THE CONNECTED HOSPITAL

Changing the conversations
between care providers,
patients and their families

Alcatel·Lucent
Enterprise

HEALTHCARE IN A CHANGING WORLD

Healthcare providers everywhere are evolving to meet new demands and deliver better care to more people in more locations. To thrive in a changing world, they must change the conversation.

Everything is digital

Electronic Medical Records (EMRs) have become synonymous with patients. Care providers must have secure access to this electronic data when they need it. Without it, they have no access to patient history or diagnoses. It's as if the patient doesn't exist.

Like EMRs, digital images are critical to making decisions about patient care. But today's megapixel images require mega bandwidth. And they need to be shared across on-site and off-site locations. Hospitals must ensure their networks can quickly transport the vast volumes of data this represents.

The move to digital healthcare also brings new requirements for privacy and security. In many jurisdictions, protecting patient data is the law – complete with stiff penalties for non-compliance.

DID YOU KNOW… ?

Computerized Physician Order Entry (CPOE) systems – which are proven to reduce prescribing errors and save costs – require an enterprise-grade wireless LAN?

Everyone is mobile

Delivering healthcare today requires front-line staff such as doctors, nurses, therapists and radiology technicians. It also requires behind-the-scenes support from a virtual army of pharmacists, dieticians, housekeeping, security and other staff.

Virtual team members are always on the move, either within the facility or traveling through a larger network of facilities. Coordinating care requires any number of short, real-time conversations between team members, patients and their families. Quickly connecting the right people is a must.

Resources must go further

In most countries, an aging population is increasing demands on the healthcare system. At the same time, finding qualified healthcare professionals is often a full-time activity.

To compensate for scarce resources, new healthcare delivery models that bring together payers, providers, patients and regulatory bodies must be considered. One technology enabler is to use video conferencing to extend healthcare delivery into patients' homes. Such new delivery models and applications will require high-speed networks that are reliable, available and secure.

"One of the fundamental building blocks for anything we were going to do on the campus was the infrastructure for both voice and data communications. The network is the backbone for all electronic health records, call systems, security systems, communication systems, building automation systems, and biomedical equipment…We wanted to be able to treat the infrastructure like a utility…"

**CIO, CHILDREN'S HOSPITAL OF PITTSBURGH AT
THE UNIVERSITY OF PITTSBURGH MEDICAL CENTER**

Build a better network

Connectivity services that link care providers to each other and to the data they need to perform their jobs all rely on the network. Without the network, there is no patient. It is the foundation upon which all other technology investments are made.

Alcatel-Lucent has experience building networks for care providers of all sizes; providers looking to build mission-critical networks benefit from our experience building service provider networks globally. Our LAN and WAN assessment services help you evaluate the best path and the right solutions to build a strong base for the connected hospital.

MAKE YOUR LAN APPLICATION FLUENT

In-building LANs built on the Alcatel-Lucent OmniSwitch™ product family allow clinical and non-clinical applications based on voice, video and data to run on the same LAN and meet performance requirements.

CONNECT FACILITIES

WANs built with the same IP and optical technologies as service providers use allow healthcare providers to quickly transfer even the largest digital files between facilities in a metropolitan area.

STREAMLINE DATA CENTERS

The Alcatel-Lucent OmniSwitch-based data center fabric switching solution brings the cost savings and efficiencies of virtualization technologies to healthcare providers' data centers.

INCREASE NETWORK SECURITY

Profile-based network access control, unified threat management and host integrity checking ensure that the network infrastructure protects patient data while keeping it available to those who rely on it.

An Alcatel-Lucent security audit helps you identify the security solutions needed for your network and compliance requirements.

DID YOU KNOW… ?

The Alcatel-Lucent data center switching blueprint solution based on the OmniSwitch product line won the Best of Interop award in the data center and storage category at Interop 2011.

SIMPLIFY IP ADDRESS MANAGEMENT

Alcatel-Lucent VitalQIP™ DNS/DHCP IP Management Software automates IP address management services across networks to reduce management requirements and cut administrative costs. VitalQIP is IPv6-ready and is ideal for healthcare providers with 1000 or more IP addresses.

MANAGE APPLICATION AND NETWORK PERFORMANCE

Alcatel-Lucent VitalSuite® software gives healthcare providers insight into their end-to-end application performance and network utilization. They can take proactive actions to address issues before their user community is affected.

Improve in-building wireless connectivity

In-building wireless connectivity that is ubiquitous, reliable and secure requires a wireless environment that supports multiple devices, users and applications across licensed and unlicensed spectrum. Cell phones, pagers, telemetry and public safety radios must all compete for the available spectrum. A unified in-building wireless strategy that considers all spectrum allows care providers to deploy applications in the frequency range that makes the most sense.

Alcatel-Lucent wireless LAN planning services treat the in-building wireless environment as a coherent whole, helping you evaluate your needs and choose wireless solutions across the entire frequency spectrum.

ENABLE SECURE MOBILE MEDICINE

The Alcatel-Lucent OmniAccess family of wireless LAN products provides the high density and security demanded in a modern healthcare environment.

From 802.11 a/b/g/n access points to wireless LAN controllers to our OmniVista™ 3600 for complete wireless LAN monitoring, Alcatel-Lucent offers the full range of products needed to securely deliver mobile medicine.

INCREASE LICENSED SPECTRUM COVERAGE

Distributed antenna system (DAS)* solutions give healthcare providers the coverage and density needed for applications that use licensed spectrum. Service provider voice and data, public safety radio, pagers and medical telemetry can all benefit from 100 percent coverage with no dead spots.

To simplify deployments, all Alcatel-Lucent DAS solutions are turnkey – delivered with the installation and commissioning services needed for use.

Connect the
right people, faster

Short, real-time conversations between healthcare providers, patients and their families are essential to make decisions, get clarifications or to take the next step in an already-determined treatment plan.

Real-time communications solutions that help everyone in the healthcare facility reach the right people, faster, support:

• Multiple devices
• Conversations that involve multiple people
• Multimedia data sharing and video

Alcatel-Lucent custom development services ensure real-time communications solutions are fully integrated with existing healthcare systems.

*DAS solutions are available in selected regions. Contact your local Alcatel-Lucent representatives for details.

"Wireless is absolutely imperative if we are to deliver the best possible quality of care to our patients. With the new network, our clinical staff can instantly confirm that the right patient is receiving the right blood and the right medication, and these checks can be under-taken anywhere in the hospital, at the bedside, in theatre or on the wards. We can cut down on the paperwork while improving the safety of the services we offer. This is great for both our staff and our patients."

IT MANAGER, POOLE HOSPITAL
NHS FOUNDATION TRUST

EMPOWER NURSES

Nurses are the focal point for patient care and the most mobile of any staff within a facility.

Alcatel-Lucent wireless LAN and DECT handsets improve nurse efficiency and patient satisfaction, especially when integrated with the nurse call systems already in place in every hospital. Alcatel-Lucent integration services ensure seamless interoperation.
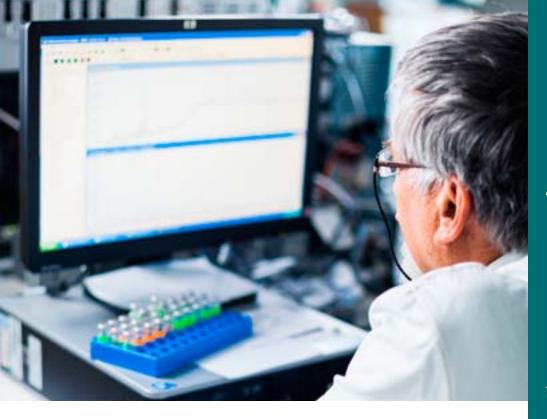
SUPPORT ALL DEVICES

Alcatel-Lucent OmniPCX™ IP telephony and unified communications solutions support IP, digital and analog endpoint devices. They are ideal for all locations, from doctors' offices to hospitals with hundreds of beds.

ENRICH CONVERSATIONS

The Alcatel-Lucent OpenTouch™ Conversation software supports conversations across multiple media, devices and parties. The first release runs on the Apple® iPad®. It gives healthcare providers an easy-to-use and engaging interface while providing the security and ease of management required in mobile healthcare.

FOSTER VISUAL COLLABORATION

An affordable, end-to-end collaboration solution delivers high-definition video and audio in just one-third the bandwidth of typical solutions. With visual collaboration capabilities, it's only natural for remote clinical and non-clinical staff members to work together.

Enhance patient services

The patient experience before, during and after their visit to a healthcare facility is a key consideration. Happy patients are more likely to comply with medical instructions. They're also more like to be in a state of mind that encourages healing.

Solutions that focus on the patient journey streamline and enhance the overall healthcare experience.

STREAMLINE APPOINTMENTS AND INSTRUCTIONS

A multi-channel contact center that includes text-to-speech and speech recognition capabilities allows healthcare providers to simplify and automate appointment-making, delivery of post-operative instructions and reminders.

These capabilities decrease the number of missed appointments, ensure patients receive key information and free staff to focus on more critical patient care issues. Alcatel-Lucent professional services help ensure your contact system is deployed with proper call flows and interactive voice response (IVR) chains.

"The time we spent at the Center for Connected Medicine made us realize that we needed to transform our facilities into connected organizations – much to the satisfaction of our doctors, 120,000 patients and staff – and we have Alcatel-Lucent to thank for that. Alcatel-Lucent's Connected Hospital Program is helping maximize our IT department's capacity, focusing on supporting internal clinical customers with applications and tools to improve patient care. My IT team can direct Alcatel-Lucent's engineers to build the network our clinical clients demand."

CIO, SOUTH JERSEY HEALTHCARE

"We are implementing a technology to transform The Ellwood City Hospital into a model for 21st century communications, benefitting staff, doctors, patients and all guests. "Even though we're a smaller facility, we were given access to the same types of strategic technologies as larger, integrated health networks. With our new Alcatel-Lucent high-speed wired and wireless network and digital applications, we are positioned to operate more efficiently, communicate more readily and provide a higher level of patient care."

CEO, ELLWOOD CITY HOSPITAL

PROVIDE MORE INFORMATION

Digital signage solutions can be used anywhere in the healthcare facility to provide information about services, menus, department locations and educational content.

GIVE PATIENTS A COMMAND CENTER

The Alcatel-Lucent My IC Phone brings powerful, yet easy-to-use features right to patients' in-room phone. The phone becomes a universal remote control for temperature, curtains and lighting. Patients can also use the phone's always-on touch-screen interface to access information about services, programs, schedules and menus.

HEALTHCARE PROVIDERS PARTNER WITH ALCATEL-LUCENT

Alcatel-Lucent delivers the solutions and expertise healthcare providers of all sizes need across the continuum of care delivery. Whether you are a hospital, a hospice, an assisted living facility, a clinic or an imaging center, Alcatel-Lucent solutions will help you change the conversation and improve patient outcomes.

Learn more about our solutions and find out how our rapid business assessment services can help you evaluate your current communications environment, uncover hidden requirements and build a roadmap to create a connected hospital with no boundaries and new opportunities.

www.alcatel-lucent.com/healthcare

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