



Mobile data keeps fire crews from harm

Kent Fire and Rescue Service has wireless-enabled its vehicles to receive risk data

Daniel Robinson

Mobile data access is often portrayed as all about executives getting updates on their company's latest product prices while out on the road, but other applications of the technology can prove to be more demanding.

Several years ago, Kent Fire and Rescue Service started a project to equip its emergency vehicles at all 65 stations in the county with mobile data terminals, so that crews could communicate with each other, and also to provide key information such as potential hazards the crew are likely to face attending an incident.

"We're using mobile data in a slightly different way. A salesman would trigger an update themselves,

while we wanted to push out data when it was ready, such as the location and availability of hydrants, and the capacity of the mains," explained John McGonigal, information services strategic development manager at Kent Fire and Rescue.

The solution that was finally chosen is based on a Windows PC fitted into each fire-fighting vehicle, which uses a Wi-Fi connection to receive large downloads while in the fire station itself. This is backed by two Siemens GPRS modems for use while out on a call, which are linked to different carriers – O2 and Vodafone.

"We had some problems with network coverage in some areas, and rather than have O2 in one vehicle and Vodafone in another, we decided

it was better to have both in all of them," McGonigal said.

The most important piece of the whole project is the availability of up-to-date risk data for the fire crews. A large-scale incident might require support from teams in neighbouring areas, and while the local crew might be aware that a site is home to a chemical factory with potentially hazardous substances, those from further afield will need access to this information.

Kent Fire and Rescue settled on Afaria from Sybase iAnywhere because of its ability to update applications and data over the air, and because it is designed to cope with varying availability of bandwidth.

"We wanted a mechanism to pro-

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vide data without having to visit every site, so we needed software to tackle the problem of feeding data to the crews,” said McGonigal. “We looked at products that would let us regulate data and not flood the network connection. We wanted something that could recover from interruptions in service, and which could also download software updates to the PCs.”

The organisation ruled out building its own software. “That would have been too technical and complex, but Afaria does everything very well – and needs little maintenance.” Afaria’s scripting language support and level of integration with existing back-end systems were also key factors in the decision.

McGonigal said that Afaria is able to check on the available bandwidth at any given moment, and decide which data to prioritise. If an update is available, but a vehicle can only be reached by GPRS, only updates to the vital risk data will get sent.

“For other data, Afaria will hold off and try again later,” he added.

The hardware fitted to each fire-fighting vehicle is actually a desktop PC, albeit a small form factor unit from Dell. This is installed by the service’s own engineering workshop so



Kent Fire and Rescue vehicles have mobile data terminals on board

that it is hidden away inside the vehicle, with crew access via a large touch-screen monitor in the cab.

PDAs were considered but rejected, as those available at the time of planning had limited power and small displays. The PC platform also has the

advantage of flexibility and a wide range of available development tools.

The PC is also connected to a TomTom satellite receiver, which provides position information for navigation software to help find the best route to an incident.

Kent Fire and Rescue is now planning to put Windows Mobile devices in the hands of Fire Officers, who often have to attend and supervise at large incidents.

Afaria will be used to deliver information in much the same way. The suite’s device management functions will also allow the service to lock down the devices, so that officers cannot accidentally change settings that might prevent it from operating.

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Q&A: Speedy access to life-saving data

What was the business need?

■ Kent Fire and Rescue Service needed to provide crews with in-vehicle information systems, in particular to provide vital data on known hazards at the site of a fire.

What was the chosen solution?

■ The service chose Afaria from Sybase iAnywhere because of its ability to deliver updates intelligently and cope with inter-

mittent connections, with in-vehicle access through a PC and touch-screen.

Benefits so far?

Kent fire crews have reliable access to up-to-the-minute information, including:

- The best route to an incident
- The location of hydrants
- The capacity of the mains
- The presence of hazardous materials