Mid Essex Hospital Services NHS Trust

Mid Essex Prescribes Wireless Network for New Hospital, Selects Aerohive to Support Acute Healthcare Services and Infection Control

Challenges

- Needed a WLAN that would help meet hospital's commitment to use RFID to track beds and valuable equipment
- As the primary Wi-Fi network connection, resilience and quality of service is essential to the success of hospital's wireless strategy
- Scale of investment means the wireless network has to support the hospital's long-term IT ambitions
- Needed to be centrally managed

Results

- Aerohive proved able to scale and support hospital's innovative applications, which were part of the hospital's expansion
- Aerohive provided hospital with secure multi-service WLAN infrastructure able to support a vast array of wireless devices, application types and service levels, with faster client performance, wire-like resilience and lower capital and operational costs
- Using HiveManager to manage the network from a central location and support up to 5000 HiveAPs
- Hospital WLAN long-term is expected to connect Wi-Fi-enabled devices, such as the Apple iPad, used by healthcare consultants

Mid Essex Hospital Services NHS Trust provides acute hospital based services to a population of approximately 360,000 people living in and around the towns of Chelmsford, Maldon and Witham.

Broomfield Hospital, part of Mid Essex Hospital Services NHS Trust, is undergoing a major redevelopment, with the creation of a new, five storey wing. The five-storey wing, which will house 365 beds, five operating theatres, A&E department, maternity unit, pharmacy, and rooftop helipad, is being funded by Private Finance Initiative (PFI) and is due for completion in August 2010.

The Challenge

Mike Casey, Director of IT for Mid Essex Hospital Services NHS Trust, is leading the IT strategy for the new wing; "Wireless connectivity is increasingly fundamental to the efficient delivery of healthcare services and, with a Greenfield site, we were afforded the opportunity to plan for and exploit all the possibilities and benefits of a wireless network.

"Alongside traditional healthcare products such as Medical Tablet PCs and computers-on-wheels, we want to use RFID to track beds and valuable equipment, effectively we want to make the hospital 'self aware'. As an example we want to use advanced Aerohive

technology and RFID to track beds, we will then connect our RFID bed tracking to the ExtraMed bed management system. In the future we would expect to be able to track where every bed and every mattress has been at any given time. The faster we can provide this information to the Infection Control Teams, the quicker they are able to combat sources of infection and contain them."

As the primary WiFi network connection, resilience and quality of service is essential to the success of Mike Casey's wireless strategy. Furthermore, the scale of investment means the wireless network has to support the hospital's long-term IT ambitions.

The Solution

To lay the groundwork for an advanced WiFi infrastructure, the Trust assessed a selection of market leading wireless technologies, following which Aerohive Networks was selected. To ensure Aerohive's Cooperative Control architecture would meet all of Mike Casey's objectives, a wireless LAN (WLAN) was implemented into the existing hospital buildings, which would then be extended into the new hospital wing.

"Following the initial deployment of an Aerohive WLAN at Broomfield Hospital, we were confident of its capability to scale and support the

innovative applications we are investing in as part of the hospital's expansion. Aerohive's was the only technology that provided the innovation, resilience, and scalability we needed," explains Mike Casey.

Aerohive's cooperative control HiveAPs require no network controllers or overlay networks. Instead, software in the HiveAPs enables them to self-organise into groups called Hives. The result is a secure multi-service WLAN infrastructure able to support a vast array of wireless devices, application types and service levels, with faster client performance, wire-like resilience and lower capital and operational costs.

Deployment

Implemented and supported by Swiftpath Business Solutions and Networks First, the existing wireless network, consisting of 75 access points (HiveAPs), is currently being scaled by a further 300. A single

HiveManager platform will enable Broomfield Hospital to manage the network from a central location, and support up to 5000 HiveAPs.

Mike Casey adds, "In addition, we will be investing in mobile devices that allow us to utilise the 3G and wireless network, helping to reduce call costs; and, in the future, hope to provide a modern platform for new WiFi enabled devices, like the Apple iPad, to healthcare consultants. To achieve this, it's important that the wireless architecture is future-proof and robust.

We expect to realise a return-on-investment, from the extended WLAN, within 12 months. The intuitive nature of the HiveAPs and central management platform combined will also help to reduce ongoing maintenance costs. Aerohive's architecture is designed to overcome the key challenges that we face both now and for the future; it has certainly raised the industry benchmark for wireless networks."