of a room and advise them that you are leaving.

People with speech impairments may be fully aware of what you have communicated, but may need more time in responding, do not rush them, and do not try to finish their sentences for them.

3.2.2 Face-to-Face Discussions

People who are deaf, deafened, hard of hearing or who have experienced a stroke, or have cognitive disabilities use varieties of ways to communicate. Some will use speech only; some will use a combination of sign language, finger-spelling, and speech; some will write; some will use body language and facial expressions to supplement their interactions.

Many people who are Deaf use American Sign Language (ASL) and Finger-spelling to communicate. In Quebec there is also Quebec Sign Language, known in French as Langue des signes québécoise (LSQ), which is closely



related to American Sign Language, but is not the same. It should be noted however, that many people who are deaf, deafened and hard of hearing do not know sign language, so it is important to consider other communication options such as CART (Communication Access Realtime Translation) services.

Sign language is the use of gestures consisting of hand-shape, position, movement, and orientation of hands to the body and to each other, to either make a complete word or the spelling of a word. When speaking with a person who is deaf, deafened or hard of hearing, maintain eye contact with them, and even if a sign language interpreter is present, speak directly to the person. Sign language interpreters are present only to facilitate communication, they are not there as part of the conversation or to offer information or opinions.

Some people who are deaf, deafened or hard of hearing are able to speech read, which is the recognition of spoken words by watching the speaker's lips, face, and gestures. Speech reading is a very difficult skill to master and most persons that lip read understand only about 25% of what is said, and even those that excel at this can only understand 45 - 50%.

Individuals who are deafblind typically use an intervenor, who facilitates conversation through a form of sign language using their client's hand. There is also a way for deafblind individuals to engage in face to face real-time conversations with others – without the need for a specially-trained intervenor. The deafblind person uses a special keyboard to write messages and a refreshable braille display to read messages; the sighted party uses a keyboard-equipped cell phone to type and read messages to/from the person who is deaf-blind.

There are some people who can hear and see perfectly well, yet still have difficulties with speech. There are software solutions for people with speech impairments, learning difficulties, or who have lost the ability to communicate. The use of adaptive technologies enables these individuals to communicate and participate through the use of adapted technological solutions.



Communication Tips for Face to Face Discussions

When communicating with a person who is deaf, deafened or hard of hearing, has a cognitive disability, for example from stroke or acquired brain injury, face the person directly, and keep your face uncovered and in the light if possible, to facilitate lip-reading. Speak naturally and clearly and in your normal tone of voice. Exaggerating, shouting and over emphasizing words distorts lip movements. Rephrase a thought rather than repeating the same words, in order to facilitate understanding and comprehension.

There are people who are deaf, deafened or hard of hearing who also use oral (verbal) communication, which is the use of speech, residual hearing, and speech-reading as primary means of communication. In addition, some people who are deaf, deafened or hard of hearing prefer writing as a means of communication.

When talking with a person who is blind or with vision loss, do not be afraid to use words such as "see" and "look", people who are blind also use these words. If you need to know what level of vision the person has, ask them, as some people may have sufficient vision to see what you are showing if they are able to get close enough, or have the proper illumination.

If you have been speaking with a person who is blind, let the person know if you are leaving them alone before you leave them, and make sure that they are well oriented to their surroundings.



3.2.3 Planned Meetings and Events

When organizing a meeting or event, it is important to take into consideration the abilities of all participants to understand the information being presented, and to be able to participate and contribute equally. The facilities should be accessible to everyone, including people with mobility disabilities. Equally important is ensuring that participants are able to access the information being shared.

Effective communication is a 2-way process which can be achieved for everyone through the provision and use of proper communication formats and information channels such as large print, braille, sign language, plain language, closed captioning videos, and audio-described videos.



Common Business Assistive Technologies

- Microphone
- Assistive listening system
- Interpreters/Intervenors

If you plan on hosting a meeting in a large room or having a meeting with a large number of people, it is important to take into consideration the needs of everyone, including people who may be deaf or have other communication disabilities. Arranging for a microphone system as well as an assistive listening system would be greatly appreciated by many people, including those who may not wish to self-identify themselves as having a speech impairment or hearing loss. The result is the sharing of information that can be heard by everyone.

If you have frequent meetings with clients, customers, suppliers or other business partners, it may be a wise investment to buy a portable assistive listening system that can be used in various meeting rooms throughout your business operations. Portable systems typically include a transmitter and microphone worn by the speaker, and a headset-type receiver worn by the listener(s). Other types of accessible audio/visual equipment can be purchased or rented, depending on your on-going needs. Finding a supplier is as simple as going to the yellow pages and/or undertaking a Web search for audio/visual companies in your area.



If you are hosting a meeting or presentation with participants you may not be familiar with, such as at a conference, a presentation at an information session or an annual general meeting, etc, it may be necessary to acquire the service of a sign-language interpreter to facilitate communication, not only so people who are deaf can understand you, but so you can understand them.

Similarly, the services of a captionist may benefit some participants – a captionist will transcribe conversation into a written transcript which can be presented to a single user on a laptop screen, or projected for the benefit of all participants. If there are participants who are deafblind it might be necessary to acquire the service of an “intervenor”.



3.2.4 Making Presentations

Some available adaptive technologies include;

- Braille Embosser (Embossers are available for text and architectural drawings)
- Braille Translation Software
- CCTV (Closed Circuit Television): A television video camera combination used by people who are visually impaired to magnify the print.
- OCR (Optical Character Recognition): Software used to convert scanned text, from books or other documents, into information that the computer can recognize.
- Refreshable Braille Display: A device used to produce Braille output the way computer monitors produce print output. They are especially useful for deafblind people that cannot use speech output.
- Screen Magnification Software
- Screen Reading Software or Text to Speech

Advances in technology have led to greater reliance on electronic audible and visual dissemination of information through the use of programs such as PowerPoint and corporate videos, and less reliance on print materials. In some cases this has resulted in people with vision and hearing loss having less access to information than ever before.

If you are going to use PowerPoint to make a presentation, having less material on each slide and using a larger font so it will appear larger on the screen, will make it easier for everyone to see. If you use photos or diagrams in the presentation, describe the diagram or photo when you get to that slide, and include a description of the slide/photo in the speakers' notes. Prior to the presentation print out a few copies of your presentation with the speakers notes containing not only information about each slide, but the text of what you are saying. This can be of benefit not only to people with vision loss, but to others who may have a cognitive disability which requires additional time to comprehend new information.

Regardless of the type of presentation or information you are disseminating, plan to have the information available in accessible formats. If the participants are known to you, send them the accessible format information in advance, so they are able to review the materials using adaptive technologies they may already have.

If it is a public event or the participants are unknown to you, have the materials you plan to show or discuss available in large print formats, and/or electronically on CD/DVD so that participants can review the materials themselves instantly using their own portable computer devices or at a later time.

When preparing handouts or printed materials for distribution, have some available in large print - use a minimum 14 pt, sans serif font (such as Arial or Verdana). In addition, have materials available on CD/DVD which people can access using their own adaptive technologies.

If you plan on using a video in a presentation, it is now possible for even small organizations to easily caption videos for people who are deaf, deafened or hard of hearing. Captioning is an on-screen display of text for spoken dialogue and other meaningful sounds, which is synchronized with the audio.



Descriptive video provides the visually impaired community and blind community access to the world of visual content. It is to people with vision loss what captioning is to people who are deaf, deafened or hard of hearing. Described Video Information (DVI) is an assistance technology located on the secondary audio track. A narrator provides vocal description of the visual action imparted by an actor's body language, unspoken acting, scene changes and other visual aspects within the natural pauses in the dialogue. The voice over narrator does not compete or "walk over" the program dialogue or sound effects, nor does it offer any subjective assumptions, rather it describes what a sighted person would see.

If your business is using video for promotion and advertising, the omission of captioning and descriptive video could mean your business is missing out on a segment of the population which could be using your business products and services.

3.2.5 Remote Discussions

Technology has changed significantly since the advent of the telephone as a means of remote discussion. People now frequently use web cameras, video telephones, VoIP (voice over internet protocol) programs such as Skype, as well as personal communication devices such as smart phones. As a result, there are now multiple means of communicating which can help, or hinder people with communication disabilities.

The use of TTY or teletype technology, (once referred to as "Telecommunication Device for the Deaf (TDD) - while archaic by modern electronic standards, is still a common method of direct telephone communication. However, simply acquiring a TTY device for office use is NOT in itself sufficient to facilitate accessible communication with another TTY user. Use of a TTY requires that someone in an office is always prepared to answer an incoming call, and is trained in its use. A common occurrence is for an office to have and list a TTY phone number, but never answer it because "no one is trained". It is probably better to not have a TTY than to have it but not know how to use it.

Many of the telephone companies offer a Relay System that makes it possible for someone who uses TTY to have a conversation with someone who does not have TTY by having a relay operator using TTY, act as an intermediary. In addition, there exist TTY-to-computer conversion systems that allow non-TTY users to communicate with a TTY user.



As technology evolves, there are emerging several agreeable alternatives to TTY communications, such as Instant Messaging, that enable computer to computer/mobile device to computer and/or mobile device/mobile devices. SMS and email also perform a similar function.

3.2.6 Presenting Design Concepts, Ideas and Illustrations

The architectural, interior and graphic design sectors are by their nature, visual. This can pose problems, not just for the businesses trying to impart the information, but for the clients, employees and suppliers who need to understand and comprehend the information.

In order for people with vision loss to understand a drawing, or layout or a photo, clear audible descriptions will be required.

The use of models is a great strategy for presenting 3-dimensional ideas – it helps everyone better understand the design, and is invaluable for persons with vision limitations. Similarly, tactile maps can be used to present 2-dimensional information. Tactile maps have lines, text and other graphic elements raised or embossed into the surface of the map, to facilitate reading through touch. The maps can be complex 2-dimensional models, built-up with layers of thin materials such as cardboard, metal, wood or plastic. Alternatively, they can be simple printed paper documents, created from an electronic file using a Braille embosser printer for a client who reads Braille.

The EU-supported TeDUB (Technical Drawings Understanding for the Blind) project is developing a software system that aims to make technical diagrams accessible to people who are blind or with vision loss. It consists of two separate modules: one that analyses drawings either semi-automatically or automatically, and one that presents the results of this analysis to blind people and allows them to interact with it.



3.2.7 Advertising

When advertising, it is important to consider all means of communications to ensure that you are reaching all potential markets, consumers, suppliers and employees. If you use print media such as newspapers and flyers, also consider having the same information available audibly through the use of radio advertising. Internet advertising can additionally reach a segment of the population that uses assistive technologies.



CASE STUDY - Organizing a Meeting

The Huang Design Group is organizing a meeting for a group of consultants. The organizers are familiar with the team of consultants and aware that one of them does have vision loss. The team prepares themselves to provide audible descriptions of the drawings and photos that will be tabled during the meeting. The model that was built earlier for presentations to their client is also brought along to provide a tactile aid. A member of the team is prepared to meet those arriving and offer assistance in navigating to the meeting room. Having asked, they are aware that the individual has some residual vision and guide them to a seat that provides the most appropriate level of illumination.



CASE STUDY - Preparing a Presentation

The Huang Design Group is preparing a presentation for a community forum. They are uncertain of the anticipated audience so aim to make the information be inclusive of any disabilities. A sign language interpreter(s) is booked and a copy of the presentation material sent to them in advance. Copies of the presentation material are also prepared in large print and on CD/DVD to be made available to attendees that may benefit from them. The team also considers in advance if they will be using any video content in their presentation so that they can allow for any sourcing out of closed captioning and audio described video. At an earlier date the organization had already recognized the value of having a portable assistive listening system on hand. Arrangements for a portable microphone are made and the availability of both of these communicated at registration. The PowerPoint presentation is designed with visual accessibility in mind and the presenters are prepared to provide audible descriptions of any images.

3.3 The Importance of Accessible Information and Communication within Emergency and Public Safety Systems and Procedures

Fire safety planning is an important consideration for all businesses, both from the perspective of an employer, but also for the safety of visitors and clients. There are legislative and legal requirements which state that there be a fire safety plan for every building, which outlines the emergency evacuation plans for building occupants in the event of a fire or emergency situation.

In addition, there are Canada Labour Code requirements which stipulate that if you are an employer with greater than 50 employees, you must also have individual fire safety and evacuation plans for each person with a disability. However, regardless of the 50 employee threshold, all businesses should have an evacuation plan for not only employees with a disability, but also a plan for visitors with a disability to be safely evacuated, be they clients, temporary employees, or suppliers.

In the case of individuals with disabilities, accessible means of communicating fire and emergency notification and evacuation information need to be considered.

Emergency evacuation plans and instructions are commonly printed and located at stairwell entrances and elevators; however, this is not an accessible format for people who are blind or with vision loss. Individual evacuation plans should be devised in conjunction with the person with vision loss. Leaflets can be developed with simple instructions for evacuation to ensure that your visitors are safe and that you are able to provide appropriate evacuation information to them, in large print format with braille. In addition, braille can be added to the information panels available at the stairwells and elevator lobbies. Of benefit to everyone, but particularly people with vision loss is emergency directional lighting, as well as tactile cues for way-finding and directional information to emergency exits and auditory alarms and emergency instructions.

Timely notification of an emergency situation is often the greatest communication barrier experienced by people who are deaf, deafened or hard of hearing. They require visual indicators such as strobe light alarms, and real time LED information screens.





4.0 Resources

4.1 Overview

4.2 Resources for Information and Communication

- Writing Techniques / Plain Language
- General Documentation
- Descriptive Techniques
- Multiple Format Production
- Print Accessibility
- Graphic Design Accessibility
- Microsoft® Word™ Accessibility
- Microsoft® PowerPoint™ Accessibility
- Portable Document Format (PDF) Accessibility
- Adobe® Flash™ Accessibility
- Providing Information to People with Cognitive Disabilities
- Meetings / Conferences

4.3 Other Best Practices and Standards (mostly for IT Professionals)

- Hardware
- Software
- Websites / Web Applications
 - World Wide Web Consortium
 - Other Web Guidelines
 - Web Accessibility Evaluation Tools
 - ISO
- Captioning / Video Description

4.4 Procurement Considerations



4.1 Overview

Some of the annotated references provided in this section will be of general interest, while others are highly technical and intended for use by experts. It is important to note that these are often not the only sources of information available on a given topic, but have been chosen either as being representative of the type, or because they are acknowledged as being well regarded in the accessibility field. A Web search using suitable keywords and phrases will often discover many more references than provided here.

The information presented can be used in a number of ways:

- For input to procurement of products and services
- As resources for in-house training or reference
- Satisfying personal interest

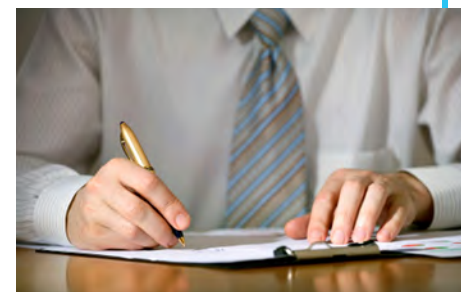


4.2 Resources for Information and Communication

Writing Techniques / Plain Language

Best Practices

- Plain Language Association International
“Plain language is an international language that everyone in your audience can easily understand. Clear writing in plain language saves time, money and lives. In whichever country you call home, you need plain language whether you are preparing a legal brief; writing a procedure; running a business; designing a brochure; publishing a newsletter; managing a department; maintaining a website or training workers” © 2009 Plain Language Association International
[<http://www.plainlanguagenetwork.org/>]
- PlainLanguage.gov – Improving Communication from the Federal Government to the Public USA
“Plain language (also called Plain English) is communication your audience can understand the first time they read or hear it. Language that is plain to one set of readers may not be plain to others.”
[<http://www.plainlanguage.gov/index.cfm>]



General Documentation

Best Practices

- Accessible Digital Office Documents Project, the Inclusive Design Research Centre.
Provides practical guidance on how to make commonly-used office documents more accessible.
[<http://adod.idrc.ocad.ca>]

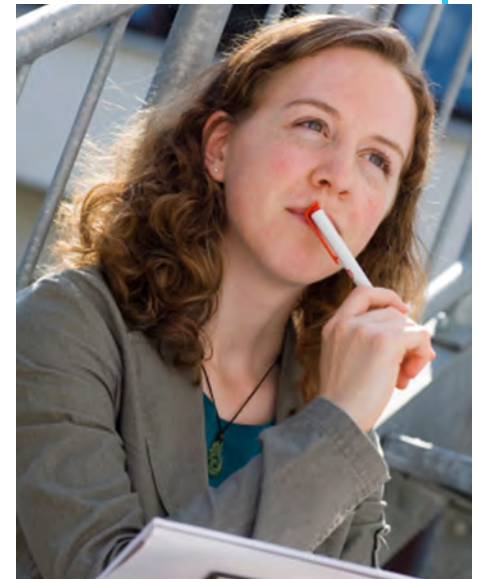


- IBM - Documentation checklist
“This checklist can help you create accessible product and website documentation.”
[<http://www-03.ibm.com/able/guidelines/documentation/accessdoc.html>]
- Provide accessible documentation, training and support materials
Centre for Excellence in Universal Design. ©CEUD 2010
[<http://universaldesign.ie/useandapply/ict/itaccessibilityguidelines/applicationsoftware/guidelines/priority-1/1-12>]
- Guidelines for Creating Accessible Documentation
The California State University Commons Management System.
[http://cms.csusb.edu/cms/pdf/CMSCO2009_Documentation_Standards.doc.pdf]

Descriptive Techniques

Best Practices

- AEB’s (Art Education for the Blind) Guidelines for Verbal Description
“The following guidelines comprise a basic methodology that museum educators and art teachers can use to create successful verbal descriptions of painting, sculpture, and architecture, as well as works in other media.” © 1996 Art Education for the Blind
[<http://www.artbeyondsight.org/handbook/acs-guidelines.shtml>]
- Multimedia accessibility - WGBH - NCAM guidelines
[http://ncam.wgbh.org/invent_build/web_multimedia/tools-guidelines]
- Creating Accessible iTunes U Content
(Must be downloaded from within the iTunes application.)
[<http://deimos3.apple.com/WebObjects/Core.woa/Browse/wgbh.org.2981986961?i=1729427098>]



- Effective Practices for Description of Science Content within Digital Talking Books
“A significant amount of Science, Technology, Engineering and Math (STEM) information is presented visually, from graphs and tables to diagrams and math equations. Students and professionals in the STEM fields who are blind or have low vision must find methods of accessing this data.”
[http://ncam.wgbh.org/experience_learn/educational_media/stemdx]
- Captioning Solutions for Handheld Media and Mobile Devices
[http://ncam.wgbh.org/invent_build/web_multimedia/mobile-devices]
- Accessible Digital Media Guidelines
[http://ncam.wgbh.org/invent_build/web_multimedia/accessible-digital-media-guide]

Multiple Format Production

Best Practices

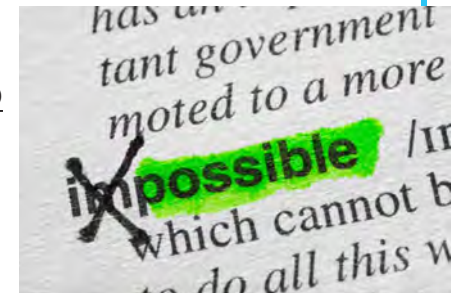
- Manager’s Guide to Multiple Format Production
Library and Archives Canada
“Your clients increasingly access information in many different ways. Formats beyond the conventional printed page are in demand because of an explosion in information technologies combined with a more diverse audience.”
[<http://www.collectionscanada.gc.ca/accessinfo/005003-4200-e.html>]
- Manager’s Guide to Multiple Formats - Online Tutorial
Industry Canada
An accompaniment to the Library and Archives
[<http://www.at-links.gc.ca/guide/zx30000E.asp>]



Print Accessibility

Best Practices

- Making Text Legible - Designing for People with Partial Sight by Aries Ardit, Ph.D
Lighthouse International
[<http://www.lighthouse.org/accessibility/design/accessible-print-design/making-text-legible>]
- Printed material
Royal National Institute for the Blind (RNIB)
[http://www.rnib.org.uk/professionals/accessibleinformation/printedmaterials/Pages/printed_material.aspx]
- How to Make Large-Print Documents
Association of Science – Technology Centers
[<http://www.astc.org/resource/access/pmlp.htm>]
- Clear Print Guidelines
Trinity College Dublin
[http://www.tcd.ie/disability/accessibility/accessible_info/clear_print.php]



Graphic Design Accessibility

Best Practices

- “The Association of Registered Graphic Designers of Ontario (RGD Ontario) is helping to lead the way to a more accessible province for everyone through a partnership with the Ontario government. Through the EnAbling Change Partnership Program, RGD Ontario will work with the Accessibility Directorate of Ontario to develop tools that will educate the design community on accessible design.”
[<http://www.rgd-accessibledesign.com/>]



Microsoft® Word™ Accessibility

Best Practices

- Accessible Digital Office Documents Project, the Inclusive Design Research Centre. Provides practical guidance on how to make commonly-used office documents more accessible.
[<http://dodo.idrc.ocad.ca>]
- Creating accessible Microsoft Word documents
“Microsoft Word is currently the most common word processor on the market. Because it is so common, the .doc format has become the de facto format for text documents. Word files can also be used to create other file formats such as PDF and HTML. There are several things that can be done to make content created in Word more accessible.” Copyright © 1999-2010 WebAIM
[<http://www.webaim.org/techniques/word/>]



Microsoft® PowerPoint™ accessibility

Best Practices

- Accessible Digital Office Documents Project, the Inclusive Design Research Centre. Provides practical guidance on how to make commonly-used office documents more accessible.
[<http://adod.idrc.ocad.ca>]
- Guidelines for Creating PowerPoint Slides Optimized for: IDEAL Conference®
Copyright © 2002-2009 by IDEAL Group, Inc. All rights reserved.
[<http://www.onlineconferencingsystems.com/powerpoint/>]
- PowerPoint Accessibility
WebAIM
[<http://www.webaim.org/techniques/powerpoint/>]



- Documentation checklist

Checkpoint 1:

Provide documentation in an accessible format. This page provides specific examples to implement the documentation techniques for accessible documents in Microsoft® PowerPoint. ©2009 IBM Corporation

[<http://www-03.ibm.com/able/guidelines/documentation/docmsppt.html>]

Portable Document Format (PDF) accessibility

Best Practices

- Adobe Acrobat 9 accessibility

"Adobe® Acrobat® 9 and Reader® 9 software continue the tradition of providing strong accessibility support for Adobe PDF documents and forms. Acrobat 9 features a number of built-in accommodations for people with disabilities as well as support for users of assistive technologies. In addition, Adobe Acrobat 9 Pro and Acrobat 9 Pro Extended software provide authors with a complete set of tools to create and optimize accessible PDF files from almost any source."

Copyright © 2010 Adobe Systems Incorporated. All rights reserved.

[<http://www.adobe.com/accessibility/products/acrobat/>]

- PDF Accessibility

WebAIM

"Before discussing the accessibility of PDF files, it is important to distinguish between Adobe, Acrobat and PDF. Sometimes you will hear them used interchangeably, but they are not the same."

Copyright © 1999-2010 WebAIM

[<http://www.webaim.org/techniques/acrobat/>]

- Authoring Techniques for Accessible Office Documents

Accessible Digital Office Document (ADOD) Project

"These documents are "desk reference"-type guides that are intended to help users create accessible office documents using their existing office applications."

Copyright © 2011 Inclusive Design Research Centre, OCAD University

[<http://adod.idrc.ocad.ca/acrobat9>]



Adobe® Flash™ accessibility



Best Practices

- [Adobe Flash CS4 Professional accessibility](#)
“Did you know that you can now create accessible web and eLearning content that includes rich media? Have you wanted to use rich media content but were concerned about policy or accessibility issues? If so, check out the accessibility features built into Adobe® Flash® CS4 Professional and Flash Player 10 software.” Copyright © 2010 Adobe Systems Incorporated. All rights reserved [http://www.adobe.com/accessibility/products/flash/]

[Providing information to people with cognitive impairments](#)

Best Practices

- [Developing sites for users with cognitive disabilities and learning difficulties](#)
Juicy Studio
“When people think about accessibility of web content, there’s a tendency to concentrate on people with visual impairments. People with cognitive impairments and learning difficulties are often overlooked. This article by Roger Hudson, Russ Weakley and Peter Firminger examines the types of problems visitors may encounter when using the Web, with insightful and practical suggestions on how to develop websites that are inclusive for people with cognitive impairments and learning difficulties.” Copyright © 2000-2010 Juicy Studio. All rights reserved. [http://juicystudio.com/article/cognitive-impairment.php]



Meetings / Conferences

Best Practices

- Guide to Planning Inclusive Meetings; Human Resources and Skills Development Canada
[http://www.hrsdc.gc.ca/eng/disability_issues/doc/gpim/page00.shtm]
- Design Resources and Demos; Industry Canada, Accessible Procurement Toolkit
[<http://www.apr.gc.ca/ap13000E.asp>]
- Wheelchair Viewing Positions
[<http://www.apr.gc.ca/ap13109E.asp>]
- Facilities should be wheelchair accessible
[<http://www.apr.gc.ca/ap13115E.asp>]
- Meeting Rooms Demo
[<http://www.apr.gc.ca/ap13102E.asp>]



4.3 Other Best Practices and Standards (mostly for IT Professionals)

Hardware

Standards

- Accessible Design for Automated Banking Machines
CSA standard B651.1-09 (2009)
“This Standard specifies accessibility requirements for automated banking machines (ABMs) and ABM sites.”
[<http://www.shopcsa.ca/onlinestore/GetCatalogItemDetails.asp?mat=2020530&Parent=2562>] {\$}
- Accessible Design for Self Service Interactive Devices
CAN/CSA standard B651.2-07(2007)
“This Standard specifies requirements for making electronic (including electro-mechanical) and mechanical self-service interactive devices accessible to and usable by people with a range of physical, sensory, and cognitive disabilities. It has been developed to fulfill an expressed need for a national technical Standard covering a broad range of interactive devices.
[<http://www.shopcsa.ca/onlinestore/GetCatalogItemDetails.asp?mat=2017784&Parent=4493>] {\$}
- Section 508 of the US Rehabilitation Act ICT standards
Section 508 provides standards for the accessibility of Information and Communications Technologies, including computers, telecommunications and general office electronics hardware, software and website content. For Ontario businesses, this set of US standards is most useful as input to a procurement process. The procuring organization can ask a manufacturer or supplier if they have a product, or range of products that exceeds, meets or approaches these technical and functional requirements.
[<http://www.section508.gov/>]



- Ergonomics of human-system interaction -- Part 20: Accessibility guidelines for information/communication technology (ICT) equipment and services
ISO 9241-20:2008
Abstract: ISO 9241-20:2008 is intended for use by those responsible for planning, designing, developing, acquiring and evaluating information/communication technology (ICT) equipment and services. It provides guidelines for improving the accessibility of ICT equipment and services such that they will have wider accessibility for use at work, in the home and in mobile and public environments. It covers issues associated with the design of equipment and services for people with a wide range of sensory, physical and cognitive abilities, including those who are temporarily disabled and the elderly.
[http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=40727] {\$}

Best Practices

- IBM – Hardware checklist
This checklist can help you design accessible personal computers and server hardware.
[<http://www-03.ibm.com/able/guidelines/hardware/accesshardware.html>]
- IBM – Hardware Self Contained, Closed Products Accessibility
This checklist can help you design accessible copiers, printers, fax machines, and kiosks.
[<http://www-03.ibm.com/able/guidelines/peripherals/accessperipherals.html>]

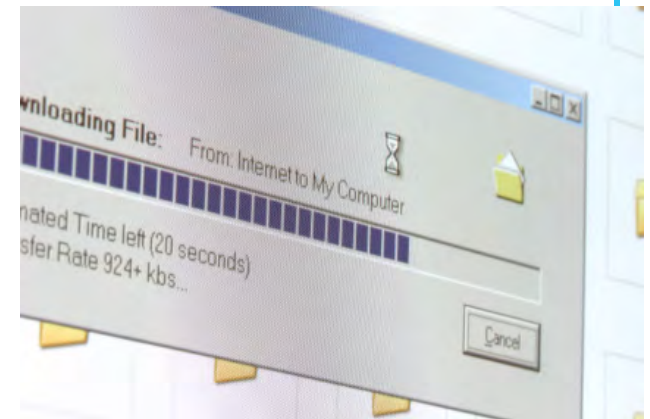
Software

Best Practices

- Accessible Digital Office Documents Project, the Inclusive Design Research Centre.
“Provides practical guidance on how to make commonly-used office documents more accessible.”
[<http://adod.idrc.ocad.ca>]



- IBM Accessibility - Human Ability and Accessibility Center
[<http://www-03.ibm.com/able/>]
- IBM – Software checklist
“In addition to the checklist to help you create accessible software, this section includes resources such as helpful information about software accessibility test tools and additional references on software accessibility issues.”
[<http://www-03.ibm.com/able/guidelines/software/accesssoftware.html>]
- IBM - Lotus Notes® Application Checklist
“In addition to the checklist to help you create notes applications that will be deployed on the notes client or the Web, this section includes additional references on Lotus Notes issues.”
[<http://www-03.ibm.com/able/guidelines/notes/accessr5.html>]
- Microsoft Accessibility
[<http://www.microsoft.com/enable/>]
- Windows Developer Center – Accessibility
[<http://msdn.microsoft.com/en-us/windows/bb735024.aspx>]
- Adobe products
[<http://www.adobe.com/accessibility/>]
- For Java Developers
- Free and Open – Award Winning Accessibility for People with Disabilities; Sun (Oracle)
“This page contains information aimed at providing the practitioner, executive, and the curious with the basics they need for taking advantage of the various technologies with support built-in and provided in the Solaris OS, and to help you start understanding why product accessibility is important to you.”
[<http://www.sun.com/accessibility/resources.jsp>]



- IBM – Software checklist

“In addition to the checklist to help you create accessible software, this section includes resources such as helpful information about software accessibility test tools and additional references on software accessibility issues.”

[<http://www-03.ibm.com/able/guidelines/software/accesssoftware.html>]

- IMS Guidelines for Developing Accessible Learning Applications; IMS Global Learning Consortium

“The following set of guidelines developed by the IMS Accessibility Working Group will provide a framework for the distributed learning community. This framework will set the stage for what solutions currently exist, what the opportunities and possibilities are for implementing them, and the areas where more development and innovation are still needed in educational technologies to ensure education that is truly accessible to anyone, anytime, anywhere.” © 2001-2010 IMS Global Learning Consortium, Inc. All Rights Reserved.

[<http://www.imsglobal.org/accessibility/accessiblevers/index.html>]

Websites / Web Applications

Best Practices

World Wide Web Consortium

- Web Accessibility Initiative

[<http://www.w3.org/WAI/>]

- Web Content Accessibility Guidelines (WCAG) Overview

[<http://www.w3.org/WAI/intro/wcag.php>]

- Web Content Accessibility Guidelines (WCAG) 2.0 - W3C Recommendation 11 December 2008

“The Web Content Accessibility Guidelines (WCAG) documents explain how to make Web content accessible to people with disabilities. Web “content” generally refers to the information in a Web page or Web application, including text, images, forms, sounds, and such.”

[<http://www.w3.org/TR/WCAG/>]



- WAI-ARIA Overview
“WAI-ARIA, the Accessible Rich Internet Applications Suite, defines a way to make Web content and Web applications more accessible to people with disabilities. It especially helps with dynamic content and advanced user interface controls developed with Ajax, HTML, JavaScript, and related technologies.”
[<http://www.w3.org/WAI/intro/aria.php>]
- Relationship between Mobile Web Best Practices (MWBP) and Web Content Accessibility Guidelines (WCAG); W3C Working Group Note 9 July 2009
“This technical report describes the similarities and differences between the requirements in Web Content Accessibility Guidelines (WCAG) and Mobile Web Best Practices 1.0 (MWBP).”
[<http://www.w3.org/TR/mwbp-wcag/>]

Other Web Guidelines

- [Best Practice] IBM – Web checklist; “This section provides the implementation and testing techniques and information on tools to help you create accessible websites and Web applications.”
[<http://www-03.ibm.com/able/guidelines/web/accessweb.html>]
- [Best Practice] WebAIM – Web Accessibility in Mind – WebAIM provides current and informative help on a wide range of Web accessibility issues. [<http://www.webaim.org/>]

Web Accessibility Evaluation Tools

- AChecker; ATRC
[<http://achecker.ca/checker/index.php>]

Standards

ISO

- [Ergonomics of human-system interaction -- Part 151: Guidance on World Wide Web user interfaces; ISO 9241-151:2008;](#)
“This standard provides guidance on the human-centred design of software Web user interfaces with the aim of increasing usability. This part of ISO 9241 sets out detailed design principles for designing usable websites.”
[http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=37031] {\$}

[Captioning / Video Description](#)

Best Practices

- [MAGpie](#), free software for adding captions and video descriptions to QuickTime, Windows Media, Real and Flash multimedia; The Carl and Ruth Shapiro Family National Center for Accessible Media
“Developers of Web- and CD-ROM-based multimedia need an authoring tool for making their materials accessible to persons with disabilities. The Carl and Ruth Shapiro Family National Center for Accessible Media (NCAM) has developed two such tools, version 1.0 and version 2.0.2 of the Media Access Generator (MAGpie), for creating captions and audio descriptions for rich media.” [http://ncam.wgbh.org/invent_build/web_multimedia/tools-guidelines/magpie]
- [Introduction to Captioning for Windows Media; WebAIM](#)
“Windows Media Player adds captions using Microsoft’s Synchronized Accessible Media Interchange (SAMI). SAMI, like SMIL, which is used by Quicktime and RealPlayer, is an XML-based text language.” Copyright 1999-2010 WebAIM
[http://www.webaim.org/techniques/captions/windows/]





- YouTube - Getting Started: Adding / Editing captions

YouTube is a popular social networking site where an increasing number of company's are posting videos relating to their products and services, hoping to leverage the phenomenon known as "viral networking". Google's YouTube has easy-to-follow instructions for captioning the videos you post there.

[<http://www.google.com/support/youtube/bin/answer.py?answer=100077>]

- Adobe Flash accessibility design guidelines - Captioning tools

[http://www.adobe.com/accessibility/products/flash/captioning_tools.html]



4.4 Procurement Considerations



Accessible information and communication systems and technologies are many and varied, and are evolving all of the time. The number of choices and quantity of information can be overwhelming for any business. The good news is that there is lots of help around to assist you make the right decisions.

Finding and purchasing the appropriate services, systems and technologies is critical if you are going to increase access to your business and attract new clients. A great starting point is

Industry Canada's Accessible Procurement Toolkit (www.apr.gc.ca/). This web site provides technical information, specifications, tutorials and demonstrations on how to purchase mainstream accessible products and services. It allows users to browse through product categories such as office furniture and supplies, telecommunication products and training. You can also use keywords to search for products or services.



An often overlooked resource when investigating the purchase of accessible information and communication technology are persons with disabilities themselves. Who better to advise on the purchase of a TTY telephone system than an organization serving people who are deaf, deafened or hard of hearing? Those with vision loss and use screen readers to surf the Internet, are experts in identifying the element of websites that are accessible . . . or not. Involving people with disabilities in the evaluation and testing of technologies and services will ensure that they work, and open up your business to everyone.

Principles of accessible procurement

- Diversity is normal
- Universal Design is the best approach to accessibility
- IT is ideally suited to Universal Design
- Accessibility is predominantly a service quality issue
- Accessibility is about "user friendliness" and "ease of use"
- Accessibility should be included from the start
- Involve people with disabilities
- Full accessibility in one step may not be possible
- Procurers and suppliers need a good understanding of accessibility

Source:

Centre for Excellence in Universal Design



Another excellent resource is the IT Procurement Toolkit from Ireland’s Centre for Excellence in Universal Design (universaldesign.ie/useandapply/ict/itprocurementtoolkit). This very comprehensive Toolkit is founded on a series of principles of accessible procurement and outlines a five-stage procurement process from writing a request for proposals through to evaluating products and maintaining accessibility over time. This site also includes comprehensive information on the types of technologies available.

When seeking out accessible technologies and services, it’s a good idea to contract with an expert to assist. Be sure to ask potential candidates to provide evidence of their skills and capacity and descriptions of previous work in Universal Design and accessibility. Finding the right expert can be a challenge: try asking for referrals from other businesses or local organizations representing persons with disabilities such as the Ontario March of Dimes or the Ontario Coalition for Persons with Disabilities. An Internet search for “accessibility consultants” may also lead you to local companies with the skills your business needs.

The US Government also has a web-based resource to help in finding and purchasing accessible products that comply with the US Section 508* requirements. The BuyAccessible.gov web site (<http://www.buyaccessible.gov/>) is clearly organized in two sections: one for buyers, the other for sellers. The site provides some very helpful product and service evaluation guides, as well as direct links to suppliers.

As the Ontario’s Accessible Information and Communication Standard evolves, the AccessON (<http://www.mcass.gov.on.ca/en/accesson/index.aspx>) website will be another place to visit for up-to-date information.

* Section 508 is a US Law that was enacted to eliminate barriers in information technology. The law applies to all Federal agencies when they develop, procure, maintain or use electronic and information technology. Under Section 508, agencies must give disabled employees and members of the public access to information that is comparable to the access available to others.



5.0 Glossary & Index

5.1 Glossary of Common Terms and Acronyms

5.2 Index



5.1 Glossary of Common Terms and Acronyms

The following is a partial list of the terms and abbreviations that you may come across when researching accessible information and communication technologies, as well as when working with the IT, graphic design or marketing folks that can help implement these systems in your firm.

Accessible communication: Communication that is delivered in a way(s) that is easily understood

Accessible information: Information that is presented in a format that is easily understood

Accessible formats: Providing information or communication in a format that better accommodates an individual who is unable to use the original format.

AIC: Accessible information and communication

AODA: Accessibility for Ontarians with Disabilities Act, 2005

ASL: American Sign Language. A language used primarily by persons who are deaf, deafened or hard of hearing. It utilizes hand positions, gestures, facial expressions and body movements. With its own grammar and syntax it is not a manual translation of the English language.

Assistive listening system: A device that assists an individual who is hard of hearing. It may be used to compensate for the effects of distance, background noise or poor room acoustics. Types of systems include FM, induction loop, infrared and one-to-one communicators. These use various means of transmitting a signal to the individual who adjusts his or her hearing aid or headset to gain a better hearing experience.





Audio-described videos: A process where visual elements of a video are described by a narrator. Persons who are blind or have vision loss are able to follow visual information such as action, gestures, scene changes or text that appear on screen.

Braille: A tactile writing system that uses arrangements of raised dots to represent letters and numerals. Uncontracted Braille (sometimes referred to as Type 1 Braille) is a direct transcription of a Braille character for its written equivalent and generally used by beginners. Contracted Braille (sometimes referred to as Type 2 Braille) makes more efficient use of space and increases reading speed by using a system of contractions.

Braille embosser: A type of printer connected to a computer that renders text in Braille. Software translates the text into Braille before being sent to the embosser.

Captioning: Simultaneous transcripts of audio information.

CART (Communication Access Realtime Translation): The instantaneous translation of the spoken word into written text using a stenotype machine or notebook computer with realtime software to display text on a laptop computer, monitor or screen.

Closed captioning: A means of presenting the audible portion of a broadcast in a text format. The audible portion is transcribed into text across the bottom of the screen. A decoder allows for the captioning to be turned on or off unlike open captioning which remains on screen.

Collaboration software: Types of software that allow people engaged in a common task to work together.

Communication supports: Devices or practices that facilitate communication

Communication systems: Systems that provide for the transferring of information between individuals or equipment.

DAISY (Digital Accessible Information System): A system that assists individuals who have a print disability. An improvement over audio books, it provides a means of skipping to chapters, using an index and placing bookmarks.

Deafblind: A type of disability where an individual has both a loss of vision and hearing. The term deafblind



does not necessarily imply that an individual is completely deaf or blind. In many cases there may be residual hearing or vision.

Described video: The synchronized verbal description of the visual action, usually interjected in pauses in the audio dialogue.

HTML (HyperText Markup Language): The authoring language used to build Web pages.

Information system: A system that provides any combination of information technology and people's activities using that technology to support operations, management and decision-making.

Interpreter: An individual who acts as a moderator between parties who do not share a common language. Typically, in Ontario an ASL interpreter would moderate between a hearing and deaf individual by translating American Sign Language to spoken English

Intervenor: An intervenor is a person who acts as a moderator for an individual who is deafblind. The intervenor assists with communication and interaction with the environment.

Large print document: A document that is formatted with text that is larger than what is typically used.

OCR (Optical Character Recognition): The recognition of text characters by a computer, a possible solution for quickly creating an electronic version from a printed document

ODA: Ontarians with Disabilities Act, 2001

Open captioning: Captioning provides a text version of the dialogue and sounds contained in a video. Open captions are permanently displayed on the screen and cannot be turned off, the way that closed captioning can.

PDF (Portable Document File): A file format that is highly portable across computer platforms.

Plain language: Use of language that is simple, clear, direct and only uses as many words as necessary. It avoids complicated sentence structures and inflated words. It allows the reader to easily understand and focus on the message.



Point size: A unit of measurement for font sizes and other small items on a printed page.

Portable assistive listening system: A type of assistive listening system that can be relocated.

Procurement policy: A policy that guides how a business will go about sourcing and purchasing items for business use.

Real time LED information screen: A display to allow information to be instantly delivered. It may be one component of an emergency notification system

Sans-serif font: A style of font such as Arial or Helvetica that does not have the flared extensions (serifs) at the ends of strokes.

Screen reader: A software application that attempts to interpret what is being displayed on-screen and translate it to a medium such as speech, Braille or sound icons that are more accessible to the user.


Semantic mark-up: A type of website programming language that provides the foundation for a more accessible website.

Sign-Language: A language used primarily by persons who are Deaf. It utilizes hand positions, gestures, facial expressions and body movements.

Sign-Language interpreter: An individual who acts as a moderator between parties who do not share a common language. Typically, in Ontario an ASL interpreter would moderate between a hearing and deaf individual by translating American Sign Language to spoken English. In Quebec, the language used may be LSQ (Langue des signes Québécoise)



Statement of organizational commitment: A statement that aligns an organization's behaviour towards a set of values, vision and principles. Within the context of this Guide, the values, vision and principles relate to the provision of accessible information and communication systems.



Structured electronic file: An electronic file that contains formatting information, giving the publisher the freedom to create many types of products.

Tactile map: Raised tactile surfaces used to convey information that is contained in a map. Tactile information can also be used for other non-text documents such as graphs, diagrams or artwork.

TeDUB (Technical Drawings Understanding for the Blind): A project to design a system to automatically generate descriptions of graphics to allow them to be understood by people unable to access them visually.

TTY (TDD) (TeleTYpewriter): A device that allows persons who are deaf, deafened or hard of hearing or who have a speech impairment to communicate by typing messages. It allows for a continuous conversation as opposed to individual text messages.

VoIP (Voice over Internet Protocol): A technology that allows telephone calls to be made over the internet.

W3C (World Wide Web Consortium): An international consortium focussed on ensuring the long-term growth of the Web. This committee develops standards and core principles to promote compatibility.

WAI (Web Accessibility Initiative): An initiative of the W3C to promote the accessibility of the Web for persons with disabilities.

WAI-ARIA (Web Accessibility Initiative – Accessible Rich Internet Applications): Information created by the W3C to guide the creation of accessible dynamic content and user interface components. It helps address barriers such as those encountered by individuals who use screen readers or are unable to use a mouse.

Web-TV: Use of an online service and a television in place of a computer monitor.

WCAG 2.0: The second version of the WAI's accessibility initiatives published in 2008 following the original guidelines that dated back to 1999.

Web content: Information provided on a Web site including, but not limited to, Web pages, documents, videos, audio files, records and archived materials





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