

The James Cook University Hospital

Teesside discovers the advantages of Tridium



Tridium has brought to life the UK's largest LONWORKS® open system at The James Cook University Hospital development on Teesside.

Thanks to Tridium's NIAGARA Framework™, the functionality of this distributed control system has been fully realised far more quickly, easily and with lower hardware, engineering and operating costs than would otherwise have been possible. Tridium's enabling capability will also ensure that the LONWORKS® network delivers the working efficiency, flexibility and life-cycle cost-savings demanded from its specification for this, the biggest acute hospital complex in England.

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“Large, open LONWORKS® systems can only work with Tridium, in our experience” says Keith Simpson, Director of project systems integrator, Jade BMS. “With the NIAGARA Framework™, system interoperability, open distributed communication, functionality, efficiency, reliability, future-proofing and significantly reduced costs are all achievable. And, the graphical, web-accessible interface, is another huge plus for the fm team operating and maintaining the system”.

The James Cook University Hospital is a £160 million PFI funded project, involving the refurbishment of a substantial part of the existing South Cleveland Hospital and a new build construction on the same site of an additional 68,000 sq m facility. The new state-of-the-art hospital, complete with scheme improvements, provides over 1,100 beds in a 145,000 sq m complex. A major characteristic of the whole complex is the installation of a fully interoperable LONWORKS® building control system which helps safeguard this PFI investment.

Continued overleaf

The Tridium Solution

The project

- The biggest acute hospital complex in England.
- A new state-of-the-art facility, complete with scheme improvements to the existing South Cleveland Hospital, providing over 1,100 beds in a 145,000 sq m development.
- An open LONWORKS® building control system featuring over 10,000 LONMARK certified control devices in approximately 30 different sub-systems and designed to integrate, monitor and control everything from HVAC, elevators, lighting, emergency lighting, security, UPS and through to kitchen refrigeration and critical medical systems.

The requirement

- A fully functioning LONWORKS® network which delivers working efficiency, flexibility and life-cycle cost-savings.

Tridium provides

- Market-leading NIAGARA Framework™ as the system architecture
- NIAGARA Framework™ embedded within over 20 JACE 5 series controllers
- Tridium Web Supervisor software, serving up control system graphical information and allowing supervisory actions over hospital intranet using a standard Web browser.

The Results

- Real-time control, data logging, alarm handling and scheduling functions which the LONMARK nodes would otherwise have been missing.
- The Tridium solution also links and unites the different sub-systems quickly and effectively into one integrated network, eliminating any need for a complex and time-consuming LNS database.
- No need for expensive BMS supervisory software, saves software and training costs and also brings greater operating and maintenance efficiency and flexibility.

Conclusion

- LONWORKS® functionality realized far more quickly, easily and with lower hardware, engineering and operating costs with Tridium than would otherwise have been possible.
- NIAGARA Framework™ ensures the control system achieves the operational advantages and life cycle benefits demanded in the project specification.

Powered by
niagara
FRAMEWORK™

Case Study

The network comprises over 10,000 LONMARK certified control devices from a range of different manufacturers within approximately 30 different sub-systems. It is designed to integrate, monitor and control everything from HVAC, elevators, lighting, emergency lighting, security, UPS and through to kitchen refrigeration and critical medical systems, such as, medical gases supply and the control of temperature for the blood banks and cryogenic storage facilities. The key to the system's successful performance is Tridium's market leading NIAGARA Framework™ software.

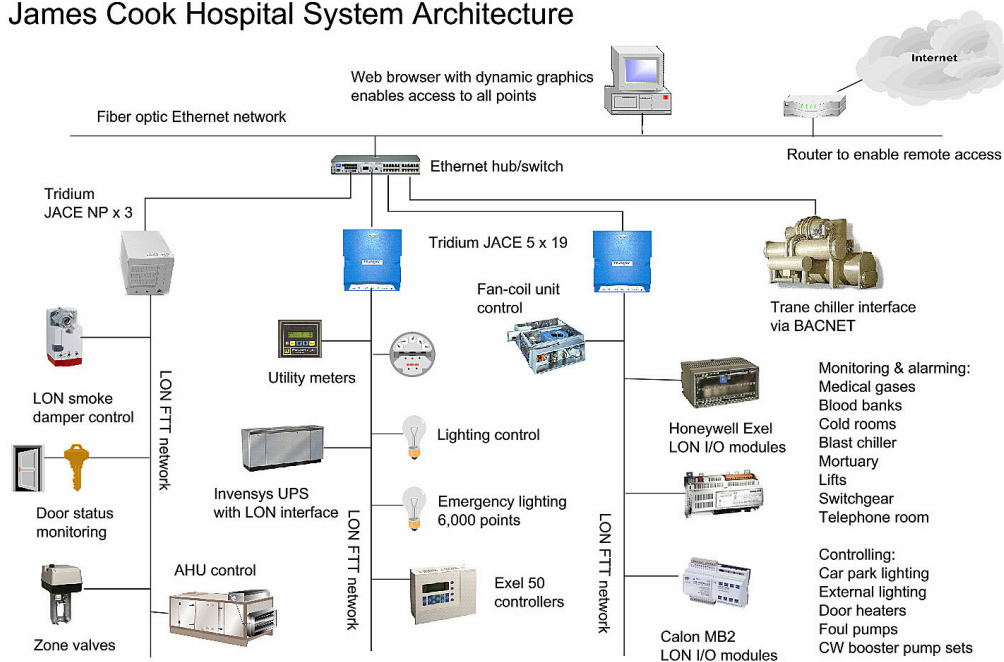
Jade BMS has installed over 20 Tridium JACE control units, incorporating NIAGARA Framework™ software, with the units allocated to serve various LONWORKS® sub-systems. This instantly adds full functionality, providing real-time control, data logging, alarm handling and scheduling functions that the LONMARK nodes otherwise lack. The Tridium solution also links and unites the different sub-systems quickly and effectively into one integrated

network, eliminating any need for a complex and time-consuming LNS database.

An extra benefit of the Tridium approach is the Framework's web serving capabilities. Graphical information on the control system is served up as HTML pages to ensure that all supervisory actions, such as monitoring, adjusting, archiving data and maintaining the different sub-systems, can take place from any PC on the hospital intranet using a standard Web Browser and so avoiding the need for expensive BMS supervisory software. The result is a dramatic cost-saving in software cost, greater operating and maintenance efficiency and flexibility, and a substantial reduction in training overheads.

Endeavour SCH plc, the special purpose vehicle who will finance and operate the building, comprises Mowlem, Innisfree and Barclay Capital who have contracted the Mowlem Crown House joint venture to build the hospital for the South Tees Hospitals NHS Trust.

James Cook Hospital System Architecture



About Tridium

Tridium is a US based company with their European headquarters in Buckinghamshire.

Tridium has established key strategic alliances with leading corporations in the energy services, building automation and data management industries.

Tridium markets its products to a wide range of controls manufacturers, HVAC equipment manufacturers, and a network of Tridium Systems Integrators.

Additional information about Tridium is available at www.tridium.com

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