

POST Command College Class # 38

FINAL ARTICLE

“A Picture is Worth a Thousand Words”

Using Internet Video Conferencing to Enhance
Communication and the Public’s Safety

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Will the general public soon demand a higher standard of communication than emails and phone calls can provide? Will the future success of police department's hinge on creating closer relationships with the public through the use of emerging technologies?

Law enforcement agencies now have the opportunity to enhance the quality and effectiveness of communications with the general public through the use of Internet Video Conferencing. The concept of developing and implementing Internet Video Conferencing (IVC) in police departments is predicated upon the notion that **improved communication** between law enforcement and the public they serve is a crucial element of enhancing the quality of public safety.

Once the public accepts the IVC as a way to effectively supplement face-to-face communication with the police, and begins to use the system with regularity, the value of web camera communications should begin to emerge. As the number of positive uses increases, we can anticipate more valuable information will be shared with law enforcement to solve crimes and, ultimately, to greater levels of community satisfaction.

Those agencies lacking solid communication skills will flounder in the coming decade, and their communities will suffer as a result. This article will look at **one way** to improve communication skills and discuss ways in which IVC can help create a foundation for future successes.

Communications, Technology, and Community Policing

In an effort to advance communication efforts within the profession and to their constituents, law enforcement is increasingly turning to a more technological approach to partnership building. In an Internet article by Robert Trojanowicz titled "Community Policing Guidelines for Police Chiefs", he noted that law enforcement must increasingly make proactive efforts to become better community problem solvers. The article states many people erroneously perceive community policing as anti-technology, even as computer terminals, cell phones, and telephone answering machines can, and have, enhanced communication with the general public.¹

Emerging technology can play an increasingly important role to advance communication between the police and their constituents. In decades past, many of the crucial skills for officers and deputies involved learning how to piece together elements and "corpus delicti" of crimes, then hand writing a report that was both well organized and easy to read. Technology was not a key factor in the everyday routine of an officer except for basic radio communications and checking records/warrant information. But as technology began to change and rapidly advance in the private sector, so too did the expectation that law enforcement agencies would embrace these advances and incorporate new technologies into everyday practices, policies, and procedures.

Computer Aided Dispatch (CAD) systems integration is one example of technology becoming more commonplace in the police environment. CAD was introduced in the 1980's, and became more advanced over the succeeding two decades to capture valuable information and assist in the prioritization of calls for service.² Radio systems became more advanced, allowing a greater diversity of frequencies for inter-agency communication. Vehicle and hand held radios became a stronger and more effective means to communicate information rapidly to the field officer and personal computers became commonplace at each workstation in the office.

It was primarily in the 1990's when we began to see some police departments mount mobile data computers in patrol vehicles so officers could receive more information about a particular call for service.³ Officers also could run person and vehicle checks without the assistance of dispatchers and could bring up a variety of valuable information to assist them better perform their increasingly demanding and complex job.

With all of these technological changes now widely used by the police, the fundamental skill of effective and quality communication through the use of emerging technologies cannot be underestimated in its overall importance for creating better public safety.

Additional Historical Perspectives

An Internet article entitled "Improving Communication", emphasized the importance of face-to-face communication for its value of conveying information as well as the emotions of the words we receive through body language and voice tone.⁴ Even though different people may prefer different methods of communication, the ability to successfully listen and communicate helps people feel more connected with one another. IVC technology allows a close substitute for face-to-face conversation, and can become an integral link in the emerging future where the police and the public will learn to communicate at a greater frequency than in the past to serve their mutual needs.

In another Internet article located at agilemodeling.com and updated in January 2006, author Scott W. Ambler compares different modes of communication and ranks them based upon their relative effectiveness.⁵ (See chart A) Mr. Ambler charted communication effectiveness versus richness of communication and uncovered some interesting results. He found the communication form of least effectiveness was in the form of paperwork. Audiotapes which trailed emails, videotaped statements, and phone conversations were judged to be more effective to convey meaning.

Not to editor: you could insert chart A and the digital photographs into a box in the middle of the text if you wish...

Video conversations were a better form of communication than all of the previously

mentioned modes, trailing only face-to-face communication as the best way to effectively communicate with another person.

IVC and Community Policing

According to the California Attorney General's office, community oriented policing and problem solving (COPPS) is an effective strategy to solve problems and create safer communities.⁶ While it's true IVC will not replace other forms of communication, it certainly can become another very useful tool in the communication process to serve the goals of COPPS by opening access to the police by a broad spectrum of potential community partners. As professionals in the field already know, law enforcement is not just focused on crime prevention and apprehension; it has also expanded to the point where officers are helping solve traditionally non-police matters such as dealing with complaints about potholes in roadways or street lights not working properly. Peace officers could potentially use IVC to facilitate the liaison between the public and a variety of resources, greatly increasing their ability to help solve complex and often long-term problems.

Without IVC to support other remote and direct means of communication to strengthen relationships between law enforcement and the general public, it is likely crime prevention efforts will be less successful than envisioned, in-progress crimes will not be solved as frequently, investigations will have fewer leads and willing witnesses and corresponding clearance rates will decline. This could ultimately weaken the public's confidence in law enforcement's ability to protect the citizenry.

Future Potential of Internet Video Conferencing Systems

Knowing that effective communication is a key step to work more successfully with the public, let's specifically focus on the use of IVC as a means to facilitate a higher level of communication with the public.

IVC in the private sector has already been used for some time now. The first web cameras actually had origins before the World Wide Web; in 1991 a computer scientist at Cambridge University set one up to monitor coffee usage by staff in the computer science department!⁷ Large multi-national corporations have taken advantage of IVC to allow employees and clients on opposite sides of the country and around the world to have real-time meetings.

Two different, but related, types of IVC systems are currently being utilized to meet goals for separate purposes. Network web cameras and personal computer web cameras both play a role to communicate video and voice images in real time between locations.

Network video cameras can best be described as a camera and computer combined into one unit. Everything needed to view images and associated sounds are included in the network unit since the built-in software has access to a web server as well as an email link.⁸ This video technology is most commonly used for security purposes, with equipment being installed either in public places or in offices and the perimeters of buildings. This type of web system can be remotely activated to record or broadcast live images and sounds to a security officer in a fixed location, or it can be automatically activated by sound or motion.

Network video cameras are best utilized to capture video and voice images of suspicious persons that can be used to identify, capture, and prosecute criminals. Though two way communication is possible, this feature is not often used in the United States, though it is more commonly use in foreign countries such as England.⁹

Personal web cameras, however, provide an entirely more practical interactive communication tool with great promise for law enforcement. Internet access is commonplace across the country, with about 137 million Americans using the Internet.¹⁰ It's quite possible the widespread application of web camera video conferencing systems may not be far behind.

Practical applications of personal web camera IVC systems can already be seen in other countries. In Belmont, Ontario Canada, a web camera allowed an injured 4th grade student, who had to stay at home, to remain connected to his teacher and fellow students through an IVC hook-up. Instead of reading textbooks at home and being isolated from his classmates, this ten year old boy was able to interact with his class, ask questions, watch classmates give speeches and even deliver his own speech to his entire class.¹¹ The student's mother was quoted as saying the web technology was very easy to set up and use and she hopes more schools with injured students will adopt the use of this kind of technology.

Another practical application of an IVC system involves the Shen Zhen, China Fire Department. This progressive fire department was seeking a way to remotely access conditions at any fire scene, in real time, so proper equipment and support personnel could be sent to help the on-scene firefighters. Shen Zhen installed tiny cameras on the helmets of several firefighters from each station so they could have live web camera feeds from the scene of any incident sent to their fire prevention center. Currently more

than 140 video units have been supplied to their fire stations to provide wirelessly transmitted live video back to their command center.¹²

In a fire incident, the General Commander (Fire Chief) at the command center can receive the live, high quality streaming audio and video images from a fire scene. Once the true nature of the incident has been determined, he can quickly provide direction to

the scene supervisors and makes certain all of the necessary resources are available. The audio and video images can also be recorded in real time to a computer hard disk, providing valuable information for future investigations, analysis and training.

Another example of web camera technology being used by a public safety organization is occurring in the United States. In the Seal Beach, California Police Department they recently experimented with a new technology called A-TIP. A-Tip stands for alarm-triggered Internet protocol which is a live broadcast of video images sent from inside a local bank to the police department via the Internet. This system allows the police to see and hear live video images from within a bank as soon as a bank employee triggers a robbery alarm.¹³ The ultimate goal of this system is to make it available on handheld devices police officers in the field will eventually be carrying so they can see a potential crime unfolding first hand and be able to respond accordingly.

These examples of web camera video technology currently being used by the Shen Zhen Fire Department and Seal Beach Police Department provide practical success stories from a public safety perspective. The future of law enforcement across the United States could very well include web cameras attached to each personal and mobile computer so all police employees could communicate with one another and members of the community more effectively. Whether it will be one-on-one or group web communications, a higher standard of communication which is easy to install and use could be an attractive tool for the public to access and use.

Budgetary Considerations

Web camera technology can have very valuable and practical applications to share information and create internal and external partnerships to enhance the quality of delivering public services. But what about the cost of installing such a system? In the case of the injured student in Ontario Canada the only cost was an \$80 investment in two web camera's that could be attached to personal computers that already existed.¹⁴ Though the actual cost to use an IVC in China is unknown, it would cost the City of Pleasanton, California approximately \$5,000 to install web cameras on virtually all of the 50 or so personal, non-mobile desktop computers within the police department.

Budgetary considerations are certainly an important issue these days for public organizations. Increased expenditures coupled with flattening or reduced tax revenues make it even more important for governmental agencies to wisely spend their funds. With this in mind, a search of various Internet sites for cost efficient web camera systems was conducted. No less than 71 products costing less than \$100 per unit were discovered. A typical web camera system in this price range could provide a windows-compatible 30 frames per second, digital zoomX4, high quality audio and visual system that could easily be attached to virtually any kind of personal computer.¹⁵ There are many variations of web cameras available and each agency has to decide what fits their needs the best.

Potential revenue strategies include grants and/or inclusion in an operating budget. A department with a staff of 100 employees, for instance, could purchase web cameras for every employee at a total cost of \$10,000 assuming each web camera unit cost \$100. The cameras would only be activated when an employee was actually present to receive the video call. After normal business hours, IVC would only be monitored in records and dispatch.

As the public becomes more comfortable with this newly applied technology, elected officials and budget policy makers should have enough public support to secure all the funding needed to implement this progressive communication system.

Ten Steps for Implementation

As already suggested, an IVC system is not a radical change being proposed, only another worthwhile public relations tool to consider. With this in mind, a variety of steps are outlined here to help guide the development of an Internet Video Conferencing project if a police department wants to be more technologically linked with the public:

1. First, secure the support of the Police Chief and the police managers for the general concept of **enhancing communication** through IVC.
2. Share the general concept with line level personnel early on and ask for their input.
3. Float the idea to the City Management staff via the Chief of Police so input and support can begin to be developed from the top levels of city leadership.
4. Involve city Information Systems personnel in the early stages of development so the proper hardware can be purchased and installed.
5. Set up a few IVC sites within the police department to test the system and work out any technical issues that may develop before launching the project in a public forum.
6. Publicize the experimental system in the local media so the general public can begin to learn about the possibilities and potential benefits of the system.
7. Establish several IVC sites outside the police department so selected members of the at one time. (Note: The use of IVC would only be used to supplement, **not** replace face-to-public can begin to see the benefits of the system. Block captains in a neighborhood watch program may be a good place to start since valuable crime prevention information can be shared and dispersed to multiple neighborhoods face contacts.) If an IVC were set up at a community center, for instance, it could be monitored by a person in the records/dispatch bureau for a quick response.
8. Begin to develop a funding source such as grant funds or inclusion into an operating budget in preparation to expand the program incrementally throughout the department.

9. Provide continuing training and information to all employees as the program is being developed so employees will be comfortable with the concept when it is ready to go on-line for the majority of the department.

10. Have a stated target date, perhaps 2-3 years down the road, to implement the system on all computers within the police department and make sure employees and the media are involved and informed as the program comes to fruition.

The Transitional Process

To develop and implement a successful change strategy, many different people need to be identified and their roles defined. In most police agencies, the administrators generally are the change strategists because they are the ones who are most likely to identify a need, create a vision, and decide what change is realistic for the organization. The change implementers are frequently the mid-managers and first-line supervisors who are the people overseeing line personnel and making sure day-to-day operations take place. The line level personnel made up of police officers, dispatchers, community service officers and volunteers are usually the recipients of change and play a key role in the eventual success of any new endeavor, including an IVC communication system.

In the process of developing a transitional change model, organizational leaders need to make a conscious effort to shift from the status quo to a known new state by implementing new products or services. To achieve this new state of growth, IVC needs to become a norm for the agency, and employees must be willing to adapt to its use as a tool to improve service to their public.

Implementation of a Strategic Plan

The preferred implementation strategy for an IVC system in most agencies should involve a more gradual and incremental approach. This approach allows time for police employees and other stakeholders to make a smoother transition to a more effective form of communication.

Like any new venture, the people most affected by a change in operational standards need time to digest the purpose and value of the change. If the Pleasanton, California

Police Department, for instance, expects its employees to correctly use the IVC system they must first understand and accept the potential benefits to be gained by its use. In the case of an emerging technology like IVC, it is beneficial for all members of the department and community to have a slow and measured implementation process so

glitches can be worked out prior to widespread use.

Desired Outcomes

I believe there are several desired outcomes of developing an IVC system that will eventually result in the success of this program. First, more effective and efficient communications between the public and law enforcement should occur, allowing the public to see and hear from police personnel in real time and deal with issues without delay.

Second, a higher level of openness and accountability between the public and the police department should result from implementing an IVC system as shared goals to provide public safety are more effectively discussed and then jointly implemented.

Finally, municipalities implementing this kind of progressive communication system will be in a position to set a higher standard for other governmental organizations at the local, state, and federal levels of government to emulate.

Summary

The business world has seen the value of using IVC for almost fifteen years; it is time for law enforcement to embrace this advancing technology as well. After all, it's only reasonable for the public to expect government to be more responsive to new technologies and utilize it in a more efficient manner. Given that law enforcement's credibility is perhaps its most important asset; it needs to make every effort to interact more effectively with the public through use of more technologically progressive forms of communication.

While community based strategies like citizen academies, neighborhood watch groups and youth diversion programs help policing agencies form stronger connections with its constituents, the police also need to utilize modern technology more pervasively to enhance the quality of communication with the general public. I believe the development of IVC systems in law enforcement agencies can be another effective tool to facilitate more successful communication between the police and the diverse members of the general public. The net result serves both the interests of the police to protect the public, but also that of those served who wish to enhance the quality of life in their communities.

As the public experiences more effective communication with members of the law enforcement community through IVC, a healthier partnership will naturally take place. The ultimate hope is that creating better relationships will result in increased levels of public support for the law enforcement profession, safer communities, and a higher standard of living for all members of the public.

Endnotes

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