



Video Quality in Public Safety

Background

Public safety practitioners rely heavily on video technology as a tool by which to keep the Nation safe. Poor quality video footage can have serious implications and may mean the difference between life and death.

No matter how video is used – as evidence in a criminal case, to provide aerial images of wildfires, to monitor highway traffic, to assess the scene of an accident, etc. – video applications are quickly emerging as an essential component of effective public safety communications. In the past, many practitioners relied on manufacturers to provide video equipment specifications. However, as video technology has evolved, the equipment options have become increasingly complex. As a result, many public safety agencies now lack the tools, support, and information they need to make informed video system purchasing decisions. Unbiased guidance is essential for practitioners to clearly articulate their video quality needs.

An Innovative Approach

In 2008, the Office for Interoperability and Compatibility (OIC) within the Command, Control and Interoperability Division (CCI) partnered with the U.S. Department of Commerce’s Public Safety Communications Research program to form the Video Quality in Public Safety (VQiPS) Working Group. The VQiPS Working Group is comprised of volunteers from each public safety discipline, including law enforcement, fire, and emergency medical services from the local, state, and Federal levels, as well as representatives from industry, Federal agencies, academia, and non-profit organizations. Together, these entities work to coordinate disparate video standard development efforts and ultimately arm public safety consumers with the knowledge they need to purchase and deploy the right video systems to fulfill their missions.

The VQiPS Working Group’s key initiatives include:

1. Develop a set of usage scenarios that are independent of application
2. Develop a guide to help public safety agencies perform the following:
 - a. Assess video needs for their usage scenario
 - b. Match their needs to technical performance specifications and standards for the development of a video system procurement document
3. Develop a glossary of common terms
4. Compile an inventory of existing standards and specifications that address key video quality requirements for the usage scenarios
5. Develop a common library of test clips that represent common use cases

CCI’s Role in Video Quality

The use of video in public safety will undoubtedly increase as agencies migrate to more powerful broadband systems. CCI is working to bridge the communication gaps between diverse agencies to prevent duplicative or competing efforts in defining and deploying video systems. CCI is also acting as an objective technical resource to ensure that future video technologies reflect the needs of the entire public safety community.

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Through a practitioner-driven approach, the Command, Control and Interoperability (CCI) Division within the Science and Technology Directorate creates and deploys information resources—standards, frameworks, tools, and technologies—to enable seamless and secure interactions among homeland security stakeholders. With its Federal partners, CCI is working to strengthen capabilities to communicate, share, visualize, analyze, and protect information.