

# Case Study

## AMPTRAC SYSTEM @ BELFAST CITY HOSPITAL



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### TE Connectivity's AMPTRAC System in a literally vital role

Most network issues have an impact on the efficiency of an organisation, but occasionally they can directly affect human lives. This was a key consideration in the planning of Belfast City Hospital's new oncology building, a state of the art centre employing the latest equipment for cancer diagnosis and therapy. BCH is Northern Ireland's leading university teaching hospital, with a strategic focus on the development of regional cancer and renal services, working in partnership with the National Cancer Institute of the United States.

The addition of the new 6 floor building would be a major expansion in the responsibilities of the hospital's 2-person ICT communications and development team, who would have to develop the additional network then service it day-to-day. This would not only mean over 3200 additional network outlets but also the huge responsibility of maintaining network connection to the medical equipment: any downtime is usually inconvenient and expensive but in this case the effect on patient care could be catastrophic.

The additional key element in this development was that the project was to be a partnership between the public and private sectors, requiring clear measurement of each party's performance. So the ICT team would need highly visible, objective records to be readily available if any connectivity problems needed investigating. BCH identified a range of key needs including management of risk, resilience to failures, rapid recovery from faults, future proofing, minimisation of data errors and the flexibility to support many operational technologies. VoIP capability was also necessary. To maintain service levels whilst meeting targets for commissioning the new building, it seemed that the ICT team would have to grow from 2 to 5. To save this cost whilst satisfying the key network needs of the enlarged hospital, technological improvements were investigated and an



**Above: Keren Moleon, BCH Systems Specialist, knows that the AMPTRAC System keeps her fully in the picture.**

**Main picture: The Cancer Centre of Belfast City Hospital is a modern, attractive state of the art building. It hosts the radiology suite, research facilities and also 84 inpatient beds.**



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Intelligent Infrastructure Management System was identified as the solution that could make the difference. A business case was written detailing the choices available and, after this was analysed by the finance department of the Department of Health, the IIMS option was chosen and AMPTRAC was selected as the preferred IIMS solution. Key AMPTRAC features include real-time documentation: the software self-discovers infrastructure ports and their associated connectivity, registers the status of each port and documents any patching that is done. Also important in the decision-making was the presence of a thoroughly trained and experienced local AMPTRAC installer. The AMPTRAC system was installed, managing nearly 4000 outlets: in the new building this includes not only staff work stations but also the medical equipment required for cancer diagnosis and treatment; also a further 600 outlets are located in other areas including a remote location. ICT Development Manager Darren Henderson commented: "AMPTRAC cost us about 25% more than a standard Cat. 6 system, but you should not undervalue just how much you save even in the first year. The commissioning process involved constant changes, yet the two of us in ICT were able to manage. We simply could not have commissioned by the target date without AMPTRAC. And we would not have been able to manage the ongoing support since then."

The efficiency gained from AMPTRAC is due in particular to its ability to discover and monitor physical end-to-end connectivity in real-time; also the tracking of IP devices to their physical location on CAD floor plans. Gone are the days of going in person to physically check whether a particular PC is still connected to the same outlet as it was when the records were last updated, then doing the same again in the comms room. The physical connection driving AMPTRAC information means that you are sure the connection shown on your plan is the correct one, so you can go straight to the task in hand. Asset utilisation is now much easier to determine: you only have to check the AMPTRAC displays in either text or graphics. For example, you can see a report telling you the percentage utilisation in a particular cabinet, then any moves, adds or changes can be planned from your desk with complete confidence. Operations teams and help desks can also access the system to answer questions on the functioning of the network. The high degree of visibility has proved a key benefit. In the view of Keren Moleon, Systems Specialist at BCH, "To maintain the network and telephony for 4500 staff, as well as the changes required by the new cancer centre, we could not rely on paper based documentation, which is usually out of date. AMPTRAC provides a trusted source of information that has freed us from the daily time consuming administrative tasks allowing us to do the rest of our work, which includes the development of other new projects."



The AMPTRAC patch panels enable the patch status of each individual port to be traced.

VLANs are run for each medical specialist division and system. In addition to the VLAN for email, file shares and access to hospital systems, there are separate VLANs for the machines delivering radiotherapy treatment to patients and also for cancer centre imaging; medical groups can also access remote systems elsewhere in the region. Throughout the network any physical change – authorised and unauthorised – is monitored and easily visible to the ICT team.

*"We would not consider any new development without including AMPTRAC in the specification!"*

Darren Henderson, ICT Development Manager of Belfast City Hospital

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