# INTEGRATING SOFTWARE AND MOBILE APPS IN CRITICAL INCIDENT COMMAND

By Ed Allen

SWAT commanders, much like professional coaches, do the majority of their work off the field. Establishing expectations, developing strategies and improving both individual and team performance levels are all tasks done before game day (or in our case, a critical incident). When game day does come, the coach or SWAT commander's role is to minimize risk, call the right plays and be prepared to adjust tactics as circumstances unfold. Imagine for a moment, then, a professional coach trying to do his job from the parking lot of the stadium and having to make all decisions based solely on information someone conveys to him over a two-way radio. Although that may be unthinkable for a coach, it is exactly what most SWAT commanders are faced with in critical incidents.

While it is highly encouraged that commanders do an initial site survey of the incident before establishing a command post in a safe area away from the problem, the circumstances may not always allow for that. Commanders often find themselves, at least during the first few minutes, responding directly to the initial command post while trying to gain both situational awareness and establish a common operating picture for all involved without having the luxury of seeing the problem firsthand. Even if that initial site survey does occur, eventually the commander will find himself at the command post and out of view of the incident as it continues to change.

NTOA instructor and Los Angeles County Sheriff's Department Commander Sid Heal says this about situational awareness: "Arguably, tactical commanders' sole contributions to any operation are the decisions they render. While factors such as training, education and experience are critical, a commander's understanding of what is going on has the most impact. This understanding is most often referred to as 'situational awareness,' sometimes called 'situation awareness.'" Common operating picture, he says, "(i)n its most simple terms … is simply the shared knowledge and understanding between individuals, teams or groups. It is particularly critical whenever a number of agencies or echelons of command are involved, such as when handling major disasters or large tactical operations, because of the need for close coordination and cooperation. Even so, because the information used to form a common operational picture is always somewhat incomplete, inaccurate, ambiguous and even conflicting, a comprehensive common operational picture is elusive."[1]

For decades now, SWAT commanders and teams have relied primarily on personal observation and communication between members over the radio or through diagrams to help

establish both situational awareness and common operating picture. As many of you know, this is often time consuming and if not done properly, it can hinder more than help the process. Radio communication can be misheard or not heard at all by some. If operators arrive on scene after the initial communication, the information may not get repeated back appropriately or, again, at all. While diagraming is extremely useful, it can often be out of scale and constantly require updating as resources and threats move during the event. This should not suggest that a well-disciplined and experienced commander cannot effectively run a scene with a radio and a whiteboard. But it does beg the question, is there a better way?

The better way is very likely the use of computer software and smartphone applications, or "apps." In the last decade, the law enforcement profession has been inundated with computer software, but smartphone apps are now starting to find their place as well. There are currently law enforcement apps for shift scheduling, case collaboration, report transcription and even suspect facial sketches. It is a logical progression to incorporate smartphone technology into incident command and improve situational awareness processes. But before you jump on your smartphone and download the first app you find, realize that the issue must be approached from a systems perspective. One person with the best incident command software or app available does absolutely no good.

**In the last decade, the law enforcement profession has been inundated with computer software, but smartphone apps are now starting to find their place as well.**

In order for a digital incident command system to work effectively, most (if not all) personnel present should be utilizing the same software. This means that everyone in the command post must have access to the software and everyone in the field must first have access to a smartphone. Many agencies recognize the benefits of this technology and now issue smartphones to SWAT operators as part of their basic equipment package. So let's assume for a moment that you have successfully overcome that hurdle and everyone has both the devices and software they need. But now, what can you do with it? Everything you used to do and much, much more!

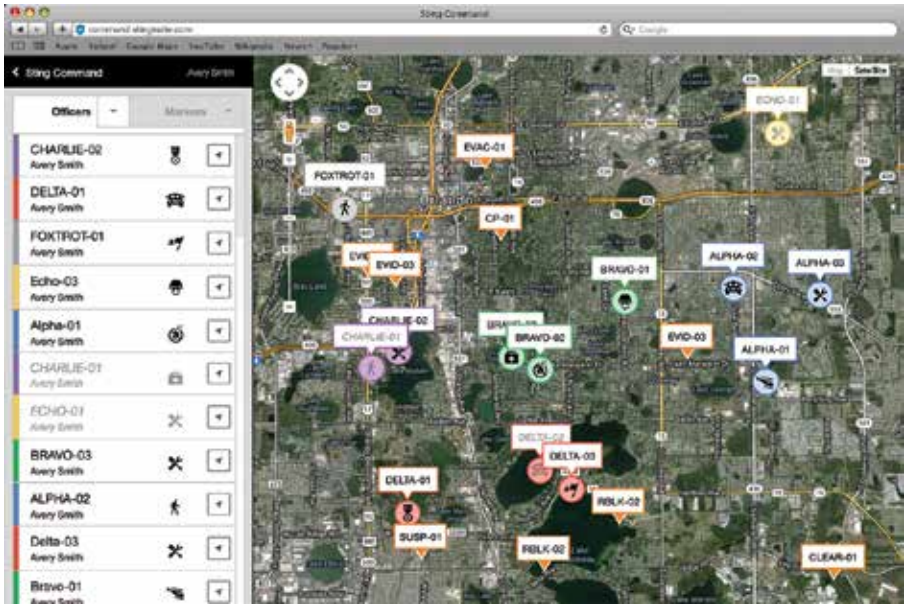
Let's start with your initial size-up of the event. This is the first few minutes when you as the commander are trying to determine the threats on scene and the hazard they pose to officers and the public. The next best thing to personal observation is an aerial photo map view. Such maps will allow you to determine hot, warm and cold zone perimeters and prioritize any necessary evacuations. Current software will allow you to color code those maps, identify areas that have been evacuated and allow you to draw perimeter lines that everyone can see. They may also allow you to accurately estimate distances between threats and officers or the public. It will allow you to see your entire area of operation and select appropriate locations for both your command post and staging area. By merely dragging and dropping an icon, you can show everyone where existing units are, such as perimeter security or traffic control, or where you want them to be.

The next challenge that commanders typically face is resource management, or the personnel and equipment necessary to resolve the incident. If every operator on the team is equipped with a GPS-enabled smartphone, they can be tracked and seen in the same map view. Non-deployed personnel can easily be seen waiting in the designated staging area and their profile can be preloaded with their skill sets or the equipment they have with them, reducing radio communications about location and status. GPS tracking devices can also be affixed to vehicles and other equipment to track their position as well. This digital presence on a commonly viewable map creates an organic common operating picture that updates in almost real time.

**In order for a digital incident command system to work effectively, most (if not all) personnel present should be utilizing the same software. This means that everyone in the command post must have access to the software and everyone in the field must first have access to a smartphone.**

Emerging software programs now allow for tactical planners to pre-load operational or Incident Action Plans (IAP)

**GPS tracking devices can also be affixed to vehicles and other equipment to track their position as well. This digital presence on a commonly viewable map creates an organic common operating picture that updates in almost real time.**




An example of a tactical mobile app that allows user to track on scene resources. Photo courtesy of Intrepid Networks

into the system for the most common deployment types or incidents. This may also include Incident Command System (ICS) forms that auto-populate data fields on multiple forms once the event is activated. For those events that go beyond one operational period, this can be a very effective way to develop and distribute IAPs rapidly.

Assuming again that each operator has a smartphone, they can each start capturing pieces of the puzzle and sharing them instantly. Those pieces may include observations on suspect movement, still photos and video of the target location and their own GPS coordinates. Again, this reduces radio communications between operators about their location and what they see. As each piece of information is captured and uploaded into the shared system, a timeline of events is recorded, making after-action reporting much more efficient. This is not to suggest that rapidly escalating situations should be delayed so data can be entered by operators. In those circumstances, radio and personal communication will remain the most effective means of sharing information. Trained support personnel can monitor radio communications and translate that activity into the software. And for those events that are stabilizing, lulls in activity will certainly allow for such use of technology. Most operators today are as proficient with a smartphone as they are with their primary weapon.

**Most operators today are as proficient with a smartphone as they are with their primary weapon.**

First response agencies should explore the use of digital incident command systems, but proceed wisely in their purchases. Such systems should not be purchased for a single response discipline or event type. Stephen Delp, regional sales director for Incident Response Technologies Inc., suggests the following: "The world is changing and no one knows what the next major incident may be. Seek out software that addresses the needs of your agency, without alienating the other members of your public safety family. Don't seek police software or fire software, instead seek command software: a true, all-hazards command platform that will ensure that you are prepared for any number of possible incidents, and more importantly that you are ready to coordinate with other organizations and incident stakeholders." An incident commander who is shopping for software should also consider the company itself, Delp says. "There are many software products on the market, and many of them work well, but if the company behind the product doesn't share your vision and truly understand your vital role in the community, they are likely to fall short when it comes to supporting your agency," he says. "For this reason, don't look for great software, look for a great company, with great people, that happens to have a great software product."

**Good incident commanders learn to do their job anywhere, under any conditions. Every commander should learn to do this job with just a radio and a whiteboard, but recognize that there's also an app for that!**

Incident command is ultimately about qualified and experienced leaders making tough decisions during crisis. Good incident commanders learn to do their job anywhere, under any conditions. Every commander should learn to do this job with just a radio and a whiteboard, but recognize that there's also an app for that! ■

## ENDNOTE

1. Heal, Sid. "Situational awareness and a common operational picture," *The Tactical Edge,* Winter 2002, p. 42.