OCUL

Ontario Council of University Libraries

Report on Accessible Media (ROAM)

Version 1.0
February 2, 2015

2

Table of Contents

Executive Summary

Disability comes in many different forms. It can be temporary, progressive, or permanent and it can be visible or invisible. Inclusive design, teaching practices and media are becoming more attractive and robust, allowing a wide range of students to reach their academic potential.

Digital video is a key resource for teaching and learning in Ontario's universities. Older digital and analogue video more often than not lacks appropriate captioning. Five OCUL libraries are currently provide a captioning service for library patrons, while fourteen libraries currently do not caption media at all. This represents a significant barrier to providing accessibility services in libraries, highlighting the need for further development of tools and resources (such as this report) in support of these institutions.

Accessible media benefits a wide range of library users who face physical or mental limitations. Based on aggregated data about university students with disabilities who have registered at accessibility offices, they represent 7.7% of the total student population in 2013-14. This figure only includes students who have chosen to self-identify and have successfully met the medical paperwork requirement and would need to be further augmented by students who are not in this category, by faculty and staff with disabilities, and by visiting scholars.

For individuals with hearing loss, the preferred alternative format for timed media is captioning. Captioned media is traditionally composed of text on-screen designed to replace sound within a video or audio recording. For individuals who are partially-sighted or blind, the preferred alternative format for timed media is video description (also referred to as "described video" or "audio description"), where the audio track is supplemented with an audio description of the action on the video. Video description is particularly useful when the video conveys information that the audio track omits. Both captioning and audio description play a key role in the delivery of accessible media.

The overall objective of the ROAM project is to provide the OCUL libraries with critical information and analysis that they need to plan and implement equitable and barrier-free access to video collections held at university libraries across the province. In so doing, the project aims to assist those libraries in meeting the needs of their user communities and the 2020 compliance requirements of the Accessibility for Ontarians with Disabilities Act (AODA).[1]
OCUL initiated this project knowing that Ontario university libraries wanted answers to many questions about the provision of accessible media collections to library users. In this report, the research, technological workflows and best practices address many of these questions in detail. Many can be answered definitively; in other cases, the report provides suggestions for further research and consultation. Libraries want answers to these questions:

---

[1] "Understanding accessibility," Ministry of Economic Development, Employment & Infrastructure, Government of Ontario. Last modified November 26, 2014,
http://www.mcss.gov.on.ca/en/mcss/programs/accessibility/understanding_accessibility/index.aspx.

- What makes audio-visual materials accessible?

- How can library users know if audio-visual materials are accessible?

- How timely should libraries be responding to requests for accommodation?

- What are the accessibility requirements for materials in university libraries?

- How can copyright permission for captioning be cleared?

- How can videos be legally captioned?

- Can media copies be retained after captioning?

- What is the right balance to maintain between enhanced access to content and compliance with copyright and other relevant legal acts?

- What is a reasonable cost of outsourcing media for captioning or description?

- What factors should libraries consider when choosing a service provider for captioning or description?

This report looks first at library user populations through a lens of accommodation and accessibility; second, at the libraries themselves in terms of the multimedia that is collected and how it is used; and, third, at the current legal framework for providing accessible media in Canada. The legal context for providing accessible multimedia library collections is framed by the Accessibility for Ontarians with Disabilities (AODA) Act and Canadian copyright law. Each of these is discussed in detail.

Information gathered for this report was acquired through an environmental scan that was conducted via surveys, a series of focus groups and interviews, and a literature review. The survey asked libraries about their familiarity with the Accessibility for Ontarians with Disabilities Act (the AODA) and provision of accessible media. For libraries that do provide a captioning service, the survey asked for more details about workflows, providers, materials and operational details such as costs and turnaround times. The survey asked libraries about sharing accessible media or alternative formats and whether they would be interested in using an Ontario-based resource for sharing accessible media. The survey also queried libraries about student needs and outreach.

Three accessible media production models and workflows are described in this report, based on the environmental scan. Each model has its own benefits and drawbacks, and libraries may need to use a combination of approaches to meet the needs of their users. All of these models assume that libraries will prefer to acquire already-accessible media at the time of purchase and/or receipt into the library collection. The report appendices offer additional details on best practices, service providers, suggested resources, and a short glossary.

The ROAM project initially aimed to provide a detailed analysis of potential costs and benefits of a variety of approaches but, as the research proceeded, it became apparent that current practices for captioning library material in Ontario universities were not mature or varied enough to be effectively compared. What did emerge, however, is a number of concrete steps that libraries could take to prepare for compliance with AODA in 2020. These steps fall generally into three distinct categories. The first of these is to **know your context**, in terms of each library's collections, users and university, as well as trends in higher education. The second is to **make accessible resources visible and be transparent**, and these apply to the catalogue and to clear procurement policies. And the third is to **collaborate**, specifically to share rates, create shared strategies, develop best practices, advocate for accessible media with producers and industry associations, and monitor captioning activities to assess demand and maturing of practices.

The ROAM project was designed to initiate OCUL dialogue about accessible media and it is the hope of the ROAM Steering Committee that this dialogue will continue to grow and mature.

About this Report

The **Report on Accessible Media** was prepared by an OCUL Project Team. Inclusive Media and Design (IMD) acted as researchers for ROAM and reported their findings to the Steering Committee. External anonymous reviewers provided valuable feedback on the IMD interim and final reports which was subsequently incorporated in the ROAM report by the Project Team.

OCUL Project Team

Darnell, Alan (Director, Scholars Portal, OCUL)
Davis, Kate (Assistant Director, Scholars Portal, OCUL)
Ervin-Ward, Anika (Administration and Communications Coordinator, OCUL)
Greenberg, Amy (Assistant Director, Scholars Portal, OCUL)
Pereyaslavska, Katya (Accessibility Librarian; ROAM Project Coordinator, Scholars Portal, OCUL)
Scardellato, Kathy (Executive Director, OCUL)

Researchers

In 2014 OCUL commissioned Inclusive Media and Design (IMD) to conduct research for the ROAM research project. The IMD work included: an environmental scan of Ontario universities (survey, follow-up interviews and focus groups); research on the legal framework in Canada, the service provider marketplace, and available software; detailed descriptions of technological processes and model workflows; identifying and responding to key questions from libraries; trends research; and interim and final IMD reports to the Steering Committee.

Ontario Council of University Libraries (OCUL)

OCUL is an academic affiliate of the Council of Ontario Universities and is responsible for the management and implementation of the ROAM project. OCUL is a consortium of Ontario's 20 university libraries and the library of the Royal Military College of Canada (RMCC).

An EnAbling Change Project

This study is conducted with support from the Government of Ontario as a part of the EnAbling Change Program.

1. Purpose of the ROAM Project

Digital video is a key resource for teaching and learning in Ontario's universities. Video is routinely included now in university courses in a range of disciplines, supported by large media collections in the university libraries. Video purchased today may include captioning. Older digital and analogue video more often than not lacks appropriate captioning. This situation presents a challenge for Ontario's university libraries to meet the 2020 target of the Integrated Accessibility Standards Regulation for media accessibility.

The biggest barrier libraries face in meeting the 2020 challenge is a lack of understanding of available options for captioning legacy video content. Libraries need a full understanding about available technologies; captioning costs; existing standards; captioning level required to address different kinds of disabilities; legal issues related to sharing captioning and copying digital video; and the best delivery tools for providing access.

To answer this need, the Ontario Council of University Libraries decided to undertake an extensive project of research and documented analysis for librarians and information technologists addressing these critical issues involved in video captioning.

ROAM aims to:
- provide a detailed analysis of potential costs and benefits of a variety of approaches to video captioning and delivery of accessible media educational materials

- provide clarity on sharing video captioning under Canadian law

- assist Ontario universities in becoming AODA compliant and serving students and faculty most effectively

The Report on Accessible Media is intended to inform the planning processes for Ontario's university libraries in 2015 and beyond as they implement services to ensure fair and equitable access to media.

2. Context

Value of Accessible Media at OCUL Institutions

"We look to accommodation as a means of providing access for students with disabilities. There are potentially many students who will benefit from a higher level of accessibility, especially those who either do not know about disability or accommodation or those who actively choose to disassociate with disability whatever their motivation. A higher level of accessibility by its very nature does not automatically eliminate the need for accommodation of any one individual though it may well meet the simple needs of a greater population. Perhaps the most notable example is the use of access ramps on public walkways where the motivation for such accessibility was to give access to persons who use a mobility device, though in practice so many more people are accommodated for their individual needs."

"Both the Canadian National Institute for the Blind and the Canadian Hearing Society (Ontario) report a much greater degree of vision and hearing loss among the general population than what we see reported at our post-secondary schools. If there are in fact more students on our campuses who have vision and hearing impairments than the number served by disability services, any enhanced degree of accessibility would be of benefit to all."

"Additionally, students with other disabilities - e.g. learning disabilities, attention deficit disabilities, audio-perceptual disabilities, mental health disabilities, etc. - which do not fully meet any accepted definition of disability within Copyright will likely benefit from a higher degree of accessibility. It is therefore important that we aspire to the greatest level of accessibility possible to meet the needs of the greatest number of our citizens with any type of disability whatever the task may be."

"Access to print and other modes of communication is important and essential to a strong knowledge community. We have an obligation to ensure we do all we can to make information accessible to every person including every person with every disability. Captioning and video description alone may not be enough, but it demonstrates a greater level of access than what we currently enjoy."

<div align="right">- Tim Nolan (Director, Student Accessibility Services, McMaster University)</div>

The overall objective of the ROAM project is to provide the OCUL libraries with critical information and analysis that they need to plan and implement equitable and barrier-free access to video collections held at university libraries across the province. In so doing, the project aims to assist those libraries in meeting the needs of their user communities and the 2020 compliance requirements of the AODA. The ROAM project explores the possible advantages of collaboration in developing solutions for shared problems, including collaboration with other stakeholders on campus. The project also strives to ensure that solutions based on the ROAM research are evidence-based and sustainable.

Libraries want answers to these questions:

- What makes audio-visual materials accessible?

- How can library users know if audio-visual materials are accessible?

- How timely should libraries be responding to requests for accommodation?

- What are the accessibility requirements for materials in university libraries?

- How can copyright permission for captioning be cleared?

- How can videos be legally captioned?

- Can media copies be retained after captioning?

- What is the right balance to maintain between enhanced access to content and compliance with copyright and other relevant legal acts?

- What is a reasonable cost of outsourcing media for captioning or description?

- What factors should libraries consider when choosing a service provider for captioning or description?

The report addresses each of these questions, providing answers where possible and suggestions for further research when answers are not available. This report looks first at library user populations through a lens of accommodation and accessibility; second, at the libraries themselves in terms of the multimedia that is collected and how it is used; and, third, at the current legal framework for providing accessible media in Canada. The report provides a review of current practices in Ontario universities, describing some technology trends and modelling different workflows and methods. The report is supported by a standalone Directory of Service Providers and a summary of best practices identified during the project research stage.

About Timed Media

This report focuses on timed media, particularly audio and video, the latter usually having an audio component. Timed media is media that can be "played back" over time. It may exist by itself or be bundled with other materials. Commercial media may or may not be clearly labelled as "educational." Popular and counterculture media, investigative journalism, video art, Hollywood and homemade movies, and other timed media content are used heavily in curriculum and research.

3. The Research

A. The Research: Library Users – Who they are and how they benefit

Determining how many library users with disabilities are eligible for accessible format accommodation at Ontario universities is a difficult task. Looking at how many students are *registered* at accessibility offices is a good starting point, but these numbers only include students who have successfully met the medical paperwork requirement. Students who choose not to self-identify or fail to provide current medical paperwork are excluded from these statistics. Furthermore, university libraries also serve faculty and staff, and faculty and staff with disabilities are more likely to register not with a campus accessibility office but with their department of human resources. Visiting scholars who require individual assessment also represent a challenge to the calculation of total numbers of eligible users or accessibility services.

The following table, therefore, represents some but not necessarily all of the Ontario university library users with disabilities eligible to request accessible formats. The Ministry of Training, Colleges and Universities (MTCU) provided OCUL with the following statistics about students with disabilities who are *registered* at Ontario Universities. This aggregate data is based on information provided by University Offices for Students with Disabilities (OSD) in Table 1 of their annual report under the Accessibility Fund for Students with Disabilities (AFSD) from 2009-10 to 2013-14.

Table 1: Students with disabilities registered at Ontario Universities, 2009-10 to 2013-14

	2009-10	2010-11	2011-12	2012-13	2013-14
University Total Enrolment [1]	309,898	319,298	327,101	332,357	335,164
University Students with Disabilities Enrolment [2]	18,842	19,868	21,653	23,343	25,784
University Students with Disabilities % of Total Enrolment	6.1%	6.2%	6.6%	7.0%	7.7%
% change in University Students with Disabilities enrolment from previous year	N/A	5.45%	8.98%	7.80%	10.46%

Key Considerations

1) University enrolment data is defined as Eligible Full-Time Undergraduate Headcount.

2) This aggregate data is based on information provided by University Offices for Students with Disabilities (OSD) in Table 1 of their annual report under the Accessibility Fund for Students with Disabilities (AFSD) from 2009-10 to 2013-14 in which they summarize the total number of students registered with their offices and receiving accommodations or services during that year according to principal disability. These students may be receiving accommodations for more than one disability, but this is not reflected in this summary. Students with Disabilities data is collected and maintained by each postsecondary institution and not MTCU. More detailed information can be obtained from each institution's Office for Students with Disabilities.

The Higher Education Quality Council of Ontario (HEQCO) released a report[2] in February 2013 that demonstrates a gradual rise in the use of disability services by Ontario university students between 1999 and 2012. A multitude of factors could have contributed to this increase, such as

---

[2] Ursula McCloy and Lindsay DeClou, "Disability in Ontario: Postsecondary education participation rates, student experience and labour market outcomes." (@ Issue Paper No. 14, February 21, 2013), Higher Education Quality Council of Ontario. Accessed January 8, 2015, http://www.heqco.ca/SiteCollectionDocuments/At%20Issue%20-%20Disability%20in%20ON_ENG.pdf.

those identified in a 1999 National Educational Association of Disabled Students (NEADS)[3] study, which suggested that "an increased awareness of disability in society" may be leading to higher reporting:

> In particular, those with learning disabilities, mental health disabilities and medical conditions may have shown an increased willingness to identify themselves to their institutions. Changes in attitude within the post-secondary environment have also led to greater attempts to include and provide for the needs of students with disabilities and this has also undoubtedly affected overall levels of representation of such students at the post-secondary level[4].

At the International Summit on Accessibility[5] held in Ottawa in July 2014, Carleton University's Dean Mellway stated that almost 10% of Carleton's student population was registered with a disability. While this number might seem higher than those cited in previous reports, the continued rise of student admission at Ontario universities over the past 15 years has undoubtedly had an impact on the number of students with disabilities enrolling in universities in Canada. Taken in conjunction with factors cited by NEADS, an increase in registered students with disabilities should not come as a surprise.

Disability comes in many different forms. It can be temporary, progressive, or permanent and it can be visible or invisible. According to data provided by MTCU and made available by the Council of Ontario Universities (COU)[6], enrolment in Ontario universities in 2013-14 totaled 464,520 full-time-equivalent (FTEs) undergraduate and graduate students. Estimating that 10% of these students might have a disability, 46,452 students would therefore qualify to receive some type of accommodation. Inclusive design, teaching practices and media are becoming more attractive and robust, allowing a wider range of students to reach their academic potential.

Media of any sort depends on the senses for intake and appreciation. Accessible media benefits a wide range of library users who face physical or mental limitations. For individuals with hearing loss, the preferred alternative format for timed media is captioning. Captioned media is traditionally composed of text on-screen designed to replace sound within a video or audio recording. For individuals who are partially-sighted or blind, the preferred alternative format for timed media is video description (also referred to as "described video" or "audio description"), where the audio track is supplemented with an audio description of the action on the video. Video description is particularly useful when the video conveys information that the audio track omits. Both captioning and audio description play a key role in the delivery of accessible media.

---

[3] "Working Towards a Coordinated National Approach To Services, Accommodations And Policies For Post-Secondary Students With Disabilities" National Educational Association of Disabled Students. Accessed January 8, 2015, http://www.neads.ca/en/about/projects/nasp/nasp_intro.php.

[4] Ibid. Project Introduction. Accessed January 11, 2015, http://www.neads.ca/en/about/projects/nasp/nasp_intro.php

[5] http://www.carleton.ca/accessibilitysummit/

[6] "Table 1: Summary of Enrolments in Ontario Universities, 2004-05 to 2013-14" Council of Ontario Universities. Last modified October, 2014 http://cou.on.ca/statistics/multi-year-data/enrolment.

B. The Research: Ontario University Libraries

The scope of multimedia collections and the services provided in support of those collections varies among OCUL libraries. There is a wide spectrum of analog and digital media formats provided for use with projectors, DVD players, or digital devices (computers, smart phones, iPads, etc.). The content may be available on a physical storage device, such as a DVD, or streamed through the Internet. Collections may include both commercial and non-commercial resources. And the media devices themselves may be institution-based or provided by the user.

The Canadian Association of Research Libraries (CARL) provides an annual summary of library collections for all Ontario university libraries. The most recent data reported by CARL[7] for multimedia holdings indicates that, in 2010-11, 139,046 film and video and 462,386 audio-only titles were held in 17 of Ontario's 20 university libraries. These statistics do not tell us anything more about the collections, however, such as distinguishing between film and video or identifying the number of titles available in accessible formats.

To gain a better understanding of the current practices, needs and experiences of OCUL libraries in the area of accessible media provision, an environmental scan was conducted from June 2014 to the end of September 2014. Information was gathered via a survey of OCUL libraries, through focus group discussions, and through one-on-one interviews with members of the OCUL community and external experts.

The environmental scan should be assessed in the context of understanding the current extent of multimedia holdings in Ontario university libraries, how multimedia is acquired, the available discovery tools for locating media in library collections, and use of these materials. A number of OCUL member institutions were approached to share information, and nine institutions responded[8]. Below is a summary of the information that was gathered. Of note, over the past five years, several Ontario universities have shifted media collections into the university libraries in order to support content discoverability, re-organize reporting structures, and address budget considerations[9] .

Formats: DVD, VHS, and Streaming Video

Several institutions stated that circulation of DVDs has decreased significantly over the past year. A possible reason cited was the recent change in the Canadian Copyright Act which permits use of personal videos in the classroom. VHS is still retained in collections but in some cases these collections are placed in off-site storage. High demand VHS tapes are converted by some universities or DVD copies are purchased to replace these formats where available. Libraries have started to license streaming video as well. However, streaming may pose a number of delivery challenges in terms of image quality and the need for wireless connection, which at times can be unstable. The following streaming services are used across interviewed

---

[7] "Statistics Table II – Library Collections other formats 2010 – 2011", Ontario Council of University Libraries. Accessed January 8, 2015,   http://www.ocul.on.ca/node/397.
[8] Brock, Carleton, McMaster, Ottawa, Queen's, Ryerson, Toronto, Western, Wilfrid Laurier
[9] Focus group discussion with OCUL Accessibility Community, September 9, 2014. Conference call.

libraries: CBC Curio, National Film Board, Criterion, Alexander Press, Kanopy, Films on Demand, Docuseek2, and Medici.tv.

How much of the multimedia content acquired is captioned?

Acquisitions methods for multimedia material vary across Ontario universities. This in itself can have an impact on a library's ability to acquire accessible multimedia at time of purchase. For instance, where universities shop online with services such as Amazon, accessibility information does not accompany purchasing records and consequently, purchasing decisions are less informed. As a result, DVDs purchased on Amazon may or may not arrive with pre-existing captions. The lack of a systematic purchasing strategy backed up by procedures that include sourcing accessible multimedia material, make it impossible to ensure newly acquired materials are accessible. With respect to streaming video services licensed by libraries, some content is captioned or has an accompanying script, while captions can be requested for other content.

Discoverability of captioned content

Catalogue records for older materials in university collections generally lack accessibility information. A number of OCUL institutions[10] now include accessibility information for newly-acquired materials in their catalogues. However, metadata practices for recording the accessibility note vary, with the following MARC fields cited by interviewed libraries: "500" - general note; "655" - video recording for hearing impaired note; "546" - physical description of what's on the disk; "800" - general note. The new Resource Description and Access (RDA) standards[11], the successor to the current AACR2 standards for descriptive cataloguing, include extra descriptors for accessibility in Section Two, Chapter 7[12].

Ontario Interfilm Group

The Ontario Interfilm Group is an informal consortium comprised of representatives from Ontario university libraries and media departments. Materials borrowed through Interfilm are not fully representative of all library holdings because restrictions on loans apply to materials held in some collections. Interfilm is not responsible for purchasing materials, only for circulating them between consortium members. Ontario Interfilm Group loan statistics from May 2012 – April 2013 indicate that a total of 1,934 items were loaned to institutions in this time period, with the highest volume of videos on loan to one institution being 16.

Classroom use of accessible multimedia

It is difficult to track the use of multimedia material in classrooms because the material can come from so many different sources - YouTube videos, personal collections of faculty, and library collections.

Additional considerations regarding accessible media in classrooms include the following:

---

[10] Including but not necessarily limited to: Brock, McMaster, Ottawa, Queen's, Ryerson, Toronto, Western, Wilfrid Laurier

[11] This standard replaces the Anglo-American Cataloguing Rules 1978 and is being adopted by libraries. Background information can be found at: http://www.rda-jsc.org/rda.html. Accessed January 8, 2015.

[12] RDA Toolkit. Accessed January 11, 2015, http://www.rdatoolkit.org/

- Use of projectors designed to capture captions. While TV sets provide this, projectors also need to be able to read the encoding for DVDs with captions

- Finding ways to share or access via interlibrary loan content that has been captioned by faculty for their own classroom use. Faculty might caption content that they own or that may be owned by their departments

- Anticipating the need to support faculty who would prefer to pre-emptively make all of their teaching materials accessible

Statistics from 9 schools

(September 2013 - September 2014)
The nine institutions that responded to our request for information about their current multimedia collections have provided some statistics on formats held in a one-year period from September 2013 to September 2014:

Table 2: Multimedia holdings Sept 2013 to Sept 2014

Institution	DVD	VHS
Brock	2,165	833
Carleton	1,073	1,650
McMaster	1,093	2,037
Ottawa	9,544	12,172
Queen's	under 8,000	3,400
Ryerson	2867	2799
Toronto (Media Commons)	11,883	6,745
Western	2,400	2,005
Wilfrid Laurier	1,925	931

In addition, data about the University of Toronto Media Commons collection was recently analyzed to better understand availability and usage of media formats in this large collection. Not surprisingly, DVDs make up the majority of the collection, representing over 90% of the current acquisitions, and account for the majority of the use.
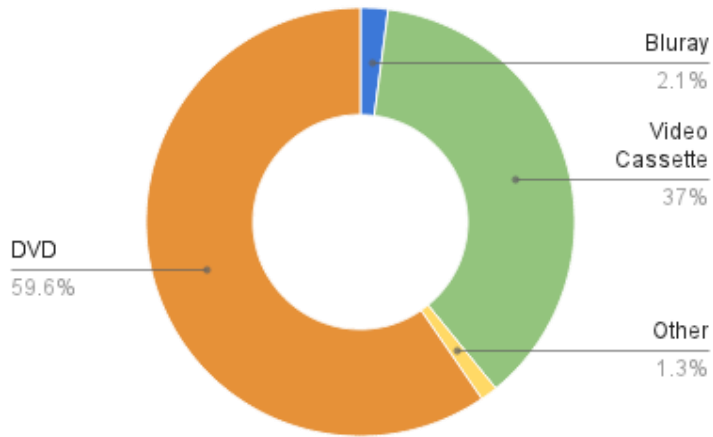

Figure 1: Media in Collections, by format (University of Toronto Media Commons)
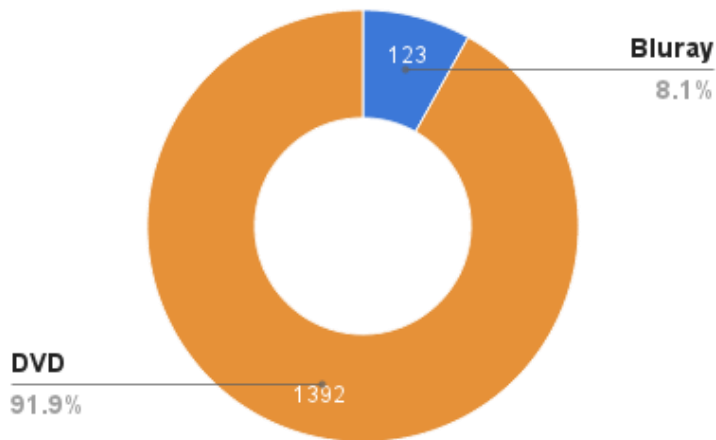

Figure 2: Items acquired in 2014, by format (University of Toronto Media Commons)

18
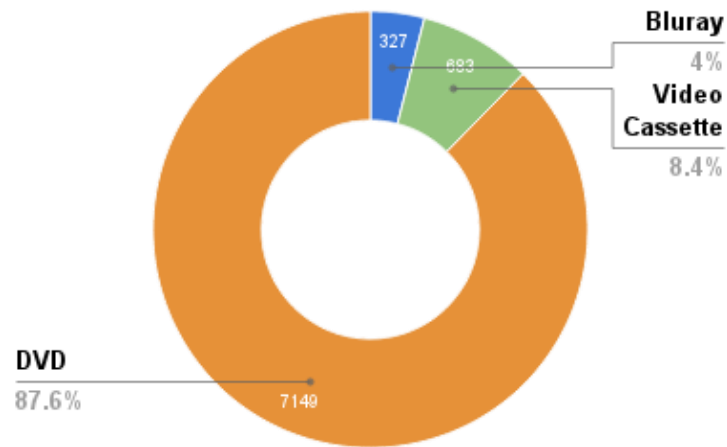
Figure 3: Items last used in 2014, by format (University of Toronto Media Commons)

Due to the importance of DVDs to the collections, the percentage of DVDs that were acquired with closed captions and how that has changed over time was analyzed. While this information is now routinely added to catalogue records, it was not consistently added before 2013. In order to gather data from 2004 DVD acquisitions, the DVDs were examined by checking the covers for closed captions and other accessibility symbols. While the percentage of DVDs acquired with captions has risen in the last 10 years from just under 30% to just over 40%, the majority are still not purchased in an accessible format. A closer look at the DVDs acquired without closed captions reveals that many of these items are foreign language material or older films for which captions were not available. There were also a number of "new releases" distributed with captions but in formats other than DVD.

Figure 4: Closed-caption DVDs, by year acquired or captured in collections (University of Toronto Media Commons)
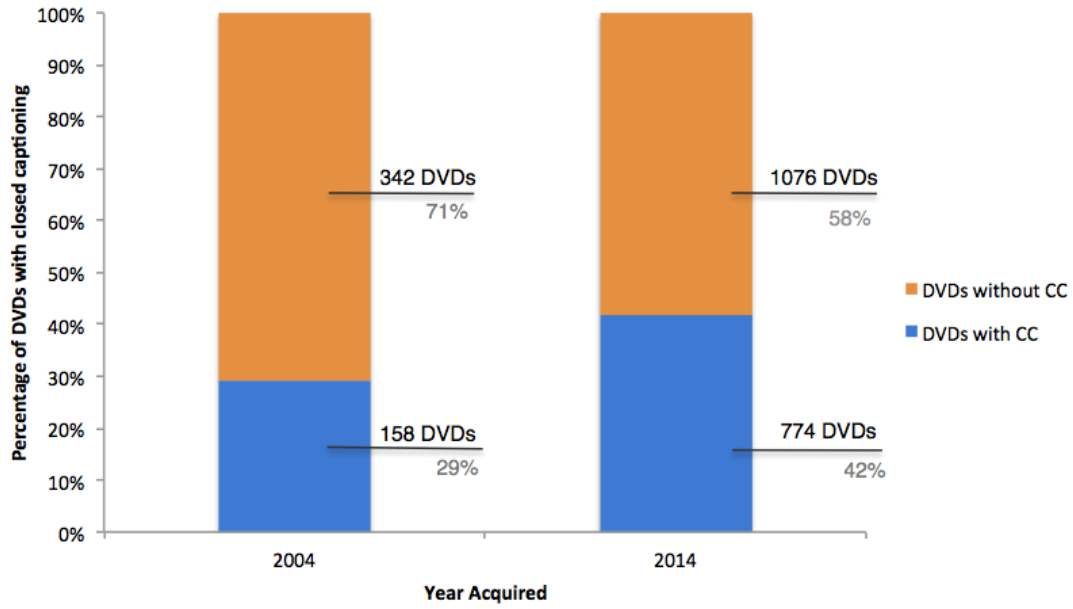
Survey of Ontario university libraries

The initial survey was developed and deployed in two stages:

- A pilot survey was distributed at the end of July 2014. Eleven OCUL institutions provided feedback with regard to the structure and the content of the survey.

- All twenty-one OCUL institutions were invited to complete the final version of the survey on August 7, 2014, with a deadline for responses of August 19, 2014. Nineteen universities participated in the final survey.

- As follow up to the survey, a series of interviews and meetings took place with a variety of experts, addressing issues such as:

  - Local demand for accessible timed media

  - Potential for in-house production and distribution of accessible media by library personnel, or in conjunction with campus accessibility centres

  - Optimal use of caption tools for in-house production

  - Potential for in-house training

  - Outsourcing options

  - Leveraging consortium resources and buying power

  - Lobbying for accessible media from content providers

For a list of interviewees and discussion groups see the Acknowledgements.

Full survey results are provided in Appendix A. A copy of the survey is provided in Appendix B. (Stylistic note: In the survey report summary below, *terms in italics* are taken directly from survey questions; **terms in bold** are based on written comments submitted by respondents.)

Survey Section 1: Background

1.1 Familiarity with AODA
Most contacts at OCUL libraries reported being *moderately or quite confident* with their interpretation of the AODA's requirements; however, some indicated that they were only *slightly confident* or *not at all confident* with the requirements.

When asked if further resources and guidance around AODA-legislated responsibilities specific to accessible audio and video provision would be valuable, all OCUL libraries responded very favourably to the idea of additional training and resources. Types of desirable training and resources ranged from **basic to advanced guidelines** for making audio and video materials accessible, **users' needs assessment**, guidance on the provision of certain **kinds of media** (i.e. cinematic works), and **legal and copyright guidance**.

1.2 Provision of Accessible Media

Only 5 of the 19 libraries surveyed currently provide a captioning service for library patrons. 14 libraries currently do not caption media at all, and this represents a significant barrier to providing accessibility services in libraries. Only one library that was not currently captioning indicated that they had done so in the past.

The most common factors for not captioning library material were related to a **lack of discerned demand**, and a **lack of any established workflow**. Broken-down by size of institution, these factors were cited more consistently by smaller OCUL libraries (**56%**) than medium or large libraries.

The 5 OCUL Libraries that currently caption media reported receiving a total of **60 patron requests annually**. This represents an average of 12 requests per library, though the number of requests varied widely by library. Regardless of current demand for accessible media production, all 5 libraries expected demand to increase, and some indicated a projected average increase of **50-100%** in the coming year.

Survey Section 2: Models and Workflows

2.1 Libraries Currently Providing Captioning Services

Among the 5 OCUL libraries that provide captioning, there are a variety of sources for the requests and a variety of workflows to handle them. Four libraries that provide captioning services indicated that teaching faculty most often requested captioning services. Other requests came from university departments (2 libraries) and directly from library patrons (2 libraries). Only one library indicated that they received requests from the university's accessibility office. Additionally, 3 out of 5 libraries reported that they were captioning specific library collections, including DVDs or course-related works.

OCUL libraries that provide captioning services reported that they are able to accommodate students with accessible media formats within a time period of **14-21 days**. This incorporates the time it takes to gain copyright permission from producers and the time it takes to transcribe / caption the media. This is the situation for both in-house providers (those libraries that caption media in-house), and those that outsource captioning. It was reported that there can be significant **time delays associated with permission requests** for captioning, since responses to permission requests are often not very expedient. Three of the 5 OCUL libraries indicated that this was *absolutely* or *frequently* the case.

2.2 Libraries with In-House Production

Currently only one OCUL library, Ryerson University, is producing in-house captioning, where library staff and resources are used in the production of captions for multimedia resources. This

method of production, however, is not exclusive; Ryerson also reported outsourcing requests to external service providers.

2.3 Libraries that Outsource Accessible Media Production

Libraries that outsourced the production of captions utilized services on campus which have captioning capabilities and/or commercial captioning services. The survey results confirmed that all 5 libraries use services in Canada, with one library using American providers and one also using an overseas provider. Additional follow-up with the libraries indicated that the quality of captioning services was better in Canada, where service providers are more familiar and sensitive to **Canadian spelling**, expectations about **turn-around time**, and **copyright situations**.

OCUL libraries that produce captioning externally are all interested primarily in captioning their own library's audio-visual materials. One library indicated that they captioned other kinds of materials, such as **textbook related AV content**, while 2 libraries reported less frequent captioning of **instructional materials** and **library productions**.

The average cost to caption timed media ranged from C**$2.65 / per minute** to C**$3.00 / per minute**. Funding for captioning almost always (4 out of 5 libraries) came from within the **library's budget**, with one library funded from a university level **accessibility cost centre**. For most libraries, therefore, outsourcing captioning represents a considerable cost to the individual library.

External captioning services were rated by libraries on the **cost**, **turnaround time**, and **level of service** provided. In terms of **cost**, 2 libraries expressed a *high level of satisfaction,* with one library being *somewhat* satisfied. **Turnaround time** was also rated unevenly, with 2 libraries *highly* satisfied and 2 only *somewhat* satisfied. All libraries felt *highly* or *moderately* satisfied with the **level of service** they received from the service providers.

Other solutions that OCUL libraries are currently investigating for providing accessible media include:

- Purchase of captioned media for library collections (often through streaming services)

- Online real-time captioning services

- Collaborating with other departments and/or centres

- In-house and ad hoc captioning using YouTube and Desire2Learn

- Providing a transcript of the media as a PDF document

Survey Section 3: Sharing and Next Steps

3.1 Sharing accessible formats across libraries

Currently, most OCUL libraries (95%) do not share any accessible media or alternative formats. When asked about the potential for sharing alternative formats for accessibility purposes, most libraries (81%) felt it was *very reasonable* to share these kinds of resources among institutions for reasons related to **reduced duplication**, **cost-sharing**, and overall **collaboration**. Some libraries had minor reservations, mainly due to **copyright** and **legal** considerations.

Most OCUL libraries (95%) would be *absolutely* or *very interested* in utilizing a Canadian or Ontario-based resource for sharing accessible media in libraries. There were several considerations noted around the creation and maintenance of such a service, including **copyright/legal issues**, **content types**, **infrastructure decisions**, **streaming media vs. file access**, **quality assurance** and **standards for captioning**.

When asked about their level of interest in the topic of *ownership and distribution of alternative formats*, most OCUL Libraries had a *strong interest* (**63%**). Other libraries were *somewhat interested* (**32%**) or *not at all interested* (**5%**). When asked about their level of interest in the legal and other implication of altering or augmenting source material, most OCUL libraries also had a *strong* interest in the topic (**74%**).

Additional comments and considerations addressed the need for OCUL-wide discussion around several other topics:

- Instructional materials

- Information sharing

- Skills development and training

- Master copies and digital locks

- Publisher relationships

- Intellectual and creative property rights

3.2 Student needs and outreach

A major gap in knowledge for libraries is whether students with disabilities are aware of or understand how universities can support their needs. Many libraries do see an issue with students' understanding of services offered (**47%**) but others are unsure. Additionally, the

24

majority of libraries (84%) felt that they could *not* meet increased demands from students or were *not sure* whether they could.

Many OCUL libraries are aware of alternative options for providing accessible media to patrons beyond what they are currently using. Most libraries cited being familiar with automated voice recognition software (**89%**) followed by live remote captioning (**58%**) options. Other technologies, including crowd-sourced options, were less known but still cited by some OCUL libraries.

Survey Summary Conclusions

OCUL libraries are aware of and eager to address accessibility and accommodation in libraries. Many libraries anticipate increased student and faculty requests for accommodation in using library materials, including audio-visual resources. Only a few libraries (5 out of 19) are currently providing captioning services for media resources, mainly on a faculty or student request basis. Of those libraries providing captioning services, most are outsourcing captioning to external service providers at a cost to the library.

While the majority of OCUL libraries are not captioning media, they are looking forward to some form of consortial support or investigating, at an institutional level, options available to them at this time. Almost all OCUL libraries would support a shared OCUL service for increased access and delivery of alternative formats for library materials. However, there are several considerations, related to legal issues and standards that need to be addressed before any such service could be established.

C. The Research: Legal Framework

The legal context for providing accessible multimedia library collections is framed by the Accessibility for Ontarians with Disabilities (AODA) Act and Canadian copyright law. Each of these is discussed in detail in this section.

The Accessibility for Ontarians with Disabilities Act

The Accessibility for Ontarians with Disabilities Act (AODA) was passed into law in 2005. Different sections and standards have been rolled out in a staggered compliance timeline since the Act was passed into law.

Under this legislation, the Government of Ontario has developed mandatory accessibility standards that identify, remove, and prevent barriers for people with disabilities. The requirements for libraries in the Information and Communications Standard of the Integrated Accessibility Standards Regulation (IASR) of the AODA are the primary focus of this report.

The AODA acknowledges the history of discrimination against persons with disabilities in Ontario. The purpose of this Act is to benefit all Ontarians by:

(a) developing, implementing and enforcing accessibility standards in order to achieve accessibility for Ontarians with disabilities with respect to goods, services, facilities, accommodation, employment, buildings, structures and premises on or before January 1, 2025; and

(b) providing for the involvement of persons with disabilities, of the Government of Ontario and of representatives of industries and of various sectors of the economy in the development of the accessibility standards. [SO 2005, c 11, s. 1(b)][13]

Integrated Accessibility Standards Regulation (IASR)

The standards in the Integrated Accessibility Standards Regulation (IASR) are those under which AODA compliance is measured. They include standards of compliance and dates and deadlines that regulate when standards are to be implemented in all areas, including communications, transportation, employment, and design of public spaces. Standards were intended to be reviewed every five years.[14]

---

[13] "Accessibility Standard for Customer Service: employer handbook" Ministry of Economic Development, Employment & Infrastructure, Government of Ontario. Last modified November 26, 2014, www.mcss.gov.on.ca/en/mcss/programs/accessibility/customerService/guideToAccessibilityStandards/background.aspx.

[14] Charles Beer, "Charting A Path Forward: Report of the Independent Review of the Accessibility for Ontarians with Disabilities Act, 2005," (Ministry of Economic Development, Employment & Infrastructure, Government of Ontario, February 2010). Accessed January 8, 2015, http://www.mcss.gov.on.ca/en/mcss/publications/accessibility/charles_beer/intro_preamble.aspx.

The following four sections in the Information and Communication standard of the IASR explicitly refer to educational institutions, the fourth being most relevant for libraries:

- Educational and training resources and materials, etc. (Section 15)

- Training to Educators (Section 16)

- Producers of educational or training material (Section 17)

- Libraries of educational and training institutions (Section 18)

The implementation of the Act's standards is mandatory. While there are some exemptions for small businesses, this legislation is almost universally applicable across the province, with penalties for non-compliance. As a result, university libraries need to reassess their physical and virtual spaces, service provision models, and collection development guidelines; and to establish universally accessible information literacy practices.

AODA Legislation and the University Context

For each standard, compliance must be met by specific dates. Ontario universities are encouraged to establish a consistent institutional interpretation of these requirements and meet them in a timely manner. The following will offer a closer study of Sections 15-18.

Section 15 – Educational and training resources and materials, etc.

Compliance Date: January 1, 2013

This section states that educational organizations shall:
1. provide educational or training resources or materials in an accessible format that takes into account the accessibility needs due to a disability of the person with a disability to whom the material is to be provided by;

   i. procuring through purchase or obtaining by other means an accessible or conversion ready electronic format of educational or training resources or materials, where available, or;

   ii. arranging for the provision of a comparable resource in an accessible or conversion ready electronic format, if educational or training resources or materials cannot be procured, obtained by other means or converted into an accessible format. [O Reg 191/11, s. 15(1)(1)]

Ontario university libraries hold considerable multimedia collections, which are often utilized by instructors for classroom viewings. Multimedia content can be presented in class or made

available through a Learning Management System (LMS) or an equivalent platform or through a public portal such as YouTube or Vimeo.

This content could be commercial or prepared by the instructor. In the context of the course, all content is educational, regardless of platform, media type, or whether it is provided on the Internet, an Intranet, Extranet or LMS.

With respect to Internet and Intranet sites, it should be noted that [Section 14 of the IASR](#) covers "Accessible Websites and Web Content," and is directed at all organizations, including educational institutions. It refers to Web Content Authoring Guidelines 2.0 (WCAG 2.0) for making web content accessible but includes exemptions for video description and real time (live) captioning.

> 2. By January 1, 2021, all internet websites and web content must conform with WCAG 2.0 Level AA, other than,
>
>> i.   success criteria 1.2.4 Captions (Live), and
>>
>> ii. success criteria 1.2.5 Audio Descriptions (Pre-recorded). O. Reg. 191/11, s. 14 (4).

There are two compliance dates for Section 14 – a January 1, 2014 deadline for new websites to comply with WCAG 2.0, Level A, and a January 1, 2021 deadline for all websites and web content to comply with WCAG 2.0 Level AA.

Section 16 – Training to educators

Compliance Date: January 1, 2013

Educational or training institutions, and those who work with them to prepare educational material, are required to:

- provide educators with accessibility awareness training related to accessible program or course delivery and instruction, and;

- keep a record of the training provided under this section, including the dates on which the training is provided and the number of individuals to whom it is provided. [O Reg 191/11, s. 16]

The term "educator" is broadly defined, and is inclusive of any staff member involved in "course preparation, delivery, and instruction" which includes information literacy sessions often offered by library staff. Training plays an important role in advancing awareness, understanding, and compliance of the AODA.

Section 17 – Producers of educational or training material

Compliance Dates:
- Part 1 – For accessible or conversion ready versions of textbooks, January 1, 2015.

- Part 2 – For accessible or conversion ready versions of printed materials that are educational or training supplementary learning resources, January 1, 2020. [O Reg 191/11, s. 17(3)]

Section 17 addresses publishers and others who produce educational materials:
(1) Every obligated organization that is a producer of educational or training textbooks[15] for educational or training institutions shall upon request make conversion ready or accessible versions of the textbooks available to the institutions. [O Reg 191/11, s. 17(1)]

(2) Every obligated organization that is a producer of print-based educational or training supplementary learning resources for educational or training institutions shall upon request make accessible or conversion ready versions of the printed materials available to the institutions.[O Reg 191/11, s. 17(2)]

This section applies to producers of print-based materials such as commercial publishing houses, which also include university presses. "Supplementary learning resources" may include multimedia materials, whether bundled with a primary text or available independently. This and other sections of the legislation looks at accessibility as a request-driven process; however, to accommodate an often time-sensitive request, making collections accessible pre-emptively in anticipation of future requests can ensure timely accommodation.

Section 18 – Libraries of educational and training institutions

Compliance Dates:
- Print-based resources or materials – January 1, 2015.

- Digital or multimedia resources or materials – January 1, 2020. [O Reg 191/11, s. 18(3)]

Section 18 specifically addresses libraries:
(1) Subject to subsection (2) and where available, the Libraries of educational or training institutions that are obligated organizations shall provide, procure or acquire by other means an accessible or conversion ready format of print, digital or multimedia resources or materials for a person with a disability, upon request.

---

[15] The definition of "textbooks" is not given in the legislation. It could be interpreted to mean any materials found on a course syllabus adopted by the instructor as "textbooks" for a given course.

(2) Special collections, archival materials, rare books and donations are exempt from the requirements. [O Reg 191/11, s. 18]

Libraries will need to employ several strategies to ensure their readiness in making accessible multimedia resources available: procuring accessible or conversion-ready formats at time of purchase, acquiring from publishers and suppliers a newly-accessible version of already-owned materials, and converting already-owned materials to accessible versions. Some of these considerations were addressed in the Copyright Roundtable held on September 16, 2014. For a complete list of questions discussed at the Roundtable please refer to Appendix E.

Other relevant AODA IASR sections

Other sections of the Integrated Accessibility Standards Regulation have additional bearing on educational institutions in relation to timed media. These include:

Procurement or acquiring goods, services or facilities (Section 5) requires media purchased, such as DVDs or data projectors, to have options for accessible features selected where available as of January 1, 2014 for large public sector organizations.

Feedback (Section 11) calls for organizations to notify the public of availability of accessible formats and communication supports. This includes access to timed media and is in addition to Section 12, "Accessible formats and communication supports."

Emergency procedure, plans or public safety information (Section 13) requires providing alternate formats upon request, which may include access to timed media if timed media is used as a method of providing emergency information.

Accessible websites and web content (Section 14) is the fallback requirement for the education specific sections (15–18), depending on how "Educational and training resources and materials" is defined in terms of delivery platform. We think of resources and materials as content, not defined by platform (e.g. books, eBooks, web-based, disc-based, etc.). If resources and training material are the same content, it may not matter how they are delivered for the purposes of requiring and providing alternate format.

AODA and Web Accessibility Guidelines

The AODA's "Accessible Websites and Web content" (Section 14) defers to the W3C's Web Content Accessibility Guidelines - usually referred to as WCAG 2.0 - for clarification on the implementation of online alternate formats, including captions, video descriptions, and transcripts. *All* levels of WCAG 2.0 compliance (A, AA and AAA) require video to be captioned.

As described earlier in AODA Section 15 Considerations, there is some uncertainty as to whether "educational material" on the Internet is considered to fall under Section 15 "Educational

and training resources and materials, etc.," or to be web-based material, covered under Section 14 "Accessible websites and web content" where there is an exemption for WCAG 2.0 requirements for two alternate formats: video description and real-time captioning.

Appendix C of this report includes further information on WCAG 2.0 Levels A and AA as they pertain to timed media.

Further resources and discussion on web accessibility are available in the OCUL Accessibility Information Toolkit for Libraries[16].

---

[16] "Accessibility Information Toolkit for Libraries," Ontario Council of University Libraries. Accessed January 8, 2015, http://www.ocul.on.ca/node/2127.

Copyright

The Canadian Copyright Act, Digital Locks and Accessibility

The landscape of Canadian copyright law has altered tremendously in the past two years, with the 2012 passage of the Copyright Modernization Act [SC 2012, c 20] and the so-called "pentalogy" of Supreme Court of Canada decisions (also in 2012) which – when taken together - radically changed the ways in which copyright is approached and applied. For educational institutions, one of the more significant changes is the explicit inclusion of education under the "fair dealing" exception, which provides institutions with greater flexibility when reproducing copyrighted works for educational purposes.

Significantly, while the educational exception for fair dealing has garnered the most attention at educational institutions across Canada, for those working in the field of accessible formats there is another exception that is just as important - Section 32(1). Under this exception, those providing accessible formats to persons with disabilities do not infringe copyright, provided the limitations and restrictions pertaining to this exception are adhered to. For instance, this exception does not apply to cinematographic works. This is further explained in the next section.

The other significant exception in the new Copyright Act is the exception provided to the "digital lock" provisions for those acting on behalf of persons with disabilities.

Section 41.1 of the Act is very clear on the fact that digital locks are not to be broken:

> **Section 41.1** (1) No person shall (a) circumvent a technological protection measure within the meaning of paragraph (a) of the definition "technological protection measure" in section 41. [RSC 1985, c. C-42, s. 41.1]

However, Section 41.16(1) states:

> **Paragraph 41.1**(1)(*a*) does not apply to a person with a perceptual disability, another person acting at their request or a non-profit organization acting for their benefit if that person or organization circumvents a technological protection measure for the sole purpose of making a work, a performer's performance fixed in a sound recording or a sound recording perceptible to the person with a perceptual disability. [RSC 1985, c. C-42, s. 41.16(1)]

This suggests that those with a disability (or those acting on their behalf) may be able to circumvent some types of digital locks in order to make materials accessible. However it is important to note that Section 41.16(2) indicates that doing so must not *unduly impair* (emphasis added) the functioning of the digital lock in such cases.

Cinematographic Works Exception

The OCUL Accessibility Information Toolkit for Libraries section 5.2 "Canadian copyright and accessibility" touches on fair dealing and accessibility exceptions. The Copyright Act does exclude cinematographic works from Section 32, but not from Section 29, which is the "fair dealing" exception (as the next paragraph explains). There are a number of exceptions for educational purposes in the Copyright Act, which could be read as enabling library captioning for accessibility purposes. But, as previously mentioned, Section 32 seems to specifically rule out the making of accessible copies of "cinematographic" works.

However, it may not be an infringement of copyright to make alternate format copies of short excerpts of cinematographic works under the fair dealing exception in the Copyright Act's Section 29. Fair dealing permits copies to be made for the purpose of education, research, criticism, review, news reporting, satire and parody. The Copyright Act does not explicitly define "fair," but the Supreme Court of Canada has, in several significant decisions, outlined the tests for determining fair dealing, and has repeatedly stressed the fact that it "must be given a large and liberal interpretation in order to ensure that users' rights are not unduly constrained, and is not limited to non-commercial or private contexts."[17] There is extensive literature by a wide range of Canadian copyright experts on the minutiae of this topic; for one example, see Michael Geist's analysis following the 2012 Supreme Court "pentalogy, "The Supreme Court of Canada Speaks: How To Assess Fair Dealing for Education"[18].

---

[17] C.C.H. Canadian Ltd. v. Law Society of Upper Canada [2004] 1 SCR 339.

[18] Geist, Michael. "The Supreme Court of Canada Speaks: How to Assess Fair Dealing for Education." Accessed January 23, 2015 http://www.michaelgeist.ca/2012/08/scc-on-fair-dealing.

D. The Research: How multimedia is made accessible

Based on the results of the environmental scan of OCUL libraries, which revealed that only five of nineteen reporting libraries are currently providing captioning services, it seems clear that an informed understanding of how video captioning is created and employed is not widespread within OCUL libraries. In the Accessibility Information Toolkit, OCUL addressed many of the basics about captioning and audio-visual materials. This section reiterates the basics before moving on to discussions about future trends, workflows, key questions and options.

- In order to transcribe or caption a video, generally a copy of the media from which an alternative or augmentative format is derived must be obtained. The final version of the captioned or transcribed video – whether digital or physical – represents a new copy of the work, but in an accessible format.

- Captions themselves are generally very small files containing text and time code, identifying what displays when and for how long, with traits about the text – including location, font, size, style, etc. Many of these formats have been created for Internet deployment.

- When captioning, it is possible to create a large file containing all the captions for a video, but the usual practice among service providers is to create multiple caption files and then merge them into a single file for delivery to the client. Often this is due to the fact that multiple people may be working on the same video.

- One of the most robust and simplest forms of captioning is *open captioning*. Due to the text being "burnt in" to the video, the captions should be evident when the video is played, regardless of its format. This does limit the viewer's options, as the captions will display across all devices and contexts without the ability to be turned off. *Closed captions* give viewers the choice to toggle captions on or off. Closed captions come in a variety of formats and compatibilities, and may display properly on some media players but differently or not at all on others. When in doubt, and to ensure captions will play across all devices, open captions are the safest bet.

- For closed captions to display, a user may need to select the relevant menu option in their DVD player or online player. Most online and DVD players have the ability to display captions, as long as the caption files are in a standard format such as .srt. If the media is being projected (e.g., being shown in class as part of a lecture), then the ability of the projector to display captions must also be taken into account.

- To produce a captioned video:

    1. A transcription is created. This may be done by humans, by using voice recognition technologies, or a combination of the two

    2. The transcription is divided into small sections and time-coded

3. Using software, captions are created based on the transcription sections and time-coding

4. Proofing and other quality-checking is completed

Further details about production and playback of captions can be found in Section 4 of this report, Models and Workflows for Accessible Media Production.

E. The Research: Current and Future Trends

As new technologies yield increasing potential, early adopters in some libraries will experiment with approaches to providing accessible media and instruction while others will choose to hold off until technologies are proven. The OCUL survey (Appendix A) found that most respondents were already aware of live remote captioning or transcription and automated voice recognition systems. One commenter referred to awareness of other relevant developments through technology blogs and accessibility/alternative listservs.

Streaming Video

Streamed media services have been growing in prevalence for over a decade, and while hardly new, a shift in preference for "cloud" video subscription service over local physical media ownership is relatively recent. The National Film Board of Canada's CAMPUS and the Canadian Broadcasting Corporation's Curio are examples of current services used by libraries to stream educational content – though caption offerings may be sporadic. For a more comprehensive list of streamed media services, please refer to Appendix D.

Automatic Speech Recognition

Gradual improvements in automated speech recognition have resulted in its affordable availability in commodity software, as well as packaged in personal devices. From iOS's Siri and the software Dragon NaturallySpeaking, to automated call centres, speech recognition technology has proliferated.

One approach to economically captioning lectures or bulk video content is via automatic speech recognition. Although it has been harnessed by YouTube and some commercial captioning houses, automated speech recognition without ample editing and proofing is less accurate. OCUL survey respondents and focus group members were very aware of, and vocal about, frequent recognition failures in their experiences with these technologies.

While some captioning houses leverage these algorithmic efficiencies before assigning staff to revise and improve the output, others rely solely on staff to provide captions. Libraries should carefully assess service providers' methodologies, along with the quality of their work.

Crowd Sourcing

Crowd-sourced captioning services such as Dotsub and Amara leverage volunteers and incentive-motivated online community members using free online subtitle and captioning editors. Libraries will need to weigh the risks of enabling less-than-qualified people to caption video using this strategy. These services also offer a higher tier paid-for service.

These risks can be mitigated through efforts to achieve greater accuracy, for instance, by accepting volunteer contributions through a prioritization scheme in which:

- only vetted or trusted members, and/or those with subject matter expertise, are given access for creation/editing

36

- words/terms are automatically analyzed and selected by highest commonality across multiple submissions, and therefore are likely to be correct

The two options could be combined, so that trusted (and potentially paid) members' submissions have higher weighting than those of volunteers.

The WebOption Lecture-cast system, in pilot at the University of Toronto Scarborough, has shifted editing from crowd to class, as students in a discipline may have better accuracy in discerning what a spoken lecture may contain.

Online and Blended Learning

As Ontario universities increase their capacity to offer online and blended learning courses, system-wide support mechanisms are being modified. Considering accessibility, libraries could partner with faculty and instructional designers to ensure that video content provided by the libraries is accessible. A broad, holistic approach is pro-active, rather than reacting when accommodation requests are received. As examples, both Ryerson and McMaster are making changes in this direction. Associated with this, online courses include activities and assignments where students are asked to create content or presentations that are accessible. One course design question to be addressed, in the context of individual courses, is whether it is useful to develop skills for making materials accessible, alongside other skills development like video editing.

Student-generated content

An institution-wide accessibility issue, rather than a library-specific issue, is to manage the trend for *student-generated content* to use YouTube and make it accessible; this also applies to some material prepared by instructors or coming through non-traditional channels. This raises the question of whether there is a double standard for quality and accuracy rates for accessibility; i.e. is automatic machine transcription satisfactory for a lecture, versus human transcription for recorded media? Should all content be held to the same standard?

Accessibility practice - research

As accessibility practice evolves, some research[19] is focusing on best practices for described video that should be employed in an academic context. One of the first practical questions to understand is the need for fully described video in any given circumstance - should it be suggested that libraries describe as well as caption their videos? At this point, the answer would appear to depend on what is being described - for instance, just the action or all of the detailed visuals, and the appropriate level of description would depend on the planned use. Consensus in this area is still evolving.

---

[19] ROAM Advisory Committee discussion. September 29, 2014. Gerstein Library, University of Toronto.

4. Models and Workflows for Accessible Media Production

The following section suggests possible accessible media production models and workflows, based on the OCUL survey findings as well as follow-up focus group discussions:

1. In-House Production Model

2. Outsourcing Model

3. Hybrid Models

To support readers' understanding about the technologies employed in various workflows, the greatest amount of detail is provided in the description of the first model, In-House Production. Variations from this base model are clarified in the sections on the alternative models -- Outsourcing and Hybrid.

Each model has its own benefits and drawbacks, and libraries may need to use a combination of approaches to meet the needs of their users. *All of these models assume that libraries will prefer to acquire already-accessible media at the time of purchase and/or receipt into the library collection.* In assessing the benefits and drawbacks, the focus here is on instances when existing media is not already accessible.

In-house production has many benefits such as flexibility, control of content and budget, and the opportunity to develop local expertise in accessible media. Specialized subject knowledge may be needed for accurate transcription of some materials and this may be best obtained from within the university. When cost is a consideration and an accurate transcript of the speaker(s) in the video is available, this type of specialized content could be suitable for in-house processing. However, developing a service and the staff expertise to support it does require a significant investment in staff time, as well as budgetary outlays for software or hardware.

Outsourcing to acquire accessible media has the obvious benefit of reducing internal work and, with that, the associated need for staff, expertise, and technology. However, effective outsourcing will depend on solid procurement practices to purchase captioning services, the ability to define what is needed and to assess the quality of the service provided, and a supporting budget.

Hybrid models incorporate both in-house production and outsourcing. They can enable libraries to focus internally on small projects while sending large projects out to service providers. They also provide the opportunity to limit investment in technology locally while evaluating whether to grow the size of an in-house operation. Hybrid models also incorporate working with other

campus units and other institutions to blend a suite of options for providing accessible media while reducing duplication of effort within or among universities.

In-House Production Model

After a user requests an accessible version of existing audio-visual material, steps in the library workflow or in-house production will be:

1. Determine whether copyright clearance is needed and if so, obtain permission to produce a captioned or described copy of the original

2. Choose software for producing captions / descriptions, whether manual or automatic

3. Review the material and produce a transcript if one is needed

4. Produce and edit captions / descriptions and time codes

5. Review captions / descriptions for quality and accuracy. Modify where needed and repeat quality control until the final product meets in-house standards.

6. Package or convert accessible version of material and deliver to user for review

7. Incorporate changes suggested by user where required, and clarify the communication process for any subsequent questions or issues - whether technical or policy-related.

Major considerations for the in-house workflow include: (These are elaborated upon further in this report)
- Staffing and turnaround time

- Choice of production / editing software

- Production of quality captions and descriptions

  o Automatic captioning and automatic time coding

- Choice of platform for playback

  o Video format

  o Open versus closed captions

  o Caption file format

Staffing and turnaround time
Staffing will be needed to support both administration and technical operations. Administrative responsibilities include general facilitation, project management, and copyright permissions

clearance. Technical staff will be responsible for production tasks, including quality assurance and deployment of the accessible material. Additional subject matter expertise may be needed to address questions that may arise during the production process. This may involve consulting with an expert at the university but outside the library who is willing to assist in interpreting discipline-specific terms, names, acronyms, and other specialized language.

Library staff will want to establish the expected turnaround time at the outset of the request. While there is no standard definition of a 'timely manner" in providing accessible media, a possible (high-achieving) target would be no more than five business days in order not to create an undue hardship for the requesting individual. As reported in the OCUL survey, the average turnaround time for university libraries which provide captioning is 14-21 days. Requesting permission to caption or describe media within short time periods presents a challenge, which makes planning and preparedness key to meeting requests for accommodation efficiently.

Choosing Editing/Production Software

There are many software programs for producing captions, all of which create timed caption scripts in formats that can be played back on a computer or online. It is best to be familiar with several different types of editing software. Most programs have import and export features that allow users to produce captions in one program and create a desired format in another.

When choosing software for captioning, libraries will want to consider:

- Price (purchase/license and ongoing support)

- Operating system compatibility, as many programs work optimally or exclusively with either Mac (e.g., Annotation Edit) or Windows (e.g., MAGpie, Subtitle Workshop)

- Desired output (for example, InqScribe produces transcripts as well as captions).

- Ease of use

- Availability of support

To assist libraries with some of these decision factors, a detailed list of captioning software is available in Appendix D.

Some captioning software can also be used to produce video descriptions. The Media Access Generator (MAGpie) tool from the National Center for Accessible Media is probably the most well-known example. Few software tools exist specifically for the task of creating descriptions, so standard video editing software is often used instead, which introduces an additional level of complexity.

Production of quality captions and descriptions

It generally takes between 4-8 minutes to transcribe or caption one minute of video, independent of proofing. More time may be required if the video has any of the following:

40

- Multiple speakers

- Overlapping dialogue

- Poor audio quality

- Rapid and/or unclear speech, accents

- Excessive paralanguage[20]

- Use of unfamiliar terms and acronyms

Video description is usually more time-consuming than captioning, as description writers must first develop an understanding of the video content in order to describe aspects that have not been described or explained in the soundtrack, and then locate silent points in the audio where descriptions can fit.

Transcripts and notes can help to ensure accuracy and reduce the possibility of error, as well as reduce the time required in the actual creation of captions or descriptions. Once the media is transcribed or described, it will need to pass through rounds of proofing or other forms of quality control, then be converted and packaged for delivery to the user. After delivery, library staff should provide opportunity for ongoing user feedback regarding potential corrections, technology or accessibility challenges, and any other related concerns.

For examples of best-practice guidelines for creating captions and descriptions, see Appendix F.

Caption file formats

Captions are generally small files containing text with time codes that identify what displays when and for how long. They also include information about how the text is to be displayed (location, font, size, style). Examples of common file formats include:

- SRT (SubRip), one of the most ubiquitous formats (recommended; see Appendix F - Best Practices for more details)

- DFXP (Distribution Format Exchange Profile), also known as TTML (Timed Text Markup Language)

- SAMI (Synchronized Accessible Media Interchange)

- VTT or WebVTT (Web Video Text Tracks)

Caption files need to be synchronized and/or embedded with the video file in order for the video to be accessible. Synchronization may be built into some media players such as Quicktime, or may require additional steps if the media is hosted on a streaming server.

---

[20] Paralanguage is defined as "optional vocal effects (as tone of voice) that accompany or modify the phonemes of an utterance and that may communicate meaning." by the *Merriam-Webster.com*. Merriam-Webster. Accessed January 8, 2015, http://www.merriam-webster.com/dictionary/paralanguage.

Configuring each type of file format in conjunction with a video and relevant code for Internet use is beyond the scope of this report. The University of Ohio's Accessible Classroom Technologies resource, Do-It-Yourself Video Captioning Techniques, provides helpful information[21].

Automatic Captioning and Time Coding

Library staff may opt to use speech recognition software to produce captions. The following considerations may be helpful in evaluating such software:

- Accuracy rate

- Appropriate grammatical parsing and time coding so that line breaks make grammatical sense and captions make semantic sense

- Time required to correct automatic captioning versus time required to manually generate original captions

YouTube offers automatic captioning and automatic time coding, for which a complete transcript must be submitted. YouTube will then parse the transcript and generate time code automatically. This free service can work well for media with a single, clearly spoken, and even-paced speaker. However, it will parse in a manner that makes reading comprehension difficult, as it breaks up semantic chunks of information. There may also be issues with caption accuracy, especially for academic content.

Once created, captions in SRT format can also be retrieved from a personal YouTube account or with an online tool such as KeepSubs. Downloaded captions can then be manually revised for further accuracy. Some librarians have taken this approach for smaller, in-house-created instructional videos.

Choosing a Platform for Playback

Another important consideration is the platform on which users will watch their media. If the media is digital this may include the local infrastructure by which an access point is provided e.g., a catalogue record, a course page in the LMS, an institutional iTunes account, etc.

In addition to hosting timed media on the educational institution's servers, online portals such as YouTube, Vimeo, and iTunes University have become popular for hosting content. Of the three online services, YouTube and iTunes provide the most effective infrastructure for supporting captions, though Vimeo started offering caption support in early 2014.

---

[21] University of Ohio. Accessible Classroom Technologies. "Do-It-Yourself Captioning Techniques.". Accessed January 23, 2015, https://carmenwiki.osu.edu/display/10292/DIY+Captioning+Techniques#DIYCaptioningTechniques.

Libraries need to consider many aspects of technology including:

- support for captions

- support for multiple audio tracks

- access across devices and screen sizes

Where captioning and/or description is not supported by the player, one solution is to produce open captions and/or open descriptions that will run regardless of media player. Another consideration is that media players may not be accessible to screen readers, although this is not a problem with default media players installed on operating systems, such as QuickTime Player, iTunes (Mac), and Windows Media Player (Windows).

Choosing a video format

Understanding the library user's needs and options for playback will help inform the decision regarding the type of accessible video format produced. One of the most ubiquitous formats is MPEG-4 (also known as MP4 or M4V) due to its compactness and ability to stream over the Internet if placed on a server. MPEG-4 files can be stored on a computer hard drive, CD-ROM, DVD or USB thumb drive, and most laptop or desktop computers (as well as many current DVD set top players) can recognize and play it back with default media software.

Other common video formats are MOV (Apple QuickTime), WMV (Windows Media), FLV (Adobe Flash), and AVI (Audio Video Interlaced). Some of these may require a specific media player installation. One player that will play a wide range of media formats is the free, open-source and multi-platform VLC Media Player.

Creating a DVD with selectable subtitle tracks containing captions, and even audio with description, is one option that allows for playback across all DVD players. DVDs are also a good option where a menu of chapters is desired, if the original media content supports this type of chapter chunking. However this creates another layer of work for the library and requires more time for production.

Open versus closed captions

One of the most robust and simplest forms of captioning is open captioning, where captions will display regardless of playback format or device without the ability to be turned off. Closed captioning, where the viewer can choose to toggle captions on or off, may be more user-friendly for media in general library circulation. However, closed captions come in a variety of formats and have varying compatibility with media players. To ensure captions will display across all devices, open captions are the safest bet.

Outsourcing Model

The outsourcing model is focused on employing a commercial service provider to caption multimedia content, often known as post-production captioning. From the library perspective, workflow to outsource will be:

1. Determine whether copyright clearance is needed and if so, obtain permission to produce a captioned or described copy of the original.

2. Determine funding source/s internal and external to the library. Funding may depend on the type of material and the origin of the request, e.g., a faculty member's department may be expected to cover the cost of making lecture material accessible.

3. Determine if there are any privacy issues that may preclude media from crossing provincial or national borders.

4. Choose a commercial provider for the service

5. Review transcript (or copy of caption / description) for quality

6. Send feedback to the service provider; media may then undergo more iterations of proofing / editing as needed to ensure quality

7. Receive final version of the accessible media, possibly in addition to a separate caption / description file

8. Deliver media to user and add accessibility descriptors to the relevant catalogue entry

While details of the above workflow will vary from one institution to another, outsourcing can generally be broken down into four key components, elaborated below:

1. Choosing a Service Provider

2. Requisitioning

3. Quality Assurance

4. Deployment

Choosing a Service Provider

There are several North American commercial services that provide accessible media production. A comprehensive list of these, with contact details and pricing information (current as of November 2014) can be found in Appendix D - Directory of Service Providers.

When choosing a commercial provider the following factors should be considered:

- Pricing[22], including any required user fees to gain access to the service

- Quality and accuracy

- Turnaround time (keeping in mind that description will take longer than captioning)

- Services provided (video descriptions, captions, transcripts)

- Support options in case of technical issues or other questions

- Experience working with universities or colleges, and with academic content

- Experience with different playback solutions, including web (if applicable)

- Familiarity with AODA and the IASR

Requisitioning

After a service provider has been selected, it is important to clarify the details of the requisitioning and any follow-up communication that may be necessary, including:

- Primary and alternate contact/s (including shipping address) at the library for receiving notices of incoming media, actual files or materials, and associated notes and instructions

- Primary and alternate contact/s for the service provider

- Preferred channels and frequency of communication

- Expected time frame for

    o   Receipt of media by service provider

    o   Delivery of accessible media and caption/description files

---

[22] If multiple institutions across OCUL choose the outsourcing or hybrid model, this could provide an opportunity to negotiate a discounted consortial rate.

- Format/s of accessible media and captions

- Transcript requirements and associated costs

- How corrections and revisions will be made, and costs associated

- Time limit to provide corrections or changes

- Additional costs that may be incurred (e.g. for providing multiple media formats)

- Terms of payment and confirmation of applicable discounts (educational, bulk, etc.)

Quality Assurance

Post-production service providers have varying methods and in-house "style guides" for transcription and captioning. When media is received it may be sectioned up and disbursed to whichever transcriber or describer is available, or even outsourced to the lowest bidder. However, some service providers with academic clients will consider which 'scriber has the most fitting background relevant to the content in order to achieve accurate captioning. In either case transcripts and notes provided by the institution can help ensure accuracy and thereby reduce processing time and, potentially, the cost of the service. However, material containing many mathematical expressions or chemical equations may still incur a premium price.

Once the media is transcribed or described, it will pass through rounds of proofing or other forms of quality control by the service provider. If either the transcriber or the quality controllers need to double-check content, correspondence may be opened up between the library and the production contact. Once the media has passed through quality control, the files are then pieced back (if necessary), converted, and packaged for delivery.

On receipt of accessible media, the following additional quality control checks at the library may be useful:

1. Scan or spot-check the syntax and parsing.

2. Test for basic usability across devices

3. After the media is delivered to the user, provide opportunity for ongoing user feedback on potential corrections, technology/accessibility challenges, or other related concerns

Deployment

The type of video format will need to be agreed upon with the service provider. The information provided above under In-House Production will support this decision point. It is recommended that libraries request a separate caption or description file in addition to the integrated captioned media for future flexibility in deployment. Costs for all deliverables should be agreed before production begins.

Hybrid Model

A hybrid model employs both in-house production and external services provided by a vendor. Small projects can be a good starting point: videos 5 minutes or shorter featuring a single clearly spoken, evenly paced speaker, are easy to caption or even describe with proper software and technical support, without requiring a large investment of time or funds. If the library has limited access to IT or AV support for the more complicated aspects of captioning, online tools such as YouTube and Amara may be of use.

For those libraries with the budget and staff resources, perhaps in partnership across other university departments or units, it may be possible to build in-house competency in captioning (and perhaps description, though that would require additional training.) Initially, a pilot could be launched to take on a limited number of jobs in order to get a sense of the commitment and challenges involved.

Students can be employed to assist with in-house production, but the potentially rapid turnover of student employees can pose a challenge in providing consistent service and finding time for library staff to provide training. However, as described in Appendix F (Best Practices) the Paul Menton Centre at Carleton demonstrates that a service heavily reliant on student resources can be successful in providing high-quality accessible media.

With small or medium projects handled by the library, larger and/or more difficult media production (e.g. media featuring multiple speakers from various countries, lengthy videos, format-specific requests such as DVDs) could then be outsourced.

Another type of hybrid model is a training partnership where several OCUL partner institutions produce accessible media, with a commercial service provider offering ongoing support and overflow service (at reduced rates) when the volume of requests exceeds libraries' capacity. Further resources beyond those provided in this report's In-House Production Model: Choosing Editing/Production Software section, include:

- Do-It-Yourself Video Captioning Techniques (University of Ohio's Accessible Classroom Techniques)

- Tools for DIY Captioning (Collaborative for Communication Access via Captioning)

5. Questions and some answers for libraries

OCUL initiated this project knowing that Ontario university libraries wanted answers to many questions about the provision of accessible media collections to library users. The research and technological workflows described in the previous sections of this report (as well as in Appendix F Best Practices) address many of these questions in detail. This section is intended to summarize the most common questions and provide answers, either definitively or by providing suggestions for further research and consultation.

- What makes audio-visual materials accessible?

- How can library users know if audio-visual materials are accessible?

- How timely should libraries be responding to requests for accommodation?

- What are the accessibility requirements for materials in university libraries?

- How can copyright permission for captioning be cleared?

- How can videos be legally captioned?

- Can media copies be retained after captioning?

- What is the right balance to maintain between enhanced access to content and compliance with copyright and other relevant legal acts?

- What is a reasonable cost of outsourcing media for captioning or description?

- What factors should libraries consider when choosing a service provider for captioning or description?

What makes audio-visual materials accessible?

OCUL has produced the Accessibility Information Toolkit for Libraries, which includes information on procuring audio-visual materials[23]. Section 4.4.3 of the Toolkit responds to this question as follows:

Audio-visual media are considered adequately accessible when:
- There are captions that can be displayed or activated easily by viewers (for publicly accessible online videos or audio files, as per the IASR, Section 14)

---

[23] "Accessibility Information Toolkit for Libraries," Ontario Council of University Libraries. Accessed January 8, 2015, http://www.ocul.on.ca/node/2127.

- When a video includes a Described Video audio track option (though not required for audio-only files)

For compliance with Sections, 15, 12 and 18 of the IASR, an audio track must be added to a video to convert it to a Described Video format when "notification of need is given".

Expanding on this, captioning may be included with physical media such as magnetic tapes and optical disks. However, an available playback device may not include features that will display the captioning; not all data projectors support closed captioning from DVD player input. Audio Description (also known as Described Video) is virtually non-existent on commercial VHS tapes and far less common than captioning on DVDs.

How can library users know if audio-visual materials are accessible?

To ascertain if library audio-visual materials are captioned, users will either find a notation in the catalogue record or the material will need to be retrieved and examined. Databases at some OCUL libraries include a field to indicate captioning, with the entry manually made at the time of cataloguing or as the item goes through circulation. A voluntary audit of content accessibility is worth considering, as well as potential entry for Audio Description status.

How timely should libraries be responding to requests for accommodation?

There are no cut-and-dried definitions about what constitutes a "timely manner" for transcription and captioning provision on request. Any more than five business days could create an undue hardship for the requesting individual (e.g. an undergraduate student) insofar as being able to keep up with studies, especially if tests or exams are approaching. Requesting permission to caption or describe media within short time periods presents a challenge, especially in the context of outsourcing, which makes planning and preparedness key to meeting requests for accommodation efficiently.

Based on the ROAM environmental scan, the average turnaround time for OCUL universities is 14–21 days for captioning, which does not include time for seeking permissions to do so where required. Timeliness is affected by other university processes such as syllabus release dates, medical paperwork requirements for accommodation, and procurement of desired accessible formats.

What are the accessibility requirements for materials in university libraries?

The predominant accommodations identified by the AODA for timed media online are captioning and descriptive audio. Material in e-reserves and learning management sites falls under the "Intranet" definition in the IASR because it is usually secured behind authentication. If the audio-visual material is not intended for general community use (as on a public website), it qualifies as training material (see IASR, Section 15 for details), and as such, an accessible version can be provided upon request. If the material is available publicly online, it falls under Section 14 of the IASR, and institutions are obliged to provide this material in an accessible format, regardless of whether or not there is an explicit request for it.

How can copyright permission for captioning be cleared?

Copyright permission is usually sought on a case-by-case basis, as a request for accessible video is received. For those institutions that caption extensively, copyright clearance becomes a very time-consuming process.

A possible solution would be for libraries to seek a blanket copyright clearance at the time of purchasing audio-visual materials. This permission should not come at additional cost. The vendor could also be asked to supply the original script or captions where available. It is a mutually beneficial practice for the institution securing captioning permission to share the video captions with the copyright holder after the fact. Offering this accessible content can further encourage rights holders to grant permissions for captioning/described video.

A further extension of the blanket copyright clearance could be a joint permissions request on behalf of OCUL members. This would reduce the duplication of work for OCUL members sending permission requests for the same material (and copyright owners needing to respond).

How can videos be captioned legally?

If the audio or video is not already captioned or available for purchase in accessible form, the OCUL Accessibility for Libraries Toolkit recommends that permission be sought from the copyright holder where required in order to copy, and then caption or have media captioned by a service provider. Section 32 of the Canadian Copyright Act indicates that one may create an accessible variant from media except for "cinematographic works"[24]. More information is provided in the Research section on the Legal Framework above.

---

[24] Bill C-32 defines cinematographic works as "any work expressed by any process analogous to cinematography, whether or not accompanied by a soundtrack." Accessed on January 8, 2015, http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=2329490&Language=e&Mode=1&File=16.

Whereas most videos from larger production companies will include captions or at the very least subtitles, videos by smaller organizations may not. In those cases, libraries can contact the copyright holder (usually the producing organization) and request a commercially available captioned DVD version and/or ask about getting the file captioned.

Videos posted on YouTube or Vimeo can be problematic. If captions are provided, it is necessary to look closely to determine the accuracy of the captions and whether the poster is the content rights holder or has permission to post it. Extracting or snagging video from YouTube without consent is a potential breach of the YouTube terms of service. Libraries should send a letter seeking the original media in cases where the poster is not the rights holder.

Can media copies be retained after captioning?

In order to transcribe or caption, generally a copy of the media from which the alternative or augmentative format is derived must be obtained. For preservation purposes, it may be appropriate to keep the original media as a backup on hard drive or other stable electronic format. It should be noted, however, that accommodation is based on providing access, not preservation.

Long-term preservation aside, media copies retained for purposes of ensuring accessible format provision may sound like a good idea. However, questions remain about what actions constitute breaking a digital lock (in order to copy) and under what circumstances that action might qualify as an exemption. Further legal advice may be needed before taking this preservation action.

What is the right balance to maintain between enhanced access to content and compliance with copyright and other relevant legal acts?

The AODA clearly states[25] that other laws should not be broken in the pursuit of reaching or maintaining compliance. Reasonable or "practicable" efforts should be taken and documented to ensure accessible audio/video in library holdings without breaking copyright or digital locks. In scenarios where fair dealing is considered, the library should document its judgment of fair dealing criteria and accommodation requests in order to meet AODA compliance.
Failing to comply with AODA legislation could result in fines to an institution. Libraries well understand penalties for breaking copyright.

What is a reasonable cost of outsourcing media for captioning or description?

The Directory of Service Providers and Software (Appendix D) provides some current rates that can serve as a resource. Rates for captioning may or may not include transcription which is a necessary precursor to caption creation and which may exploit voice recognition technologies, human effort, or a combination of both.

What factors should be considered when choosing a service provider for captioning or description?

In the Models and workflows for accessible media production section of this report, an outsourcing model provides specific detail on choosing and working with an external service provider. First, libraries will want to determine their needs for turnaround time and specific captioning deliverables, the available budget, and any privacy issues. Libraries should assess service providers for quality and accuracy, pricing, turn-around time, experience, academic environment familiarity, and services offered.

---

[25] Recognition of existing legal obligations:
      3. Nothing in this Act or in the regulations diminishes in any way the legal obligations of the Government of Ontario or of any person or organization with respect to persons with disabilities that are imposed under any other Act or otherwise imposed by law. 2005, c. 11, s. 3.

6.Options for libraries to provide accessible collections

Ensuring barrier-free access to library-owned videos has become increasingly important for OCUL libraries and their users. In order to facilitate this process, the ROAM project aimed to provide a picture of captioning activities in OCUL libraries and some clarity on sharing video captioning under Canadian law, including a detailed analysis of potential costs and benefits of a variety of approaches. As the project team began to analyze the research, it became apparent that current practices for captioning library material in Ontario universities were not mature or varied enough to be effectively compared. However, a number of concrete steps libraries could take to prepare for compliance with AODA in 2020 did emerge. These steps fall generally into three distinct categories.
Firstly,

Know your context

- Your collections

    - Libraries should gather more detailed information about their media collections to understand the size, age, formats that are being used, and the extent of captioned materials available. With this information, libraries should complete some analysis to determine the extent to which their media collections are not accessible already.

- Your users

    - By gathering information that will provide a concrete understanding of users and their needs, each library should be able to determine potential demands for accessible media.

- Your university

    - At any given university, there can be many different departments, which are involved in providing accessible media to their community. Each library should ensure that it understands its institutional context so that it is able to assess the potential for partnerships within the university to provide accessible media.

- Trends in higher education

    - Libraries should gather information about growth in providing online and blended learning at their university. Tracking this trend, and collaborating across the university in planning activities, should improve the availability of accessible media that is used in these courses.

Secondly,

Make accessible resources visible and be transparent

- Catalogue

    - Libraries should update their media catalogues with captioning information. This will aid discovery of accessible resources and save users' time.

- Clear procurement policies

    - Libraries should have procurement policies that support two strategies. First, libraries should acquire accessible formats of media whenever possible. Second, when non-accessible media is acquired, libraries should also acquire rights to make the media accessible in the future.

And, finally,

Collaborate

- Share rates

    Libraries should share information about service providers, including rates, with each other and other university departments. Agreement on common ways to describe and share this information will facilitate understanding and each library's ability to assess vendors' service offerings.

- Create shared strategies

    To streamline the captioning permissions process, libraries should share lists of accessible media copyright holders, gather blanket permissions to share captions amongst libraries, store documentation about rights holders and permissions information alongside captions, and develop a model click-through agreement to be sent to copyright holders.

- Develop best practices

    This report has identified best practices that have already been developed by some libraries. This is fertile ground for further collaborative work within OCUL and with partners in other academic libraries and organizations.

- Advocate

    Libraries should be actively engaged in advocating for the inclusion of captions in streaming services licensed by libraries as well as on DVDs distributed in Canada. Within institutions, libraries should seek opportunities to speak with faculty in meetings and teaching fellow groups, to identify faculty champions who can showcase benefits, and to educate teaching assistants and contract instructors. During course design processes,

when libraries are engaged for copyright assistance, accessibility should be addressed as well.

- Monitor

  Libraries should monitor captioning activities to determine if an increase in demand or maturing of practices warrants revisiting the extent to which they are engaged in comprehensive collaboration partnerships at their institutions and with other libraries.

The ROAM Advisory Committee helpfully provided a great deal of advice to the project and much of this is included throughout this report. As discussed above, the project team's assessment is that there is a tangible lack of mature practices amongst our members. A comment from one Advisory Committee member is very relevant at this time: "There is lots of activity which is not always fully coordinated, resulting in some overlap - but overlaps are better than gaps". OCUL members could work together to:

- know our context better by sharing local research results, and perhaps even developing a pilot project in the area of online learning

- make accessible resources visible, both for library users and in the context of negotiating for rights to make media accessible

- collaborate by sharing market information with OCUL members, learn about each other's best practices, and advocate for accessible media with producers and industry associations.

Digital video continues to be a key resource for teaching and learning in Ontario's universities. The biggest barrier libraries face in meeting the AODA requirement pertaining to digital media is lack of understanding of available options for captioning legacy video content. This report looked first at library user populations through a lens of accommodation and accessibility; second, at the libraries themselves in terms of the multimedia that is collected and how it is used; and, third, at the current legal framework for providing accessible media in Canada.

This publication is intended to inform the planning processes for Ontario's university libraries in 2015 and beyond as they implement services to ensure fair and equitable access to media. To this effect, this document has summarized the current climate of accessible media provision at Ontario university libraries, providing examples of current practices pertaining to the provision of accessible media and providing a variety of reference resources to support OCUL members.

Appendix A – OCUL Environmental Scan

Summary

This appendix provides an overview of the Ontario Council of University Libraries (OCUL) Accessible Media Library Survey, and the summary responses collected from the participating libraries during the summer of 2014.

This survey provides a snapshot of the current understanding, practices, and needs of OCUL libraries around the provision of accessible multimedia. The results from this survey have been summarized and presented throughout this report to provide a background and an environmental scan of the current landscape. The survey gathers feedback from the community about the options and considerations moving forward with respect to any future projects for captioning media and sharing resources within OCUL.

Overview

To gain a better understanding of the current practices, needs, and experiences of OCUL libraries in the area of accessible media provision, an environmental scan and survey was conducted over the period of June 2014 to the end of September 2014. Information was gathered using a standard survey questionnaire administered to OCUL library contacts via email, using the online survey tool FluidSurvey (an accessible web-based survey tool). In addition, several discussion groups and one-on-one interviews with experts and members of the OCUL community were conducted to supplement the results of the survey.

Survey

Survey contacts e-mails were supplied to the research team by OCUL member libraries in advance of the survey link being distributed.

The initial survey was developed and deployed in two stages:

- A pilot survey was developed and distributed at the end of July 2014.

  - Eleven OCUL institutions provided feedback with regard to the structure and the content of the survey.

- All 21 OCUL institutions were invited to complete the final version of the survey on August 7, 2014. The deadline for responses was August 19, 2014.

  - Nineteen institutions participated in the final survey, resulting in a **response rate of 90%*** from OCUL members (*note: in some cases follow-up was conducted after the survey deadline to verify responses).

Community consultations (follow-up interviews)

In addition to the survey questionnaire, a series of interviews and meetings took place with a variety of experts, addressing issues such as:

- Local demand for accessible timed media;

- Potential for in-house production and distribution of accessible media by library personnel, or in conjunction with campus accessibility centres;

- Optimal use of caption tools for in-house production;

- Potential for in-house training;

- Outsourcing options;

- Leveraging consortium resources and buying power;

- Lobbying for accessible media from content providers.

For more information about the in-person interviews and meetings, please contact Katya Pereyaslavska katya.pereyaslavska@utoronto.ca. Where applicable, information gathered from the interviews is provided throughout this environmental scan.

Methodology

Scope

The survey was developed by the research team to cover the provision of accessible media within OCUL libraries as well as to get a sense of the involvement of outside departments at Ontario institutions. This includes captioning services and production workflows, tools, service providers, as well as the needs and considerations of libraries to any future projects for the sharing and distribution of captioned media within OCUL. All OCUL members were invited to participate.

Survey Questionnaire

The OCUL survey questionnaire and follow-up interviews were designed specifically for university libraries in Ontario. It included up to 40 questions about the provision and management of captioning services, with two unique sets of questions depending upon whether the library did or did not provide captioning services. In an effort to deliver an accessible solution for all survey contacts, the OCUL survey was administered using FluidSurveys, an accessible online survey tool. Tests were conducted by the research team in advance to ensure appropriate levels of accessibility with this platform.

Survey respondents

The survey was circulated to the OCUL libraries contacts via OCUL Directors, who identified the appropriate contacts to respond to the survey at their institution. These contacts were primarily library administrators, accessibility and technical staff. Respondents were provided with the opportunity to remain anonymous or to include personal data. Some institutions have agreed to be named in this report. Participation in the survey was voluntary.

Overall, most responses were gathered during the survey collection period. However, some follow-up was conducted to verify the responses in cases that were unclear to the research team or required further review.

For the complete survey questionnaire please refer to Appendix B.

OCUL Libraries

Participating OCUL libraries represented a range of institution sizes including large (greater than 30,000 FTE), medium (in between 15,000 – 29,999 FTE), and small (less than 15,000 FTE). Participation from nineteen OCUL libraries ensured that the results of this survey were representative of most Ontario libraries and situations.
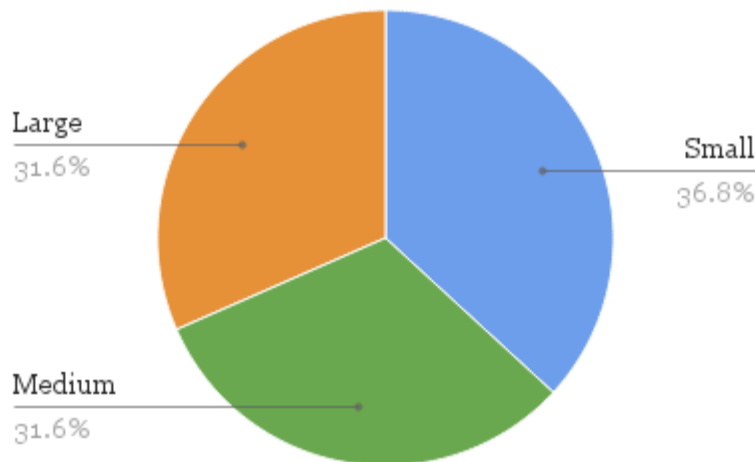
Figure 5 below shows a well-balanced sample (n=19)

Large
31.6%

Small
36.8%

Medium
31.6%

Figure 5: Response by size of institution (by FTE)

Survey Results & Analysis

The survey results presented here represent the summarized responses of the OCUL Libraries with regards to accessible media provision. Some of these results include the opinions of individual OCUL survey contacts; however, for the most part, they represent the responses and situation of that particular OCUL institution.

Survey results are presented in three sections: Background; Service Models and Workflows (for captioning media); and Sharing and Next Steps for OCUL.

Section 1: Background

1.1 Familiarity of AODA (Accessibility for Ontarians with Disabilities Act)

Contacts at OCUL libraries were *moderately confident* to *quite confident* (**78%**) with their interpretation of the AODA's requirements. Some OCUL libraries indicated that they were only *slightly confident* or *not at all confident* (**22%**) with the requirements, indicating some need for continued support and resources.

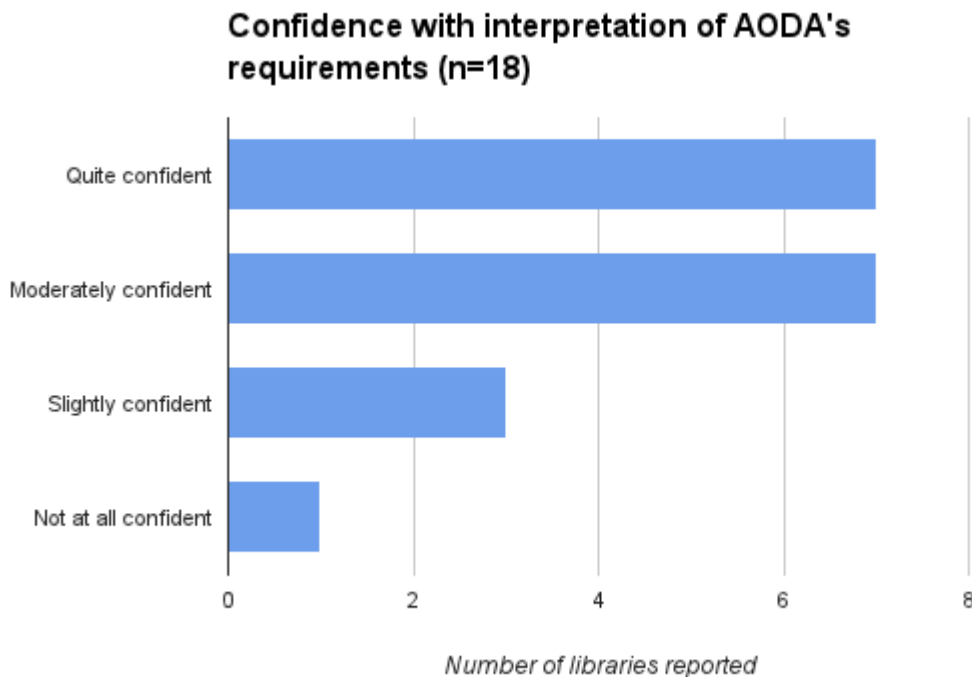*Figure 6* below presents responses from Question 1.2.

Figure 6: Question 1.2

When asked if further resources and guidance around AODA-legislated responsibilities specific to accessible audio and video provision would be valuable, all OCUL libraries responded very favourably (**100%**) to the additional training and support.

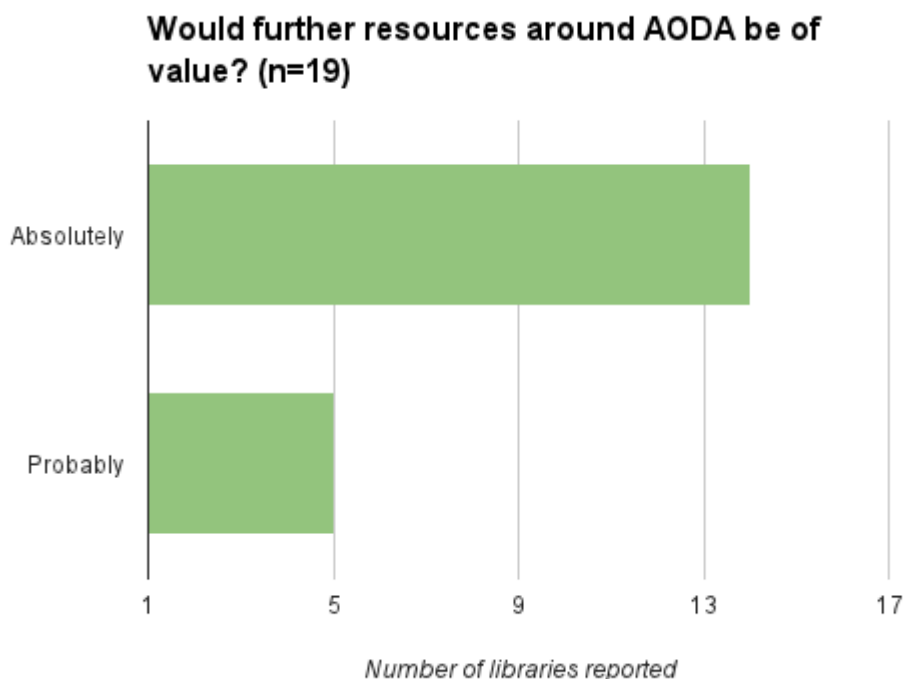*Figure 7* presents responses about additional training and support (Q 1.3)

Would further resources around AODA be of value? (n=19)

Number of libraries reported

Figure 7: Question 1.3

In terms of the kinds of resources and materials OCUL Libraries would like to see made available, these ranged from **basic to advanced guidelines** for making audio and video materials accessible, **users' needs assessment**, guidance on the provision of certain **kinds of media** (i.e. cinematic works), and **legal and copyright guidance**.

1.2 Provision of Accessible Media

Only 5 of the 19 libraries (**26%**) surveyed currently provide a captioning service for library patrons. 14 libraries currently do not caption media at all (**74%**), and this represents a significant barrier to providing accessibility services in libraries. The most common factors for not captioning any library material were related to a **lack of discerned demand**, and a **lack of any established workflow**.

Figure 8 below presents the multiple responses to Q 2.1 (n=14 – this question was asked only to libraries who do not caption media currently; multiple responses were permitted)
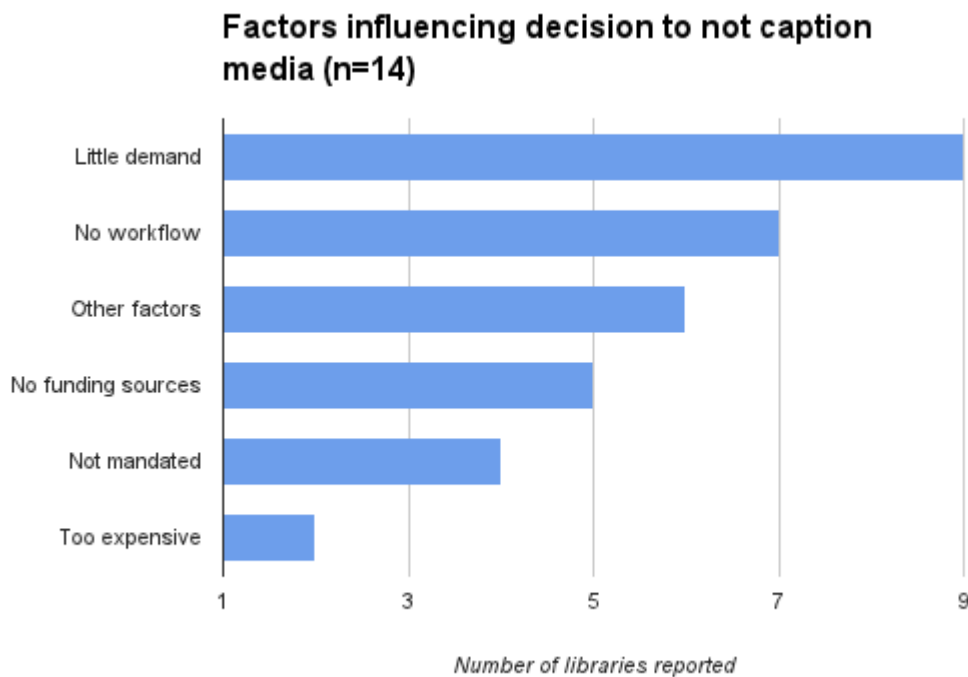
Factors influencing decision to not caption media (n=14)

Little demand	9
No workflow	7
Other factors	6
No funding sources	5
Not mandated	4
Too expensive	2

Number of libraries reported

Figure 8: Question 2.1

To a lesser extent the lack of any funding sources and the prohibitive costs associated with captioning were cited as a factor influencing libraries. Only two respondents (**14%**) listed "too expensive" as a reason for not captioning. These results did not provide a clear indication as to which of these factors was the most prohibitive for any single library.

Broken-down by size of institution, the factors influencing libraries such as **'little demand'** appear to be more prevalent among smaller OCUL libraries (**56%**).

Figure 9 presents responses of "little demand" (Q 2.1 by institution size).

Little demand factor cited, by institution size (n=9)
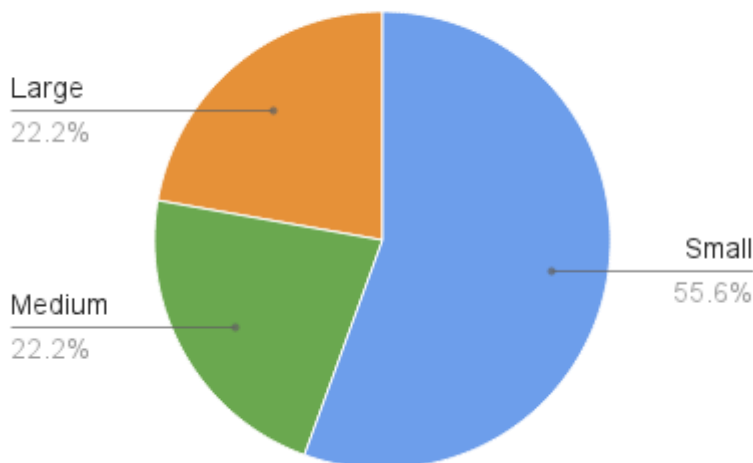

Figure 9: Question 2.1 by institution

A follow-up discussion involving institutions, which do not provide accessible multimedia took place on October 17, 2014 with 7 OCUL schools represented. This meeting explored the reasons why these libraries have not provided accessible media, pointing to the lack of existing workflows and procedures to accommodate requests for captioning. In some cases, other units on campus (usually disability centres or media services) were already engaged in media captioning, which took this responsibility away from the library.

Other key findings:

- Those libraries that provide captioned media, expected the demand for this service to increase, and some libraries indicated a projected average increase of **50-100%** in the coming year;

- The five OCUL Libraries that currently caption media reported receiving a total of approximately **60 patron requests annually** for accessible captioned media resources. This represents an average of 12 requests per library, though the number of requests varied widely by library;

- Six out of the nineteen libraries (**32%**) that participated in survey indicated that they **currently or had previously** captioned multimedia resources.

Section 2: Models and Workflows (for captioning media)

2.1 Libraries that currently provide captioning services for multimedia

OCUL libraries reported a number of models and workflows for providing captioning services to library patrons. The majority of libraries that provide captioning services indicated that teaching faculty most often requested captioning services (four out of five libraries). Other requests came from university departments (two out of five libraries), and directly from library patrons (two out of five reported). Only one library indicated that they received requests from the university's accessibility/disability office.

Figure 10 provides library requests by source, for captioning services (Q 2.3 - multiple responses were permitted)

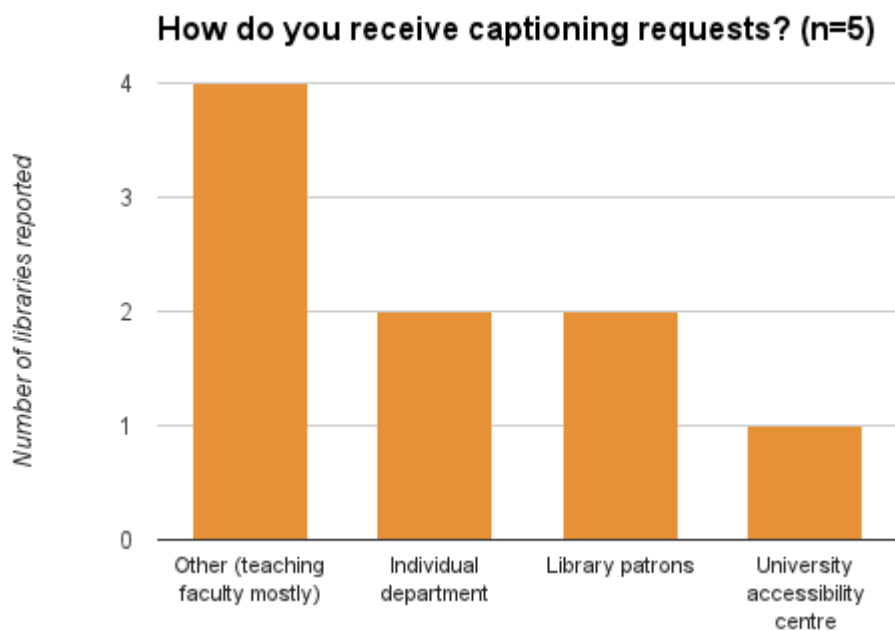**How do you receive captioning requests? (n=5)**

Figure 10: Question 2.3

The majority of libraries that currently caption media indicated that they were captioning media by request from either faculty/staff or students (four out of five libraries). Additionally, some libraries were captioning specific library collections, including DVDs or course-related works (three out of five libraries).

Figure 11 below shows a breakdown of what materials libraries are captioning (Q 2.4 - multiple responses were permitted)
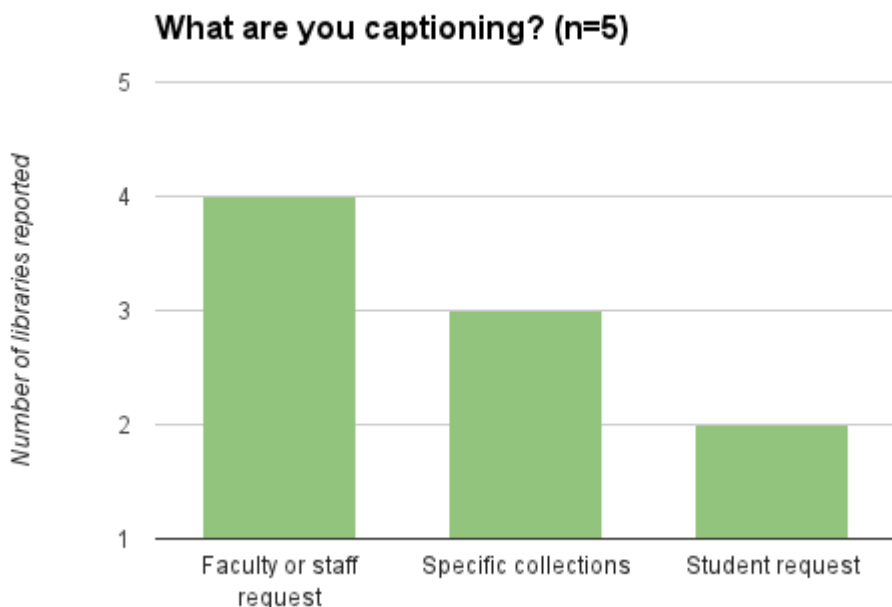
What are you captioning? (n=5)

Figure 11: Question 2.4

On average, OCUL libraries that provide captioning services reported that they are able to accommodate students with accessible media formats within a time period of **14-21 days**, from start to finish. This incorporates the time it takes to gain permission from producers (for copyright reasons), and the time it takes to transcribe / caption the media. This is the situation for both in-house providers (those libraries that caption media in-house), and those that outsource captioning.

It was reported by OCUL libraries that there can be significant **time delays associated with permission requests** for captioning (copyright compliance), and libraries report that responses to permission requests are often not very expedient. Many OCUL libraries indicated that this was *absolutely* or *frequently* the case (three out of five libraries), when offering captioning services to library patrons.

2.2 Libraries that produce accessible media in-house

Currently only one OCUL library, Ryerson University, is producing in-house captioning where library staff and resources are used in the production of captions for multimedia resources. The majority of libraries that are captioning media are doing so by outsourcing to external service providers (five libraries).

Figure 8 outlines Ryerson University's model for in-house captioning, as reported in the survey. More discussion of in-house captioning models is available in the Models section of this report.

In-house captioning production: case study
- **Library 1** produces captions for media in-house (in the library);

- Captions are produced using tools and resources such as **manual entry software,** often with **work study students**, as well as **staff transcribers/captioners**;

- Sometimes, an **external service provider** is used concurrently with in-house work, for example, for **time stamp captioning**;

- This model is leveraged for a variety of content types including:

   o Library and Library AV holdings;

   o Textbook-related AV material

   o and materials from the institution, but outside the library

- Captioning is **funded entirely by the Library's budget**, and is **provided to other departments** at the institution **free of charge**.

Additionally, discussion group interviews identified that some libraries that created their own instruction or informational videos use **software such as Camtasia**, which support captioning media. Other tools cited included **YouTube** and **Desire2Learn** video platforms to add captions to library material.

2.3 Libraries that outsource accessible media production
The majority of OCUL libraries that are producing captions for media are doing so by outsourcing work to an external service provider (five libraries).

Note: In total five libraries reported outsourcing captioning services. Of those, one library indicated that it used external providers **AND** produced captions in-house; the chart below reports the total number of responses (n=6) to reflect this situation.

Figure 12 shows the proportion of libraries providing captioning services, those that are captioning internally vs. using external service providers (Q 2.5).

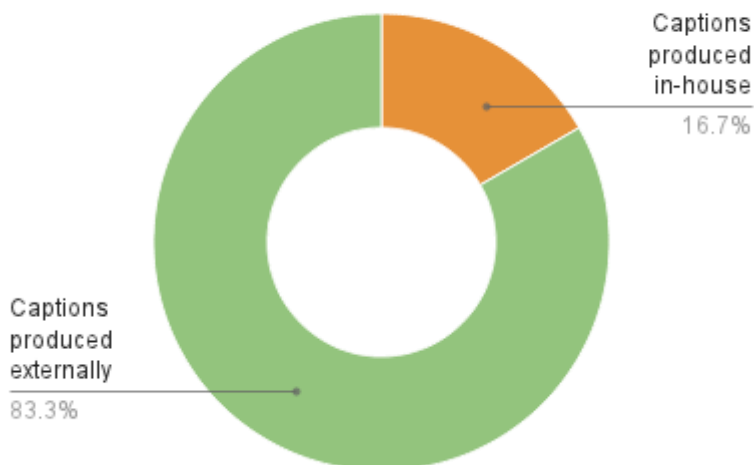## Captions produced in-house vs. external to library (n=6)

Figure 12: Question 2.5

Libraries producing captions externally either utilized services on campus, which have captioning capabilities, and/or outsourced to external captioning services.

The survey results confirmed that for those libraries that commission captioning, all (five libraries) use services in Canada. One library indicated that they use service providers from both Canada and the United States. Only one library indicated that they outsourced to an overseas provider.

Some service providers mentioned by OCUL libraries included:

- Automatic Sync;

- Caption Sync;

- Inclusive Media;

- DJ Woods.

Additional follow-up with the libraries that outsourced captioning indicated that the quality of captioning services was better in Canada, where service providers are more familiar and sensitive to **Canadian spelling**, expectations about **turn-around time**, and **copyright situations**.

OCUL libraries that produce captioning externally are all interested primarily in captioning their own library's audio-visual materials (five libraries). One library indicated that they captioned other kinds of materials such as **textbook related AV content**, while some (two out of five libraries) reported less frequent captioning of **instructional materials** and **library productions**.

Figure 13 shows content types currently being captioned externally by libraries (Q 2.14 - multiple responses were permitted)
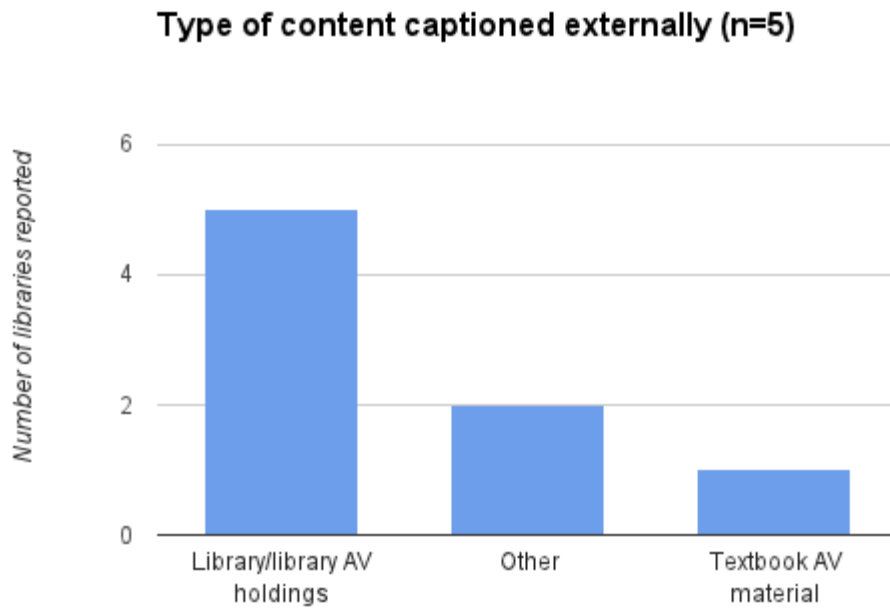
Type of content captioned externally (n=5)

Figure 13: Question 2.14

Quality Assurance

Some OCUL libraries (three out of five libraries) provided additional **quality assurance** on captioned deliverables; this included the work of library staff to proof the provider's captioning for accuracy.

Library's ability to provide quality assurance on delivered products (n=5)

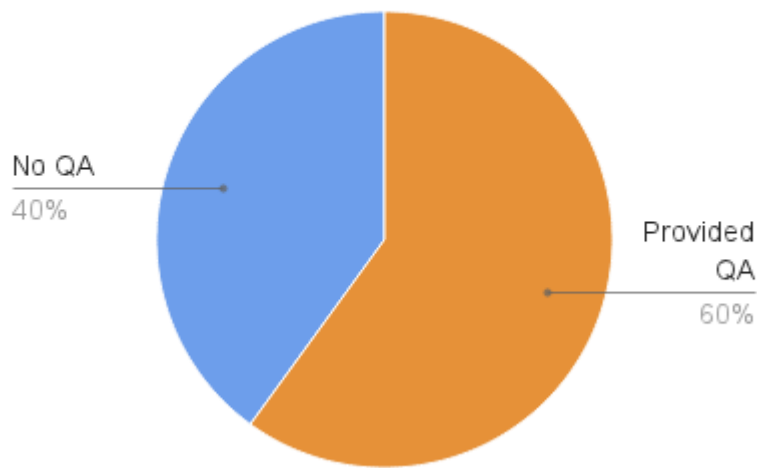
No QA
40%

Provided QA
60%

Figure 14: Question 2.17

None of the OCUL libraries reported receiving any feedback from users with regards to the quality of the delivered captioned products.

Costs and satisfaction with service

Costs associated with captioning media were reported by some OCUL libraries who currently outsource captioning. The average cost to caption timed media ranged from C**$2.65 / per minute** to C**$3.00 / per minute**.

Funding for captioning almost always comes from within the **library's budget** (**4 of the 5 libraries which outsource captioning** indicated so), with one library reporting funding coming from a university level accessibility cost centre. For most libraries, therefore, outsourcing captioning represents a considerable cost to the individual library.

External captioning services were rated by libraries that currently outsource materials, on the **cost ($)**, **turnaround time**, and **level of service** provided. In terms of **cost**, some libraries expressed a *high level of satisfaction* (two out of four libraries), with one library being *somewhat* satisfied. Libraries rated the **turnaround time** of services providers unevenly, with some libraries *highly* satisfied (two out of four libraries) and others only *somewhat* satisfied (two out of four libraries) with turnaround time. All libraries felt *highly* or *moderately* satisfied with the **level of service** they received for external captioning services.

Figure 15 presents satisfaction rates by libraries to captioning services provided by external companies (Q2.19)
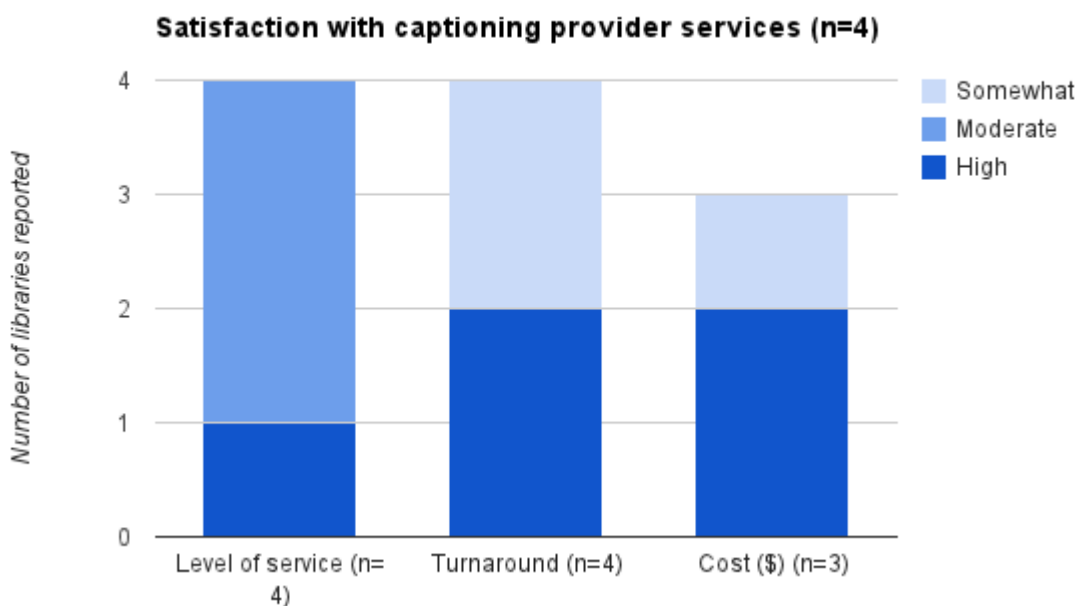
Figure 15: Question 2.19

All OCUL libraries that provide captioning services provide ***transcription only*** for audio/video content (i.e. no captions synchronized with audio, just the text of what is spoken).

Other solutions that OCUL libraries are currently investigating for providing accessible media to library patrons include:

- Purchase of captioned media for library collections (often through streaming services);

- Online real-time captioning services;

- Collaborating with other departments and/or centres;

- In-house and ad hoc captioning using YouTube and Desire2Learn;

- Providing a transcript of the media as a PDF document.

Section 3: Sharing and Next Steps

3.1 Sharing accessible formats across libraries

Currently, most OCUL libraries (**95%**) **do not share** any accessible media or alternative formats. In OCUL, this represents a significant opportunity to evaluate the potential benefit for libraries to

share resources around the provision of accessible media.

Although OCUL libraries have not been sharing captioned or alternative content (other than that which may already be commercially available), feedback indicated a strong consensus that it would be reasonable for libraries and universities to do so.

When asked about the potential for sharing alternative formats for accessibility purposes, most OCUL libraries (**81%**) felt it was **very reasonable to share** these kinds of resources among different institutions for reasons that related to reduced duplication, cost-sharing, and overall collaboration. Some libraries had minor reservations, mainly due to copyright and legal considerations.

Figure 16 presents library attitudes towards sharing alternative formats (Q 4.2)

Reasonable to share alternative formats among libraries (n=18)
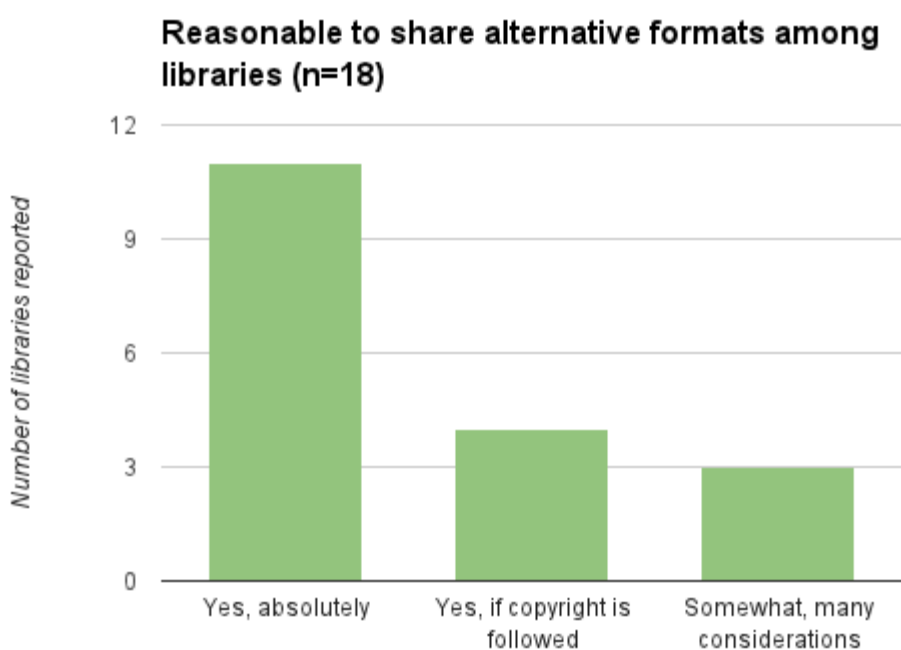
Figure 16: Question 4.2

Most OCUL libraries (**95%**) would be *absolutely* or *very interested* in utilizing a Canadian or Ontario-based resource for sharing accessible media in libraries.

There were several considerations noted by OCUL libraries around the creation and maintenance of such a service, including **copyright/legal issues**, **content types**, **infrastructure decisions**, **streaming media vs. file access**, as well as considerations around **quality assurance** and **standards for captioning**.

Figure 17 presents the interest of OCUL libraries in utilizing a shared resource (Q 4.3)

Interest in shared resource for access to accessible media (n=19)
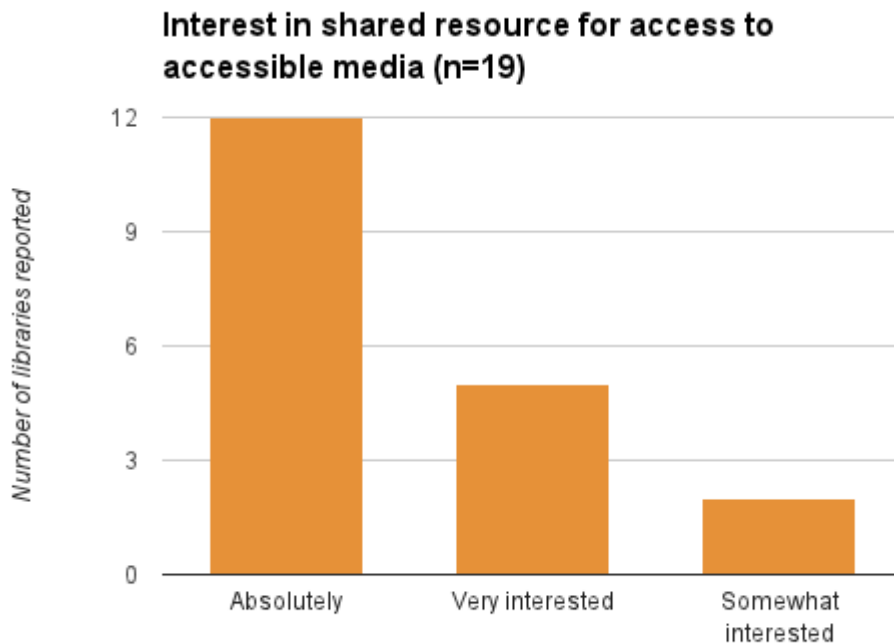
Figure 17: Question 4.3

Libraries were asked about their level of interest in certain topics relevant to the sharing of alternative formats amongst libraries. Overall, there was strong interest in discussing this topic; together they have a great deal of knowledge to share.

When asked about their level of interest in the topic of *ownership and distribution of alternative formats*, most OCUL Libraries had a *strong interest* (**63%**). Other libraries were *somewhat interested* (**32%**) or *not at all interested* (**5%**).

When asked about their level of interest in the legal and other implication of altering or augmenting source material, most OCUL libraries also had a *strong* interest in the topic (**74%**).

Figures 18 & 19 below indicate interest levels among OCUL libraries in relevant topics around the sharing of alternative formats (Q 4.5)

Interest in ownership/distribution of alternative formats (n=19)

Not at all
5.3%

Somewhat
31.6%

Strong
63.2%
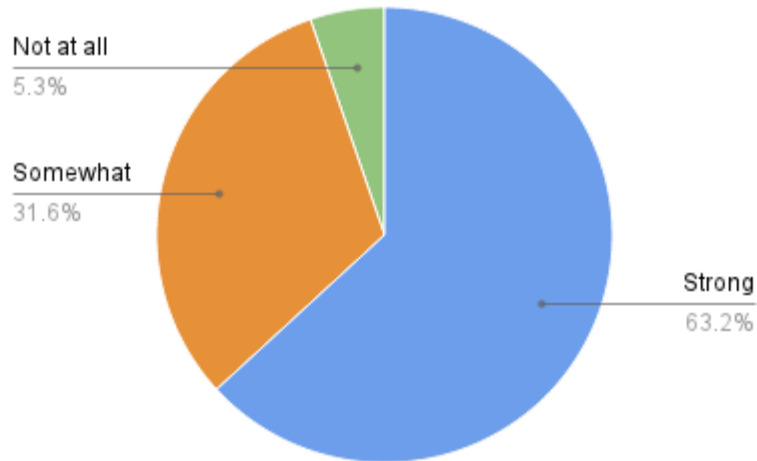
Figure 18: Question 4.5 (ownership/distribution)

Interest in implications (legal or otherwise) of altering source material (n=19)

Somewhat
26.3%

Strong
73.7%
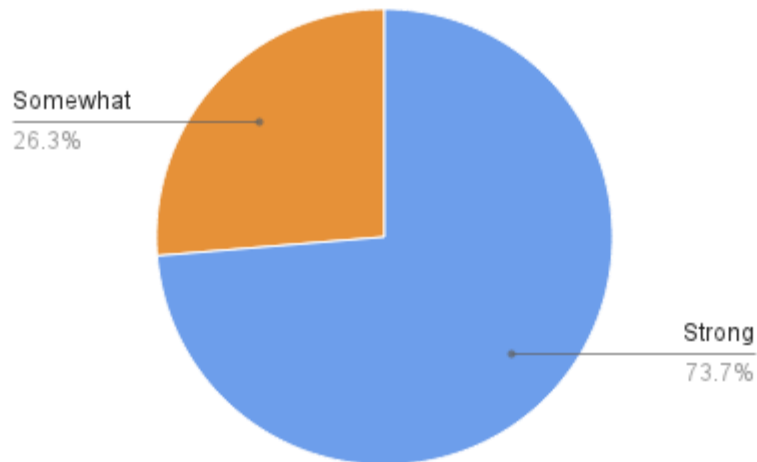
Figure 19: Question 4.5 (implications of altering source material)

Additional comments and considerations around alternate or modified-for-alternative access media were provided by libraries. Topics reported addressed the need for discussion around:

- Instructional materials

- Information sharing

- Skills development and training

- Master copies and digital locks

- Publisher relationships

- And intellectual and creative property rights

3.2 Student needs and outreach

A major gap in knowledge for libraries is whether students with disabilities are aware of or understand how universities can support their needs. It is unclear how well libraries are able to articulate this issue, but generally some OCUL libraries feel that many students are not in touch with the right support services nor do they avail themselves of services offered to them. Libraries were asked about this, as well as whether they felt that they would be able to meet demands if more students were aware or availed themselves of services in the library.

Many libraries do see an issue with student's understanding of services offered (**47%**) but others are unsure or are still trying to figure this out.

Figure 20 presents coded responses from libraries about needs / support services for students (Q 5.1)

Do students with disabilities know about how universities support their needs? (n=19)
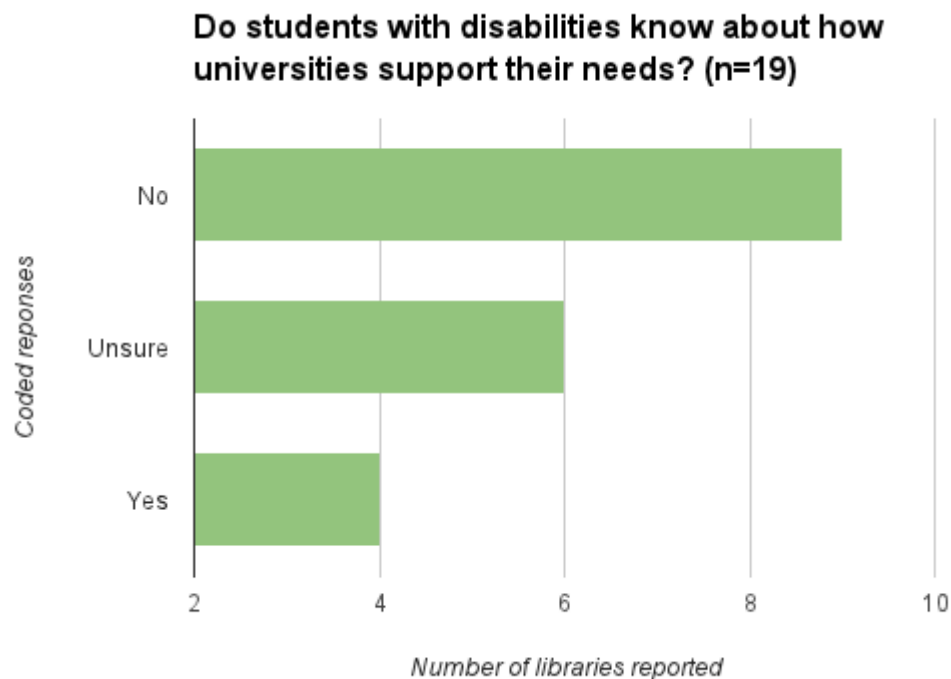
Figure 20: Question 5.1

In terms of whether libraries would be able to meet anticipated demands, the majority felt that they could not meet the demands from students or were not sure whether they could (**84%**). Only a small number of libraries felt that they could handle the demand.

Figure 21 presents libraries' readiness for increased demand and support of students (Q 5.1 part 2)

Readiness for increased demand & support of student's requests (n=19)

Yes
15.8%

Unsure
47.4%

No
36.8%
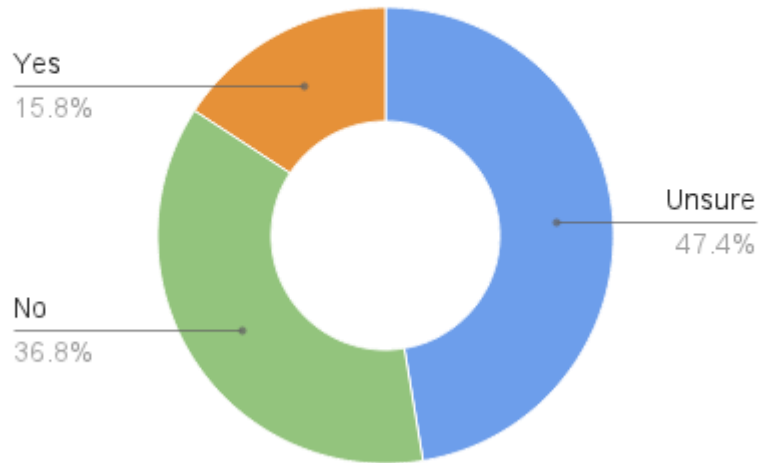
Figure 21: Question 5.1 part 2

Typically, OCUL libraries work closely with accessibility services at their institution to identify student needs and support. Nearly all OCUL libraries (**94%**) contact some accessibility service to verify a request for accommodation by a student.

Figure 22 presents the library's process for review of requests for accommodation (Q 5.2)

How do libraries verify a "legitimate" request for accommodation (n=18)

Assume all are legitimate
5.6%

1

Contact accesibility services or other department
94.4%

17
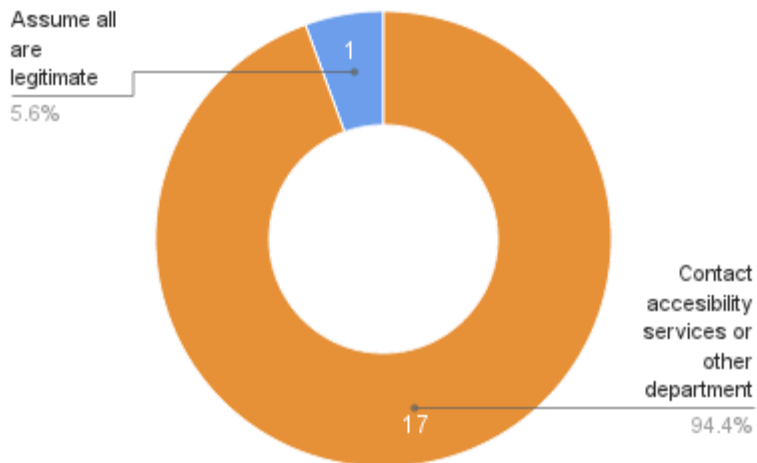
Figure 22: Question 5.2

Moving forward, many OCUL libraries are aware of alternative options for providing accessible media to patrons beyond what they are currently using. Most libraries cited being familiar with automated voice recognition software (**89%**) followed by live remote captioning (**58%**) options. Other technologies, including crowd-sourced options were less known but still cited by some OCUL libraries.

Figure 23 presents awareness and familiarity of other options for captioning media (Q 6.1 - multiple responses were permitted)

Awareness of other options for captioning media (n=19)
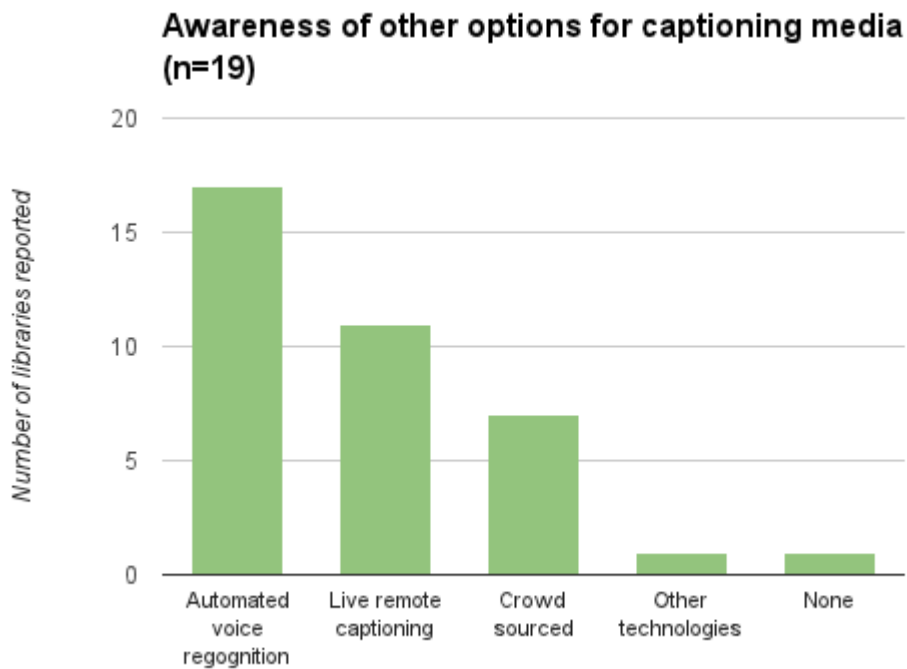
Figure 23: Question 6.1

Summary conclusions

OCUL libraries are aware of and eager to address accessibility and accommodation in libraries. Many libraries anticipate increased student and faculty requests for accommodation in using library materials, including audio-visual resources. Only a few libraries (5 out of 19) are currently providing captioning services for media resources, mainly on a faculty or student request basis. Of those libraries providing captioning services, most are outsourcing captioning to external service providers at a cost to the library.

While the majority of OCUL libraries are not captioning media, they are looking forward to some form of consortial support or investigating, at an institutional level, options available to them at this time. Almost all OCUL libraries would support a shared OCUL service for increased access and delivery of alternative formats for library materials. However, there are several considerations, related to legal issues and standards that need to be addressed before any such service could be established.

For further information or clarification of any of the above please contact the Scholars Portal (OCUL) Accessibility Librarian:
Katya Pereyaslavska
katya.pereyaslavska@utoronto.ca

Appendix B – ROAM survey questions

Accessible Video Provision at Universities – OCUL Survey

About This Survey

The Report on Accessible Media (ROAM) is a research study and report on accessible media delivery at Ontario universities. The study will identify a range of service options available to Ontario's university libraries. ROAM will document the diverse practices for delivering media in accessible formats that are employed at Ontario universities.

The purpose of this survey is to provide Ontario university library staff with an opportunity to contribute their expertise and knowledge of current practices around the provision of accessible digital media (predominantly audio and video) at their institutions. The impact of the final report summarizing this collective knowledge will be broad, feeding in to the service plans of individual schools to ensure compliance with the Accessibility for Ontarians with Disabilities Act (AODA) Information and Communications requirement, and the strategic planning of OCUL as a whole.

This research is being conducted by Inclusive Media and Design on behalf of OCUL with support from the Government of Ontario. ***Please complete this survey by 5pm on August 16, 2014.***

Survey Format

There are about 40 questions in this survey, not all of which may be applicable to your institution.

We encourage you to consult with your colleagues when completing this survey. We recognize that some questions might be more difficult to answer than others and we appreciate your investment in this project.

Accessible Word and PDF versions of this survey are also available. If you require alternative format for this survey please contact katya@scholarsportal.info.

Questions?

If you have any questions about the research study, please contact rob.harvie@inclusivemedia.ca or katya@scholarsportal.info. This survey has been approved by the ROAM Steering Committee.

Consent

Proceeding indicates that you wish to participate in the research study, and that:
- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age

PART A: Survey Introduction

1.1 Information about you:
Name:
Title/Role:
Department/Library:
Email:
Phone Number:
Relevant Experience:

1.2 Are you confident in your interpretation of AODA's Information and Communications Integrated Standards as it relates to your library's provision of accessible audio/video?

☐ Extremely confident
☐ Quite confident
☐ Moderately confident
☐ Slightly confident
☐ Not at all confident

1.3 Would further resources and guidance around AODA-legislated responsibilities specific to accessible audio and video provision be of value?

☐ Absolutely
☐ Probably
☐ Might be
☐ Not really
If yes, anything specific?

1.4 Does your library currently caption media (DVD, VHS, unstreamed digital video/audio, etc.)?

☐ Yes
☐ No

Branching Information:
*If answer to: 1.4 Does your library currently caption media = Yes then proceed to **PART C**. Otherwise proceed to **PART B**.

PART B: If Your Library Does Not Caption Media

2.1 Your library does not caption multimedia materials, due to: (comments invited)

☐ Little demand
☐ Too expensive
☐ No funding source established yet
☐ Haven't enacted a workflow yet
☐ Not officially mandated
☐ Other factors
Comments?

2.2 Has your library ever captioned media (DVD, VHS, unstreamed digital video/audio, etc.) in the past?

☐ Yes
☐ No

If Yes, please let us know who your past service provider was:
      Name of provider(s):
      Why no longer in use?
      Volume of content commissioned per year (approximately):
      Rate per minute or other pricing info:
      Comments?

2.3 If any other departments on your university campus are responsible for the provision of accessible media, please list:

List of departments

Branching Information: Proceed to **PART H**.

PART C: If Your Library Does Caption Media

2.1 How many video captioning requests do you receive annually? Please estimate:

2.2 What is the projected growth in requests over the next year?

☐ no expected growth
☐ up to 10% more
☐ up to 25% more
☐ up to 50% more
☐ double
☐ triple or more

2.3 How do you receive captioning requests?

☐ From an individual department
☐ From the university accessibility/disability centre
☐ From the library patrons themselves
☐ Other
If from a department or other, please provide details: Details

2.4 What are you captioning?

☐ Specific collections.
       Which and/or why?
☐ Only materials acquired after a specific date.
       Details
☐ Student request
☐ Faculty or Staff request

2.5 Are you producing any captions in-house?

☐ Yes
☐ No

Branching Information: If answer to:
2.5 Are you producing any captions in-house? = No then you will now Skip Questions 2.6 to 2.10 and proceed to **PART E**.

PART D: Captions Produced In-house

2.6 If you produce captions in-house, what sort of tools or resources do you use? Select all that apply:

☐ Manual entry software
☐ Speech recognition-based screen capture tools
☐ Student work study
☐ Part-time staff
☐ Staff transcribers/captioners
☐ Other
☐ Not Applicable to my institution

2.7 Are you using an external service concurrent with in-house production?

☐ Yes
☐ No
☐ Sometimes
If so, please specific why:

2.8 What content are you captioning?

☐ Your own library/libraries AV holdings
☐ Textbook-related AV material
☐ Material from the institution but outside of library
☐ Material from other institutions
☐ Other; please specify:

2.9 This captioning service is funded by:

☐ Library budget
☐ Central/other accessibility cost centre
☐ Bursary, student accommodation or gifted provisional fund
☐ External to institution
☐ Other source; please specify:

2.10 Do you provide a captioning service to other departments or other institutions? If so, do you charge for it?

☐ Yes
☐ No
☐ Provide free of charge
☐ Provide at a cost

2.11 Do you use external captioning services?

☐ Yes
☐ No

Branching Information:
*If answer to: 2.11 Do you use external captioning services? = No
then proceed to **PART G**.

PART E: Captions Produced Externally

2.12 Where are these services located? Select all that apply:

☐ In Canada
☐ In the USA
☐ Outside of North America; please specify:

2.13 Are there any concerns or benefits around using services outside Canada?

Please list benefits and/or concerns

2.14 What type of content do you have captioned through an external service?

☐ Your own library/libraries AV holdings
☐ Textbook-related AV material
☐ Material from the institution but outside of library
☐ Other; please specify:

2.15 Current Service Provided Captioning

Name of provider(s):
Estimated number of items per year in the past 3 years you've had captioned:
Estimated amount spent per year in the past three years on captioning:
Rate per minute or other pricing info:

2.16 Are funds for the service originating from:

☐ Within library budget
☐ Central/other accessibility cost centre
☐ Bursary or student accommodation or gifted provisional fund
☐ External to institution
☐ Other, please specify:

2.17 Does your staff proof or sample a provider's deliverable for accuracy?

☐ Yes
☐ No
Comments?

2.18 Do end users provide feedback on quality or errors?

☐ Never
☐ Rarely
☐ Frequently; kinds of issues are:

2.19 Are your staff and clients satisfied with:

Level of service:
☐ Highly ☐ Moderately ☐ Somewhat ☐ Rarely
Turnaround time
☐ Highly ☐ Moderately ☐ Somewhat ☐ Rarely
Cost
☐ Highly ☐ Moderately ☐ Somewhat ☐ Rarely
Please provide details:

2.20 Have you used other captioning services in the past?

☐ Yes
☐ No
☐ Unsure
If applicable, please let us know who your past service provider was:
      Name of provider(s):
      Why no longer in use?
      Volume of content commissioned per year (approximate):
      Rate per minute or other pricing info:
      Comments?

2.21 How long does it generally take from request or commissioning of captioning to actual availability to client?

☐ within 7 days
☐ within 14 days
☐ within 21 days
☐ within a month
☐ over a month
Comments?

2.22 Is it a frequent problem that responses to permission requests are not very expedient?

☐ Absolutely
☐ Frequently
☐ Sometimes
☐ Rarely

---

*Branching Information: Proceed to **PART H**.

PART F:

2.12 How long does it generally take from request or commissioning of captioning to actual availability to client?

☐ within 7 days
☐ within 14 days
☐ within 21 days
☐ within a month
☐ over a month
Comments?

2.13 Is it a frequent problem that responses to permission requests are not very expedient?

☐ Absolutely
☐ Frequently
☐ Sometimes
☐ Rarely
Comments?

2.14 Have you used any external captioning services in the past?

☐ Yes
☐ No
☐ Unsure
If applicable, please let us know who your past service provider was:
Name of provider(s):
Why no longer in use?
Volume of content commissioned per year (approximate):
Rate per minute or other pricing info:
Comments?

3.1 Are you having audio/video content transcribed only, i.e. no captions synchronized with audio – just text of what is spoken?

☐ Yes
☐ No
Comments?

3.2 Any other solutions of note that you are leveraging?

PART G: Sharing Media Between Institutions

4.1 Have you ever shared either of the following with another library outside of your institution:

Captioned (as well as Audio/Video Described) **content** that your institution had created or commissioned.
☐ Never ☐ Infrequently ☐ Sometimes ☐ Often

Alternate or augmentative content **derived from** video or audio (transcripts, caption or subtitle files, descriptive audio tracks):
☐ Never ☐ Infrequently ☐ Sometimes ☐ Often

Comments?

4.2 Is it reasonable for alternative formats to be shared among different institutions? Why?

4.3 Would your library be interested in utilizing a Canadian or Ontario-based resource for sharing accessible media?

☐ Absolutely
☐ Very interested
☐ Somewhat interested
☐ Not interested

4.4 What benefits and challenges might exist around the creation, maintenance or use of such a service?

4.5 Please rate these topics according to your amount of interest:

Ownership of alternate formats – by whom, and how may they distribute/share it.
☐ Strong ☐ Somewhat ☐ Weak ☐ Not at all

Implications (legal and otherwise) of altering or augmenting source material.
☐ Strong ☐ Somewhat ☐ Weak ☐ Not at all

4.6 Do you have any other comments concerning alternate or modified-for-access media ownership?

5.1 Do you think enough students with disabilities understand how universities can support their learning needs? (And would you be able to meet demand if more did?)

5.2 If applicable, how do you verify a "legitimate" request for accommodation?

PART H: Concluding Questions

6.1 Which of the following options are you aware of?

☐ Crowd/Class-sourced captioning
☐ Live remote captioning/transcription
☐ Automated voice recognition systems
☐ Other unfolding technologies
☐ None of the above
☐ If "Other", then how?

6.2 Would you be open to our research team getting in touch with you to discuss your unique or shared context, digital media and accessibility practices, and concerns?

☐ Yes
☐ No

6.3 If you answered "Yes" above, who should we contact?

Name:
Title:
Email Address:

6.4 You've reached the end of the survey! Are there any other issues that you would like to see this study address?

Appendix C - WCAG 2.0 Levels A and AA as they pertain to timed media

What WCAG 2.0 Covers under Level A and AA

In WCAG 2.0, timed media is covered under Guideline 1.2, "Time-based Media: Provide alternatives for time-based media."

1.2.1 Pre-recorded audio-only and video-only – Level A

Audio-only refers to audio podcasts, MP3 files, etc. Video-only is video without a sound track (so as a result there is nothing to caption). However, it is a good practice to clearly identify that such video *has no* audio component.

Alternative format for audio files:

For people with hearing loss, provide a descriptive text transcript (verbatim spoken words and relevant sounds, etc.)

Alternative format for video (without audio files):

For people who are blind or have low vision, provide a transcript for the audio-only track.

1.2.2 Captions (pre-recorded) – Level A

This section covers all video when there is an audio track involved.

Alternative format:

Provide either closed or open captions for videos for the web, whether on your own site, an LMS, or a media portal such as YouTube or iTunes.

1.2.5 Audio Description (pre-recorded) – Level AA

Audio descriptions are provided for all video content, but only if the visual content contains information that is not explained in the audio track.

Alternative format:

Provide either a closed or open description track for videos for the web, whether on your own site, an LMS, or a portal such as YouTube or iTunes. As with captions, "closed" entails that the alternate format can be switched on and off, whereas "open" provides always-on descriptive audio.

Appendix D – Directory of Service Providers and Software

Commercial Providers of Transcriptions and Captions

DISCLAIMER: Rates are subject to change. Education rates are provided where available. While we have been able to divide the services provided by vendors into 3 broad categories, what they provide will vary and you will need to confirm that the product they deliver meets your needs before ordering.

Vendor	Caption Only (transcript provided) Turnaround: Rate	Transcript Only Turnaround: Rate	Transcript + Caption Turnaround: Rate	Minimum Charge	Notes
Canadian Companies					
Inclusive Media and Design www.inclusivemedia.ca Toronto, Ontario **Rates in Canadian Dollars**	($CAD) **24hr:** $150 for 10min +$ 13/min **48hr:** $100 for 10min. + $11.50/min **3day:** $50 for 5min +10.25/min. **7day:** $50 for 5min. + $8.25/min **10day:** $6.80/min	($CAD) **24hr:** $150 for 10min +$ 3.50/min **48hr:** $100 for 10min. + $3.50/min. **3day:** $50 for 10min +3.50/min. **7day:** $50 for 5min. + $2.50/min	($CAD) **24hr:** $150 for 10min +$ 16/min **48hr:** $100 for 10min. + $14/min **3day:** $60 for 5min+ $13.75/min **7day:** $50 for 5min. + $10.75/min **10day:** $8.60/min		Audio Description services available Privileged Client Status is granted to clients with over 6 hours of video per month (commencing second consecutive month), OR after 20 hours accumulated over the course of 12 months. Benefits include exemption from the $50 minimum per video plus a 20% blanket discount. Can be leveraged by consortium members.
	Previous clients: Brock University, Carleton University, Harvard University, Ontario College of Art and Design University, Ryerson University, University of Guelph, University of Ottawa, University of Ontario Institute of Technology, University of Toronto, Wilfrid Laurier University, York University				

Vendor	Caption Only (transcript provided) Turnaround: Rate	Transcript Only Turnaround: Rate	Transcript + Caption Turnaround: Rate	Minimum Charge	Notes
The Media Concierge www.mediaconcierge.ca Toronto, Ontario **Rates in Canadian Dollars**	**($CAD)** **24hr:** $10.50/min	**($CAD)** **24hr:** $2.50/min (Word File)	**($CAD)** **24hr:** $13.00	**($CAD)** $50	Collective group rates based on annual contract.
	Previous clients: Centennial College, Conestoga College, George Brown College, Ryerson University, The deVeber Institute for Bioethics and Social Research, Wilfrid Laurier University, York University				
American Companies					
3Play Media www.3playmedia.com Cambridge, Massachusetts	NA	NA	**($USD)** **4day**: $2.50/min	NA	Process uses automatic speech recognition with human clean up to "produce 99.5% accuracy"
	Previous clients: Carleton University, McMaster University, York University, McGill University, University of Toronto, Wilfrid Laurier University				
Automatic Sync Technologies www.automaticsync.com San Francisco, California	**($USD)** <2hr: $1.15/min	**($USD)** **24hr**: $2/min **3day**: $1.50/min	**($USD)** **24hr**: $3.15/min **3day**: $2.65/min	**($USD)** $75	"Web-automated captioning" with human editing Bulk rates lower beyond 20, 30, 150 and 300 hours Billing resolution is one minute; rounded up to the next nearest minute.
	Previous clients: University of Toronto, University of Guelph, Queens University, McMaster University, Brock University, York University, Ryerson University				

Vendor	Caption Only (transcript provided) Turnaround: Rate	Transcript Only Turnaround: Rate	Transcript + Caption Turnaround: Rate	Minimum Charge	Notes
Dotsub http://dotsub.com/ enterprise/order New York	NA	NA	($USD) $4/min Video length limit of 45 minutes on basic plan; otherwise Pro plan of $9.99/month or $100/year.	NA	Human transcription. Strength in language translation.
Caption Depot www.captiondepot.com Rockville, Maryland	($USD) **2day:** $100+8/min **5day:** $75+5/min **10day:** $75+4/min	($USD) **2day**: $5/min **5day**: $3/min	($USD) **2day**: $100+11/min **5day**: $75+7/min **10day:** $75+6/min	NA	Bulk rates available Rates include one standard caption file format Open captioned video at additional cost
NetCaptioning www.netcaptioning.com Baltimore, Maryland	($USD) **24hr:** $7/min **3day:** $5.50/min **5day:** $4/min	($USD) **24hr:** $4.25/min **3day:** $3.25/min **5day:** $2.25/min	($USD) **24hr:** $11/min **3day:** $8.50/min **5day:** $6/min	($USD) $75	Rates include one standard caption file format.
Talking Type Captions www.talkingtypecaptions.com Bethesda, Maryland	($USD) **24hr:** $7/min ($USD) **2day:** $5/min **4day:** $4/min	($USD) **24hr:** $3/min ($USD) **2day:** $2.50/min **4day:** $2/min	($USD) **24hr:** $10/min ($USD) **2day:** $7.50/min **4day:** $6/min	NA	

Vendor	Caption Only (transcript provided) Turnaround: Rate	Transcript Only Turnaround: Rate	Transcript + Caption Turnaround: Rate	Minimum Charge	Notes
RhinoMoon www.rhinomoon.com Austin, Texas	($USD) **24hr:** $14/min **2day:** $13/min **4day:** $12/min **7day:** $10/min	($USD) **24hr:** $7/min **2day:** $6/min **4day:** $5/min **7day:** $3/min	($USD) **24hr:** $15/min **2day:** $14/min **4day:** $13/min **7day:** $11/min	($USD) $50	
Video Caption Corp www.vicaps.com New York and Los Angeles		($USD) $3/min	($USD) $2.50 to $16.50/min "depending on format, caption style, turnaround time, volume, and type of content."	($USD) $35 or $50 for 3min. or less	Posted rates for up to 3 minutes for YouTube-compatible format Volume discounts available. Audio Description Services
	Previous clients: American University, California Polytechnic University, Columbia University, Cornell University, Michigan State University, MIT, Tufts University, University of Chicago, University of Florida, University of Kentucky, University of Maryland, University of North Carolina, University of South Carolina, University of Vermont, University of Washington, Virginia Commonwealth University				

Software

(rates are in US Dollars ($USD) unless otherwise stated)

Software/Vendor	Price	Notes
Desktop Software		
InqScribe (Inquirium) Compatible with: Mac & Windows	$99 full $69 edu/nonprofit Quantity discount and site licenses available.	Efficient, easy-to-use transcription software that also allows for time coding. Features include: • Clickable time codes • Subtitles • Mouse-free controls • Coding for keywords • Variable speed playback • Video and transcript in the same window • Online user guide
MovieCaptioner (SynchriMedia) Compatible with: Mac & Windows	Single User: $99.95 Up to 10 Users: $899.95 Educational rates upon request.	Software for the intermediate-through-advanced captioner, MovieCaptioner is versatile with the capability to import and export many file formats.
Camtasia (TechSmith) Compatible with: Mac (very limited) & Windows	Camtasia: US$99 Camtasia Studio: US$299	Camtasia allows loading of prepared captions or transcripts with some manual time coding tasks required before outputting content as a video. Closed captions only.

Software/Vendor	Price	Notes
Captionmaker and MacCaption (Telestream) Compatible with: Mac (MacCaption) & Windows (Captionmaker)	Desktop *Version:* $1095 Pro *Version:* $5000 Enterprise *Version:* $10 000	Acquired by Telestream in summer 2013, CPC had developed one of the foremost professional captioning tools. Features of the desktop version include: • Caption Authoring, Timing and Formatting • Auto Time Stamp (sync text and audio) • Export SCC (CEA-608) & MCC (CEA-708) files • Burn-in Subtitles and Basic DVD Subtitles • Streaming/Mobile Video (Timed text, WebVTT, SRT, iOS, iTunes iTT, YouTube, WMV, etc.) • Import plain text, SCC & MCC, web formats
Annotation Edit (zeitAnker) Compatible with: Mac	$380	Advanced subtitling functionality out of Berlin with limited support and updates. A complex Mac-based application appropriate for professional use.
AEGISUB Compatible with: Mac & Windows	Open Source Software	This is easy to use and has had a massive online community for many years. Features an audio waveform viewer.
Handbrake Compatible with: Mac, Windows & Linux	Open Source Software	While not a subtitle/caption editor, Handbrake is an extremely versatile cross-platform video transcoder (or convertor) that allows for prepared caption file integration.
Jubler (Payontis) Compatible with: Mac, Windows & Linux	Open Source Software	Written in Java 5.0, this is very text-oriented and requires installation of Java, MPlayer for video playback, and ASpell for spellcheck functionality. Jubler can be used for creating captions, editing pre-existing captions, or exporting to another format.

Software/Vendor	Price	Notes
Media Access Generator (MAGpie) **National Center for Accessible Media** Compatible with: Windows	Open Source Software	MAGpie will always be the "original free caption- and audio-description authoring tool", though showing its age, may require some technical contortions to load and run.
Subtitle Workshop (URUWorks) Compatible with: Windows	Open Source Software	Supporting a large spectrum of caption and subtitle formats, this donationware is available for Windows as a Beta and has not been updated in many years.
Online Video Hosting Service		
Amara (previously called Universal Subtitles)	Rates unavailable	Amara focuses on ease of subtitling via a simple online interface. Other people in the crowdsourced-cloud can edit your subtitles (or translate them into other languages), or, you can use their professional services.
YouTube (Captions and Subtitles)	Rates unavailable	Caption files can be uploaded to YouTube. It has a built-in text editor that allows you to either add a plain text transcript or to enter text and mark locations in the video where that text should appear (time coding). If you do not time code your text, YouTube will do it automatically; however, this can be less accurate.

Appendix E – Copyright Roundtable Questions

A copyright roundtable was held on September 16, 2014. The roundtable members considered these questions:

1. Does captioning mean breaking a digital lock? Especially if I can't track down permission, i.e. YouTube

2. Can subtitles alone meet the requirements of IAS?

3. Are there opportunities for a shared service of accessible media? Can these files be shared among different institutions?

4. What kind of paperwork needs to be preserved with regard to securing permissions for video captioning? Securing copyright permissions to caption is a labour intensive part of the process (blanket permissions?)

5. ARES system capabilities (Rights holders database and contacts; can facilitate the entire request)

6. Who owns the derived content? Audio description or captions?

7. Libraries have purchased many databases, which provide videos. What are our obligations for making this content accessible?

8. Education performance rights for videos: it can take a very long time to secure this permission. Minimum 2 months to get the right to buy it (is this discussion within the scope of ROAM?)

9. Streaming video vs. ownership of a physical copy – copyright considerations for making content accessible.

10. Is there any way to expedite the permission process and or share content? Pre-emptive captioning and then looking for permissions…take the video down if there is an issue?

11. California – video accessibility legislation has been there for a long time. Can we learn from them? Is anyone approaching entire collections and making them accessible or is this still on request basis?

12. Does it make a difference if you are using a whole film or just a portion? Copyright perspective. Depends on whether we are covering this under fair dealing. Short excerpt under 10%. We are not just talking about making a copy, talking about modifying a copy – can fair dealing be applied to caption something?

13. License trumps the copyright act. What license agreements are there in place for multimedia content?

14. Has a rights holder ever taken legal action against a university captioning without securing permission?

15. Hollywood studios are highly protective of their content

16. Community of practice can help to defend what we do

17. Captioning permission should be free, at no additional cost…would that apply to specific request *and* pre-emptive captioning (both)? This can be a dangerous road to follow.

18. "*Accessible Video First*" policy – can OCUL create a blanket permission form that could be used? Consortial way of approaching purchasing – a policy that says we are obliged to buy accessible video whenever possible. OCUL could come out with a statement, which can be used when schools procure. What would this policy look like?

19. Ontario online initiative around development of online courses, which the government is sponsoring – one of the goals of the project is to create funds for e-learning.

    - This centre could create resources / captioning services; consortial licensing

    - There might be opportunities to collaborate with this centre

Appendix F - Best Practices

In conducting the ROAM research, best practices around various aspects of media accessibility were identified. These are included in this appendix to provide additional detail on technical considerations and library workflow procedures.

Best Practices in Creating Captions and Descriptions

There are several guidelines for creating captions and descriptions. For captions on the web and local playback, the [Caption Key](#) [26] guidelines from the Described and Captioned Media Program (DCMP) can be used to produce in-house captions, or used for quality assurance purposes to evaluate a commercial product or service.

The DCMP captioning guidelines include:

1. Captions appear on-screen long enough to be read.

2. It is preferable to limit on-screen captions to no more than two lines.

3. Captions are synchronized with spoken words.

4. Speakers are identified when more than one person is on-screen or when the speaker is not visible.

5. Punctuation is used to clarify meaning.

6. Spelling is correct throughout the production.

7. Sound effects are written when they add to understanding.

8. All actual words are captioned, regardless of language or dialect.

9. Use of slang and accent is preserved and identified.[27]

The Canadian Network for Inclusive Cultural Exchange research project (2004) provides the following guidelines for creating video descriptions:

1. Understand the type and purpose(s) of the video, so you can determine what visually conveyed information is germane to that purpose, and what's not germane.

---

[26] "Captioning Key," Described and Captioned Media Program (DCMP). Accessed January 8, 2015, http://www.dcmp.org/captioningkey.
[27] "Caption It Yourself," Described and Captioned Media Program (DCMP). Accessed January 8, 2015, http://www.dcmp.org/ciy/.

2. Understand the material presented, so you can make sense of what you see, and convey that sense to the learner.

3. Understand what someone who can't see needs to know to follow the program and make sense of the material presented; so you can determine what needs to be conveyed, and what doesn't – because it's apparent from the audio, or because it's not helpful (enough).

4. Observe closely and accurately.

5. Speak simply, clearly and concisely, so what you say is easy to understand the first time it's heard.

6. Respect the audio. Description is intended to complement the audio, not compete with it and create confusion.

7. Be an objective and positive observer. Your purpose is not to convey your personal feelings about the program or to point out what you perceive to be its shortcomings.

8. Disappear. Good description directs attention to the presentation, not to itself.[28]

Other resources for description and captioning include:

- DCMP's Description Key [29] and Caption It Yourself [30] tools

- Accessible Media Inc.'s Described Video Best Practices [31]

- The American Council of the Blind's Audio Description Project [32]

- Web Accessibility in Mind (WebAIM) guidelines[33] (for media accessibility on the Web)

- Media Access Group's Caption FAQ [34] and Guide to Producing Programs for Viewers with Vision Impairment [35]

[28] "Online Video Description" Canadian Network Inclusive Cultural Exchange. Accessed January 8, 2015, http://cnice.idrc.ocadu.ca/guidelines/video.php.
[29] "Description Key," Described and Captioned Media Program (DCMP). Accessed January 8, 2015, http://www.dcmp.org/descriptionkey.
[30] "Caption It Yourself," Described and Captioned Media Program (DCMP). Accessed January 8, 2015, http://www.dcmp.org/ciy/.
[31] "Described Video Best Practices," Accessible Media Inc. Accessed January 8, 2015, http://www.ami.ca/media-accessibility/Pages/Described-Video-Best-Practices.aspx.
[32] "All About Audio Description," The Audio Description Project. Accessed January 8, 2015, http://www.acb.org/adp/ad.html.
[33] "Captions, Transcripts, and Audio Descriptions," WebAIM. Accessed January 8, 2015, http://webaim.org/techniques/captions/.
[34] "Captioning FAQ," Media Access Group at WGBH. Accessed January 8, 2015, http://main.wgbh.org/wgbh/pages/mag/services/captioning/faq/sugg-styles-conv-faq.html.
[35] "Mag Guide Vol. 2," Media Access Group at WGBH. Accessed January 8, 2015, http://main.wgbh.org/wgbh/pages/mag/resources/guides/mag_guide_vol2.html.

- Canadian Association of Broadcasters' 2012 [Closed Captioning Standards and Protocol for Canadian English Language Television Programming Services](#) [36]

Best Practices in Caption File Formatting and Playback

SubRip or SRT is the recommended caption file format because of its ubiquity and versatility. Files are usually only a few kilobytes in size and therefore easy to store, edit, and deliver or receive via email. SRT is also compatible with and loadable into YouTube, Vimeo, and many local playback media players, such as VLC. For VLC, an SRT file similarly named and co-located with a video on a storage device (e.g. *worldpeace.mp4* and *worldpeace.srt*) allows for straightforward playback with a simple toggling on and off of the captions across platforms.

SRT is also a good back-up to address errors. Errors in open captioning cannot be corrected without modifying the actual video file, whereas correcting closed caption files with a text editor such as SRT is easy and quick. (Technical note: always retain the unaltered original file when making corrections and save variants as plain text, i.e. *.txt* with UTF-8 encoding.)

Some video formats such as MP4 allow for captions to be directly integrated and then automatically triggered in a number of media players: VLC, QuickTime Player (version 10) and iTunes. Libraries could therefore produce an MP4 with built-in closed captions along with a separate external SRT file, for additional flexibility in deployment.

Best Practices in Media Procurement

As noted on page 48 of the [Accessibility Information Toolkit for Libraries](#)[37]: "Libraries should consider making every attempt to purchase media that is already captioned." It is also recommended to obtain separate caption and/or transcript files from the vendor at the time of purchase, wherever possible.

Where an accessible version of the media is not available, blanket copyright clearance for producing captions or an accessible version of the material could be secured at the time of purchase. This permission should not come at additional cost. It is a mutually beneficial practice for the institution securing permission to share the captions and/or the accessible version with the copyright holder after the fact. Offering this accessible content can further encourage rights holders to grant permissions for captioning or describing their media.

---

[36] "Closed Captioning Standards and Protocol for Canadian English Language Television Programming Services," (August 2012). Canadian Association of Broadcasters. Accessed January 8, 2015, http://www.cab-acr.ca/english/social/captioning/cc_standards.pdf.

[37] "Accessibility Information Toolkit for Libraries," Ontario Council of University Libraries. Accessed January 8, 2015, http://www.ocul.on.ca/node/2127.

The OCUL Electronic Journals and Databases License Agreement[38] contains sample language for obtaining accessible formats or permission to provide them where unavailable from the vendor: this may become of increasing importance as libraries license more databases that include video content. Additionally, though provided in the context of non-media resources, the accessibility requirements as stated in the model license are quite broad and could serve as a starting point for discussion with media providers. Additional sample language and other procurement considerations can be found in the Procurement section of the OCUL Accessibility Information Toolkit for Libraries.

Best Practices in Discoverability of Accessible Library Media

A number of OCUL institutions have made it their priority over the past few years to include accessibility information for newly-acquired media. The location of this information is most commonly the 546 field of the MARC record, which includes information about the physical disc. However, other MARC record fields are also used to indicate the presence of captions:

> 500 - general note
> 520 - summary note
> 650 or 655 - subject or index term, e.g. "Video recordings for the hearing impaired."

Many libraries have created a pre-selected search or filter on accessible media in their catalogue or discovery layer. This is probably the most user-friendly way to ensure that the material is discoverable, as it removes the guesswork involved in entering search terms (e.g., "captions" vs. "captioned"). It can also serve as a marketing tool, indicating that the library provides access to and actively promotes accessible material.

Spotlight on Ryerson University Library & Archives' Services for Persons with Disabilities

The Ryerson University library has a very well-scoped accessible media accommodation workflow, which includes both in-house and outsourced production. This spotlight provides detail about these workflows and is based on interviews with several library staff.

What media is captioned?
Requested materials held by the library as well as classroom content is processed through the library. Funding sources for library-held materials come from the library budget. Other requests are evaluated on a case-by-case basis to identify the appropriate revenue sources (i.e., departmental videos should be funded by the department).

Do faculty play a role?

---

[38] "OCUL Model Licenses," Ontario Council of University Libraries. Accessed January 8, 2015, http://www.ocul.on.ca/collections/licenses.

Instructors usually contact the library to place an accessible media accommodation request on behalf of their students. Some faculty will caption preemptively; others will wait for the student to request accommodation.

What kinds of materials has the library worked with?
- Physical DVD and VHS formats

- In-house videos

- Streamed media

    - · Recorded lectures

    - · Podcasts

    - · Commercial films

    - · Art films

- 16 mm films pose a challenge as they cannot be captioned and much of the older technology to watch these has been deaccessioned.

Does the library outsource captioning work?
The Ryerson university library staff engage with commercial service providers and also caption in-house.

Example of an outsourcing scenario:
A student who is hard of hearing would like to watch a DVD held in the library collection.

1. Library staff secure permission to caption the work from the copyright holder

2. The physical DVD is sent out to a commercial service to be captioned

3. A transcript is sent to library staff to review for quality (having access to an additional copy of the video is helpful at this stage)

4. Feedback from staff is forwarded to the commercial service

5. A physical copy of the captioned DVD is sent back to the library, in addition to a caption file in SRT format

6. Library staff add an accessibility note to the MARC 546 field, and the accessible DVD copy is included in the same case as the original DVD.

Example of an in-house captioning scenario:

A faculty member would like to show a small film clip in her classroom.

1. Staff write a transcript and save it as a separate file (usually in Word). This document is then used to create the captions.

2. Captioning permissions are requested

3.

    a. If the copyright holder does not respond or cannot be located; the clip is screen-captured and uploaded – either to a private library YouTube account or to Camtasia - and captioned using the transcript. The final captioned version is only shared with the student with a disability.

    b. if permission or copyright clearance is obtained then the clip is uploaded into the library YouTube account. The script is also loaded into YouTube to create captions. The captioned YouTube clip is shared with the whole class.

4. When captioning is complete, staff download the caption file in SRT format from YouTube. Both the SRT and the Word document versions are retained.

What are some considerations and recommendations for captioning permissions?
- Permission to caption can be difficult to acquire at the time of purchase if the purchase is made via Amazon or similar online platforms

- Some national organizations that produce video, such as CBC or the National Film Board (NFB), either do not retain captioned versions or do not usually respond in a timely fashion to requests for permission to caption. This could be a result of the AODA being provincial rather than national legislation[39].

- Lists of accessible media copyright holders should be shared among institutions across Ontario.

- Sharing captions among OCUL institutions can help to reduce costs as long as vendor licenses allow this.

- Documentation about rights holders should be retained alongside the captions to facilitate sharing (where allowed) and ensure that information about permissions is readily available

- Institutions could set up a shared document, which would document permissions received. This document could be a click-through agreement sent to copyright holders asking them to agree to:

---

[39] The AODA does not apply to Federally Regulated Organizations.

- Have a video captioned by the institution

- Agree to extend this permission to all OCUL institutions

- Receive a complimentary captioned copy

Contact
http://library.ryerson.ca/services/disabilities

Spotlight on Carleton University's Paul Menton Centre (PMC) for Students with Disabilities

Though independent from the library at Carleton, the PMC provides a good example of a well-run volunteer-based accessibility service. The PMC has student volunteers trained for various disability-related services. In response to the increasing demand for accessible course materials, the centre staff selected and trained some of these volunteers to be captioners. Quality control and volunteer turnover are carefully managed with supportive supervision for the specialized volunteers. The students have a dedicated work space and equipment, and their shifts are determined in a way that prioritized the demands of their own studies.

While the PMC initially had to devote considerable resources and staff time to establish and manage the captioning program, the result is a considerable output volume of quality captioned video.

The quality of the service is maintained in part due to the following standards:

- a "no guesswork" policy on the part of the captioner

- multiple rounds of proofing and quality control

- three-week turnaround deadline from request to delivery

The PMC's success in developing internal captioning capabilities is part of a much larger strategy at the cultural level throughout the university, leading to the establishment of a positive working relationship with faculty and more inclusive classroom learning environments.

Contact
http://carleton.ca/pmc/
Email: pmc@carleton.ca
Tel: 613.520.6608, TTY: 613.520.3937

Acknowledgements

A special thank you to:

Nemeth, Susan **(**Program Advisor, Public Education & Partnerships, Accessibility Directorate of Ontario)

Wadhawan, Justine (Research Policy Analyst, Universities Unit, Postsecondary Accountability Branch, Ministry of Training, Colleges and Universities)

Steering Committee

Pottier, Anne (Associate University Librarian, Library Services, McMaster University)
Langford, Lari (Head, Access and Information Services, University of Toronto)
Lefebvre, Madeleine (Chief Librarian, Ryerson University Library & Archives)
Moore, Carole (former Chief Librarian, University of Toronto)
Thomson, Amanda (Policy Analyst, Strategic Initiatives, COU)

Advisory Committee

Caputo, Aldo (Associate Director, Online Learning, Centre for Extended Learning, University of Waterloo)
Cushing, Pamela (Associate Professor, Disability Studies, Department of Interdisciplinary Programs, Western University)
Dolmage, Jay (Editor, Canadian Journal of Disability Studies; Associate Chair, Undergraduate Studies, Associate Professor of English, University of Waterloo)
Gow, Athol (Manager, Library Accessibility Services, University of Guelph)
Kenderdine, Tricia (Communications Coordinator, Office of Student Life, University of Toronto)
Langford, Lari (Head, Access and Information Services, University of Toronto)
Lefebvre, Madeleine (Chief Librarian, Ryerson University Library & Archives)
Moore, Carole (former Chief Librarian, University of Toronto)
Pearson, Robert (Director Accessible Digital Media with Accessible Media Inc.)
Pottier, Anne (Associate University Librarian, Library Services, McMaster University)
Roberts, Vera (Research Facilitator, Inclusive Design Research Centre, OCAD University)
Sukhai, Mahadeo (Senior Advisor, Governance and Leadership Development, NEADS)
Thomson, Amanda (Policy Analyst, Strategic Initiatives, COU)

Project Researchers

OCUL commissioned [Inclusive Media and Design](#) (IMD) to conduct research for the ROAM research project. The IMD work included: an environmental scan of Ontario universities (survey, follow-up interviews and focus groups); research on the legal framework in Canada, the service

provider marketplace, and available software; detailed descriptions of technological processes and model workflows; identifying and responding to key questions from libraries; trends research; and interim and final IMD reports to the Steering Committee. When IMD launched their research, the company committed to a fair and objective evaluation in the following statement:

Fair and Objective Evaluation

Inclusive Media and Design aims to help provide "access for all" in its role as a service provider to organizations and institutions on matters related to AODA compliance. In support of the provincial goal of achieving an accessible Ontario by 2025, OCUL will leverage IMD's practical knowledge and expertise to produce an assessment of current accessible media production practices across Ontario university libraries. Acknowledging its existing position as a service provider within the industry, Inclusive Media and Design will conduct this research in an objective and transparent manner and to the high standard of academic research warranted by Ontario's academic libraries.

Realizing goals of the ROAM project will involve researching a competitive market utilizing a variety of techniques and considerations. The project's research methodologies will be developed collaboratively with the guidance from the ROAM Steering Committee. The final report of the ROAM project will also be subject to third-party review. This approach will help ensure the final report delivers the essential information needed for Ontario's university libraries to review current practices and evaluate how to best meet the digital media accessibility requirements of the AODA. Ontario universities may in turn continue their work in preserving and disseminating information in a manner that welcomes all of our academic community members.

For more about Inclusive Media and Design visit: **http://www.inclusivemedia.ca/**

The ROAM project team would like to thank the following colleagues

For preparing the final report on the OCUL Environmental Scan for the ROAM report:
Leahey, Amber (Data Services Metadata Librarian, Scholars Portal Operations Team, OCUL)
Trimble, Leanne (Data and Geospatial Librarian, Scholars Portal Operations Team, OCUL)

For providing data from the University of Toronto Media Commons catalogue:
Khalid, Bilal (Application Programmer Analyst, Information Technology Services, University of Toronto Libraries)
Zhang, Wenran (Senior ILS Database Administrator, Information Technology Services, University of Toronto Libraries)

Individuals Consulted

Brown, Kraigen (E-Reserves and AV Library Technician, Ryerson University Library)
Cappon, Cathy (Accessibility Manager, Diversity, Equity & Sustainability Initiatives OCAD University)
Dermody, Kelly (E-Learning and Accessibility Librarian, Ryerson University Library)
Glushko, Robert (Scholarly Communications and Copyright Librarian, University of Toronto Libraries)
Hamm, Bruce (Student Support Officer, Paul Menton Centre for Students with Disabilities Carleton University)
Hymen, Avi (Director, Academic and Collaborative Technology, University of Toronto)
Langford, Lari (Head, Access and Information Services, University of Toronto Libraries)
Links, Joan (Audiovisual Acquisitions, Media Commons, University of Toronto Libraries)
Ludbrook, Ann (Copyright Coordinator/Librarian, Ryerson University)
Martin, Heather (Copyright Officer and Manager, University of Guelph Library)
Michaud, Diane **(**E-Learning Librarian, Liaison for Library Accessibility, J.N. Desmarais Library and Archives, Laurentian University) (previously Accessibility Services Librarian, Ryerson University)
Nolan, Tim (Centre for Student Development, McMaster University)
Panangaden, Sonya (Accessibility Services Library Technician, Ryerson University Library)
Peters, Tom (High Tech Training Center – Adapted Computer Technology, Santa Monica College)
Petrie, Cheryl (Media Specialist, Media Resources/IST, University of Waterloo)
Pyatt, **Elizabeth J.** (Instructional Designer, Teaching and Planning with Technology, Penn State University)
Spong, Stephen (Law Librarian, Osgoode Hall Law School, York University)

Focus Groups

OCUL Accessibility Community (Sept. 9, 12-2PM)

Bouchard, Jasmine (Head, Media Library, University of Ottawa)
Caputo, Aldo, Associate Director for Distance Education (University of Waterloo)
Chittenden, Michele (Coordinator, Services for Students with Disabilities; LRS Librarian, Queens University)
Cross, Heather (Coordinator, Library Services for Students with Disabilities, Carleton University Library)
Dolmage, Jay (Assoc. Chair, Undergraduate Studies, University of Waterloo)
Fesnak, Vera (Head, Copyright and Resource Delivery Service, University of Waterloo)
Gow, Athol (Manager, Library Accessibility Services, University of Guelph)
Hatton, Meredith (Manager, Access Services, York University)
Innerd, Charlotte (Head, Collections and Acquisitions, University of Waterloo)
Links, Joan (Audiovisual Acquisitions, Media Commons, University of Toronto Libraries)

Kalvee, Deb (Associate University Librarian, Services and Facilities, Brock University)
Martin, Heather (Copyright Officer and Manager, University of Guelph)
Sigurdson, Victoria (Head, Visual resources and Special Collections, OCAD University)

OCUL Copyright Roundtable (September 16, 2014)

Critchley, Valerie (Associate University Librarian, Carleton University Library)
Dermody, Kelly (Accessibility Services Librarian, Ryerson University)
Fesnak, Vera (Head Copyright and Resource Delivery Services, Wilfrid Laurier University)
Field, Ken (Librarian, Trent University at Oshawa)
Glushko, Bobby (Scholarly Communications and Copyright Librarian, University of Toronto Libraries)
Innerd, Charlotte (Head, Collection Development and Acquisitions, Wilfrid Laurier University Library)
Kalvee, Debbie (Associate University Librarian, Brock University)
Kelly, Cathy Newell (Director, Centre for Extended Learning, University of Waterloo)
Landriault, Emily (Copyright Services Librarian, University of Ottawa)
Lawrence, Susan (Copyright Coordinator, Trent University Library)
Leroux, Coralee (E-Resources and Services Coordinator, Ontario Colleges Library Service)
Ludbrook, Ann, (Copyright Coordinator/Librarian, Ryerson University)
Lynch, Patricia (Copyright Officer, Office of the University Secretary and General Counsel, York University)
MacPherson, Laurie (Divisional Assistant, Library and Bookstore Services, Niagara College)
McGrath, Karen (Director, Library and Bookstore Services, Niagara College)
Parisi, Bianca (Library Technician, Copyright and Media, Niagara College)
Pottier, Anne (Associate University Librarian, Library Services, McMaster University)
Roy, Virginia (Director of Services, Ontario Colleges Library Service)
Rouleau, Thomas (Officer and Manager of Copyright Services, University of Ottawa)
Spong, Stephen (Law Librarian, Osgoode Hall Law School, York University)
Toppan, Carolin (Library Technician, Seneca College)
Tucci, Ryan (Reference Services Administrator/ Transcription Services Coordinator, Carleton University Library)
Tufts, Emily (Academic Liaison Librarian, Guelph Humber)
Yochem, James (Copyright Coordinator, Library Resource Centre Conestoga College, Institute of Technology & Advanced Learning)

Roundtable discussion with university libraries that do not caption accessible media (October 17, 2014)

Bouchard, Jasmine (Head, Media Library, University of Ottawa)
Chittenden, Michele (Coordinator, Services for Students with Disabilities; LRS Librarian, Queens University)

Cross, Heather (Coordinator, Library Services for Students with Disabilities, Carleton University Library)

Innerd, Charlotte (Head, Collection Development and Acquisitions, Wilfrid Laurier University Library)

Kalvee, Debbie (Associate University Librarian, Brock University)

Links, Joan (Audiovisual Acquisitions, Media Commons, University of Toronto Libraries)

Sigurdson, Victoria (Head, Visual resources and Special Collections, OCAD University)

Tucci, Ryan (Reference Services Administrator/ Transcription Services Coordinator, Carleton University Library)

The Project Team and Researchers would also like to thank the following groups for contributing feedback and resources throughout this project:

Council of Ontario Universities (COU) Reference Group on Accessibility

Heads of Libraries and Learning Resources, Colleges Ontario

Inter-University Disability Issues Association (IDIA)

Ontario Council of University Libraries (OCUL) Accessibility Community

Works Cited

Accessible Media Inc. "Described Video Best Practices." Accessed January 8, 2015, http://www.ami.ca/media-accessibility/Pages/Described-Video-Best-Practices.aspx.

The Audio Description Project. "All About Audio Description." Accessed January 8, 2015, http://www.acb.org/adp/ad.html.

Charles Beer, "Charting A Path Forward: Report of the Independent Review of the Accessibility for Ontarians with Disabilities Act, 2005," Ministry of Economic Development, Employment & Infrastructure, Government of Ontario, February 2010. Accessed January 8, 2015, http://www.mcss.gov.on.ca/en/mcss/publications/accessibility/charles_beer/intro_preamble.aspx

Canadian Association of Broadcasters. Closed Captioning Standards and Protocol for Canadian English Language Television Programming Services." (August 2012) Accessed January 8, 2015, http://www.cab-acr.ca/english/social/captioning/cc_standards.pdf.

Canadian Network Inclusive Cultural Exchange. "Online Video Description." Accessed January 8, 2015, http://cnice.idrc.ocadu.ca/guidelines/video.php

Council of Ontario Universities. "Table 1: Summary of Enrolments in Ontario Universities, 2004-05 to 2013-14" Last modified October, 2014 http://cou.on.ca/statistics/multi-year-data/enrolment.

Described and Captioned Media Program (DCMP).
    "Captioning Key," Accessed January 8, 2015, http://www.dcmp.org/captioningkey

    "Caption It Yourself," Accessed January 8, 2015, http://www.dcmp.org/ciy/

    "Description Key," Accessed January 8, 2015, http://www.dcmp.org/descriptionkey.

Ursula McCloy and Lindsay DeClou, "Disability in Ontario: Postsecondary education participation rates, student experience and labour market outcomes." (@ Issue Paper No. 14, February 21, 2013), Higher Education Quality Council of Ontario. Accessed January 8, 2015, http://www.heqco.ca/SiteCollectionDocuments/At%20Issue%20-%20Disability%20in%20ON_ENG.pdf.

Media Access Group at WGBH.
    "Captioning FAQ." Accessed January 8, 2015, http://main.wgbh.org/wgbh/pages/mag/services/captioning/faq/sugg-styles-conv-faq.html.
    "Mag Guide Vol. 2." Accessed January 8, 2015, http://main.wgbh.org/wgbh/pages/mag/resources/guides/mag_guide_vol2.html.

Merriam-Webster. Merriam-Webster.com. Accessed January 8, 2015, http://www.merriam-webster.com/dictionary/paralanguage.

Ministry of Economic Development, Employment & Infrastructure, Government of Ontario.

"Understanding accessibility," Last modified November 26, 2014, http://www.mcss.gov.on.ca/en/mcss/programs/accessibility/understanding_accessibility/index.aspx

"Accessibility Standard for Customer Service: employer handbook**"** Last modified November 26, 2014, http://www.mcss.gov.on.ca/en/mcss/programs/accessibility/customerService/guideToAccessibilityStandards/background.aspx

National Educational Association of Disabled Students. "Working Towards a Coordinated National Approach To Services, Accommodations And Policies For Post-Secondary Students With Disabilities" Accessed January 8, 2015, http://www.neads.ca/en/about/projects/nasp/nasp_intro.php

Ontario Council of University Libraries.
"Statistics Table II – Library Collections other formats 2010 – 2011," Accessed January 8, 2015,   http://www.ocul.on.ca/node/397.

"Accessibility Information Toolkit for Libraries," Accessed January 8, 2015, http://www.ocul.on.ca/node/2127

 "OCUL Model Licenses." Accessed January 8, 2015, http://www.ocul.on.ca/collections/licenses

WebAIM. "Captions, Transcripts, and Audio Descriptions," Accessed January 8, 2015, http://webaim.org/techniques/captions/.

Suggested Resources

3PlayMedia. White paper: 2015 Roadmap to Web Accessibility in Higher Education. (2014)

Accessibility Directorate of Ontario. Understanding Accessibility. (2008).

Accessible Media, Inc. Described Video Best Practices. (2014).

Audio Description Coalition. Standards for Audio Description and Code of Professional Conduct for Describers, 3rd Edition. (June 2008).

Beer, Charles. Charting a Path Forward: Report of the Independent Review of the Accessibility for Ontarians with Disabilities Act (2005). (February 2010)

Canadian Association of Broadcasters (CAB). Closed Captioning Standards and Protocol. (2012).

Canadian Association of Disability Service Providers in Postsecondary Education. Towards Developing Professional Standards of Service. (1999).

Canadian Network for Inclusive Cultural Exchange. "Online Video Description."

Canadian Radio-television and Telecommunications Commission (CRTC). Broadcasting Regulatory policy, CRTC 2012-362: Quality Standards for English-language Closed Captioning. (July 5, 2012).

Collaborative for Communication Access via Captioning. "Tools for DIY Captioning." (2014).

Conference Board of Canada. Business Benefits of Accessible Workplaces. (2014).

Described and Captioned Media Program (DCMP). "Captioning Key Guidelines." (Last updated 2011).

Geist, Michael. "The Supreme Court of Canada Speaks: How to Assess Fair Dealing for Education." (August, 2012).

Copyright Board of Canada. "Unlocatable Copyright Owners." (2001).

Government of Canada. Copyright Act. (Last amended 2012).

Government of Canada. Federal Disability Report. (2009).

Government of Canada. Federal Disability Report. (2010).

Government of Ontario. Accessibility for Ontarians with Disabilities Act (2005).

Government of Ontario. Ontario Education Act (1990).

McCloy, Ursula and Lindsay DeClou. "Disability in Ontario: Postsecondary education participation rates, student experience and labour market outcomes." Higher Education Quality Council of Ontario, issue Paper No. 14. (February 21, 2013).

National Association of the Deaf. "When is Captioning required?" (2014)

National Association of Disabled Students. *Working Towards a Coordinated National Approach to Services, Accommodations and Policies for Post-Secondary Students with Disabilities: Ensuring Access to Higher Education and Career Training.* (1999).

National Center on Disability and Access to Education. "Captioning YouTube Videos." (2013)

Ontario Council of University Libraries (OCUL). Accessibility Information Toolkit for Libraries. (2013).

Roettgers, Janko. "Youtube wants you to tell on publishers without closed captions." Gigaom. (October, 2012).

United States Department of Justice. American Disabilities Act. (1990).

University of British Columbia. "Guidelines and Resources – Bill C-11: The Copyright Modernization Act." (2012).

University of Ohio. Accessible Classroom Technologies. "Do-It-Yourself Captioning Techniques." (Last updated 2014).

Wikipedia. "Subtitle (captioning) Types." (Last updated 2014).

Glossary

Captioned media is traditionally composed of text on-screen to take the place of sound within a video or audio recording.

Captioning translates the audio portion of a video presentation by way of subtitles or captions. They usually appear on the bottom of the screen. Captioning may be **closed** or **open**. **Closed captions** can only be seen on a television screen that has a device called a closed caption decoder. **Open captions** are "burned on" a video and appear whenever the video is shown.

Deaf (upper case "D") is a term that refers to members of a socio-linguistic and cultural group whose primary language is sign language. In English-speaking parts of Canada, the main sign language is American Sign Language (ASL).

Deafened and **deaf** (lower case "d") are terms that refer to individuals who have lost all or most functional hearing at some point in their lives. These people use spoken language and rely on visual forms of communication such as speechreading, text, and, in some cases, sign language.

Descriptive Video is listed as the alternative format for describing video for a person who has low vision or is blind. It is also known as Descriptive Video Service (DVS) and often referred to as Descriptive Audio. The Accessibility Directorate of Ontario summarizes description as a "... descriptive narration of key visual elements – the action, characters, locations, costumes and sets – without interfering with dialogue or sound effects"[40]. Descriptive video is more complicated to produce than captions, as it must convey more than spoken utterances and relevant sounds. It is far less familiar generally than captioning, but is just as important.

Hard of hearing is a term that refers to individuals who have a hearing loss ranging from mild to profound and who use their voice and residual hearing and, in some cases, sign language for communication.

Subtitles are easily confused with captions, though are intended for display of language translation. They may take various forms, including being closed or open. Where a technology does not support captions but does afford subtitling, it may be exploited as a means to provide captions.

Timed Media is media that can be "played back" over time. It may exist by itself or be bundled with a textbook. Commercial media may or may not be clearly labelled as "educational." Popular and counterculture media, investigative journalism, video art, Hollywood and homemade movies, and other timed-media content are used heavily in curriculum and research.

---

[40] Accessibility Directorate of Ontario. Understanding Accessibility. (2008). Accessed January 11, 2015, http://www.mcss.gov.on.ca/en/mcss/programs/accessibility/understanding_accessibility/making_information_accessible.aspx

Transcriptions are a precursor to either open or closed captioning. For captioning, they should be a verbatim text representation of not only what is spoken, but by whom, often including nonverbal utterances and relevant sounds.