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.

Everything is digital

Electronic medical records (EMRs) have become inextricably linked to patients. Care providers must have secure access to this electronic data when deciding treatment options. Without it, they have no ability to consult patient histories or diagnoses, forcing critical decisions to be made without sufficient information.

Similar to EMRs, digital images are critical for understanding patients' conditions and making decisions. These images tax the network, as they are used in ways not imagined when the communications infrastructure was deployed.

Information of all kinds needs to be shared across on-site departments and off-site to clinics, offices and even home-workers. Hospitals must ensure their networks can quickly and securely transport these vast volumes of data.

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… ?

Clinical imaging is increasingly used to explain procedures to patients at the bedside? And fast access to these images on mobile devices requires an enterprise-grade wireless local area network (WLAN)?

"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

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 locations.

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

Aging populations in most countries are increasing demands on the healthcare system. At the same time, finding qualified healthcare professionals is becoming more difficult.

To compensate for scarce resources, new healthcare delivery models that bring together payers, providers, patients and regulatory bodies must be considered. New delivery models and applications – such as video conferencing that extends healthcare delivery into patients' homes – require high-speed networks that are reliable, available and secure.

Build a better network

The network is the linchpin for the connectivity services that link care providers to each other and to the data they need to perform their jobs.

Without the network, fully informed patient care becomes impossible. It is the foundation upon which all other technology investments are made.

Alcatel-Lucent Enterprise has built networks for care providers of all sizes; healthcare facilities looking to build mission-critical networks also benefit from our experience building networks globally in other industries where mission critical networks are the norm. Our LAN and WAN assessment services help you to evaluate the best path and the right solutions to build a strong base for your connected hospital.

> "With so much riding on this network, we really needed a system that was both state-of-the-art — to deliver the capacity and wireless access required — and that was bullet-proof in terms of reliability."…

> "Alcatel-Lucent provided an end-to-end system that meets our needs today, and can grow along with us as our requirements evolve. We have the high bandwidth and high throughput we need available now through the 10 Gb/s core infrastructure, and it's scalable to 100 Gb/s or more for the future."
>
> **NICK VAN DOMBURG, CIO LIVERPOOL HOSPITAL**

MAKE YOUR LAN APPLICATION FLUENT

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

STREAMLINE DATA CENTERS

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

INCREASE NETWORK SECURITY

Profile- and application-based network access control across wired and wireless networks ensures the network infrastructure protects patient data while keeping it available to those who rely on it.

SUPPORT PERSONAL DEVICES, SECURELY

Self-service on-boarding and guest access with dedicated user profiles for guests, patients, care providers and staff means the bring your own device (BYOD) trend need not tax scarce IT resources or put patient data at risk.

> "One of our main goals is to have the best wireless network possible, so that whenever we do purchase new technologies, networking and interfacing isn't something we have to worry about."
>
> **FRANCOIS BODHUIN,**
> **TECHNOLOGY DIRECTOR,**
> **INSPIRA HEALTH NETWORK**

Improve in-building wireless connectivity

Wireless connectivity is increasingly the norm for both clinical and non-clinical devices. Users carry multiple wireless devices and use them for patient order entry and record viewing, among other tasks. In-building wireless connectivity that is ubiquitous, reliable and secure requires a wireless environment that supports multiple devices, users and applications.

Alcatel-Lucent wireless LAN planning services will help you to evaluate your needs and choose the most appropriate wireless solutions across the entire frequency spectrum.

ENABLE SECURE MOBILE MEDICINE

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

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

Connect the right people, faster

Short, real-time conversations between healthcare providers, patients and their families are essential to make decisions, get clarification 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 Enterprise custom development services ensure real-time communications solutions are fully integrated with existing healthcare systems.

EMPOWER NURSES

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

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

SUPPORT ALL DEVICES

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

ENRICH CONVERSATIONS

Alcatel-Lucent Enterprise OpenTouch Conversation software supports conversations across multiple media, devices and parties. Care providers with Apple® iPads™, iPhones™, or any PC can participate in rich collaborative conversations. It gives healthcare providers an easy-to-use and engaging interface, while providing the security and ease-of-management required in mobile healthcare.

> "The Alcatel-Lucent [networking] equipment has been able to support all of the demands driven by advances in medical technologies and the desire to deliver great service. Our infrastructure is so flexible that we can easily handle unpredicted changes; the modular architecture enables us to do controlled transitions rather than having to make large-scale alterations to accommodate the latest requirements."

DAVE HUNT,
MANAGER OF OPERATIONS
AND SERVICE SUPPORT,
CLARK MEMORIAL HOSPITAL

FOSTER VISUAL COLLABORATION

An affordable, end-to-end collaboration solution, OpenTouch Conversation delivers high-definition video and audio using only 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 visiting a healthcare facility is a key consideration. Happy patients are more likely to comply with medical instructions. They're also more likely to be in a mental state that encourages healing. Solutions that focus on the patient journey simplify and enhance the overall healthcare experience.

STREAMLINE APPOINTMENTS AND INSTRUCTIONS

The Alcatel-Lucent Enterprise OpenTouch Customer Service Solution is a multi-channel contact center that includes text-to-speech and speech recognition capabilities. It 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 to ensure your contact system is deployed with proper call flows and interactive voice response (IVR) chains.

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 Enterprise OmniTouch 8082 My IC Phone brings powerful, yet easy-to-use features right to a patient's in-room phone. Beyond voice services, 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 Enterprise

Alcatel-Lucent Enterprise 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 Enterprise solutions can help you to 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 new opportunities, and build a roadmap to create a connected hospital with no boundaries.

enterprise.alcatel-lucent.com/healthcare

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