

In the last issue of SSAIB News we gave details of BT's 21st Century Network, its plan to replace the main core of its telephone network with a new system known simply as 21CN. Here Dr John Porteous provides an update on the latest 21CN developments.

There are two major thrusts to BT's introduction of its 21st Century Network (or 21CN for short).

1. To replace its core networks with a single Internet Protocol (IP) based network.

Historically BT has had a number of different core networks, each based on different technologies. Replacing them with a single IP based technology is intended to make it easier to manage and provide significant extra capacity for new or upgraded services.

2. To replace its local exchanges

The technology used in BT's local exchanges is now somewhat dated, originating in the main from the late 70's or early 80's. Adding new services in particular is difficult and time consuming as it involves updating over 5500 sites from Land's End to the Shetland Isles. With 21CN these will be replaced by much simpler nodes, all call control and services will be provided from less than 100 sites, making it much easier to manage and update.

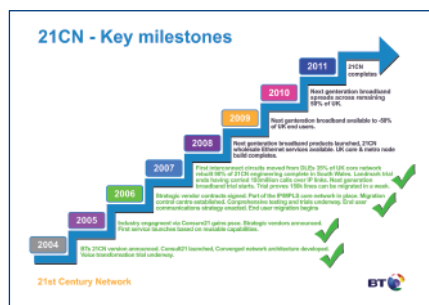
A Change of Emphasis

Whilst it's not apparent from the public information available, there has been a change of emphasis in the 21CN rollout. Much of the initial publicity was centred on the trials in the Cardiff area, and the local exchange replacement programme. These trials have now finished and some of the lines have been switched back to the original exchange equipment. The ongoing rollout of exchange upgrades has been deferred and it's not clear when they will resume or at what rate.

The 21CN website (<http://www.switchedonuk.org/>) no longer gives projected dates but simple states:

Migration dates in South Wales and subsequent areas of the country are being reviewed between BT and other communications providers.

The main emphasis now is in the upgrade of the core network which, according to BT, is progressing well. This allows BT to increase its capacity (e.g. to cope with the growth in Broadband demand) and to offer new transmission based services (e.g. higher speed Broadband).



In simple terms, its concentrating on changes that will allow it to provide more services, and hence increase its income; whereas replacing the exchanges might make them easier to maintain, but in the end only gives us the same telephone service we already have, with no opportunity for extra revenue to pay for the upgrade.

Effects on Alarm Transmission

Whilst the delays to the exchange upgrade program will avoid some problems, the main problems encountered by alarm transmission systems, and digital alarm communicators (including social alarm transceivers) in particular, are associated with network delays and transmission quality. These problems come largely from the network upgrade and so are still likely to be an issue.

Unlike the exchange change-outs, which will have publicly announced dates for each exchange, the network upgrade is a continuous and largely invisible process. It's not therefore possible to identify a specific date from which a particular alarm system, telephone exchange or region will be affected.

What you should be doing

- Make sure you keep up to date with what BT is doing.
- If you haven't done it already, make sure you collect details of the transmission equipment at all alarm systems for which you have an on-going responsibility (i.e. those you have installed and any you have taken over).

- Check with your suppliers what equipment has been successfully tested on the 21CN test-bed and what the supplier certifies as 21CN compliant.
- On maintenance visits make sure that you check the alarm transmission system, especially with older system where the transmitter may not have been tested.
- Be aware of any reports of alarms not being transmitted and/or of reports transmission problems, especially if reported from particular transmitters.

BT is continually both working to switch their network to 21CN, and upgrading that 21CN network to provide additional functionality. The fact that a particular transmitter worked on your last visit does not mean it will work in the future – especially if it's not on the supplier's compliant list.

Additional Information

The main public information is available via <http://www.btplc.com/21cn/>

Also, look for updates in the trade press, exhibitions and roadshows.

Dr Porteous is an independent consultant working in development and security. He has been involved in the development of security standards at BSI, CENELEC and IEC and remains a co-oped member of a number of BSI committees. He is also an independent member of the SSAIB board. He can be contacted on ssaib@securecomms.co.uk.

