GEMATECH MEETS MAJOR INCIDENT CALL DEMANDS AND NUMBER SHORTAGE CRISIS AT LEADING NHS TRUST

King's College Hospital NHS Foundation Trust receives 1.8 million in-bound telephone calls a year. As one of the largest and busiest teaching hospitals in London, with an excellent international reputation in medical research, it is also the owner of over 5000 direct dial telephone numbers (DDIs) – and this requirement is increasing year-on-year. A maximum of 10,000 numbers are possible within any give area code. The Trust did not own all of the numbers for its area code - 020 7346 xxxx - and was, literally, running out of DDIs. "Many people work on the basis that the number of direct dial numbers is effectively limitless, however, this is not the case" says Dave Bailey, ICT Telecoms Manager at King's College Hospital.

The Trust uses extension numbers between 0200 and 8999 inclusively, but does not own all the 020 7346 DDI numbers within this range. For example, anyone calling a number 020 7346 2xxx, would either get "Number Unobtainable" or some person not connected with the Trust.

''An unfortunate example of this happened a few years ago when we allocated non DDI numbers in the 8000 range to the maternity department of the new wing of the hospital," continues Bailey. 'someone decided that they would add the 020 7346 prefix to one of the numbers, resulting in one poor individual in their private house, who happened to be pregnant, who routinely received calls asking for the birth centre at King's."

In short, something had to be done to combat both the shortage and the confusion. Bailey and his team had two options. One possibility was to have a completely new set of numbers to fill the gap in the existing DDI number range. However, that was unattractive because it would have arguably complicated things further, some DDI numbers would be on the 020 7346 range, whilst others on a completely different 020 number.

The second possibility was to apply for a complete new 10,000 number range. OfCom had recently released a new London number 020 3xxx and one of these numbers was chosen for the Trust's new number range. "This was a far more attractive choice," Bailey explains. "In addition to avoiding the complications of the first option, it meant that we could be allocated all 10,000 numbers within a particular range, and therefore have complete control over which were external direct dials."

Equipment Failure and Major incident Communications

Alongside this problem, Bailey was very conscious of another issue, namely that of contingency planning and business continuity in the event of equipment failure or major incidents. "We had been alerted to the limitations inherent in the telecommunications system following the bombings on 7/7," Bailey explains. "Whilst our telecommunications network coped with the situation, it did show some weaknesses that needed resolving, which have now been put into place."

For example; for some major incidents it may be necessary to redirect calls from certain departments, e.g. if staff in the Emergency Department were too busy to take them, telephone calls would need to be redirected to another location. In a very serious situation, it could be great advantage in being able to divert calls to other hospitals or to impromptu call centres who could handle these calls. Similarly, messages given to callers requesting them to call back unless their enquiry is urgent would be beneficial to ease congestion at exceptionally busy times.

''Within the specification of the Civil Contingencies Act of 2004, we are required to provide the best resilience we can against these kinds of scenarios and also equipment failure," explains Bailey. "The old system simply did not do that. So, as well as dealing with the issue of new numbers, we also realised that we needed far better business continuity to provide us with a comprehensive means of coping with equipment failure or a major incident."

Fortuitously, those two requirements could be met by a single solution in the shape of GemaTech's fully managed, business continuity service. GemaTech designs and develops telecommunications products that reduce failures to an absolute minimum. The equipment is capable of ensuring almost instantaneous,

seamless and total recovery of a large proportion of an organisation's incoming calls, and redirecting them to any number of alternative telephone numbers or locations, including alternative landline lines or mobiles phones.

‘‘GemaTech's solution is particularly powerful because it 'understands' Excel spreadsheets," continues Bailey. "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 network, or some other completely different PSTN number. These dial plans are stored on the GemaTech equipment, and by connecting to this equipment via the Internet or dial-up line, the active plan 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. Before this system was implemented, the incident might well have been over before we could implement any changes necessary. The advantage of using spreadsheets to do this greatly simplifies changes," Bailey adds: "Dial plans are very detailed and complex!"

As access to the GemaTech equipment can be gained remotely, plans can be invoked without having to wait for Bailey or one of his colleagues to arrive on site. "Recorded messages can be set up ahead of time too," Bailey adds. "This will be particularly important during the changeover to the new DDI number range as callers will be told that the individual DDI number has changed and then put through to the new one. Furthermore, individuals receiving the calls can be told that their caller is using the old number. This can act as a further prompt, should that be desirable."

Excellent service

In addition to these benefits, GemaTech was chosen by the Trust for the simple reason that it had a working solution that could meet the hospital's needs immediately. "We needed to move quickly on both counts - the new numbers and the business continuity. The fact that GemaTech could be implemented without delay was a big plus. It was very easy; we described our requirements, set up the call plans in the spreadsheets, and GemaTech did the rest." Just a few weeks passed between signing the contracts and going live in April 2006.

Further, business continuity resilience is provided by having the GemaTech equipment housed remotely within the Trust's Telecommunications supplier equipment locations and are distributed in two physically separate locations in London. Albeit that equipment is physically in different locations, the supplier can still act as a single point of contact when dealing with any problems, whilst also ensuring that there is no single point of failure in the system. "We now have two separate telecommunication routes into the hospital, provided by two independent PTOs, connecting into two internal telephone exchanges" Bailey adds. 'Should there be a failure of one of the connections or exchanges, GemaTech equipment detects the problem immediately and implements the appropriate response, ensuring continuity."

At the time of writing, January 2007, the Trust is in the changeover phase: it is running both the old and new external codes in parallel. A large publicity campaign, including posters around the hospital and the distribution of credit card-sized reminders, is getting the message across; many users have required assurance that the new London "3" area code is right. "It clearly takes time to port all the numbers to the new code since it requires the reprogramming of exchanges at our supplier's end, in addition to the implementation that we can carry out with GemaTech," Bailey says.

’’I can say that the service we have received from GemaTech has been excellent," Bailey adds. "They have been very quick in responding to our requests and have acted without fault as our one point of contact when dealing with other suppliers." He concludes on a more personal note: "Just how well any of the numerous systems within a large hospital Trust might respond in an emergency is always a concern. For myself, I know that the telecommunications system is in an infinitely better shape now. We have the flexibility we require to implement any plan that might be needed, as indeed an independent audit has concluded too.“