Video Quality Working Group Preps for Broadband Involvement

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By Michelle Zilis, Managing Editor

One technical working group is seizing the opportunity to have a voice in the video requirements used on the nationwide public-safety broadband network with the creation of a video quality handbook, Web tool and more.

The U.S. Department of Homeland Security (DHS) Office of Interoperability and Compatibility (OIC) Video Quality in Public Safety (VQiPS) working group held its fourth annual workshop in Denver in late July. The Public Safety Communications Research (PSCR) group is working on behalf of the DHS OIC to develop the technical requirements.

This year the group expanded the focus from strictly video quality to examine all the moving parts, including governance, training and technological options. Case studies were shared from three of the four largest cities in the Unites States, as well as other local public-safety agencies and a representative from the U.K.

The workshop shared the major accomplishments the group has achieved during the past year and gave the 92 attendees an opportunity to look over and offer suggestions for improvement.

One of the big projects presented was a 50-page video quality handbook that is intended to be a guidance document for the First Responder Network Authority (FirstNet) to use when establishing rules for public-safety video.

"Video Quality in Public Safety (VQiPS) has taken a leadership role in applying best practices as guidance for law enforcement, first responders and agencies," the handbook says. "Anyone who has seen a video stream lose connectivity or suffer packet loss while watching a live televised sporting event knows the frustration of missing a key play because of a poor picture. For public-safety practitioners using incident video services, however, a clear picture could mean the difference between life and death."

The handbook includes use cases and video system surveillance components, equipment and configurations. The technical document was distributed to attendees to read and offer feedback. VQiPS plans to have the book finalized and distributed to FirstNet by the end of September.

The group also presented a Web tool that offers different use cases and use classes for video needs. The website is designed to help agencies identify what type of video system their agencies might benefit from and includes spreadsheets, Q&As and surveys. The Recommendation Tool for Video Requirements helps users determine what a system would look like if they follow a particular formula.

The establishment of the Video Technology Advisory Group (VTAG) was also discussed. The practitioner advisory group falls within the National Public Safety Telecommunications Council (NPSTC). VTAG was created to interact with end users and industry representatives and bring its findings back to VQiPS. VQiPS, a DHS-sponsored enti-

ty, has more restrictions about interacting with industry representatives than NPSTC. VTAG will have a broader mission but will help VQiPS in its work.

The sessions were the most technical in the workshop's existence, with topics ranging from cloud use to video analytics, video synopsis and biometrics, as well as continued work on video quality, particularly in low light conditions.

Case Studies

Agency representatives shared how they've started incorporating video into their public-safety systems. A key theme that emerged was the use of partnerships. The U.K. police and the New York Police Department (NYPD) have partnered with private business owners, the Los Angeles County Sheriff's Department is allying with school districts, while others have partnered with departments of transportation and other public-safety jurisdictions and entities.

"It helps to be knowledgeable about potential partnerships," said John Contestabile, assistant program manager, homeland security, Johns Hopkins University. "There are a lot of opportunities out there; people just aren't connecting all the dots yet." Contestabile previously worked as the director of engineering and emergency services at the Maryland Department of Transportation (DOT) and was involved in a project where the Maryland State Police partnered with the DOT to use its fiber for high-capacity backhaul. "Transportation has some of the most robust networks in the country due to the fact that they need to communicate with various devices in the field," he said.

Funding for the video projects ranged from full federal grants to no federal funding at all. For example, the National Capital Region's (NCR) project to consolidate and streamline an information platform is mainly funded with federal 2011 Urban Areas Security

Initiative (UASI) grants.

The city of Houston began a wireless mesh public-safety video program in 2006. The program is entirely DHS funded, which means it is being piecemealed together because the city receives varying amounts of funding each year. “It’s similar to driving on a freeway that is being built at the same time,” said Jack Hanagriff, Office of Public Safety and Homeland Security, city of Houston.

However the Los Angeles County Sheriff’s Department has not received any federal money for its video project. Instead the department is paying for the project with local revenue and partnerships. The program was designed to incorporate CCTV, license plate recognition (LPR) and gun shot detection technology into its system. “Partnerships is where everything is going,” said Sgt. John Gaw, technical services division, L.A. County Sheriff’s Department. “It seems like everyone is expanding and funding through partnerships.”

Of the millions of CCTVs used in the U.K., a vast majority are owned by commercial entities, and a majority are not connected, said Paul Smith, chairman, Lawrenson Smith and former officer of the U.K. Intelligence Community and British Army. Instead, the police connect the owners together by geographical area to help one another, as well as the police. “We’re trying to use community engagement,” he said. “Commercial companies will take the lead. They have the money. It’s public safety’s job to team up with them.”

The two-day workshop wrapped up by looking at future events. September promises to be a busy month. In addition to finalizing the handbook, two reports stemming from the group should be published — one from PSCR on the results for technical tests and one about the workshop’s results. Broadband initiatives will start once FirstNet begins work

on the nationwide network.

“As video technology continues to evolve, it is imperative for the VQiPS working group to convey clarity in an increasingly complex environment,” said Cuong Luu, program manager, DHS OIC in an email following the event. “All of the progress made last week was a result of the efforts of the many individuals who attended the workshop. … As video technology continues to evolve, it is imperative for the VQiPS working group to convey clarity in an increasingly complex environment.”