

Broadband Media Access in Humboldt County

How IP media streaming over fiber connects the community cost-effectively

Humboldt County, California is located on the picturesque Redwood Coast six hours north of San Francisco. While this remote, rural area is a very pleasant place to live, the cost of gas is about 20-percent higher than anywhere else in the nation. For this reason, having a wide area network (WAN) for transferring video and media is critical to connecting Humboldt County citizens, agencies, and government officials and fostering a sense of community.

As the sole PEG operator serving Humboldt County, cable company Access Humboldt made a commitment to the community to accept live and pre-produced video from Humboldt citizens over its high-speed fiber WAN, then air the programs on its PEG channel.

Making An IP Connection

To accomplish this, Access Humboldt set-up more than a dozen high-speed data drops at various public locations throughout the County, including libraries, colleges, and municipal buildings. This non-profit PEG provider also deployed content ingest kiosks at these remote data drops so people could import and transfer content from their own computers and DVDs via the fiber WAN. Taking advantage of this convenience, these video contributors now save the time and expense of driving to Access Humboldt's facility in the town of Eureka.



Due to its remote location, fuel costs are 20% more than elsewhere in California.

While Access Humboldt cablecasts multiple channels with a recent generation video server, it was not able to decode MPEG-2 transport streams sent as IP video over the WAN. Seeking to accomplish this using open standard encoders, Access Humboldt discovered that TelVue Princeton broadcast servers decode standard MPEG-2 IP streams using the same high-quality hardware MPEG decoders used for file-based playout. Not only did this eliminate the need for a separate IP decoder, it seamlessly integrated these live events with the primary playback schedule and simplified reporting.

In its search for a server-based, cross-platform DVD import application, Access Humboldt was pleased to learn that TelVue Princeton broadcast servers include, at no extra cost, a DVD Import hot folder for adding content from DVD's with a simple drag-and-drop. TelVue also offered unmatched 24/7-tech support, Linux-based reliability, and the convenience of remote scheduling and administration.



TelVue Princeton™ Series Servers

Fast, Cost-Effective Integration

In July 2008, Access Humboldt purchased a four-channel TelVue Princeton B3400 and compact TelVue Princeton B100, along with numerous open-standard MPEG-2 IPTV encoders. Within days, the B100 was installed at Access Humboldt's cable head-end; the B3400 was operating in its master control; and MPEG-2 encoders were being installed at the remote fiber drops.

On August 18, 2008, Access Humboldt broadcast a live meeting from the Fortuna City Council chambers using the new IP encoder and TelVue Princeton servers. The IP stream travelled over 20 miles of fiber and went through the encoding and decoding process twice—once to get into Access Humboldt's master control, and a second time for the connection between Access Humboldt and the cable head-end. Visual inspection of the return signal showed marked improvement over the previous solution—whereby content was broadcast over a traditional coaxial system using analog transport solutions.

Three days later, Access Humboldt broadcast a full-day regional forum on "Rural Broadband Needs" from the Fortuna River Lodge, another location on the fiber network. Live coverage of the forum was IP streamed to the server and cablecast making the event available in real time to folks around the County. A return feed in the conference hall showed a crystal-clear signal with less than a 10-second delay, even after being encoded and decoded twice.

At this forum, Access Humboldt demonstrated the power of broadband media networks to connect communities across the County. Among the benefits of this IP streaming solution, presenters at the conference were able to reach a broader audience and Access Humboldt created value for dozens of agencies.

Now that Access Humboldt has proven the effectiveness of IP streaming over their WAN, they are "turning on" data drops at additional public locations, as well as developing a new free public Wi-Fi service as part of its community broadband media access efforts. This gives county residents even greater convenience. They can now upload their video remotely from their computers using Wi-Fi—another great way to avoid the time and expense of driving around this vast, rural area.



Julie Ryan schedules the server playback for later in the week while the broadband forum is simultaneously cablecast using the same fiber connection.



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