

## **Video and the Town Hall**

A guide for wiring Marin Council Chambers

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AGENDA ITEM # 1

## Elements of Program Acquisition

### Video Production Equipment

Cablecasting and webcasting rely on the same video production equipment to generate the programming and documentation of meetings and events. For now, consider the equipment related to 'program acquisition' equipment separate from the 'mode of distribution' equipment (cable/web/live or recorded). Once the equipment for acquisition is in place, options for distributing are always available.

### Audio

Most council chambers are already partially equipped for video production since there is a already public address audio system with a series of microphones. In most cases, this system can provide the audio feed to the video system that would be installed. Should additional equipment be required, it is typically of minor expense.

### Video Cameras

When many first consider wiring council chambers for video they often consider the use of a single camera as a suitable solution. This has many drawbacks, primary of which is that it offers no means of capturing different camera angles – such as the faces of those presenting public comment in front of the council. A single camera also results in an endless wide angle shot that typically evokes the qualities associated with a security camera.



camera controller

The alternative is to position multiple PTZ cameras around the council chamber according to the camera angles needed. Each camera has remote pan, tilt, zoom (PTZ) and focus capabilities and all the cameras are controlled by a single operator. Using this system, the cameras can store pre-sets for different positions and easily move between the different close-ups and wide shots as needed. Typically a council chamber requires three to four cameras, more can be added later if desired.

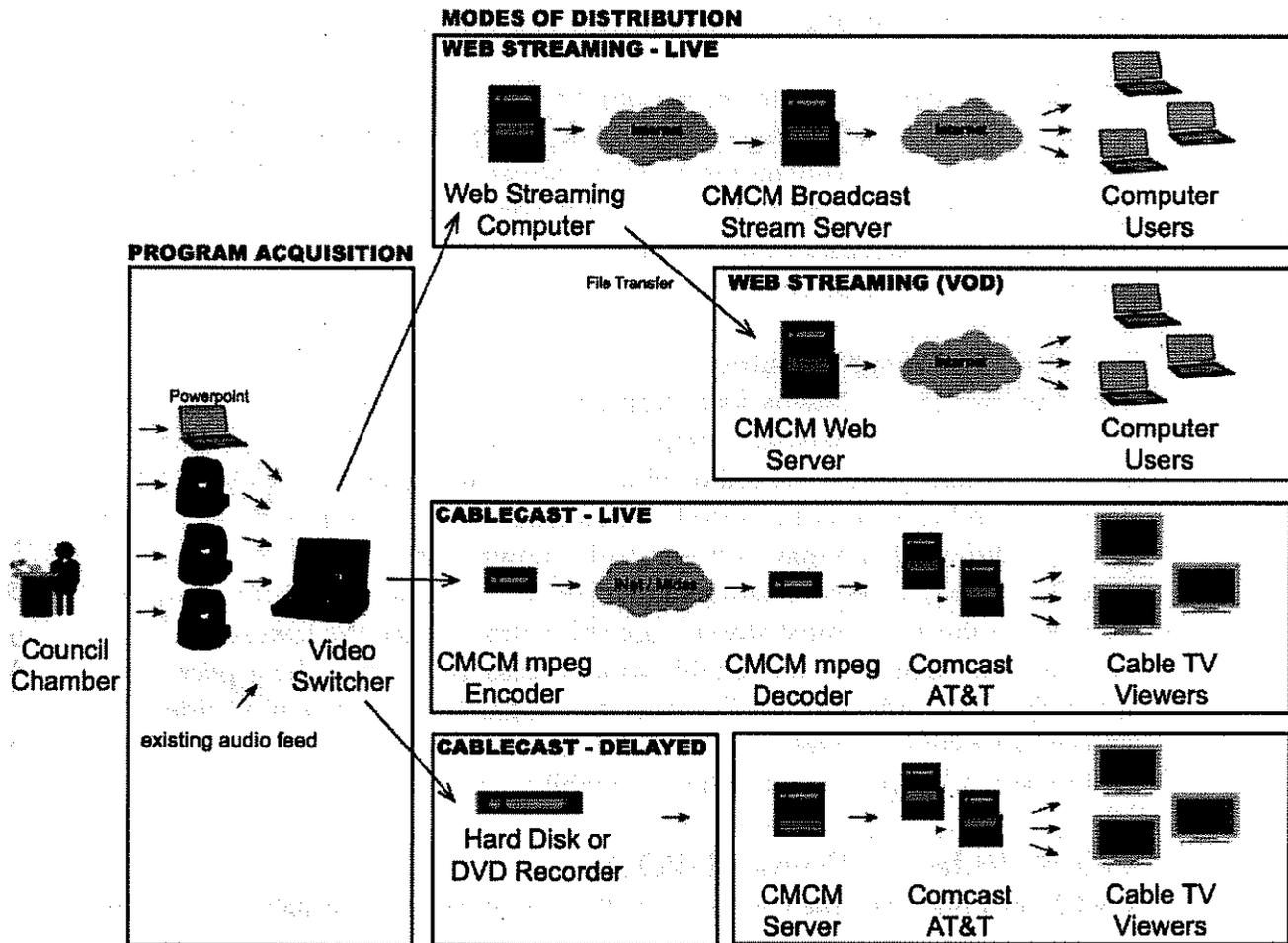


Sony PTZ Camera

These robotic PTZ cameras are not expensive. Reliable models range from \$1000 to \$4000 depending on the advanced features desired. The cameras are small and light, easily ceiling or wall mounted and can be made unobtrusive within the current architectural design of the council chambers. These cameras are also low-voltage which means that cable runs do not require any special wiring or conduit for installation.



### Modes of Video Distribution



### Webstreaming (Live and VOD)

Traditionally a low cost alternative to broadcast or cablecast, webstreaming simply is a means of distributing video over the internet. The event or meeting can be 'streamed' live over the internet and/or recorded and made available later on a web site (VOD). The archival aspect of webstreaming is perhaps the most attractive as it allows users to easily locate and view past meetings, and if the video file is properly indexed, the user may even fast forward to specific agenda topics.

Webstreaming requires the same cameras, video switching capability and microphone/audio system as traditional broadcasting or cablecasting. The difference is primarily in the choice of delivery. In this case, a desktop computer is used to send the live video stream to a broadcast server which then distributes the stream



### **Cablecasting (Live and Delayed)**

Cablecasting is the best quality option available for delivering meetings and other events to local residents. CMCM currently operates a countywide governmental cable channel on Comcast Ch 27 and AT&T U-verse Ch 99. This channel is dedicated to local government usage and is where your municipal meetings would air. Depending on your constituencies, cable is likely a more accessible medium than the internet, though this is changing in many areas.

Live cablecasting requires some additional transmission equipment in the form of mpeg encoders and decoders. This equipment allows for the signal to be transmitted over the iNet / Midas network to the CMCM facility for delivery to Comcast and AT&T. At present, this equipment is expensive and demands significant network resources (approx. 6MB bandwidth), but CMCM is investigating lower cost alternatives that afford similar reliability. If live cablecasting is not an immediate priority, it can always be added later as an option.

Delayed cablecasting is a lower cost alternative. The program material is simply recorded on location at full resolution (vs smaller web resolution) to hard disk or DVD and then delivered (or sent via FTP) to the CMCM for scheduling and playback at a later date. We advise doing this even if you are doing live cablecasting as it affords backup and archive copies. The only additional cost is the recording device desired and any media associated with that device. Network resources (bandwidth costs) are not an issue in this scenario.

### **In-House Video Presentation**

An optional but often desirable element for council chambers is providing a means for portions of the presentation content to be presented to the attending public and the council itself. This is typically a video projection of a powerpoint or web presentation, a video on DVD or projected enlargement from a document camera. These video sources are easily split to feed the video switcher as well as a projector or series of LCD displays. These systems can be installed at different times and integrated together with proper planning.

Another option is to take the switched video program feed and distribute it throughout a city hall, either to a closed circuit cable system or simply to one display in a room or hallway designed to accommodate overflow. This can also be an option added later.



### Hardware/Equipment Specification and Installation

CMCM is able to work with cities on video production equipment selection, purchasing and installation that best suits the needs at hand. Installation and cabling costs will vary according to individual sites and existing equipment - an estimate can be prepared after a site visit. CMCM is also available to work with outside integrators/installers if necessary. Some basic costs for video production equipment are illustrated below:

Qty	Item	Unit	Total
<b>Video Production Equipment</b>			
1	Extron scan converter (for computer input)	\$1500	\$1500
3	Sony EVI-D70 Camera (robotic camera)	\$1000	\$3000
1	Sony RM-BR300 Robotic Camera Controller	\$1400	\$1400
1	Switcher: Tricaster Studio w/Character Generator, Six Inputs, records program to hard disk.	\$12,000	\$12,000
1	LCD Display	\$300	\$300
-	Misc cabling, camera mounts and power*	\$5000	\$5000
1	8" NTSC Monitor	\$400	\$400
1	DVD Recorder (archive and backup)	\$350	\$350
1	Audio Limiter/Compressor	\$1000	\$1000
1	Furniture/Rack (dependent on site)	\$500	\$500
		<b>TOTAL</b>	<b>\$25,450.00</b>
<b>Equipment for Live Cablecast</b>			
2	vBrick H.264 encoder/decoder**	\$18,000	\$18,000
<b>Equipment for Live Web Streaming***</b>			
1	Web Streaming Computer	\$2000	\$2000

\* Cabling will vary from site to site depending on distances and existing electrical and architectural features.

\*\* CMCM is actively exploring lower cost solutions for reliable broadcast quality live transport.

\*\*\* Web Streaming Hardware includes computer, video digitizing card, software and set-up, configuration to stream Flash video.



Below is our standard rate sheet for production services:

## CMCM Production Services – Rates

### Free Services

**Program Playback on Channel** free

**Community Calendar Submissions** free

**Consultation for Field/Studio Production** free

**Membership** \$35/25 year individuals  
\$100/200 organizations

**Training/Class Fees** Varies, see specific class information

### Field Productions (off site)

**Single Camera Videotaping** \$200 (up to 3 hours)  
*Includes operator, professional camera and mic, lights optional* \$350 (3-5 hours)  
\$450 (5-7 hours)

**3 Camera Switched Production** \$800 (up to three hours)  
*Includes Anycast Switcher, live or post-produced graphics, web copy and DVD* \$150 each additional hour

### In-House Productions

**Studio Production** \$250 hour  
*Includes two CMCM crew members for technical production*

**Studio Show Producer** \$150 per 30-60 min program  
*Responsible for show production, crew, graphics, etc. (optional)*

**Editing/Post Production/Graphics** \$75 hour

**DVD Creation** \$75 per master  
*Includes DVD menus and cover*

**Tape Duplication** \$10 per program  
SVHS, DVD, DV, DVCAM, Beta