

Video Surveillance Via Cell Phone



There is no information more precious to a SWAT team than intelligence. Knowing the physical layout of a targeted location, its defenses, and how many people are inside can save the lives of SWAT team members and the bad guys they are charged with apprehending.

In hostage takings and other unexpected situations, such intel is hard to come by. But when it comes to assessing the risks at crack houses and other pre-planned targets, the Dallas Police has significantly improved its intelligence gathering by means of remote network video cameras made by Axis Communications and engi-

neered into innocuous disguises by Mobile ID Solutions.

Built to send video via commercial cellular telephone networks, these surveillance cameras can be discreetly positioned anywhere. Whether hidden inside a weather-proof enclosure that can be mounted on a telephone pole or simply deployed from the backseat of a squad car, the Axis cameras are bundled with the Junxion Box. It's a commercial-class cellular router that manages the cellular connection between the cameras and the detectives using notebook PCs to monitor criminal activities. "The ability to deploy and operate a surveillance camera anywhere a cellular

phone works greatly enhances the safety of our operations," said Dallas Police Detective Steve Ledbetter. "We're able to view drug houses remotely before we go in. This allows us to assess their defenses. Do they have cages or reinforced doors? How many people are on site that we will have to deal with?" With this kind of advance information, SWAT team leaders can plan for the most effective, quickest, and safest way to take down the target.

The heart of the Dallas Police surveillance system is the Axis 213 PTZ Network Camera. The AXIS 213 can be remotely panned 340 degrees, tilted 100 degrees, and zoomed over any IP network; whether by wire or cellular wireless. This compact color unit comes with

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a 26x optical zoom, auto focus lens and an IR mode for nighttime conditions. Depending on the network bandwidth available, the Axis 213 can deliver full motion Motion JPEG and MPEG-4 video at 30 frames per second. However, current cellular network bandwidth typically limits its output to one to two frames a second.

While Dallas police often operate their mobile surveillance units from a vehicle, the department's Narcotics Division sometimes mount the Axis 213 and Junxion Box router on a telephone pole facing the targeted location. This is done by an undercover agent dressed as a telephone repairman. Once in place, video from the camera is routed by the Junxion Box to the DPD's headquarters, and any DPD squad car equipped with a laptop also connected to the cellular network.

"Power for the set-up is pulled from whatever source is available on the telephone pole," said Fredrik Nilsson, Axis Communications' general manager. "Once the camera is on, police can pan, tilt, and zoom from headquarters or a command car near the scene." The Axis 213 can also be concealed virtually anywhere—inside a rolled up coat,

looking through a hole in a Dumpster, or hidden in a tree. That's the real beauty of this unit: It is easy to deploy and provides often invaluable intel in all kinds of light conditions. The camera can even be set to send e-mail alerts anytime something happens within its field of view, such as someone walking into a crack house. "All told, this surveillance solution works extremely well," Ledbetter said. "The only drawback is that we're not getting full motion video at 30 frames a second, which is our ultimate goal. But once the local cellular carriers get their networks up to speed, we'll be able to do so."

To get a sense of just how big an improvement cellular video surveillance is for the Dallas Police, one has to understand what the department did previously. Typically, a remote camera site could only be established if an Internet connection happened to be available at the scene, or by establishing a point-to-point microwave link. To say the least, ensuring a clear transmission path was cost-prohibitive, and the equipment required to support the link was far from discreet.

"Not being restricted by using microwave is the biggest benefit of this solution," Ledbetter said. "But that's not

all: Having the ability to monitor a house 24 hours a day and let everyone who needs to see that video in real time makes mission planning far simpler and more effective. We can even project the signals onto a large LCD monitor during team briefings, to ensure that everyone is on the same page." Clearly, real-time video via cellular networks can be a boon to SWAT teams in providing accurate pre-action intelligence. However, the benefits don't end here: On the way to the site, tactical teams can keep monitoring what's happening at the target. This ensures that they enter the location with the most up-to-date information possible. Once the raid is under way, command officers can watch what's happening in real time. They can use this information to keep SWAT team members up to date on suspect movements and to make informed decisions as to what should be done as the situation develops. Afterwards, video recorded from these SWAT team actions can be reviewed to develop better strategies. It can also be used in the classroom to show new SWAT team members what actually happens on the job.

Finally, should the media misrepresent what happened during a raid, the police department can release this video to back up its officers' decisions and actions. In the same vein, such video could be invaluable during prosecutions to show judges and juries what really happened. The bottom line? Wireless-connected Axis network cameras can be a potent tool in a police department's arsenal. It is in Dallas!

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Photos by David Woo.



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