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Security and Surveillance Product Information for Architects and Engineers

## Emerging Standards in Video Security

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One of the obstacles to greater adoption of IP video in security and surveillance has been the lack of agreed-upon and adopted technical standards. However, significant progress is being made by a number of emerging and existing standards bodies, all of which are working hard to define and develop standards that are suited to the specific needs of IP video security and surveillance. In this installment of Pelco Consultant, we examine the progress of IP video security standards.

### Why Standards?

A technical standard is an established norm or requirement. It is usually a formal document that establishes uniform engineering or technical criteria, methods, processes and practices. Most importantly, technical standards pave the way to interoperability between devices. It's not that the video surveillance industry is operating without any technical standards. From electrical power standards governing voltage and current to IT standards dealing with compression and networking to international standards regarding physical materials, video security manufacturers and integrators deal with and rely on technical standards on a daily basis. Indeed, progress in IP video to date is built on the successful adoption of previous IT standards, including Ethernet, TCP/IP, RAID, USB, Universal Plug and Play, MPEG-4, H.264, and much more.

But in the absence of technical standards that deal directly with network video for security and surveillance, manufacturers and customers alike face challenges in the interoperability of network devices – cameras, encoders, recording and storage devices, etc. The adoption of technical standards will bring enormous benefits to the video security industry. End users and integrators will enjoy greater choice and flexibility in designing and deploying solutions to meet their evolving needs. For manufacturers, standards make it easier to develop and deliver interoperable devices that play well with others. Instead of having to develop and test their products independently with dozens of other manufacturers' devices and systems, manufacturers need only develop products that conform to the technical standards. Thus, effective standards reduce the cost of development, increase the speed of deployment, and expand choices for customers.

The two most active standards organizations are PSIA and ONVIF, though other bodies are working on standards as well. In keeping with our commitment to Open and Integrated solutions, Pelco is committed to supporting these initiatives and are doing so by participating as members of most. Here's a look at the groups developing IP video security standards:

#### **PSIA (Physical Security Interoperability Alliance)**

PSIA is a consortium of manufacturers and integrators from across the physical security industry – encompassing alarm, access control, and video. PSIA has good support from the industry and solid momentum. Several IP manufacturers

### About PSIA

The Physical Security Interoperability Alliance is a global consortium of nearly 50 physical security manufacturers and integrators that are focused on promoting interoperability of IP-enabled security devices across every segment of the security industry.

Participating companies include

Adesta, Arecont Vision, Assa Abloy, Cisco Systems, GE Security, Genetec, Honeywell, IBM, IQinVision, Johnson Controls, March Networks, Milestone Systems, NICE Systems, ObjectVideo, OnSSI, Pelco, SCCG, Stanley Security, Texas Instruments, Tyco International, Verint and Vidsys.

Founded in February 2008 and officially incorporated in March 2009, PSIA's objective is to develop standards relevant to networked physical security technology. Under the direction of its Board of Directors, PSIA promotes and develops open standards relevant to networked physical security technology across all segments including video, access control, analytics and software.

PSIA supports license-free standards and specifications, which are vetted in an open and collaborative manner to the industry as a whole. There are currently five active working groups: IP Video, Video Analytics, Recording and Content Management, Area Control and Systems. The organization reviewed and ratified its 1.0 IP Media Device specification in March 2008 and more than 700 companies have registered for the specification since its initial release.

Source: <http://www.psialliance.org/about.html>

For more information on these or any consulting or specification issue, please contact Pelco A&E Business Development Manager, Don Tennyson at: [dtennyson@pelco.com](mailto:dtennyson@pelco.com)

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## About ONVIF

Established in 2008 by Axis Communications, Bosch Security Systems and Sony Corporation, ONVIF (Open Network Video Interface Forum) is a global and open industry forum that is committed to the adoption of network video in the security market. ONVIF's mission is to facilitate the development and use of a global open standard for the interface of network video products. ONVIF membership is open to manufacturers, software developers, consultants, system integrators, end-users and other interest groups that wish to participate in the activities of ONVIF.

ONVIF is committed to the adoption of network video in the security market. The ONVIF specification will ensure interoperability between network video products regardless of manufacturer. The cornerstones of ONVIF are:

- Standardization of communication between network video devices
- Interoperability between network video products regardless of manufacturer
- Open to all companies and organizations

The ONVIF specification defines a common protocol for the exchange of information between network video devices including automatic device discovery, video streaming and intelligence metadata.

Source: <http://www.onvif.org>

demonstrated PSIA-compliant devices at ASIS International Seminar & Exhibits in September 2009, and many PSIA-compliant devices will be released to the market in 2010. Pelco has been a voting board member for the past year and a half.

### *ONVIF (Open Network Video Interface Forum)*

ONVIF is an industry forum comprised of manufacturers. ONVIF enjoys broad support from the industry and solid momentum. Several IP manufacturers demonstrated ONVIF-compliant products – specifically, network cameras and software clients. Many ONVIF-compliant products are expected in the market in 2010. Pelco is in the process of joining as a user of the ONVIF standards.

### *IEC TC79 (International Engineering Consortium)*

IEC is a globally focused standards body. The IEC's Technical Committee 79 is working "to prepare international standards for detection, alarm, and monitoring systems for protection of persons and property, and for elements used in these systems." Typically, the pace of IEC standards development is very slow. However, IEC standards do attain market acceptance, and TC 79 has the potential to impact many specifications worldwide if it releases a standard. Pelco joined in mid-2009 and holds a leadership position in the workgroup for IP CCTV standards.

### *SIA (Security Industry Association)*

SIA is the leading U.S. trade association for the physical security industry. Though SIA is working on standards for IP video, its pace of development is typically more deliberate than that of manufacturers' consortia and currently has little market acceptance. Pelco has been a long-term voting board member of SIA.

### *HDcctv Alliance*

HDcctv Alliance is a manufacturers' consortium that promotes "industry adoption of HDcctv based on all-digital transmission over coaxial cable of broadcast-industry-standards-compliant serialized uncompressed video." HDcctv approach is based on adapting an existing broadcast-television technology for use in CCTV. Pelco is not participating in this standard.

## Leading Standards

Most significant IP video systems suppliers are supporting both PSIA and ONVIF. Some camera suppliers are also showing support for both PSIA and ONVIF, but the majority have picked one or the other – which is perfectly sound, since most head-end suppliers will support both PSIA and ONVIF over time. Being a member of the group does not mean the company is committed to releasing products that support the standard.

Pelco is planning to release products that support both PSIA and ONVIF during 2010.

On the systems side we will implement both PSIA and ONVIF. This is in-line with the majority of head-end suppliers. Supporting both standards reinforces Pelco's commitment to open and integrated solutions, while enabling more rapid rollout of products for customers. Our first implementation is already underway, with PSIA ready for testing and ONVIF now in development.

On the Imaging/Camera side, Pelco plans to implement one of the standards in an upcoming Sarix firmware release in late 2010. In selecting the standard to implement in IP cameras, Pelco will pick the standard we feel will give our customers the greatest array of choice and compatibility with head-end suppliers.

The next 6 – 12 months will be very exciting, as most manufacturers are claiming they will be shipping standards-compliant products in that time frame.