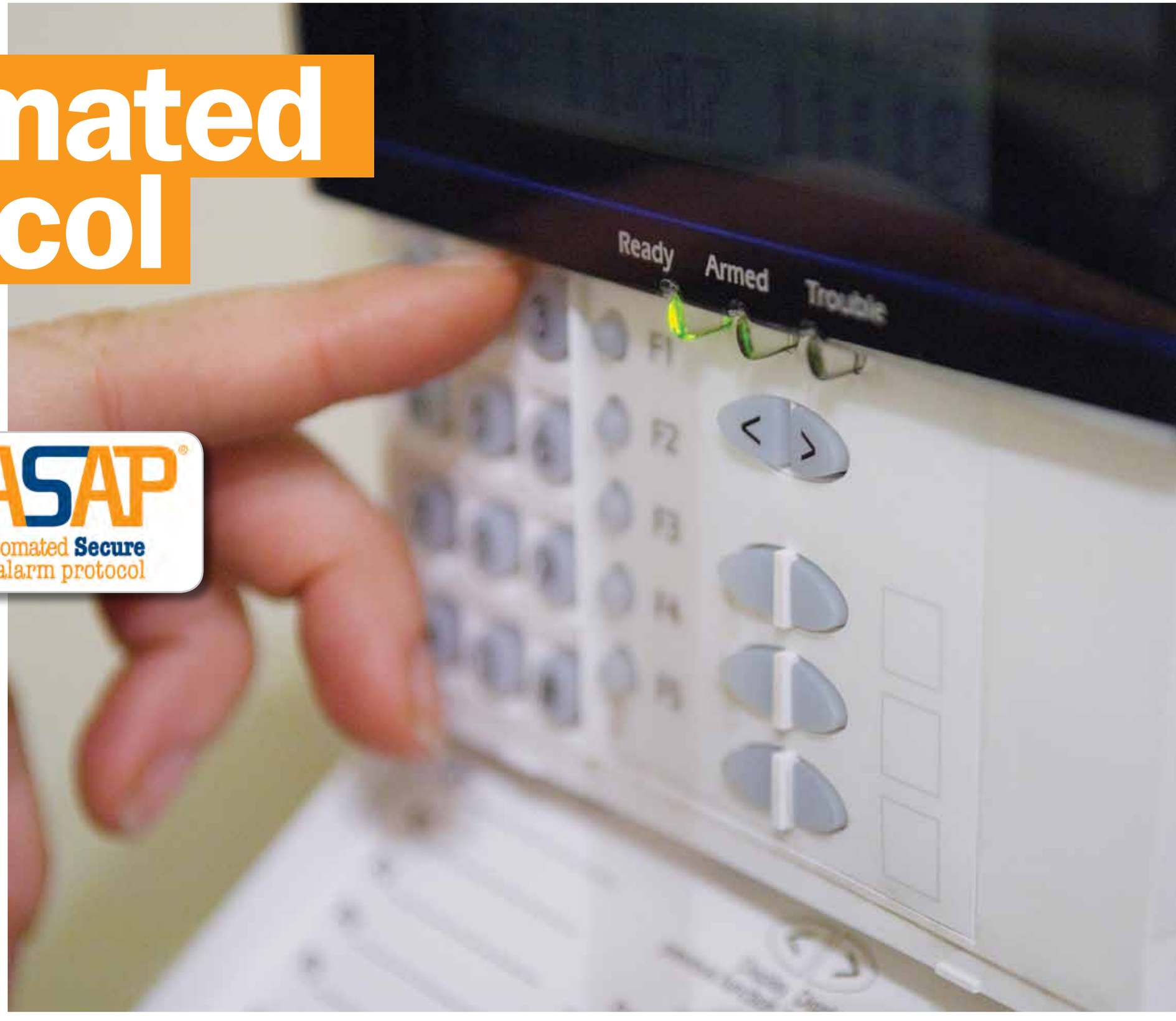
Automated Protocol

How processing alarm calls is becoming faster & more efficient

by Christina Dravis



It is not uncommon for today's 9-1-1 communications centers to be required to do more work with fewer people. An increase in crime and mobile phones has resulted in more calls for service coming into the comm center than, say, just ten years ago, yet staffing in many centers has either remained the same or even decreased due to budget cuts or agencies' inability to retain trained personnel. So when a technology comes along that has been proven to reduce the amount of phone calls coming into 9-1-1 centers by an average of 10%, it immediately gets the attention of center managers and directors across the country.

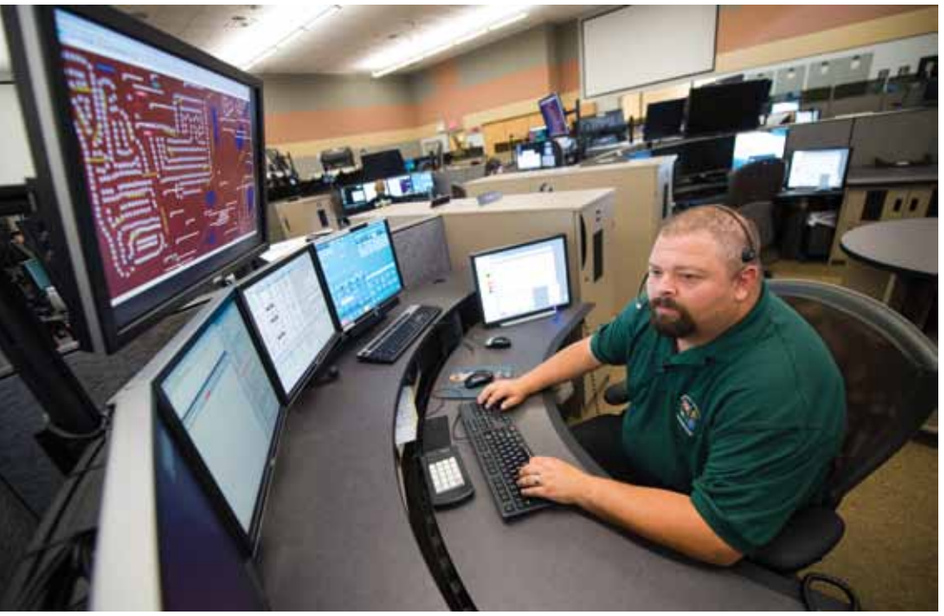
The Automated Secure Alarm Protocol, also known as "ASAP to the PSAP," was created with three goals in mind: 1) to reduce telephone calls from alarm monitoring companies to 9-1-1 centers; 2) to eliminate miscommunications between alarm operators and 9-1-1 calltakers and the mistakes that often occur as a result of those miscommunications; and 3) to reduce PSAP processing times to generate faster response times by law enforcement, fire and medical field responders. ASAP to the PSAP increases efficiency and reduces response times by allowing the information traditionally relayed by telephone to instead be transmitted automatically between alarm monitoring companies and PSAPs.

Ideal vs. Reality

Normally, an alarm operator receives a police, fire or medical alarm on the operator's workstation that is connected to the alarm company's automation system. This first step is done fairly quickly, but the next processes can take up to five minutes or longer. Under ideal

conditions, the alarm operator calls the responsible PSAP, the calltaker answers right away, the information is understood on the first attempt and entered into CAD by the calltaker without error. This can, in theory, be done in approximately one minute.

However, what normally happens is this: The alarm operator calls the responsible PSAP, which already has several phone calls in the queue and the alarm operator's phone call isn't answered for at least a minute. When the PSAP calltaker finally answers, the phone call is put on hold once it's determined that it's not a life-or-death emergency. The PSAP calltaker picks the line back up after processing higher priority phone calls and starts to enter the information into CAD. The alarm operator provides the address, but the PSAP calltaker doesn't understand and asks for the spelling of the street name.



The calltaker puts the alarm operator back on hold to answer an incoming 9-1-1 line, then picks up the alarm phone call again and asks for the spelling of the street name. Without anyone realizing it, five minutes (or longer) has elapsed before the alarm is even entered into the PSAP's CAD system. If the PSAP had ASAP in place, the alarm incident would have appeared on the dispatcher's screen within 15 seconds or less after the alarm operator sent notification to the PSAP.

The Richmond Model

The city of Richmond, Va., was one of the first PSAPs to implement ASAP and has since processed more than 25,000 alarm calls with absolutely no telephone call or calltaker involvement. In addition to eliminating the difficulty of entering calls—whether due to low volume on headsets, misinterpretation of accents or other issues—Richmond has eliminated spelling errors and accidental transposition of street address numbers.

Before ASAP, Richmond's calltakers took an average of 90 seconds to process alarm calls, with some calls placed on hold up to 8–10 minutes. Alarm calls had the worst processing times in the entire center. After implementing ASAP, Richmond's alarm call processing times were reduced to 15 seconds or less, and are now the most accurate and concise calls in the center. Similar experiences have been documented in six other centers in Alabama, Arizona, Texas, Virginia and Washington, D.C.

Bill Hobgood, project manager for the city of Richmond's IT department, was instrumental in the creation of ASAP and is still its biggest advocate. "The city of Richmond experienced two major incidents in 2011—a 5.9 earthquake centered only 47 miles from the city, and Hurricane Irene, which caused severe damage to central and eastern Virginia," Hobgood says. "ASAP worked effectively and flawlessly during both events. Alarm companies using ASAP were able to deliver their alarm notifications within five seconds, while companies that did not use ASAP and had to call the 7-digit emergency lines experienced very long wait times."

Because ASAP has reduced the amount of incoming phone calls to the Richmond PSAP, its calltakers are able to focus more on their 9-1-1 callers. "Another thing that is difficult to measure is the number of litigations that have been prevented because of ASAP," Hobgood adds. "Human mistakes happen, sometimes with tragic results. Because ASAP provides the data for some of the most accurate calls-for-service in a PSAP, there is a strong likelihood that civil lawsuits have been avoided because miscommunications and mistakes are avoided. This has the potential to save jurisdictions millions of dollars."

Potential Roadblocks

So why aren't more centers using ASAP? Even though ASAP was founded through a joint partnership between the Central Station Alarm Association (CSAA), the International Justice & Public Safety Sharing Network (Nlets) and APCO International, and has received government recognition and funding since 2010, getting the word out has been slow. ASAP was first presented at the APCO annual conference in 2012, which was the first time many had ever heard of it. Interest has since grown with each conference, but there are still two major hurdles experienced by many PSAPs interested in adopting ASAP: each CAD provider must develop the ASAP interface solution, and states must allow the Nlets message switch to forward the information from the alarm company to the correct PSAP.

Bill Hobgood

Although only five CAD providers currently offer the interface, many more companies have attended ASAP presentations and received the "CAD providers ASAP technical package." At least five additional CAD providers are engaged in the development of an ASAP interface solution. Other CAD companies have the specifications so that they may develop the interface when the time comes. Most CAD providers simply won't develop the interface without interest from its PSAP customers.

On the alarm company side, dozens of alarm company central stations (including most of the major companies) have already signed up to participate in ASAP, and this number is expected to grow to 300 during the next 2–3 years, and to 600 within 5–10 years.

Nlets is the preferred transport for ASAP traffic because it is already utilized by thousands of PSAPs and is trusted to keep communications safe and secure through its intelligent routing scheme. For Nlets, allowing the information from the alarm monitoring company to pass through its system to the states is fairly simple. Nlets has assigned two new message keys for the alarm traffic: ALQ for alarm data sent by the alarm company to the PSAP, and ALR for responses from the PSAP to the alarm company. Participating alarm companies use the originating agency ID (ORI) coupled with a unique ID assigned by the CSAA used for routing purposes.

ASAP to PSAP increases efficiency and reduces response times

Next Steps

Many states have configured their switches to accommodate ASAP traffic. It's up to the remaining states to allow the information from alarm companies and Nlets to continue to local PSAPs via the state network. Some PSAPs are proactive in making their request for ASAP heard at the state level. In my home state of New York, for example, state government has hinted that ASAP will become a higher priority if it knows that more than just a handful of PSAPs are interested in implementing it. They suggested that I reach out to the 57 counties and New York City to solicit support; in less than a month, more than half of the counties have added their names to a list that I will forward to the state's IT personnel who oversee Nlets. Hopefully, ASAP will become available to New York PSAPs by 2016.

Once a PSAP is able to implement ASAP, the process is fairly simple. Each participating alarm company performs bulk address validations to confirm that addresses are correct within a PSAP's jurisdictions. Once a PSAP starts using ASAP, new account address validations are performed automatically by an alarm company's automation software when a new account is added. Each PSAP must also decide up front which alarm types from a standardized list it will receive for police, fire and/or EMS in order for the alarm company to be able to transfer the information.

Fire/EMS-only PSAPs without Nlets access shouldn't be discouraged. If they are networked to a police PSAP, then conceivably ASAP traffic could funnel through the police PSAP's connection to the state to the fire/EMS PSAP. If not, an alternative for fire/EMS PSAPs to bypass the state control point and make use of the Emergency Services IP Networks (ESINets) is currently in development and may become available within 2–3 years.

ASAP has been an American National Standard (ANSI) since 2009 and has received multiple awards ranging from the Governor's Technology Award for Innovation in Local Government in 2009, to induction into the National Information Exchange Model (NIEM) Hall of Fame in 2013. The overarching goal is to provide the ASAP service to PSAPs in all 50 states. Some PSAPs have hinted that future legislation in their jurisdictions may require that all alarm companies use the ASAP service when reporting alarm notification to those jurisdictions.

For more information on ASAP to the PSAP, visit www.csaaintl.org/asap or email psap@csaa-asap.org. The ANSI Standard (APCO/CSAA ANS 2.101.2-2014) "Alarm Monitoring Company to Public Safety Answering Point (PSAP) Computer-Aided Dispatch (CAD) Automated Secure Alarm Protocol (ASAP)" is available for download at apcostandards.org. APCO also has information on the ASAP project posted at www.apcointl.org/resources/asap.

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