

IMPROVING RESILIENCE 03



The Firelink project

Delivering a national digital radio system for the fire and rescue service by 2009

Firelink is a vital investment in radio communications. It will replace individual fire and rescue services' radio systems with a common wide area radio system for the first time. The Government has already made a commitment, in principle, to implement Firelink in England (in coordination with the FiReControl project) and a framework is being created to allow for its adoption in Scotland and Wales too.



Photo: Shrewsbury Fire and Rescue Service

Firelink: delivering interoperability between FRS and the other emergency services at Silver command level.

But what does this mean and why do we need it?

Now...

To date, individual fire and rescue authorities have provided their own radio systems. This has led to differences in the type and nature of existing systems and a limited level of interoperability between fire and rescue services (FRSs) and with other emergency services. The majority of existing wide area radio systems in England were originally installed in the 1970s and are reaching the end of their economic and useful life. Most have relatively limited functionality and development potential.

It was originally planned that the radio systems should be replaced by regional procurements. However, following the events of 11 September 2001, it became necessary for the fire and rescue service and other emergency services to prepare more fully to respond to catastrophic incidents, including terrorist attacks. Enhanced communications systems would be central to this. Accordingly, in May 2002 Ministers announced a new competition for the procurement of a national wide area radio system, with significant funding from the Government.

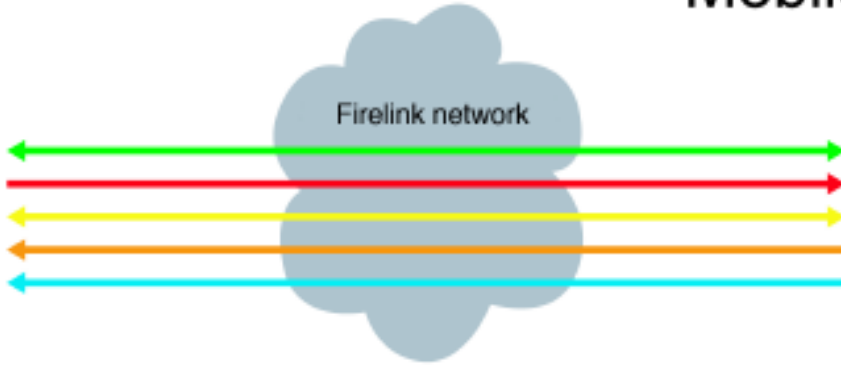
On 11 November 2005 the Office of the Deputy Prime Minister (ODPM) announced that the

telecommunications company O2 Airwave Ltd had been chosen as the preferred bidder for the Firelink contract and that a final decision on contract award will be taken following discussions to resolve outstanding matters with that company.

The future

Firelink will provide a digital radio network that ultimately will enable users, virtually anywhere on the mainland, to communicate with each other from any FRS mobile resource or Regional Control Centre (RCC). Poor coverage and speech quality, together with interference and jamming, will be eliminated. Designed to meet rigorous resilience

RCC



Mobile resource



- █ Voice call
- █ Mobilising message
- █ Short text message
- █ Status message
- █ Geographical location information

The Firelink network will be used to facilitate new ways of working.

requirements, availability of service well in excess of 99% of the time will be delivered. It will include the installation of radio terminals, Global Positioning System (GPS) units, printers and mobile data terminals (MDTs) in over 7,000 FRS vehicles supported by a national fault management and maintenance infrastructure.

The contract to deliver this capability will run for ten years. In addition to supplying the radio communications equipment and infrastructure, the supplier will provide an extensive training programme for both FRS trainers and certain specialist users. Maintenance and spares support, including a 24/7 helpdesk facility, will be provided and additional services and

equipment will be available under a call-off mechanism to meet specific FRS needs.

Stringent performance targets, linked to supplier payment, have been built into the contract to ensure the supplier delivers the required level of service throughout the life of the contract.

ODPM has made the commitment to introduce the Firelink network in England and a framework has been established for it to be extended to Scotland and Wales, subject to decisions by the Scottish Executive and the Welsh Assembly Government.

Major benefits and features of Firelink:

- improved voice quality when compared to existing analogue systems
- extension of data capabilities, already available to FRSs at the leading edge
- the ability for appliances/officers in cars to communicate directly with each other without utilising traditional 'talk through' procedures
- national roaming whereby an FRS vehicle can contact any FRS control centre, wherever it is located
- highly resilient with fallback mechanisms and duplication of key elements of the network;
- the provision of an 'Emergency' button for high priority voice calls
- encryption of all voice and data, ensuring privacy
- the ability to talk to other FRS mobile resources anywhere in the country and the ability to

communicate with other emergency services at Silver command level

- structured radio communications: talkgroups can be made available for specific functions, e.g. individual incidents, major incidents, community fire safety, exercises, over-border roaming and national coordination and
- enhancement of the existing extensive network of hill top sites that will fully meet the wide area operational coverage requirements of FRS.

Additional services that Firelink will enable

In addition to these major benefits, there will also be a capability to support:

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Photo: Fire Service College, England

Under Firelink's primary scope of supply, all FRS appliances will be fitted with a mobile data terminal.

- data systems that will allow:
 - status codes to be sent directly to the mobilising system, updating it automatically
 - pre-defined short messages to be sent to the mobilising system
 - free format stop and informative messages to be sent to the control room
 - control to send mobilising instructions and operationally urgent information directly to vehicles and
 - GPS to enable control room officers to ‘see’ appliances on a geographic information system

- the use of mapping data, route planning, chemical information, plume prediction data, generic risk assessments, standard operational procedures and individual building risk information via MDTs fitted as standard in all frontline appliances and
 - the provision in MDTs for a high capacity/high speed secondary data bearer.
- In England, many of the additional services that Firelink can support will be introduced as part of the FiReControl project.

Training

Firelink will primarily utilise the ‘train the trainer’ concept, with the contractor delivering training initially to nominated FRS trainers.

As with the introduction of any new technology, there will be an impact on operational procedures and protocols, but these will be phased in over time with full training being provided to all users of the system.

Close liaison with the FiReControl and New Dimension projects in England will ensure the best use of FRS effort and resources in the training requirements of the three projects, avoiding duplication of effort. A planned and systematic approach to training is currently being developed.

Delivering Firelink

To ensure the rollout of Firelink is effectively managed and coordinated England has been divided into nine regions, each with its own dedicated Firelink Delivery Team. These teams will comprise one Regional Delivery Manager and one or two Regional Coordination Managers, who have been seconded from FRS. The Regional Coordination Managers will be the primary point of contact for the FRS.

Following contract award, the Regional Delivery Teams will continue to brief their fire and rescue services on the proposed rollout programme and the support required from FRS.

Firelink will be rolled out to the FRS on a regional basis, with the capability being delivered in three phases in England.

Phases of Firelink rollout in England

Phase A

Core infrastructure - encompassing rollout of the network infrastructure and installation of equipment into FRS control rooms

Phase B

Interim solution – fitting out FRS vehicles with voice services, allowing voice communication to existing FRS control rooms

Phase C

Migration to RCCs – integrating voice and data services between FRS vehicles and RCCs

Operational continuity

ODPM has also been actively working to safeguard existing radio systems as well as enhancing their interoperability. Following a risk assessment of existing radio equipment, elements originally identified as high risk have been replaced under Phase 1 work, completed



Firelink regions in England.

in September 2005. The team has also overseen the reprogramming of FRS wide area radio systems in England and Wales to deliver enhanced interoperability.

A subsequent re-analysis of the risks has resulted in a revised set of mitigation measures for implementation under Phase 2, commencing in February 2006. This work will include the replacement of central and site control equipment, site to site linking equipment and antenna arrays.

Operational continuity will continue to deliver sustainable solutions in response to elevated risks, ensuring radio systems remain operational until replaced by the Firelink network.

Our work with New Dimension

Firelink will also be supporting the wide area communications aspects of the New Dimension programme in England. The existing multi-band radios fitted in Incident Response Units and Prime Movers will be replaced with standard Firelink equipment enabling these resources to maintain seamless operation within host FRSs and maintain the ability to communicate with any existing or planned fire control room or mobile resource nationally. Firelink will also ensure that the radio infrastructure has the capability, and is configured to support, a nationally coordinated response to catastrophic incidents.

Firelink and FiReControl

Firelink is critical to the delivery of the regional FiReControl project, providing the voice communications link between the nine RCCs and mobile resources within individual FRSs. Delivery of the two projects will be within an overall coordinated programme aimed at minimising disruption to existing FRS control rooms.

For the latest updates visit

www.firelink.org.uk



Photo: Fire Service College, England

Firelink: providing interoperability for New Dimension operations.



Photo: Fire Service College, England

Firelink and FiReControl will be delivered within a coordinated programme.

Firelink – a summary

- Meeting the wide area communications needs of FRS
- Delivering same-service interoperability
- Delivering inter-agency communications at Silver Command
- Introducing national roaming
- Safeguarding existing radio systems until Firelink implementation
- Creating a framework for the scheme to be extended to Scotland and Wales in the future

Firelink will transform the current arrangements and give the service, for the very first time, the same digital radio system across the country – a system that will enable firefighters to communicate not only between fire and rescue services but also with other emergency services, regardless of location. We are also creating a framework for the scheme that provides the devolved administrations with an option to extend it to Scotland and Wales in the future.

Fire Service Minister, Jim Fitzpatrick