

## Portable, Wireless Public Security helps Combat Crime

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In a recent press release provided by the Office of University Relations, Drexel University announced that it would begin using a new type of wireless technology, designed specifically to "enhance response times for campus public safety personnel."

The new technology, aptly named Dragon Force, was developed by two faculty members, Moshe Kam, Robert G. Quinn Professor of Electrical and Computer Engineering and William Regli, associate professor of computer science. Dragon Force was licensed to local firm Drakontas LLC which is now marketing the product. Drexel will be the first school to utilize the technology as a means of augmenting its own public safety system.



This chart demonstrates some uses and features of Dragon Force, a new technology to be used by Public Safety.

Dragon Force was developed as part of a project funded by the Defense Advanced Research Projects Agency, according to the press release. The system will be deployed on all three campuses. The system consists of wireless technology in the form of customized PDA devices.

"The technology provides a single wireless exchange platform that will incorporate GPS-enabled

blue-force tracking, whiteboard and image sharing; alarm notification, command text and voice messaging that will assist Public Safety operations and allow us to better serve the Drexel community." Bernard Gollotti, Senior Associate Vice President of Public Safety said. "Implementation of the applications will be conducted in several phases over the course of the next year."

In a recent Philadelphia Inquirer article, these hand-held PDAs were referred to as "COTS" or commercial-off-the-shelf technology, which helps keep procurement costs low. In a recent contact with Brian Regli, CEO of Drakontas, he stated "we reached out to the law enforcement and security community - they are the ones who told us that visual communications tools were lacking and as important as the voice enabled walkie-talkie infrastructure. Our ability to add functionality that permits the use of these tools during emergency response circumstances contributes greatly to the value proposition in both critical circumstances and day to day operations. The PDAs contain customized software including several versatile Linux operating systems as well as other unique applications and features.

The PDAs enable fellow officers to track each other on a digital map, giving them instant knowledge of their relative locations to each other and to the potential scene of a crime. According to the Inquirer, "a central dispatcher can view the same map that the officers possess, draw instructions in "whiteboard" mode, John Madden-style, and have the X's, O's and arrows show up instantly on the officers' PDA screens." The dispatcher then has the opportunity to direct specific officers to the location of a crime rather than having all units swarm to the scene after being notified.

"Dragon Force, like any technology will be used to better manage operations. With quicker deployment and enhanced communication our goal is to provide a safer Drexel community. Crime will always be something that everyone needs to be concerned about, not just here at Drexel, but no matter where you live or travel. The implementation of Dragon Force and similar applications are simply tools to provide the security officer and other partners with the ability to share information as it becomes available" said Gollotti.

In the University press release, Drexel University President Constantine Papadakis, hailed the use of Dragon Force stating that "it will take public safety into a new dimension not only for Drexel Public Safety but for all first responders...emergency responders will be able to better serve the public, especially the campuses of America's colleges and universities." The implementation of Dragon Force comes at a time when the number of crimes on both the Drexel and University of Pennsylvania campuses is on the rise. "The commercial application of the Dragon Force technology is being co-developed by Drexel University and Drakontas LCC. Funding is being provided through various external sources," said Gollotti.

The Dragon Force technology is still being enhanced. Future plans include the elimination of walkie-talkie cell phones to transmit oral communications and instead, the implementation of PDAs that double as wireless phones in which Voice over Internet Protocol will be used in conjunction with Dragonfly, the University's wireless network, in order to transmit voice

messages. Other features include allowing officers to use their PDAs to send text messages from the scene, and view photos of suspects and surveillance videos almost instantaneously after a crime is committed. In its tactical mode, Dragon Force may also be utilized to spontaneously form networks. In areas with no networks such as overseas, "you form your own network on the fly," James Sim, president of Drakontas, said. "Each unit serves as its own router. It's about responding to situations in which the infrastructure was never there or was destroyed. Communication integrity is what is really important here."

Drakontas LLC is planning an aggressive marketing campaign for college campuses across the country. However, the technology will not be limited to colleges. Its applications extend to the needs of SWAT teams as well as to police and fire departments. In the University press release, James Sim, president of Drakontas, said that both the Army and the Marines are planning to deploy Dragon Force in overseas operations in order to assist infantry soldiers in their missions. Lockheed Martin Corporation, a defense contractor plans giving Dragon Force a test run in the military by 2006 when they expect "the Army's 10th Mountain Division and the First Marine Division to take its system to war with them in Afghanistan and Iraq." The Department of Justice recently provided Drexel University and the Atlantic County, N.J. Department of Public Safety with a \$330,000 grant to test Dragon Force in a simulated high school hostage situation.