

2007 Campus Technology Innovators: Securing the Campus

<http://campustechnology.com/articles/49210/>

August 1, 2007

TECHNOLOGY AREA: SECURING THE CAMPUS

Innovator: Drexel University



Drexel-affiliated researchers and entrepreneurs develop a landmark mobile security communications platform, and now campus communities everywhere can benefit

Not long ago, Bernard (Ben) Gollotti, senior associate VP/ Public Safety at **Drexel University** in Philadelphia, took on a critical challenge: to put into place a single platform that, via the integration of security tools, would provide strategic and operational advantages that could be utilized daily in the public safety operation.

Fortunately, in 2003, [Drakontas](#) was founded by a combination of entrepreneurs and researchers affiliated with Drexel. Interestingly, the company's initial goal was to develop prototype systems to test enabling technologies for dismounted warfighters (infantry and others) to receive information through wireless network access. The team created a first-of-its-kind prototype system, which included a live MANET (mobile, ad hoc network for security) consisting of dozens of lightweight, resource-constrained mobile hosts (PDAs, tablet PCs, and laptops). Then, in 2004, the management team looked to police, fire, and private security officials to help determine which portions of the research and software capabilities would be of most interest and use. The core capabilities they identified became the basis for the DragonForce system, and Drakontas launched the security product in early 2005. Today, the company delivers communications software and integrated solutions for law enforcement, emergency response, and security operations. According to Jim Sim, company CEO, Dragon- Force provides situation awareness tools that allow teams to orient and communicate in a secure shared environment. The missioncentric design of the system has produced software that is secure and flexible, and runs on multiple networks plus a variety of hardware form factors.

At present, DragonForce is in use on the Drexel campus, where, under the watchful eye of Director of Special Projects Kurt Bittner, the command center enables the use of text messaging in everyday and tactical environments; GPS and access point dispatching; the ability to send JPEG files and images from CCTV cameras; and the ability to transmit incident reports electronically. With these tools, Drexel officials and staffers now have a technological advantage

in response time, have dramatically improved the identification of individuals, and are able to maintain more efficient public safety operations on campus.

Here's how it works: Officers are assigned user IDs and passwords that they utilize to log on to the hardware device (mobile or otherwise) they are issued during roll call. The logon process provides name recognition of each unit and allows for ease of identification of officers during interactions with the command center. Additionally, it provides specific, individual logs of textual communications between the dispatchers and officers.



At the start of a shift, to aid in recognition of persons of interest, each officer receives JPEG images that are derived from mug shots or CCTV images sent via the command center. The devices also aid the staffers in public safety efficiency by allowing for sector communications (and routine procedures the officers are assigned during their shift) to be communicated via text message. This reduces the amount of radio traffic and also enables dispatchers to access timestamped logs of the officers' activity during their shifts. What does this mean to the campus? Students, staff, faculty, and visitors are better protected; crime perpetrators or suspects can be apprehended much more swiftly; activities and events are better able to be tracked; and communication among officers and dispatchers (and soon, with the community, as well) is greatly improved and enhanced.

Because the DragonForce platform is so versatile, say Drexel officials, it allows for the integration of other tools, as well. Items currently in the process of being incorporated are report writing, streaming video, alarm points, and text communications from the Drexel community mobile phones (for direct communication with the dispatchers, to assist in security observations as well as to arrange for escorts, and for alert notifications that route directly to the nearest officer to provide the fastest response time possible).

Bittner and his team point out that finding the right hardware to use with the system is critical: It must meet the needs of 24/7 operation in all weather conditions. What's more, the appropriate screen size, input capabilities, battery life, wireless network requirements, and durability must be carefully assessed, based on the specifics of each campus. Of note: Drakontas (in partnership with Atlantic County, NJ) has been testing DragonForce technology for police tactical deployment missions in environments with limited or no communication infrastructure. It is now possible for tactical teams to build a secure wireless mesh network for communications of mission-critical information. That means that the deployment of a mobile mesh network would allow Drexel University to patrol areas not covered by university infrastructure, and that would aid greatly in the patrolling of a complex urban environment— something of very real interest to urban campus administrators nationwide.