"Last mile" resilience

With fixed line guidance now incorporated in the Government's Resilience website, Dan Worth looks at how King's College has responded to its responsibilities under the Civil Contingency Act.

The Resilient Telecoms section of the Government's UK Resilience website has recently undergone a major update and now also includes a definitive section on "Enhancing the resilience of Terrestrial (fixed line) telecommunications".

The section explains what is meant by resilient communications, how resilience can be enhanced and provides an overview of the Government's strategy for enhancing resilience. Organisations are encouraged to sign up for information alerts in order that they may update their own business continuity plans with current information.

All Category 1 Stakeholders, as defined in the Civil Contingencies Act 2004, including the blue light emergency services, are required to undertake detailed risk assessments and put in place comprehensive business continuity plans to combat those risks – with the ability to receive incoming calls from both the general public and colleagues (other members of local resilience forums) being an essential part of the recovery process both during, and following, any disaster.

Taking their responsibilities under the Act extremely seriously, King's College Hospital London installed a system from GemaTech, a company that specialises in design and development of equipment that allows incoming phone calls to be directed to individual geographical numbers and be instantaneously and seamlessly re-routed, on an individual DDI basis, to any other number, or group of numbers anywhere. This ensures that incoming call flows from the general public, as well as colleagues, are not interrupted as a result of any outage and/or failure of the telecoms connectivity or infrastructure within the hospital.

Ray Harris, the ICT Telecoms Manager at King's College Hospital explains why. "Within the specification of the Civil Contingencies Act of 2004, we are required to provide the best resilience we can against equipment failure. GemaTech's solution is particularly powerful because it 'understands' Excel spreadsheets so, in short, we can set up a series of complete dial plans in Excel that show the mapping between incoming numbers and a destination location, which can be a direct connection to the King's iSDX [telecoms] network, or some other completely different PSTN number.

"These dial plans are stored on GemaTech equipment, and by connecting to it via the Internet or dial-up line, the active plan can be changed within minutes. We can even respond to incidents on the fly, making changes to the system within timescales that would simply not have been possible with the old system."

Adopting a wider view, it could also be argued that what is equally relevant is the ability of any telecoms recovery solution to be able to link into, re-route calls to, and receive calls from, both satellite phones – made available to all qualifying Category 1 Stakeholders via a Civil Contingencies Secretariat initiative in 2007 – and also Airwave hand sets to ensure full interoperability between local resilience team members and related emergency services.

Acknowledged to be of equal importance is the ability to implement "partial" invocations, to allow for the fact that only some of an organisation's employees are unable to travel to work on a specific day. In those circumstances it should be possible to re-route only those calls to "missing" members of staff to their homes or alternative places of work while allowing all other inbound calls to all remaining members of staff through to their normal desk positions. Alternatively it may be necessary, on occasion, to invoke a business continuity plan for a certain section of the building because of some localised problem affecting a small number of employees. This flexibility is a key element of succesful emergency management.

The provision of voice recording is also seen as a great advantage in the aftermath of any outage when it is necessary to investigate what actually happened during and following any outage. These solutions are also available via In-house providers as well as under existing local purchasing framework agreements.

Recognizing the responsibilities that Category 1 Stakeholders have for maintaining their telecoms infrastructure, GemaTech is now working with the Cabinet Office and an increasing number of Local Resilient Forums (and specifically their Telecoms Sub-Groups) to inform and explain what can be achieved with leading edge telecoms technology available today from specialist telecoms technology vendors i.e the instantaneous and seamless recovery of their incoming calls.

Experience during a number of recent emergencies in the UK such as the Sheffield floods in June 2007 showed that communication systems could be disrupted in an emergency and that emergency planning needed to take that into account.