

THE INTERNET DRIVEN PATROL OFFICER OF THE FUTURE

Article

California Commission on
Peace Officer Standards and Training

by

Mark Yokoyama, Captain
Newark Police Department

Command College Class 33
Sacramento, California

November 2002

The Internet Driven Patrol Officer of the Future

Today's police officers are utilizing equipment and various pieces of technology like never before in the history of law enforcement. It was not long ago that a uniformed police officer did not have a patrol vehicle or even a portable radio. However, today's police officer can be found with a pager, cell phone, Personal Data Assistant (PDA), laptop computer, global positioning device, and numerous pieces of high-tech tactical equipment, to name a few.

In recent years, law enforcement agencies across California and the United States have increasingly utilized technologies associated with computers. It would not be uncommon in today's environment to find a police officer using a laptop or mobile computer in his or her patrol vehicle to write a police report and transmit that same report from the field directly to their police station for supervisory approval. It is also not uncommon to find police officers querying various databases from their police cars using mobile computers or cellular phones to conduct investigations.

One such technology that surprisingly has yet to be widely utilized by law enforcement is that of the Internet from a mobile or wireless environment. The use of the Internet by universities, private industry, families, individuals, and most recently, governmental agencies over the last five years has increased and become a global mode of research and communication. Even law enforcement agencies have found the Internet to be a useful tool when communicating organizational news, conducting criminal investigations and general research from one's office desktop computer. With the advent of wireless communications, the Internet has now become readily available to those in a mobile environment, such as in police patrol vehicles. Although law enforcement has not

yet widely tested the use of the Internet from a mobile environment, it is a technology that must be considered.

The use of the Internet and cellular phone technology has, on its own, changed the way human beings live their daily lives. The Internet has grown from its original intent of network computers at research institutions across the United States in the 1960s to a powerful communications medium. Applications of the Internet are continually evolving, creating new uses for business, government, and individuals, thus impacting cultures and age groups all over the world. This cultural and generation shift is not limited to North America or wealthy nations, but has spread to developing and Third World countries as well. Consider the following statistics from just the United States: Over half of the country's 105 million households have computers; 42 percent could log on to the web in 2000; nearly 90 percent of all school-aged children – age 6 to 17 – had access to computers either at home or at school; nearly two-thirds of all children between the ages of 3 and 17 lived in homes with computers; and nearly one-third of children in that age range have gone online.¹

The Next Generation Internet, 3G, or third generation and beyond, brings with it a new phenomenon. The term 3G refers to a technical specification for wireless data and communications designed to travel at a much faster rate than has been possible in the past. The first and second generation Internet consisted of analog and digital networks, while 3G has migrated to a new digital form called packet-switched networks. In very simple terms, the speed of 3G technology will allow for traditional e-mail and text based services, as well as multimedia data such as video mail, video news clips, video conferencing, television, music, photos, and so forth, to move within a wireless, mobile

environment and at a faster pace. The 3G terminals will have more varieties than those of 2G, mostly in the form of mobile phones, but with larger screens for displaying Internet pages or the face of the person being talked to. There will be smaller smart phones with web browsing and e-mail capabilities. Videophones, wrist communicators, palmtop computers, and radio modem cards for portable computers will also be available.²

Considering the following facts, one can easily see the trend of mobile communications: the average driver spends more than two hours a day in his or her car; some 70% of all mobile calls originate in a car; by the year 2005, 84% of new cars sold will have “Telematics” (mobile communication services like the Internet delivered wirelessly to in-vehicle devices) available as either standard or optional equipment;³ by 2002 more than 1 billion people will own a cellular phone; by the end of 2002, the number of mobile Internet users will exceed traditional PC connections.⁴

As society becomes more dependent upon Internet applications, one can assume that law enforcement will also follow this path. The web site Officer.com has approximately 462 links to California law enforcement agency web sites in California. Of those, 281 are municipal law enforcement agencies, including Sheriff’s Departments. Employment Data Statistics Year 2000 from California Peace Officer Standards and Training (POST) identifies 570 law enforcement agencies in California, of which, 394 are municipal law enforcement agencies, including Sheriff’s Departments. Although web sites may be used in different ways by various agencies, what these statistics imply is that a large percentage of law enforcement agencies are utilizing the Internet already.

With the advent of technologies that now allow access to the Internet using wireless connectivity, law enforcement must consider its future implications. Private industry is utilizing Internet applications via mobile computers with certain safeguards to maintain communications with customers and company representatives and to conduct daily business operations, just as if they were at a traditional desk in a business office. Law enforcement agencies have historically followed the lead of private industry in regards to business applications, and this is just another lead to consider.

As can be seen from statistics previously mentioned, the Internet is already being utilized by law enforcement and thus the obvious question is, “How and when will the Internet be used by law enforcement in a mobile computing environment?” Ignoring such a question could affect public safety and efficient policing strategies. Consider the following scenario for year 2007:

Law enforcement agencies from the Oregon border down to the Mexican border have been communicating with one another sharing criminal history information, sharing suspicious activity reports with video and still pictures, and conducting surveillance of highly populated areas using facial scanning software that alerts law enforcement to suspected criminal or terrorist activity. In addition to general criminal history and other database inquiries, these same officers can, at the click of a button, receive state approved training via video technology right in their patrol vehicles and can also provide court testimony from their patrol vehicles via video conferencing technology. Agencies using this technology have also been communicating with their local residents. Using e-mail, video technology, and instant messaging law enforcement agencies have created a new policing concept referred to as Technology Based Policing. This technology allows

officers in the field to receive real-time information or updates directly from citizens who communicate from their home or business computer, thereby creating instant communication sharing.

As part of the state's Homeland Security efforts, all law enforcement agencies are networked into a central Records Management System and thus, share a massive database. This same database works in conjunction with the California Anti-Terrorism Information Center and Western States Information Center. All law enforcement agencies in the state can receive instant terrorism and security alerts and briefings directly into their patrol vehicles. The system provides for complete interoperability of all law enforcement agencies in the state. Patrol officers no longer need to drive to their stations or sub-stations to access or receive law enforcement information, and thus patrol briefings can be held remotely from inside their patrol vehicles. The patrol vehicle has become a true mobile office making public accessibility to the officers easier, while at the same time allowing officers to remain in the field.

From a law enforcement perspective, one can see many positive and negative scenarios occurring with regards to the use of mobile Internet services. Just on its surface, critics will focus upon the inherent safety issues that revolve around operating any device in a mobile environment. One must only look at the current media reports and traffic statistics regarding vehicular accidents related to mobile phone use as a result of its related distractions. From a police management perspective, critics will argue the infrastructure and maintenance costs for upkeep of such a system, the potential abuse of the system regarding access to the Internet, or officer safety concerns. Information Services (IS) personnel may argue integration and security issues involved with

interoperability between the Internet, Intranet, and national, state, and local databases.

These are all valid issues to be considered.

From a positive standpoint, mobile Internet services can allow peace officers to have access to a true office in a mobile environment and have interoperability of services not available in the past. The following are some services that may keep police officers in the field and provide them with access to more information to carry out their job functions:

- Video conferencing for roll calls, court appearances, or meetings from a field environment; Instant access to community members using phone and video lines
- Training via Internet access and on-line education
- Live video surveillance or remote situation analysis from a distant location
- Pictures of missing children or a wanted suspect
- Instant fingerprint or facial recognition analysis
- E-mail capabilities to community members from the field
- Instant communication or interoperability with allied agencies from the field
- Access to building plans and other mapping functions for tactical situations
- Access to web-based legal and investigative resources

Criminals, terrorists, and computer hackers are taking advantage of Internet technologies to carry out their missions and criminal enterprises because of their accessibility to technology and communications. On the other hand, the lack of law enforcement communications and interoperability across the state and nation creates a large void when it comes to communications and information-sharing among law

enforcement professionals. Today, emergency incidents increasingly require a high level of multi-agency and multi-functional response by law enforcement personnel. The same can be said for pre-incident planning and intelligence sharing. The use of the Internet may be a part of the solution.

The Internet is a tool that is still developing and finding its place and use within the law enforcement profession. However, just as the telephone was once a new technology many years ago, the profession should be prepared to accept the Internet as a developing tool for the future. The complex network of existing telephone lines and cellular signals that traverse the state is a mode of communication awaiting expansion by leaders and change agents willing to step forward and champion a cause. The cause to be championed is that of expanding existing wireless and Internet technologies into the line level patrol functions of law enforcement agencies across the state. Both of these technologies have come too far to not explore future uses and applications.

The patrol officer of the future will surely be different from what it is today, but that is something the profession must become accustomed to in our ever-changing policing environment. Challenges will surely be ever present just as they have been with most everything else in contemporary policing. When one asks, "Can there be increased efficiency and proficiency of police practices, including Community Policing, better coordination of police resources, and increased access to information by using the Internet from a mobile environment for patrol officers," if the answer is "Yes," then we have an obligation to the profession to at least explore its potential.

During the time that this concept develops into reality, law enforcement organizations must promote themselves so that they receive consideration for technology

development from the industry itself. Unfortunately, for many years law enforcement has been on the user end of technology as opposed to the research and development end. Take, for example, the creation and expansion of the Internet. It was originally developed for use as a network for colleges and universities, but expanded into private enterprise after research by private sector entrepreneurs. Had law enforcement been on the leading edge of such development, its use and applicability for law enforcement would be completely different today. The culture of law enforcement must also change to encourage this type of involvement with research and development of technologies. One such opportunity for involvement is with the Net21 state research facility at the University of California, Berkeley. Net21 was recently created with private and public funding to design and shape the future of the Internet with advanced applications. It is incumbent upon law enforcement leaders to insure law enforcement representation in such endeavors.

As can be seen, there are hosts of logistical, financial, political, and management challenges for such a concept to become a reality. However, it is not something outside the realm of possibility when compared to such other endeavors like the original 9-1-1 system implementation. Law enforcement agencies must prepare controls and auditing systems for Internet access to prevent abuse, monitor over dependency on technology, and avoid a decrease in human socialization. The Internet and other information technologies will drive the future of the law enforcement patrol officer, and as such, it is incumbent upon us to consider our roles in insuring the continued success of contemporary American policing.

ENDNOTES

- ¹ Genaro C. Armas, “Net Access Increases in U.S. Homes,” The Union-Tribune, September 11, 2001, 2.
- ² Knowledge Corner, “About 3G-Third Generation Wireless Systems,” www.info.gov .
- ³ Andrew Seybold Group LLC, “Wingcast: Driving Telematics in New Directions,” White Paper, March 2001.
- ⁴ Nokia Inc., “What is 3G,” Hwww.nokia.comH.

BIBLIOGRAPHY

- Capodagli and Jackson, Lynn. The Disney Way. New York: McGraw-Hill, 1999.
- Horrigan, John B. "Cities Online: Urban Development and the Internet," Pew Internet & American Life Project, 2001.
- Hoyle, John R. Leadership and Futuring. Thousand Oaks: Corwin Press, 1995.
- Hunter, Ronald ., Mayhall, Pamela D., and Barker, Thomas. Police-Community Relations. New Jersey: Prentice Hall, 2000.
- Johnston, Richard L. "The National Cybercrime Training Partnership," The Police Chief, 69, no. 1 (January 2002): 52.
- Kouzes, James M., and Posner, Barry Z. The Leadership Challenge. San Francisco: Jossey-Bass, 1995.
- Lindblom, Charles E. The Policy Making Process. New Jersey: Prentice Hall, 1980.
- Levy, Steven. "Living in a Wireless World," Newsweek, December 10, 2001, 57.
- Maran, Ruth, Internet and the World Wide Web Simplified. Foster City: IDG Books, 1995.
- Police Executive Research Forum. "Police Management: Issues & Perspectives." Sam Houston State University, 2001.
- Report on the Telecommunications and Information Technology Gap in America. Falling through the Net: Defining the Digital Divide. U.S. Department of Commerce, 1999.
- Roberts, Steven. "Domestic Security," Journal of Counterterrorism & Homeland Security, Vol. 8, No. 2, 2002.
- Rogers, Donna. "On the Road Again," Law Enforcement Technology, 29, no. 1 (January 2002): 58
- Rost, Joseph C. Leadership for the Twenty-First Century. Westport: Praeger, 1993.