Review of the Canadian Communications Legislative Framework
Responding to the New Environment: Call for Comments

Submission of the Broadcasting Accessibility Fund Inc.

APPENDIX

Meeting the Challenge of Content Accessibility:
Summary of Projects 2015-2018

January 11, 2018

The Fund has completed three cycles of grant awards, with a total of 19 projects funded through 2018. An additional five projects were approved in October 2018, bringing the total number of approved projects to 24. The average grant per project is just over $100K. Strong funding guidelines are in place.

Grants are provided incrementally, based on the progress of a project, and are tied to binding Project Management Agreements negotiated by the Fund and the grant recipient.

Grant recipients are required to provide financial reporting, and abide by the Fund's established criteria for the appropriate use of all monies.

Grant recipients are contractually required to share the results of their work, and provide non-proprietary access to software and other products resulting from initiatives supported by the Fund.

Completed Projects

Mohawk College of Applied Arts and Technology

Accessible Media Production Course - Journalism ($80,000)
October 2016 – November 2017

Accessibility Issue: On-going need for accessibility training for media professionals.

Developed an Accessible Media Production Course as a required course for all Journalism program students. Made available online for free to colleges and universities across Canada.

Impact: The dissemination of accessibility best practices, technologies and regulations ensures that journalists are better informed of their role in creating and distributing accessible media to all Canadians.

Canadian Broadcasting Corporation (CBC)

A National Conversation – Making CBC Radio Accessible ($61,630)
December 18 2015 – March 21 2016

Continuing the National Conversation: Making CBC Radio Accessible ($61,953)
September 1 2016 – November 15 2017

Accessibility Issue**:** Accessible radio programming content for underserved groups, particularly deaf-blind Canadians.

Transcripts of CBC's national flagship program *The Current* and *As It Happens* produced and posted daily on cbc.ca; monthly documentaries produced in ASL and posted to cbc.ca.

Impact: The provision of transcripts allows a more accessible programming experience for:

- Those who experience difficulty understanding audio on its own.
- Those who wish to consume the content at their own pace.
- Providing an accessible means for those with hearing loss to access content.
- Offering a new way for people to access and reference the content online.

Canadian Hard of Hearing Association

Broadcasting Accessibility Education for Hard of Hearing Canadians ($125,000)
April 1, 2016 – December 15, 2017

Accessibility issue: Lack of awareness about accessibility technology already available to consumers with disabilities.

Project to assist hard of hearing Canadians with accessible technologies, building knowledge to improve accessibility of broadcast content.

Impact**:** Created resources to ensure consumers with hearing loss have the information and tools they need to access broadcast media, to know what to do when things are not accessible, and to provide tangible tools to organizations so they may create accessible online content.

Click the following link to visit the Canadian Hard of Hearing Association Broadcasting Accessibility Hub website: http://chha.ca/baf/index.php

Komodo OpenLab Inc.

Tecla Remote Switch Access Device ($77,500)
December 1, 2015 – August 13, 2016

Accessibility issue: Simplified access to media content devices for people with mobility disabilities.

The project enabled the development of a fully accessible mobile application, "The Tecla remote", a switch access device enabling users with limited mobility to control a range of media devices, using the same controls they use to operate wheelchairs.

Impact: This versatile mobile application offers users with limited mobility greater control and customization of their own personal remote to access a wide variety of appliances, and mobile functions using either voice or touch commands.

Rogers Communications Inc.

Designing Screen Reading Capabilities for the 10-foot User Interface
($140,000) January 1, 2016 – March 1, 2017

Accessibility issue: Huge barriers to the navigation of on-screen menus for blind and low vision consumers.

The project made possible the design of screen reading capabilities for people who live with low or no vision within a "10-foot user experience", by developing a prototype set-top box that allows easier access to menu navigation.

Impact: This research improves accessibility to television menu content for low and non-sighted users. Using the prototype, participants were able to use screen reading capabilities to navigate menu options, and with additional voice assistance instructions to complete initial system setup steps, and through to the usage of common menu features.

Vues et Voix

Radio with a Voice (French-language project) ($115,765)
November 30, 2015 – September 30, 2016

Accessibility issue: Making web-sites hosting disability-targeted broadcast content accessible to its audience.

This project increased radio programming focusing on disability and accessibility related stories in the French language program "Vues et Voix", and improved website accessibility so that Canadians of all abilities can enjoy the content online.

Impact: The improvements made to the website ensure the greatest possible accessibility of radio and disability content, responding to new on-demand listening habits, increased audience participation and interactivity, and connection with the community.

Mediac Systems Inc.

Enhanced real-time & post-production captioning for VoiceWriter software ($123,170)
December 1, 2015 – November 30, 2016

Accessibility Issue: On-going issues with accurate and intelligible closed captioning for live programming content.

This project aimed to create an enhanced captioning software with CEA708 digital captioning functionality, animated caption options and added speaker-dependent shadow captioning functionality for real-time and post production captioning.

Impact: Providing Alternative Viewing Opportunities (PAVO) includes a modular design with compatible file formatting and Internet transmission encoding, text customizability, multi-lingual design, an improved user interface, and the ability to import dictionaries. The initial rendition of the software was an important first step in creating an improved captioning tool.

Centre de Recherche Informatique de Montréal (CRIM)

Access Filmodio (French language project) ($101,442)
October 15, 2016 to November 30, 2017

Accessibility Issue: Video Description (VD), while available for many televised programs, only provides a limited amount of information for non-sighted users. Online forums currently offer very limited options that offer VD.

This project includes the development of a new online media player, Filmodio, which offers enhanced VD to accompany video clips, with a level of detail similar to an audiobook.
Impact: This prototype furthered the development of accessibility technology well beyond minimum standards for those who rely on VD, as well as being in an online forum where such features are seldom implemented.

Canadian Hearing Society (CHS)

Barrier-Free Emergency Communication Access and Alerting System ($135,000)
October 15, 2016 to March 31, 2018

Accessibility Issue: Systemic barriers for people who live with hearing loss, are Deaf or Deafblind to emergency alerts.

This project involved intensive research to develop practical recommendations to make emergency broadcasting accessible to Canadians who are Deaf, Deafblind or live with hearing loss.

Impact: The recommendations are being used to inform members of the national public alerting system and associated broadcasting agencies and update best practices. This will result in expanded services offered through multiple platforms and improved accessibility to emergency broadcasting systems for people living with hearing loss, identify as Deaf or are Deafblind.

Radio Canada

Video-description Accessible Audio-Video Player (French language Project) ($96,200)
October 15, 2016 to January 31, 2018

Accessibility Issue: Updating Radio Canada's website to include a video-description accessible audio-video player, and integrating other accessibility features such as captioning, screen reader compatibility, enhanced visibility of website features and keyboard accessibility among other additions.

Impact: This project furthered the development of online accessibility technology well beyond minimum standards for those who rely on VD. The additional updates that increase web accessibility across platforms, screen reader compliance and keyboard navigation also enhance access for users of all abilities.

Click the following link to visit the Radio Canada Web Accessibility website (French content): https://ici.radio-canada.ca/accessibilite-web

The Canadian Association of the Deaf / The Captioning consumers Advocacy Alliance

Understanding User Responses to Live Closed Captioning in Canada ($125,000)
November 2015 to June 2018

Accessibility Issue: Ongoing issues with live captioning are not clearly understood at present, but there are generally known problems such as delays, missed information and difficulty for viewers to differentiate speakers.

This research project has established a validated baseline for how consumers evaluate captioning, and the results help inform broadcasters, captioning providers and consumer organizations to advocate for and implement improvements to this essential service.

Impact: The research, analysis and resulting publications created through this project can be used to support funding steam activities in the future while supporting the existing regulatory obligations of the broadcasting industry.

Click the following link to visit the Live Captioning Canada survey online: http://www.livecaptioningcanada.ca/survey.html

Humber College

Accessible Design in Broadcast Media ($130,900)
October 1 2016 to November 15 2017

Accessibility Issue: on-going need for accessibility training for media professionals.

Humber College has implemented a new six-module course to raise awareness of the systemic, attitudinal, physical and technological barriers that interrupt accessibility in current broadcast media practices. This course is now available to all School of Media Studies and Information Technology students as well as the public through free, online modules.

Impact: This project increases knowledge of a wide variety of accessibility features for current and future broadcasting professionals, helping to increase compliance with CRTC regulatory obligations (as well as measures that go beyond these obligations), promoting sensitive and inclusive language in journalism.

Click the following link to visit the Humber College – Documenting our Progress video on YouTube: https://youtu.be/bqiw4Sk7AYU

Accessible Media Inc. (AMI)

Integrated Described Video Instructional Series ($82,500)
September 15, 2017 to February 16, 2018

Accessibility Issue: Sighted users can find traditional Video Description (VD) narration off-putting, and in the case of mixed viewing audiences (eg: a family with sighted and blind viewers), the blind viewer may opt out of watching television with family members.

AMI's bilingual web video series outlines the concept and benefits of Integrated Described Video (IDV). Inclusive media can be seamlessly consumed by mixed viewing audiences by integrating the description of visual elements into the script (instead of having additional voice-over narration, as is done with traditional DV).

Impact: Due to the manner in which IDV programming is created, an optimal viewing experience is provided for a mixed viewing audience, fostering inclusion. Through this initiative, Integrated Described Video is promoted to the broadcast industry through a web series that provides tangible examples of IDV.

Click the following link to visit AMI's IDV website: https://www.ami.ca/idv

Ryerson University

Phase One: Market Feasibility and Analysis to determine interest in a Continuing Education Course Series for Inclusive Media for Broadcast Production among adult learners ($11,995)
October 25 2017 to March 31 2018

Accessibility Issue: Determine the need and interest in a continuing education course for Inclusive Media in Broadcast Production, designed for adult learners.

Two studies were conducted, via online forums and face to face interviews.

Impact: The results of both studies suggest that students are interested in accessibility and consider it important enough to recommend that accessibility topics be included in undergraduate programs as well as a separate certificate. As a result of this market survey, a course series is recommended to be developed and offered at Ryerson University, and potentially other post-secondary institutions.

PAVO Digital Inc.

Enhanced real-time and post-production captioning for VoiceWriter captioning software ($81,440)
October 5 2017 to February 26 2018

Accessibility Issue: Deaf viewers may have difficulties identifying the speaker and sound effects in a way that makes sense to them. Previous captioning systems were unable to resolve these issues, but PAVO implements new solutions by including animated captions and speaker identification.

Impact: PAVO Digital Inc. has developed software called PAVO using a CEA-708 digitally compatible system for captioning. Several modules were developed: PAVO-Cap (for post-production captioning), PAVO-Quick (for real-time transcription or CART), and PAVO-Cat (for stenographic court reporting).

Ryerson Radio

SmartTones Powered Radio App for Increased Accessibility & Enhanced Audience Engagement ($64,655)
October 18 2017 to July 31 2018

Accessibility Issue: Addressing barriers to access to radio content via mobile devices.

SmartTones uses 100% silent audio tones to deliver context-driven experiences from broadcast media to mobile devices, as well as second screen content for consumers with no or low vision.

Impact: The mobile app will trigger contextual content related to the broadcast that is accessible so that all listeners will be able to participate, share and act in response to what they see or hear, regardless of ability. For example, deaf audiences being able to receive visual emergency alerts, and accessible second screen content for blind and vision-impaired audiences.

Ongoing Projects and Future Competitions

Projects that are currently ongoing:

Neil Squire Society

Mapping Physical Access Solutions to Broadcast Television ($169,208)
November 1 2017 to March 1 2019

The main objective of this project is to research accessibility barriers and solutions for people with limited or no use of their hands, and information about using existing and emerging assistive technologies to access broadcasting content through set-top boxes and broadcaster smartphone-based applications.

Carleton University

Universal Intelligent Assistive Devices for Media Content Accessibility ($83,600)
January 15 2018 to February 15 2019

This project will develop a generic and modular class of systems called Intelligent Assistive Devices (iAD) that will facilitate access to media content access for those with extreme motion challenges.

Projects Approved – Fourth Round of Funding
October 2018

Keeble Media

NER Consumer Evaluator Project ($156,000)
January 2019 to March 2020 (anticipated to be a 14-month project)

Using the NER tool for measuring captioning accuracy, deaf and hard of hearing consumers will be trained to assess English language live captioning.

Impact: Training consumers with hearing loss will generate feedback that will improve NER implementation and raise awareness of NER testing among broadcasters, as well as tangibly increase accessibility in broadcasting by ultimately improving caption accuracy on live programming.

Ryerson University

Continuing Education Course Series for Inclusive Media for Broadcast Production ($119,636)
January 2019 to December 2019 (anticipated to be a 12-month project)

A continuing education course series focused on inclusive design for broadcast production, with a key focus on the instruction of re-speaking techniques for live closed captioning and audio description techniques including scripting will be developed.

Impact: There is a gap for publicly available training in Closed Captioning and Audio Description techniques that will be filled by offering specialized accessibility content courses targeting broadcasters. This will benefit the broader broadcasting industry by improving options and technologies for captioners and audio describers, as well as improve quality with standardized training that is available to all.

Mohawk College and Inclusive Media & Design Inc.

CapScribe 2.0 ($163,029)
January 2019 to July 2020 (anticipated to be an 18-month project)

CapScribe, originally designed to enable creators and consumers to produce video captioning and described video, will be modernized to ensure compatibility to existing operating systems and devices and provide compatibility with alternative access systems used by captioners and describers with disabilities.
Impact: CapScribe 2.0 will give greater access to broadcast content for persons with disabilities, predominantly those with hearing or vision loss. Modern enhancements will ensure ease of use for broadcasters and post production technicians, including updates to export HD-compatible formats recently adapted by the broadcasting industry, advances in speech recognition and potential for AI semantic parsing.

PAVO Digital Inc.

Developing Artificial Intelligence Post Processing Methods for Improving Speaker-Independent Voice Recognition ($111,375)
January 2019 to November 2019 (anticipated to be a 10-month project)

Using Artificial Intelligence, the accuracy closed captioning can be increased using speech recognition technology.

Impact: This type of post-processing approach has the potential to optimize voice recognition as a captioning method by focusing on patterns of context in a text format, ultimately enabling the development of an AI text correction system that would ideally reduce the rate of errors in captioning to less than 1%. Speaker independent voice recognition is attractive for broadcasters, as it would cut personnel and equipment costs significantly. Our system could improve the accuracy of voice recognition engines and would reduce the cost of providing fully accurate captions.

Centre de Recherche Informatique de Montréal (CRIM)

Web DV ($65,290)
Dates to be finalized

Leveraging video insertion technology designed for the insertion of advertising, this project will develop two extended Web Described Video (DV) production approaches. Building from existing production technologies previously developed by CRIM, these two approaches will be compared and tested with users.

Impact: The results of this research will encourage Broadcasters to adopt DV broadcasting solutions which meet the needs of individuals living with low or no-vision, in both official languages in Canada. This project will offer Broadcasters two stable and multi-browser web readers to provide extended DV. Furthermore, the comparison of two achieved productions will measure their impacts on the production cycle.

Future Competitions:

February 1 2019: Call for Letters of Intent for Round 5 Projects