

Using the NLPG to mobilise FiReControl

Surrey Fire and Rescue Service



New command, control and mobilisation system uses the NLPG for accurate incident location



Many fire and rescue services are preparing for control convergence in anticipation of the FiReControl project, which will provide an integrated and modern network of nine Regional Control Centres (RCCs). These will be able to receive calls and mobilise resources across the country.

In preparation for the switch over scheduled for 2012, Surrey Fire and Rescue Service (SFRS) has built a state of the art dynamic mobilisation system that will dramatically speed up response times to incidents. The system, which went live in December 2008, has a number of key components. Each vehicle is fitted with both GPS satellite tracking and a ruggedised computer, which is connected to the command and control centre, sending and receiving data across mobile networks. The command and control software, which is designed specifically for the mobilisation task includes a live map interface, which enables staff to see vehicle location in real time. Once an incident has been reported, the system automatically chooses the nearest, appropriately equipped appliance based on the incident type. A fire in a building of six floors for example, will require an additional aerial appliance with the capability of reaching the appropriate height. The system calculates which vehicle will have the quickest travel time using GIS routing information to inform this selection.

Because the system chooses crews based on time and distance, one of the challenges experienced by crews is mobilisation out of area. In the past crews worked on a station ground or territory basis but now the system will calculate which crews can get there fastest.

The final component of the system is the NLPG (National Land and Property Gazetteer), which is used as the core source of location information and already mandated for use in the FiReControl project. SFRS has been working with local authority gazetteer custodians for over two years and increasingly the police and the NHS to build on the excellence of the NLPG to further improve the quality of address data. It has also migrated all of its legacy risk

intelligence data relating to over 70,000 properties from the old command and control system to the NLPG. In addition SFRS are building a web portal to post change and update information as it becomes available. Local authority gazetteer custodians will then access the portal in order to validate and update the NLPG.

“From a technical viewpoint this part of the deployment was the toughest,” said Carl Walker, System Information Technology Manager for Surrey Fire and Rescue Service. Cross referencing the legacy data to the NLPG, which uses a completely different data schema, took around nine months and involved a considerable amount of quality assessments to ensure it was completed to the highest standard. Hosting the system and making it available to all our stations and personnel was challenging and we used web based technologies across our intranet to achieve this. Once in place it gave transparency to our legacy information enabling staff to act as our eyes and ears, so to speak, to validate our legacy information against the NLPG,” continued Carl Walker.

As with any new system there have been significant changes to working processes and the impact of these changes cannot be underestimated as Carl Walker explains. “We have had the mobilisation part of the system in place for a couple of years now so crews were familiar with the equipment. We understood how the command and control system would work and we understood the data through the migration process to the NLPG. As a result we were able to carry out a fairly detailed impact analysis prior to full deployment.

Simply introducing a new system does not solve a problem; in fact it can create many more because it changes the way you work. You need to change the business model to suit the outcome, so rather than adapt to the system once it's in place you need to change the way you work so that when you do go live it is business as usual. We were able to prepare for go live over a period of months.

Using the NLPG to mobilise FiReControl

Surrey Fire and Rescue Service

Even small things can have a big impact, for example our personnel now have access to much more and better quality data which can be sent to an appliance while it is on the way to an incident. This enables them to be much better informed and they need to be able to act on the information and relay intelligence back once they have arrived. The expectation is much higher.

If I was offering advice to another fire service it would simply be this. Make sure you understand what the impact of regional control convergence will be. If you do this you will be able to prepare for the change in terms of training and expectations. There will be some resistance to new processes but the positives will more than outweigh the negatives."

User feedback

By and large users of the system have been very positive. "They have had quite a long time to get used to the in cab equipment and improved communications. When they are mobile, available and out of station involved in home fire or community safety, they can receive full incident details at any time which is received by the in cab computer. There is no need to write anything down or to consult a map. Gone are the days of crackly UHF transceivers and the radio traffic has been cut down dramatically, these benefits are all popular with crews" said Carl Walker. "The NLPG and GPS help a lot from a health and safety point of view because we know exactly where we are sending crews and where they are at any point in time. As a result the crews have confidence in the system and should they get into any difficulties they know the response will be swift and precise. It is also very useful if crews are being mobilised to common land for say a heath fire, which could cover an area as large as five or ten square kilometres and where there are no property locations. When the first fire crew has located the incident precisely, they can update the location dynamically on their in cab screens. This will be fed back to the central system and then out to other crews on their way to the incident. This means crews can rendezvous much quicker."

Outcomes

The new system is already revolutionising how Surrey Fire and Rescue Service mobilise its appliances replacing the old system of geographic parish or station ground mobilisation in exactly the same way as RCCs are supposed to do. Allying risk intelligence with dynamic location and routing means that the appropriate crews and appliances get routed to incidents more quickly and with greater accuracy. What's more all the risk data will have been sent direct to

the appliance's cab mounted data terminal well before arrival at the incident. The potential safety benefits both for fire service personnel and the public at large are significant.

On 13 December 2008 less than 10 days after go live, a major fire at a Waitrose store in Banstead, Surrey proved the efficiency of the new system. As the incident escalated more fire crews were mobilised to contain the blaze and prevent its spread to nearby buildings. The store location meant that the system mobilised crews from both the London Fire Brigade and Surrey Fire and Rescue Service. More than 50 firefighters attended the scene and there were no injuries. <http://news.bbc.co.uk/1/hi/england/surrey/7780971.stm>

Use of the NLPG by local authorities, the fire and rescue services and increasingly the police will mean a much better gazetteer and more efficient transfer and sharing of data when all emergency services are involved in an incident. The NLPG is a great example of the public sector working closer together and something IDeA have been encouraging for some years. Having unique property identifiers for every household and non-addressable buildings and structures, from churches to park bandstands, means that accurate location for every eventuality is catered for.

Key benefits

- NLPG is the sole source of unique location data and risk intelligence
- Improved speed and accuracy of mobilisation
- Fire crews have all necessary risk intelligence before they arrive at the incident
- Improved cooperation and data sharing between the emergency services and local authorities
- Formalised process and web portal to make the most of operations based intelligence
- More efficient use of fire service equipment and resources
- Fire service will be ready for the move to RCCs

NLPG Project Team

Ivybridge House
1 Adam Street
London, WC2N 6DD

Email queries@nlpg.org.uk

Telephone 020 7747 3500

www.nlpg.org.uk

The Improvement and Development Agency

Layden House
76-86 Turnmill Street
London, EC1M 5LG

Telephone 020 7296 6600

www.idea.gov.uk

Intelligent Addressing

Ivybridge House
1 Adam Street
London, WC2N 6DD

Telephone 020 7747 3500

www.intelligent-addressing.co.uk

Fire and Resilience Programme – FiReControl Project

Zone B4, 3rd Floor
Eland House
Bressenden Place
London, SW1E 5DU

Telephone 020 7944 4400

www.communities.gov.uk

