

Frequently Asked Questions published November 19, 2008

1. Are PSAPs required to adhere to the proposed Alarm Data Exchange standard and how much control will the PSAP have in how alarms are received at the PSAP-level should the PSAP decide to utilize the standard from an operational standpoint?

PSAPs will not be required to utilize the proposed standard once it is adopted as an American National Standard (ANS). However, the standard is highly recommended for all agencies interested in implementing an automated exchange of alarm-related data in order to promote more efficient and effective public safety and data interoperability nationwide.

The PSAP will be in total control and have the final say in exactly how the standard will be implemented. This is a local PSAP policy decision that should be coordinated with the PSAP's CAD provider and the Alarm Monitoring Companies. The following are some, but not an inclusive list of operational implementation possibilities:

Option 1: Auto into Dispatch Queue, No Phone Follow-up

Upon receipt of a new alarm event sent electronically from the Alarm Monitoring Company to the PSAP's CAD system, the call-for-service can appear immediately in the radio operator's pending call queue for dispatch and no follow-up telephone call by the Alarm Monitoring Company is necessary. (This method has been demonstrated by the successful pilot by the two Virginia pilot PSAPs).

Option 2: Auto into Dispatch Queue, Phone Follow-up

Upon receipt of a new alarm event sent electronically from the Alarm Monitoring Company to the PSAP's CAD system, the call-for-service can appear immediately in the radio operator's pending call queue for dispatch and a follow-up telephone call by the Alarm Monitoring Company is performed.

Option 3: Auto into Calltaker's Queue, No Phone Follow-up

Upon receipt of a new alarm event sent electronically from the Alarm Monitoring Company to the PSAP's CAD system, the call-for-service can appear immediately on a calltaker's screen waiting for final acceptance. No follow-up telephone call by the Alarm Monitoring Company is necessary.

Option 4: Auto into Calltaker's Queue, Phone Follow-up

Upon receipt of a new alarm event sent electronically from the Alarm Monitoring Company to the PSAP's CAD system, the call-for-service can

appear immediately on a calltaker's screen waiting for final acceptance. A follow-up telephone call by the Alarm Monitoring Company is performed.

Option 5: Other

An implementation of your own design not falling into one of the options mentioned above.

- 2. What is the purpose of the proposed Alarm Data Exchange standard?**
To provide a standard data exchange for electronically transmitting information between an Alarm Monitoring Company and a Public Safety Answering Point (PSAP), also known as 9-1-1 Center.
- 3. What are the goals of the proposed Alarm Data Exchange standard and what is the benefit for my agency?**
There are three primary benefit goals:
 - A decrease in the alarm processing time for the PSAP which will improve the dispatch and response time for police, fire and EMS calls for service. This will assist public safety protecting lives and property.
 - Elimination of miscommunication between the Alarm Monitoring Company operator and the PSAP's calltaker.
 - Elimination of the telephone call from the Alarm Monitoring Company to the PSAP.
- 4. How are response times reduced through the use of this proposed standard?**
Once an Alarm Monitoring Company receives an alarm signal, depending on the alarm type (burglar, hold-up, water flow, etc), the company's policy and procedures, and local/state ordinances, the alarm company operator may first attempt to contact someone on at the premise. Once the alarm company operator verifies that the PSAP needs to be notified so that 1st Responders can be dispatched, the operator initiates an electronic transmission of the alarm event details directly to the CAD system at the affected PSAP. The CAD System receives that data, processes the data as a new alarm call-for-service and the PSAP CAD system can be configured to have the alarm appear in the radio operator's pending call queue without any call-taker involvement whatsoever. This electronic transmission occurs without the alarm company operator having to place a telephone call to the PSAP. Traditional processing times to receive alarm call information via telephone, once the PSAP call-taker has answered the line, can range anywhere from one minute to more than three minutes. The processing time for an electronic transmission typically is only a few seconds.
- 5. How can the proposed standard method possibly be better than the traditional method of the alarm company operator speaking with the PSAP calltaker via telephone? Calltakers have been trained to ask the right questions when an alarm company calls the PSAP.**
Several factors support the electronic exchange:

- Each address for every alarm subscriber in the alarm company’s database is validated in advance of receiving an actual alarm by using the proposed electronic standard. When a new alarm is installed, the alarm company will send an address validation request to the PSAP’s CAD System at the same time that the alarm account information is entered into the alarm monitoring company’s database. The validation request is totally automated from beginning to end and free of human intervention. One of the most common problems in receiving an alarm is the proper pronunciation and spelling of the street address which is eliminated when using the electronic exchange.
- All of the information that the alarm monitoring company has on file about the alarm site is sent to the PSAP’s CAD System as part of the initial alarm event notification. No piece of information is left behind. The amount of information transmitted to the PSAP’s CAD system is more than sufficient to assemble a call-for-service and addresses the questions that a call-taker would ask of the alarm company’s operator. The call-for-service is processed within a matter of seconds.
- Diversity is a fact of life. In the United States, many calls transpire between two parties who have very different accents. Furthermore, many alarm companies use call centers in foreign countries. Callers to the PSAPs from these foreign call centers are often difficult to understand. Every day, in every PSAP across the country, there is some form of misunderstanding during the telephone conversation between the alarm company operator and the PSAP calltaker. Most of these misunderstandings are easily correctable by one party asking the other to repeat the last piece of information such as “how to spell the street name”. Every request by a PSAP calltaker asking the alarm company operator to repeat some information adds time to the call processing time and increases response times. Unfortunately, not all misunderstandings are corrected and an error in the dispatch will occur. Examples include a dispatch to the wrong address because street numbers were transposed, the wrong event type was entered resulting in dispatch of the wrong emergency services, the wrong street was selected from a list, etc. It happens every day across the country. The electronic exchange eliminates all misunderstandings and locks on accurate data to assemble the call-for-service.
- Because most alarm monitoring companies’ call centers do not co-exist locally with the affected PSAP, the alarm company operator traditionally uses a 10-digit telephone number to reach the appropriate PSAP when the need arises to relay information about a new alarm event. The typical PSAP places the highest priority on incoming 9-1-1 calls before other lines are answered. While the telephone continues to ring in the PSAP during peak periods, this adds to the response time before first responders are even dispatched. The electronic exchange does not depend on any telephone call and does not need to wait for a PSAP member to take action in order for the incoming alarm event to become a call-for-service.

6. If one goal of the proposed standard is to reduce the number of telephone calls to the PSAP, will this result in reduction of calltaker positions?

Not at all. PSAPs nationwide are struggling to keep up with an ever-increasing volume of telephone calls with existing resources. PSAP Managers are looking for methods and procedures to reduce the number of calls to PSAP simply to allow 9-1-1 calltakers to dedicate more attention to 9-1-1 calls and true emergencies. The de-facto nationwide standard of answering 90 % of 911 calls within 10 seconds is not being met by many PSAPs because they are at times overwhelmed. The proposed automated standard has the potential to reduce the number of telephone calls received by each participating PSAP by the number of alarm calls traditionally taken via telephone from alarm monitoring companies in the past. Using the case model as an example, the two Virginia PSAPs received 5,000 less telephone calls over a two year period from just one alarm company that participated in the pilot project. As more alarm companies participate, the City of Richmond, Virginia could realize a reduction in their telephone call volumes of nearly 16,000 calls annually. Nationwide, the potential exists to reduce the number of calls to PSAPs collectively by 32,000,000.

7. What is the Central Station Alarm Association’s (CSAA) view on this proposed standard?

At the CSAA annual conference in October 2008 the Executive Board voted unanimously to endorse the proposed standard. The CSAA has been very supportive of this initiative since day one and was one of the founding partners of the concept.

8. Will the verification procedures used by the alarm monitoring companies before notifying the PSAP change?

The proposed standard has no affect on the procedures, policies and local/state regulations that govern verification procedures. It is “business as usual” on the part of the alarm monitoring company operator until the operator concludes that the PSAP must be notified to generate a first responder dispatch. The difference at that point is the delivery of the new alarm event to the PSAP electronically instead of via a telephone call.

9. How will the alarm monitoring company operator know that the PSAP’s CAD System received the new event and generated the appropriate call-for-service?

The proposed standard mandates an immediate electronic acknowledgement by the CAD System back to the alarm monitoring company’s software application server.

- If the CAD System rejects the call for some reason, the CAD will send a Rejection Response Transaction (RRT) back to the alarm company that clearly states the reason for the rejection. The alarm monitoring company operator will then take appropriate action according to the company’s policies and practices.
- If the CAD System accepts the new event, the CAD will send an Accept Response Transaction (ART) back to the alarm company that contains the PSAP’s event number(s) associated with the newly created call-for-service.

10. What about updates from the alarm company such as information about the key-holder arriving in 30 minutes or someone on the premise who does not know the pass code? Wouldn't these updates and supplemental information still need to be provided via telephone from the alarm monitoring company operator?

No. The proposed standard includes an Update Transaction (UT) that can be used bi-directionally by either the alarm monitoring company or the PSAP.

- The proposed standard recommends that all updates from the alarm company appear as a new Comment to the PSAP's radio operator(s) who is(are) in control of the call. The radio operator will see the new Comment on their CAD screen and relay the information accordingly to the first responders.
- The CAD System can be programmed to send Updates to the alarm monitoring company operator as the call progresses. This is optional and a decision to be made by each PSAP at the time that the CAD System is configured for the electronic exchange implementation. Examples of typical updates that the CAD could send back to the alarm company include notification when units have been dispatched, arrived on scene, and cleared from the scene along with disposition or situation found. Other notes added to the call by the radio operator and/or the first responders could be configured to be sent to the alarm company if desired.

11. My PSAP is located in an area where hurricanes and tropical storms are common 3 or 4 times a year. The PSAP's policy is to reject all incoming calls from alarm monitoring companies during the height of the storm. If the calls originate electronically via the proposed standard, how do we control this flow? If we can't control the flow, this will place an extra burden on the radio operator to cancel each alarm call.

The CAD System can be configured by your CAD provider or your local system administrator to automatically reject some or all incoming new alarm event requests of a certain type such as burglar alarms. This trigger would be under the control of the PSAP's Manager or Supervisor and can be activated or deactivated as necessary. This is strictly a policy decision at the local PSAP-level and the PSAP remains in full control over what alarms will be filtered, if any filtering will be done at all.

12. My PSAP does not have a CAD System. How do we participate?

Sorry. The proposed standard requires that a CAD system be a necessary component of the infrastructure. As a suggestion, since the proposed standard is conformant to the National Information Exchange Model (NIEM) and promotes interoperability, you may want to explore possible Homeland Security and Department of Justice grant funding. All grant funding from these organizations require the end result to be NIEM conformant. Several State 9-1-1 Wireless Boards also offer grants for GIS-based projects. Since most CAD Systems today are GIS-based, the acquisition of a CAD System may qualify. Have your PSAP Manager check with your State's 9-1-1 Wireless Board.

13. What resources does the PSAP need to provide in order to implement and support an automated alarm exchange?

An agency liaison would need to be identified to work with the participating alarm companies to identify addressing issues up front and before the implementation of the automated exchange. Depending on agency size, this may be one or more persons and typically would be the E9-1-1 Coordinator who works with the MSAG and the telecoms. The PSAP's CAD Administrator typically would be selected to work with the CAD provider to work out details about which fields of data received from the alarm company will be used to assemble the call-for-service.

14. I'm sold on the automated exchange. How soon can my agency come on board and actively participate?

First, the proposed standard will need to be adopted as an American National Standard (ANS). Next, there will be an aggressive outreach campaign to make all CAD providers, PSAPs, Alarm Monitoring Companies, and Alarm Monitoring Software Application Providers aware of the adopted standard. It may take anywhere from several months to a year or two for some of the commercial providers to gear-up and develop a module to work with their product that adapts to the automated exchange. Additional information will be forthcoming from APCO once the ANS has been adopted. If you are interested in participating in the automated exchange, please contact APCO's Comm Center & 9-1-1 Services Department at 911services@apco911.org or (386) 322-2500.

15. Will my CAD provider charge my agency to come on board with the automated exchange?

This is really a matter between the CAD provider and the PSAP's administration. Obviously CAD providers are looking for ways to generate revenue. However, most CAD providers are strapped for resources and do not want to write a separate custom interface for 100 different PSAPs who want to take advantage of the automated exchange. Nor are most of those PSAPs able to afford a custom interface that could cost, depending on the size of the PSAP, hundreds of thousands of dollars to create. The sponsors of the proposed standard see the ANS as the one and only approved method that all software providers should follow. In this manner, each CAD provider and each alarm monitoring software provider writes a standardized interface only once and that standard interface can be delivered to any of their customers wishing to participate in the automated alarm exchange. This method should reduce overhead costs and each software provider should be able to discount their product and spread the development costs across its customer base. Since most of the software providers are good community service partners, it is expected that they will pass along their savings to their customers.

16. My PSAP currently tracks high life hazard locations and other information that is important for First Responders to know before they arrive. Does the

automated alarm exchange shift this responsibility to the alarm monitoring company?

No. This responsibility will remain with the PSAP and their CAD System.

17. What happens when the CAD System is unable to validate the street address perhaps because of multiple matches and is unable to lock onto an exact address?

The proposed ANS recommends that alarm monitoring companies store geo-coordinates (latitude/longitude) in separate fields along with each address.

Today's GIS-based CAD Systems are able to lock exactly onto an event address if geo-coordinates are present.

18. What happens if our CAD System is down and the alarm monitoring company does not receive an acknowledgement?

The candidate American National Standard recommends that each alarm company develop a policy to call the PSAP if no electronic response is received within "X" number of seconds. The time period can be negotiated locally.

19. I see Nlets referenced in the IEPD materials ... is the Nlets network path proposed as part of the standard?

NO, there is no network path proposed as a standard in the candidate ANS.

Multiple exchange delivery options are available. The materials simply document that Nlets was the selected transport mechanism for the pilot between Vector Security (the CSAA participant) and the two Virginia PSAPs, and for them, offered the best solution. Originally the pilot started with direct interchanges between Vector Security and each of the two Virginia PSAPs via the Internet. The development team realized that there were many security issues that would need to be addressed as the pilot expanded to include additional alarm companies and PSAPs. The pilot did not have the luxury of a centralized registration server to validate senders and receivers. Nlets was contacted by the development team and offered their network as a viable alternative which provides that central security focal point to achieve proof of concept. Effectively, each alarm company has a single VPN tunnel established to Nlets without the need for hundreds or even thousands of alternate connections. The IP address contained in each message allows Nlets to route the traffic to the appropriate PSAP via a dedicate link to each state, in this case the State of Virginia. Network engineers at the Virginia State Police and Nlets established the necessary Nat rules to achieve transparent end-to-end communications between Vector Security and the Virginia PSAPs. Readers should not confuse these alarm exchanges sent via Nlets with the routine Nlets traffic received on Teletype/State terminals. While the path is similar, all transmissions from the alarm companies are routed to either a middleware server ahead of the CAD system or the CAD system itself.