

## Request For Proposals

The Grafton (MA) Cable TV Oversight Committee (GCTV), acting on behalf of the Grafton Board of Selectmen (BOS) is requesting proposals for a replacement Playout Server System (PSS) for our Public Access, Government Access, and Education Access (PEG) channels to be located at our studio facility at 296 Providence Road, South Grafton.

### GENERAL:

The PSS is to be furnished and installed as a complete system, including equipment, professional installation, documentation including CAD drawings, warranty, training, and ongoing support for six (6) months. Support must include 22 hours working with our web site programmer updating our web site or integrating our web site with the server manufacturer web site tools to transition our streaming and Video On Demand web services.

This RFP is being published in the local press, on the Massachusetts web site, and is being distributed by email to vendors known to GCTV. GCTV may reject any submittal in accordance with applicable laws and reserves the right to reject the entire pool and seek a second round of proposals.

### SUBMITTALS:

Proposals must be submitted in PDF electronic form and must be received by 3:00PM June 24, 2016. Proposals should be emailed to Bob DeToma, Chairman, GCTV, at [DeTomaB@grafton-ma.gov](mailto:DeTomaB@grafton-ma.gov). Any questions should be emailed to Larry Silverman at [larry.silverman@gmail.com](mailto:larry.silverman@gmail.com). All answers will be distributed to all known potential bidders. If you wish to receive these answers or any addendum or corrections please email Larry Silverman stating that you may propose on this contract at the earliest possible time.

Proposals must include:

1. Statement of Qualifications
2. List of at least four (4) PEG installations
3. Statements of Reference from at least three (3) clients and one (1) manufacturer of the primary server components. The vendor must have been an authorized dealer for the server manufacturer for at least three (3) years.
4. Professional Resumes for the system designer, installation supervisory technician, and any additional technicians. These resumes must list at least three similar projects.
5. Photos of similar installations showing proper cabling and cable support and routing techniques.
6. A list of all equipment to be furnished including line item pricing plus pricing for warranty and support. Include a price for a twelve (12) month extension of the support services. (In addition to telephone support 5 days/week 16 hours/day from the server manufacturer, support must include on site support from the vendor within 24 hours of request when problems are not resolved by the manufacturer telephone support. Although the response time is mandated by this contract, actual time on site remains billable on an hourly basis after the first 90 days after GCTV acceptance of the system. Submit the hourly rate for this service after 90 days and during any support contract renewals.)

### DESCRIPTION:

The system components listed below comprise a system to demonstrate the features and performance specifications only. Vendors are free to propose alternative selections but should be prepared to show equivalence or better in price or performance or features. GCTV shall retain the sole determination of acceptability. Where an item is not subject to substitution or alternates it will be stated on a per item basis along with the reason for the sole source, in accordance with applicable law. Where models listed below have been supplanted by newer models from the manufacturer, supply and quote the replacement models (such as Tightrope at NAB 2016).

Manufacturer	Model Number	Description	Qty	Unit Price	Ext. Price
Tightrope	CBL-CG330-SDI	Bulletin Board/Graphics with SDI Option	3		
Tightrope	CBL-LIVE-330	HLS Live Streaming Server	3		
Tightrope	CBL-SVR430-VOD	Automation Control/Video On Demand Server	1		
Tightrope	CBL-FLEX4-32TB	2 Channel Decode/2 Channel Encode w/ 32TB Storage	1		
Tightrope	CBL-FLEX-LITE	1 Channel Decode/1 Channel Encode w/ 4TB storage	1		
Tightrope	Reflect Live VOD Bundle	Cloud VOD and Live Streaming 1 yr subscription	1		
AJA	KUMO-3232	32X32 HDSID Routing Switcher	1		
AJA	KUMO-CP	Control Panel	2		
		USB to RS-422 converter for AJA control	2		
Black Box	SWL030A-FFF	2X1 RS-422 T Switch to switch AJA control between 2 devices for backup	1		
AJA/Ross/Cobalt/Black Mag	OG3-FR CN	Open Gear Frame w/ Cooling and Network	1		
Cobalt Digital	9501-DCDA-HD+FS	Converter SD Analog Out for Air w/ audio and Frame Sync	3		
Cobalt Digital	RM20-501-B	Rear Panel for above	3		
Apantac	OG-US-3500	Open Gear DVI to SDI Converter w/ Genlock	3		

Apantac	OG-US-3500-RM	Rear Panel for above	3		
Apantac	HDMI-1X2-2	1X2 HDMI 12 bit DA	3		
		DVI/HDMI HDMI/DVI Converters as needed for above DA's - pigtail			
Middle Atlantic		Shelf for DA's	1		
Avocent	MPU2016DAC-001	KVM over IP Switch Matrix	1		
Avocent`	MPUIQ-VMCDP	Server Interface Module for DisplayPort & USB Kybd & Mouse	6		
Avocent`	MPUIQ-VMCHD	Server Interface Module for HDMI & USB Kybd & Mouse (for graphics)	3		
Liebert	PS2200T3-120XRW	Rackmount Uninterruptible Power Supply w/ network	2		
Liebert	PSRT3-48VBXR	Ext. Battery for above	2		
Middle Atlantic	MRK-4442	42" Deep Rack 44RU w/ rear door, f&r rails	2		
Middle Atlantic	SPN-44-423	Pair of side panels	1		
		Vertical Power strips for above	4		
Middle Atlantic	CBS-MRK-42	Caster base for above	2		
Middle Atlantic	MW-10FT-550	Top Panel with Cooling Fan for above	2		
Middle Atlantic	BR-2	2 RU Brush Grommet Panel for Top	2		
Middle Atlantic	FC-4-1CA	Thermostatic Fan Cntl	2		
		Blank panels as necessary in assorted sizes to fully fill 2 racks.			
Middle Atlantic	VT-2	2 RU Vent Panel (bottom of racks)	2		
		LED Worklights for racks	2		
Installation and Training					
1 <sup>st</sup> year support					

No substitutes are desirable for the Cobalt Digital converters as automatic aspect ratio conversion based on AFD signals embedded in the incoming video is required as well as the frame synchronizer to clean up the hot switches in the video. Additionally, the Apantac converters provide Genlock capability which is required. Alternatives to Open Gear frame mounted components using other proprietary frames are

not permitted as Open Gear is already a GCTV standard. The AJA router allows control from our existing Broadcast Pix switchers and LAN control, so no alternatives are desired without this capability.

#### FUNCTIONAL DESCRIPTION:

1. Three channels of HD video server with two channels minimum of HD-SDI capture and three HD-SDI outputs.
2. On playout, in real time, the servers convert all stored video files to a standard 1080i HD output from any resolution input and a wide variety of CODECS including MPEG2, H.264, ProRes (422, 422HQ, 422LT), XDCAM, DV50, DVCPRO and file extensions including avi, mov, mp4, mpeg.
3. Files for servers may be stored on local RAID drive arrays or on network servers including Editshare products to be added later.
4. The playout servers key a logo (bug) and crawl into all of the program outputs.
5. An Automation Controller stores and edits a three channel program schedule and allows for jumping events, skipping events, manual or timed start of events. The Controller maintains a database of all recorded programs and their location in multiple storage locations. When editing the schedule the automation controller allows for automatic daily or weekly repeats of individual or blocks of programs which can be edited to increment program sequence numbers or other details. When scheduled events do not fill the time slot, the controller automatically schedules default filler material such as PSAs or bulletin board.
6. The Automation Controller also provides compressed streamed files for video on demand. Once requested a first time, streamed VOD programs are cached on-line by a subscription service to be included in the cost of the system for the first year. Include cloud based serving of both streaming and video on demand.
7. Three graphics generators provide multi-zone bulletin boards with program schedules, community events, and other informational items, and include backgrounds, icons, and multiple fonts. Areas of the screen can be dynamic and populate with changing content and can both read and create RSS feeds. The generators can also create crawls across the screen. Screens may be called up via schedule and can also automatically repeat and sequence. Optionally, in the future, these devices can be upgraded to include a live video window.
8. All SDI signals, both SD and HD, are routed through the AJA routing switcher. Router outputs feed the server record inputs, the input of an AJA KiPro recorder, the three SDI to NTSC converters, all eight inputs on the studio production switcher, the three live streaming servers.
9. Feeds into the router include the three playout server outputs, the three graphics generators (via DVI 1X2 splitters and DVI to SDI conversion, the studio production switcher program and aux outputs, the AJA KiPro output, three to six fiber receivers plus future expansion, and the three studio cameras.
10. Command and control of video servers and the automation controller is via a KVM (keyboard, video, mouse) switch which allows up to two computers for control using a standard browser. Configuration and updates to the graphic generators is also via the KVM with content control via web browser. As the graphic generators have only one video output, the output feeds a splitter before feeding both the KVM and the SDI converter.

#### EXECUTION:

1. Prior to construction, submit for consultation and approval, shop drawings of rack mounting and signal flow.
2. After approvals, pre-construct the racks and equipment to the extent practical including internal rack cabling.
3. At the bottom of the racks mount a 2 RU vent panel. Above these go the UPS and the external battery. Leave space for two future external battery packs and fill these spaces with blank panels. If possible, leave 1 RU space between the UPS and battery and between each battery.
4. Each rack has two power strips. One strip has a power cord exiting the top of the rack equipped with 20 amp twistlock plug. The second strip plugs into the UPS mounted at the bottom of the rack. Extend the AC cord from the UPS out the top of the rack and equip with a 20 amp twistlock plug. Equipment with redundant power supplies shall be plugged into both power strips. Equipment with only one AC cord must plug into the strip powered from the UPS. Configure UPS networking to email designated staff when mains power fails.
5. All cabling must be properly supported and bundled into neat parallel runs using cable ties and industry standard and accepted techniques. The weight of the cabling must not stress any connections. If any equipment is mounted on slides, include a sufficient loop in the cable bundles to allow full forward motion. Do not over tighten nylon cable ties. Trim ties to not leave sharp corners. Bundle network cables using Velcro ties instead of nylon ties.
6. Use temporary cable numbers as necessary and replace with final cable numbers under clear shrink tube on all cables. All cable numbers should be written on shop drawings during assembly and transferred to the final as-build drawings.
7. After completion of the installation, provide as-built drawings by hard copy and electronic pdf and electronic editable form on a DVD. On this DVD include any configuration data and include lists of IP, MAC, and other addresses. Include any manufacturers software and manuals on this DVD. Mount a large laminated signal flow diagram on the wall of side of the rack.
8. Perform all necessary configuration and test the entire system.
9. Provide training to the facility operators.
10. Provide support to our web site authors and managers and assist in transitioning on-air operations, video on demand, and streaming.

Addendum 1, May 20, 2016

1. At this time Grafton Community TV has had limited looks at the Castus and Leightronix server systems. Based on this limited information GCTV has not ruled these systems as not equivalent to the Tightrope system specified in the RFP.
2. GCTV will consider proposals based upon these two systems, however the burden shall be on the vendor to provide evidence that these systems meet the requirements for equivalence of functionality, performance, and quality as well as the ability of the vendor and manufacturer to provide the support required.
3. GCTV will require a live demonstration of any of these systems by the vendor prior to accepting any proposal based upon these systems.
4. Where a vendor is an authorized dealer for more than one system, GCTV recommends that the vendor consider submitting multiple proposals based upon the different systems in the event that GCTV ultimately decides that the alternate systems are not equivalent. GCTV remains the sole decider of equivalency.