To: Dr. Mike Riggle
Board of Education

From: Dr. R.J. Gravel

Date: Wednesday, May 4, 2016

Re: FY2016 Technology Broadcasting Purchase

Recommendation

It is recommended that the Board of Education approve the purchase of Tightrope's Cablecast Broadcast Automation system to support WGBK's television broadcasting activities from AVI Systems, Inc. of Arlington Heights in the amount of $85,200.

Background

At the June 22, 2015 meeting, the Board of Education approved the FY2016 technology budget which included costs to purchase a new broadcasting server and streaming software and equipment in the amount of $368,000 ($69,600 for a 5-year lease; $20,000 for a one-time software program purchase).

Broadcasting Server

Several years ago the school district purchased two stand-alone file servers to meet the needs of the broadcasting program, as a result of hardware and software limitations that existed at the time of purchase. Fortunately, these limitations no longer exist, and there is no longer a need to maintain separate file servers for use by students and staff members using Mac-based software.

As part of a recent storage resources and network audit, it was determined that the existing stand-alone broadcasting file servers could be consolidated into the district's primary storage resources environment. Our primary storage resources environment currently has available capacity to meet the current and future needs of the broadcasting program, without the purchase of a separate server. To take advantage of this available capacity we sought a hardware / software streaming solution. In partnership with the broadcasting faculty, we researched potential streaming hardware and software solutions and provide additional information below.

Streaming Hardware and Software

WGBK-TV operates two independent public access channels broadcast through Comcast and Wide Open West's network (Glenbrook North - Ch. 16; Glenbrook South - Ch. 26). The television channels offer our community members the opportunity to view student produced content that is created in-studio and on-location for special events such as athletic contents and the annual graduation ceremonies. Due to limitations of the existing hardware and software, students have experienced difficulty programming an on-air schedule, preparing newly produced content for distribution on the cable channel, and broadcasting live events.

After meeting with our broadcasting teachers responsible for supporting WGBK-TV's activities, we identified a series of expectations for a streaming solution:

- Students and teachers need the ability to establish an on-air schedule that can be modified as necessary from inside and outside of the studio,
- Students and teachers need to be able to take newly generated content (in 4K resolution), import the content into the system's library, and to schedule the content without the need to further downgrade media files,
- The solution needs to provide the ability to switch between pre-recorded content and live productions on an as-needed basis,
- Content from the broadcasting channel should be available through the designated public access channels, as well as through an online streaming platform,
- The solution should allow the students and teachers to interact with the programming interface from multiple device platforms (Chrome OS, Mac OS X, Windows),
- The hardware components of the should should be able to be stored in a remote, secure location, without limiting the ability for students and teachers to manage the day-to-day operations of the broadcast.

After an investigation into potential hardware and software solutions, one solution stood out from the rest. The recognized hardware and software solution that met all of the district's requirements was Tightrope's Cablecast Broadcast Automation system. Following a comprehensive quotation process that involved the opportunity for local solution providers to tour our television studios, we are recommending the proposal received from AVI Systems, Inc. of Arlington Heights.

Purchase of the broadcast automation solution will be made using funds budgeted for the 2015-2016 school year. The efforts of the Technology Services team to utilize existing storage resources, as well as the efforts of our broadcasting teachers to identify the specific needs of their students and curriculum, will result in an overall cost savings in the amount of $282,800.