

PDA's in focus

"Deploying BlackBerry smartphones enable our front-line officers to police smarter, not harder."

➤ Keith Gough,
Mobile Information
Project Manager,
Thames Valley
Police.



GPS will improve safety

In July it was announced that the Metropolitan Police was carrying out trials of Automated Personal Location System (APLS) technology to monitor, track and record the locations and routes walked by officers on the beat. Yet, reports Dan Worth, this technology still has a way to go until it is fully adopted and rolled out by police forces.

Top: previously, when Thames Valley officers and PCSOs spotted graffiti while on patrol they had to travel back to the station to collect a camera (if they didn't have it), return to the location to take the photograph, and then go back to the station to download the images and return the digital camera. Right: using GIS to the full could involve providing accurate data from the field, including where cordons have been established or estimates of casualties.

These trials represent yet another use in the growing array of GPS-based technologies used by the emergency services. As the capabilities of PDAs are enhanced to run the latest high-end GPS applications the technology is becoming more widespread and, crucially, more functional.

Simon Cottingham from ESRI believes that the new wave of GPS-enabled devices being issued to police officers will open up a range of applications which will increase officer safety as well as improve their ability to respond to the public." He outlines how there are three ways the usage of GPS in PDAs will manifest itself: "Firstly, officer locations can be reported back into police control rooms allowing control room supervisors to make sure they have adequate resources on the



ground. More importantly this technology also allows any officer who is in trouble to press an emergency activation button and for this to be flagged to control room staff who can in turn identify and notify other officers in the vicinity providing the quickest possible assistance to officers in need of urgent backup.

"Secondly, this technology can be used to support location based services so that a user with a GPS enabled mobile device could be provided information based on their current location.

The police could use this technology to push information about risks or recent activity around a location. For example, as a police officer walks down the street alerts may be sent to their PDA with details of ASBOs in the local area and associated photos, or as an officer is dispatched to domestic disturbance at a property the device may automatically provide details of firearms licenses registered at that property or information on previous incidents at the same location.

"Finally, the technology can be used in a more active manner, using the full capabilities of mobile GIS to actually update information from the field. For example in the case of a first responder at a major emergency, they may be able to provide accurate location details and casualty estimates with a few clicks on a map, or send details back of where cordons have been established around a scene.

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They can also query the maps on the mobile device for risks and assets in the area, such as schools that need to be evacuated or where the nearest medical facilities are."

Peter Molyneux from Getac, a manufacturer of rugged PDAs with enhanced GPS technology, observes that with health and safety and corporate manslaughter becoming major elements of employment, devices that can offer this functionality provide a vital level of safety, and give those in the field peace of mind when working on their own.

Enhanced GPS positioning

Getac has recently increased its PDA offering with a new rugged device, the PS535F that offers enhanced GPS positioning as well as wireless and Bluetooth connectivity and has an IP 54 rating. "Importantly, though, while it is strong enough to offer protection to IP54 it is also light enough and small enough to mean it can be used in the field and carried for long periods of time. The battery life is long enough to cover an entire shift and it has all the functions of a regular PDA, including highly accurate GPS functionality," says Molyneux.

The accuracy of GPS is a key consideration now, especially as the quality continues to improve to within a few metres, and this is something Getac were keen to offer on the new device. "A few metres can be a big difference, and if the information is displayed on a handheld screen it needs to be clear to the user where they are being directed to.

Therefore the PS535F has a highly accurate GPS functionality and one that is very quick to load too, taking just a few seconds to locate its position."

The use of smartphones' built-in GPS capability is a feature Graham Baker of Research In Motion (RIM) believes has even more potential for the future. "Quite rightly, police forces are cautious about introducing new technologies to ensure that they don't cause any upheavals to their working practices.

"However, this means, that as of yet, we have not seen the GPS feature on mobile devices used to its full potential. The ability to push information – such as crime hot spots and known criminals' whereabouts – to officers on their BlackBerry smartphone as they 'walk the beat' is likely to become the norm in the next six to 18 months. We have also had a number of forces ask us about the possibility of using GPS information to automatically fill in forms for Stop and Search or incident reports, to improve efficiencies and ensure that recorded data is accurate."

Geo-tagging applications

Another technology becoming increasingly popular, notes Graham Baker, is the use of geo-tagging. "We recently supplied over 1,000 BlackBerry smartphones to Thames Valley Police as it wanted to increase operational efficiencies and improve productivity.

The force is using geo-tagging on BlackBerry smartphones to counter anti-social behavior. Previously when officers and PCSOs spotted graffiti while on patrol they would have to travel back to the station to collect a camera if they didn't have it, then return to the location to take the photograph and then back to the station to download the images and return the digital camera. With BlackBerry smartphones and a geo-tagging application, officers are able to capture the images while out on the beat and then upload them remotely to the necessary system, eliminating travel time and making the officer's job a lot easier.

The photos are also automatically tagged so the exact location can be recorded." Keith Gough, Mobile Information Project Manager at Thames Valley Police, adds, "Deploying BlackBerry smartphones enable our front-line officers to police smarter, not harder as being able to access systems via BlackBerry smartphones means less time spent travelling between stations as officers no longer need to go back to the station every time they need to access information from a computer."

Keeping track of officers when out on the beat, as the Metropolitan Police is doing in its current trials, is not something that RIM is involved in or has been asked about.

However, Baker does explain that 'geo-fencing' of police headquarters and stations is another use of GPS technology that is becoming increasingly popular in the police sector to help measure the amount of time officers are spending out on the beat. "Police visibility is a major issue for forces and so by using geo-fencing they can see when devices, and as such officers, are out of the station and how much time they are spending out on the street. This gives forces the ability to calculate if enough officers are out on the street."

Getac's PS535F was put through a series of rigorous tests to ensure it could withstand the toughest environments, covering risk from water, sand, and dust.

