



Extricom WLAN brings a smile to hospital patients, visitors and staff!

The University Hospital Brno was established in 1977 and provides patients with basic, specialized and highly specialized care in all medical fields, regardless of the nature of the disease, severity of the accident or patient's age. University Hospital Brno is the main and largest medical centre in the Morava region of the Czech Republic and is the first hospital to achieve ISO 9001 and NIAHOSM certification in the country.



The hospital consists of over 1,275 beds and has over 2,500 employees. The average annual number of patients successfully treated is around 700,000, with almost 40,000 patients treated surgically. The main building is a 18 floor, 40,000 square metre construction built out of reinforced concrete and designed around a central H shaped corridor system, hostile to RF signal distribution.

Improving Patient Experiences

With the intention of providing free internet access for all of their patients and a HotSpot facility for all visitors, at the same time as fully integrating the existing hospital infrastructure and preparing for future roll out of both VoIP and RFID solutions, the hospital faculty could find only one solution that would answer all of their requirements satisfactorily.

Internet access for patients is now considered a mandatory service by healthcare providers globally and the IT team at Brno saw it as a priority business requirement for their facility – offering anytime anywhere access and therefore increasing patient comfort during their treatment and improving the overall patient and visitor experience.

The most interesting qualities of the Extricom technology for the hospital lay in its ease of network design and usage of a large number of APs . Stability of services and the ability to deploy multiple services on one

infrastructure along with simple network management and compatibility with a variety of end clients were key deciding factors.

The Extricom Difference Mattered

Manager and Hospital spokesperson Anna Mrázová explained that the only other WLAN solution they considered was Cisco for the project.

“We considered Cisco but the Extricom solution offered easier network design, services with guaranteed stability under extreme conditions and total compatibility with our current infrastructure. Plus, we liked the ease of Extricom for the deployment of future services”.

She went on to add *“Compatibility with the current infrastructure was a high priority and the Extricom solution completely fulfilled this requirement. And, although we didn't choose the solution based on price, Extricom has brought savings for both CAPEX and OPEX”.*

“The pressure to deploy Wi-Fi was high. Everything had to be installed in the shortest possible time and whilst maintaining full hospital services. Extricom's minimal installation requirements enabled very rapid deployment and integration into our existing data infrastructure”.

Mrs Anna Mrázová
Hospital Spokesperson

Project Scope

To initially deploy a wireless network to give hospital patients free internet access as well as a HotSpot service for visitors that would then be suitable for future implementation of both VoIP and RFID. Once of the Czech Republic's largest medical facilities, both the building materials used and the physical layout proposed significant challenges to RF signal distribution. Full installation to be carried out with no interference to existing hospital technologies.

Solution

2 x EXSW-800 Switch
8 x EXSW-1200 Switches
4 x EXSW-2400 Switches
172 x EXRP20 APs
1 x EXNM Software

Results

Immediate appreciation and satisfaction experienced by the patients that greatly increased the comfort of their stay in hospital. Free of charge access to the internet for visitors provides fantastic value-add. Total compatibility with existing infrastructure was a key requirement, this was achieved without compromise.

Flawless Deployment

Working in close collaboration with local Extricom distributor Inteltek and their experienced Extricom team, the Hospital chose to partner with K-net Technical International Group Ltd, who managed the installation and integration of the project.

The building layout and construction, along with significant local network interference on the 2.4GHz frequency from other WLANs in neighboring buildings, coupled with the importance of maintaining consistent delivery of all of the other critical hospital systems including Citrix applications during installation would have presented an enormous challenge for any cell-based wireless solution.



However, with Extricom's Channel Blanket™ architecture, the deployment rolled out using two blankets and three SSIDs directly to the live network without fault. Both blankets are operated on the 2.4Hz frequency using standard 802.11b/g. An SSID for the patients is mapped to blanket one and separate SSIDs for internal employees and visitors are mapped to blanket two. A total of 14 Extricom switches and 172 Extricom APs provided the hardware infrastructure with the Extricom EXNM network management software installed to allow central management of the entire system.

Mrázová comments *"We had full confidence not only in the solution but also in the integrator and had no concerns about deploying directly to the live network"*.

Future Planning

The basic requirement for coverage of the main hospital building was achieved during the initial installation. Future expansion of the system is planned to cover the other buildings along with the introduction of VoIP and RFID solutions. Rapid deployment and easy integration processes offered by Extricom's guaranteed connection within a complication environment will ensure a trouble-free deployment with no effect on the existing critical technologies already running at the Hospital.

Mrázová adds *'Our IT team is accustomed to working with complex technology. They were pleasantly surprised by the ease of administration of the Extricom solution and particularly appreciated the possibility of integration into existing systems without hardware changes or restrictions'*.

The Outcome – Smiles all round!

The free internet access for the patients was immediately appreciated. *"The main requirement for the hospital was and is a satisfied patient. From a technical perspective the main benefit for us is an infrastructure that will easily support additional services in the future without network changes or further investments. The benefits this brought to the total cost of ownership with the Extricom system were clear to see"* said Mrázová.