



STAFF REPORT ACTION REQUIRED

12.

Live Web Broadcasting of Library Board Meetings - Update

Date:	January 19, 2015
To:	Toronto Public Library Board
From:	City Librarian

SUMMARY

At its October 20, 2014 meeting, the Toronto Public Library Board requested staff to further investigate lower-cost delivery options for the live web broadcasting of Toronto Public Library Board meetings.

The purpose of this report is to report back on that investigation for the Board's consideration.

RECOMMENDATIONS

The City Librarian recommends that the Toronto Public Library Board:

1. considers the lower-cost delivery options for the live web broadcasting of Toronto Public Library Board meetings.

FINANCIAL IMPACT

The costs for the recording and live web broadcasting of Library Board meetings range from \$31,950 to \$41,500 annually, based on ten meetings per year, depending on the number of cameras and camera operators used. Additional costs for closed captioning include \$3,000 for post-production closed captioning of all recorded broadcasts and real-time closed captioning of each meeting available at a rate of \$200 per hour. All costs are outlined in the following table.

	Per meeting cost	Annual Cost
Live webcasting & recording of meeting, up to 4 hours		
2 cameras, 2 operators, 1 technician	\$4,150	\$41,500
2 cameras, 1 operator, 1 technician	\$3,600	\$36,000
1 camera, 1 technician	\$3,195	\$31,950
Live closed captioning	\$200/hr	\$8,000
Post-production CC	\$300	\$3,000

Cost components include the provisioning of recording and web-broadcasting equipment, webcasting streaming services on a third-party hosted site, one technician to operate web broadcasting equipment, options for the operation of camera(s), and real time and post-production closed captioning of broadcasts.

Live web broadcasting of Library Board meetings have not been budgeted for and will be a pressure to the 2015 operating budget.

The Director, Finance and Treasurer has reviewed this financial impact statement and is in agreement with it.

DECISION HISTORY

At its March 27, 2013 meeting, the Board approved a motion to request staff to:

- *report back to the Board in September 2013 on the feasibility of providing live web broadcasts of Board meetings and providing access to previous Board meetings' web broadcasts on its internet site:*
<http://www.torontopubliclibrary.ca/content/about-the-library/pdfs/board/meetings/2013/mar27/minutes.pdf>

At its September 23, 2013 meeting, the Board received a report on the feasibility of providing live web broadcasts of Board meetings, and approved a motion to request staff to:

- *investigate further the option of a shared-service arrangement with the City to deliver live broadcast services for the Library, and report back with options and recommendations*
<http://www.torontopubliclibrary.ca/content/about-the-library/pdfs/board/meetings/2013/mar27/minutes.pdf>

In Spring 2014, Library staff met with City Protocol staff to investigate the City's approach to and timing for live web broadcasting of City Council and Committee meetings, and to determine opportunities for a shared-service arrangement with the Library.

At the October 20, 2014 Library Board meeting, staff reported back to the Board that, because the City intends to use dedicated, permanent equipment and staff to deliver the live

broadcasting service, rather than provisioning a third party to deliver and support the service, there are no immediate opportunities for a shared-service arrangement with the City for the Library Board. At that meeting, the Board subsequently approved a motion to request staff to:

- *further investigate lower-cost delivery options, including local colleges and universities, and report back to the Board.*
<http://www.torontopubliclibrary.ca/content/about-the-library/pdfs/board/meetings/2014/nov17/04.pdf>

BACKGROUND

Over the past 18 months, the Library has investigated several approaches to the recording and live broadcasting of Library Board meetings via the web. These have included: having the Library acquire the equipment and expertise internally to deliver the service; provisioning the service from a third party (either an audio/visual company or a university/college using student services); and working with the City of Toronto to share resources and/or provision the service from them.

Requirements for recording and live web broadcasting meetings

As indicated in the September 23, 2013 report to the Board, to record and live broadcast Library Board meetings via the web, an integrated system is required that can handle the video and audio recording and switching, run by a trained operator during the meetings. Both live and recorded video is done through the same camera(s); audio and presentations/visuals are fed through the Library's existing Crestron system.

For live web broadcasting, the audio and visual feeds are converted real-time to a digital signal and pushed out to the server by a dedicated PC in the Boardroom. A dedicated server, or an outsourced media-streaming service handles the actual live broadcast of the meetings over the Internet. To meet accessibility standards, real-time closed captioning is recommended. This service is provided remotely, and displayed in a separate box on a screen below the webcast (a person watches the broadcast live and provides closed captions in real time). The service is performed on a best-effort basis and supplied materials such as speaking notes, programs, etc. will enhance accuracy. For the recording and live web broadcasting of each meeting, one trained technician is required to support the switching and live web broadcasting, and one to two trained camera operators are required to support the filming of the meetings. (The web broadcasting technician could also support the filming via a remote controlled camera.)

For archive and future broadcast, the digital signal is also recorded so that it can be archived and broadcast at a later date. To prepare the recorded video for later viewing from the Library's website, post-production closed captioning and some editing of the recorded video will be required. For the post-production work, a trained technician is required for the editing, and a service is required for the closed captioning.

The Library has trained staff to film board proceedings and to do post-production editing of the video for archive and later broadcast. However, neither the equipment nor the expertise exists within the Library to support the live web broadcasting of Library Board meetings. It has therefore been recommended that the Library Board provision the equipment and the technical support required for the filming and live web broadcasting of each of its board meetings.

Shared-Service Arrangement with the City of Toronto

In Spring 2014, Library staff investigated the feasibility of a shared-service arrangement with the City to determine if such an arrangement could mitigate some of the delivery costs associated with the Library Board's live web broadcasting of meetings. It was determined at that time that the City intends to use dedicated, permanent equipment and staff to deliver the live broadcasting service, rather than provisioning a third party to deliver and support the service, therefore there are not expected to be any immediate or potential opportunities for savings for the Library Board through a shared-service arrangement.

COMMENTS

Staff have investigated two approaches to reducing the costs associated with live web broadcasting Library Board meetings:

1. reducing the equipment and technicians required to record and broadcast the meetings; and
2. partnering with a local college or university to have students deliver the service for Toronto Public Library.

Reducing the equipment and technicians required to record and live broadcast meetings

The recording and live web broadcasting of Library Board meetings can be provided at different price points, depending on the number of cameras in the room, and whether they are operated by a camera operator or by a technician via remote control. Each price point offers a different level of coverage of the proceedings, and therefore different levels of quality of broadcast. The different options and their relative benefits are outlined in the following table. In all cases, the following minimum configuration is required: at least one HD camera with digital capability; synchronized audio and presentation slides through the existing Crestron system; a dedicated system that converts the digital signal real-time and pushes it out to a streaming service; a third-party hosted live streaming service with a TPL-branded portal to host the broadcasts; a trained technician to manage the audio/visual recording and operate the digital switching and broadcasting equipment. Closed captioning of the recorded and live broadcasts are required by AODA standards.

Number of cameras	Cost/meeting	Pros and Cons
<ul style="list-style-type: none"> one professional robotic PTZ (point-tilt-zoom) camera (no camera operator; operated by technician) 	\$3,195	<p>Pros: economical, live coverage; robotic camera saves labour cost yet is adjustable via remote control</p> <p>Cons: coverage limited to one fixed camera angle</p>
<ul style="list-style-type: none"> one professional video camera with tripod, with camera operator (TPL could provide the camera operator) one robotic PTZ (point-tilt-zoom) camera for tracking multiple presenters HD video switcher to switch camera angles, show presenter titles 	\$3,600	<p>Pros: economical, live coverage; extensive camera coverage enabled by using 2 cameras, multiple angle capability with addition of robotic camera</p> <p>Cons: coverage and camera angles limited</p>
<ul style="list-style-type: none"> two professional HD cameras with tripods two professional camera operators (TPL could provide one operator) HD video switcher to switch camera angles, show presenter titles 	\$4,150	<p>Pros: live coverage; full motion coverage of all in-room activity</p> <p>Cons: costly compared to other options</p>

Partnering with a local college or university to have students deliver the service.

Staff contacted two local universities and one college that TPL currently has relationships with in the area of technology and innovation: Ryerson University, Seneca College and University of Toronto.

The model proposed by the Library to the institutions was for a journalism or media arts class to record and broadcast Toronto Public Library Board meetings for 2015, using the institution's equipment and technicians (students). The Library would provision the online hosting service to broadcast the meetings, as well as the required closed-captioning services.

While most of the institutions contacted had some level of expertise in this area and were generally positive about partnering with TPL, all reported that they did not have the necessary equipment and/or trained student resources to provide these services outside of their institutions.

CONTACT

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SIGNATURE

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