



Next-Generation Healthcare Comes to Life at Bumrungrad International Hospital



“Technology has been, and will remain a strategic differentiator for the hospital. This implementation is instrumental to Bumrungrad in maintaining its position as a world-class healthcare provider. Thanks to the scalability of the network, we know we now have a robust infrastructure which we can build future innovations on.”

— Mr. Chang Foo, Chief Technology Officer of Bumrungrad International

Company overview: Bumrungrad International Hospital

Bumrungrad International is the largest private hospital in Southeast Asia and one of the world’s most popular destinations for medical tourism.

It offers state-of-the-art diagnostic, therapeutic and intensive care facilities in a multi-specialty medical center located in Bangkok, Thailand. Opened in 1980, the hospital was Asia’s first to pass the demanding review of the Joint Commission International, the highest US standard for hospital accreditation. Newsweek recently included Bumrungrad on its list of 10 leading international hospitals, calling it “one of the most modern and efficient medical facilities in the world.”

The challenge: Real-Time access to patient information and improving hospital staff efficiency and response time

Over a million patients are provided patient-care facilities annually at Thailand’s Bumrungrad International hospital, across its 90,000 m2 campus. The hospital staff needs to have up-to-the minute information about the patients, medical records and medication schedules, regardless of where they are working across the campus.

Being the largest private hospital in Southeast Asia, Bumrungrad has built a strong reputation as a leading medical tourism destination providing world-class healthcare service to its patients. “Bumrungrad’s long-term vision is to provide information and internet access to every patient throughout the hospital. Hospital staff must have access to real-time patient information which enables them to provide improved healthcare services and advice to their patients,” said Mr. Chang Foo, Chief Technology Officer of Bumrungrad International.

Another key challenge was to have a robust system that maintains the confidentiality and security of patient information across the network.

Customer profile



Company
Bumrungrad International Hospital

Location
Bangkok, Thailand

Industry
Healthcare

Motorola Products

- WS5100
- AP300
- WIPS

Application

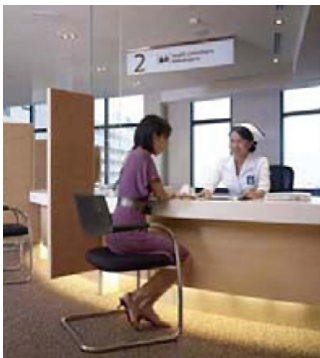
- Hospital staff is equipped with Motorola mobile computing devices through which they can access hospital information and patient records on the hospital information management system

Partner

- Netmarks (Thailand) Co., Ltd

Benefits

- Improved quality and efficiency of patient care
- Enhanced employee productivity
- Enhanced mobility by enabling rapid access to medical and patients’ data





The solution: Implementation of a state-of-the-art wireless infrastructure

Bumrungrad initiated implementation of a state-of-the-art wireless infrastructure project that will provide the backbone for delivering world-class healthcare services to its patients. Bumrungrad selected an enterprise mobility solution from Motorola that includes wireless switching and over 300 access points.

Hospital staff will be equipped with Motorola mobile computing devices through which they can access hospital information and patient records on Hospital 2000, Bumrungrad's hospital information management system provided by Global Care Solutions.

The network topology will include the Motorola WS5100 wireless switch as the core backbone. Bumrungrad chose the WS5100 switch for its Layer 3 roaming capability to handle multi-floor and large-scale campus wide deployments without the need for external applications and third-party servers. By allowing mobile users to maintain a persistent connection to high-bandwidth applications as they roam throughout the wireless coverage area, the switch will provide the foundation for Bumrungrad's long term vision to expand and deploy other WiFi services.

Bumrungrad plans to upgrade the core switching platform to the Motorola RFS7000 Wireless Next Generation Switch when it is released in later part of year 2007. The RFS7000 is the industry's first radio frequency (RF) wireless switch that bridges the gap between Wi-Fi, RFID and other key RF technologies, and is designed to support value-add, optional add-on modules such as fixed-mobile convergence to provide seamless persistent connectivity for mobile and fixed devices.

Furthermore, to ensure patient information remains confidential and known only to authorized personnel, the wireless network is also protected by Motorola's Wireless Intrusion Protection

System (Wireless IPS), which gives the hospital's IT administrators the capability to monitor WLAN performance 24 hours a day. The system will notify Bumrungrad's IT staff when network vulnerabilities or attacks occur, enabling an immediate response. The software architecture is scalable, simple to deploy and easy to upgrade.

Chang added, "We evaluated many different products and technologies during the vendor selection process, but chose Motorola because they proved to have the best products that meet our current needs for core wireless infrastructure as well as our future needs, including RFID technology."

Bumrungrad plans to take its vision of next-generation healthcare one step further through the implementation of RFID technology for staff, patient and asset tracking in 2007.

The benefits: Improve the quality and efficiency of patient care, helping to reduce risk and save lives

The solution allowed the hospital staff to access real-time information and data messaging capabilities while on the hospital's 90,000 m2 campus. It allowed the medical staff to review patients' medical histories, update patient information, check for drug interactions, and look at lab results and x-rays — all from the point of activity: the bedside, the front office, in surgery or on the go.

The patients could also enjoy seamless mobility across the campus. "The wireless network will also enable Bumrungrad's long-term vision to provide information and internet access to every patient throughout the hospital," reiterated Mr. Chang Foo.

The solution is also designed for scalability and will allow Bumrungrad Hospital to deploy Wi-Fi and RFID services through one switching platform. This will reduce the total cost of ownership and simplify management of multiple wireless infrastructure technologies.



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CASE STUDY: BUMRANGRAD INTERNATIONAL HOSPITAL