

Onze-Lieve-Vrouw Hospital

CASE STUDY

NonStop Wireless LANs with Real-Time Location System enable medical records at the point-of-care and save time locating patients and medical equipment.



“Because our doctors can consult all the information they need on their own laptop at the patient’s bedside, they have more time to provide medical care.”

— Bob Engels,
IT Infrastructure Et Support manager,
OLV Hospital

Optimal support for the healthcare provided

The OLV Hospital in Aalst was founded in 1904 by the ‘Black Sisters’ of the St. Augustine convent. After merging with the Heilig Hart hospital in Asse and Ninove at the beginning of this century, the hospital now has a capacity of 844 beds and 95 day-care beds. It currently employs around 280 doctors and more than 2400 support staff. The need for a WLAN arose in the Cardiology and Nephrology departments.

“The doctors and nursing staff of these departments wanted to be able to consult and record all the necessary medical details on a laptop at their patients’ bedside”, says Engels. “To meet this need, in 2006 we installed around thirty wireless access points from Trapeze Networks. This choice, which was based on the advice of our IT supplier, suited everybody so well that we wanted to expand the use of the system. For this reason, we came up with a business case to provide each campus with a hospital-wide WLAN, with the emphasis on the nursing departments, consultation and meeting rooms. In view of the many possible uses of the system, the management approved our proposal and it was put out to tender via a Request For Proposal. This tender was awarded to SecureLink, using wireless equipment from Trapeze Networks and Nortel switches”.

Centrally managed WLANs with a real-time location system

Once the large new hospital wing has been completed, thus doubling the campus area in Aalst, the OLV Hospital will have a centrally managed WLAN on all its sites. As well as for data communication, this network will also be used to locate specific patients and expensive medical equipment. “Preventing confused patients unintentionally leaving the hospital is a valuable ICT application, although one which is hard to quantify”, continues Engels. “On the other hand, not having to spend hours locating temporarily stored electric beds, a large number of portable drips and other equipment will save our technical services department a great deal of time every day. For both applications, we will use around 500 AT-320 active RFID tags.

If patients carrying these tags get too close to an exit, or leave a certain area, an alarm will be issued to the nursing staff automatically. Our solution for real-time location was developed by Newbury Networks, now a division of Trapeze (Through acquisition in Dec 2008). Another WLAN application which is valued highly by our patients is the free Internet access. As a result, for example, the fathers of (new-born) children will be able to stay with their family yet still keep working. The same applies to the immediate family of seriously or chronically ill patients.

DESCRIPTION

The Onze-Lieve-Vrouw hospital in Aalst, Asse and Ninove is renowned the world over for its premium medical care, for example in areas such as Cardiology. In order to optimally support the healthcare provided by the hospital, it has recently implemented a wireless network (WLAN) on all its sites. The experience has been so positive that free Internet access is now also being offered to patients and visitors and its use has been expanded to the technical services and IT departments.

OBJECTIVE

- Allow patient records to be consulted at the bedside
- Locate specific patients and medical equipment
- Offer free Internet access to patients and their visitors
- Increase network availability and flexibility

SOLUTION

- Centrally managed Trapeze WLANs on three healthcare campuses
- One MX-400 and three MX-200R Mobility Exchanges
- Around 440 Mobility Points
- RingMaster and SmartPass software
- LA-200 Location Appliance
- Newbury Active Asset management software
- 500 Newbury AT-320 Asset Tags

RESULTS

- Doctors are able to consult electronic patient records at the bedside
- Patients and family members can keep on working in the hospital if required
- Technical services will soon be able to locate beds and medical equipment more quickly
- "Unplanned downtime" of the hospital network has been virtually eliminated

Onze-Lieve-Vrouw Hospital (continued)

Using Trapeze's SmartPass Secure Guest Access solution, we can easily generate large numbers of user IDs upon registration without tying-up nursing or IT staff".

More stable, more secure network

The added value provided to the OLV Hospital by the wireless networks is highest in the healthcare applications. "Because our doctors can consult all the information they need on their own laptop at the patient's bedside, they have more time to provide medical care", says Engels. "The same applies to the nursing staff. The WLANs have become an important, scalable infrastructure for the further introduction of electronic medical records in our hospital. As the networks form a single unit, the connections simply remain intact in the case of transfers within the hospital. One user group which I have not yet mentioned is the management and middle management, who are now able to work and convene in a simple and flexible manner on their own laptops because of the WLANs.

Finally, in the IT department we are also very pleased with the WLANs, as we have been able to virtually eliminate the 'unplanned downtime' of the hospital network as a result! In the old days, incorrectly connected cables regularly caused network loops and thus annoying network failures, but this has not happened once since the wireless networks were installed. All in all, the Trapeze WLANs have considerably increased both the security and stability and the flexibility of our network usage", concludes Engels.

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