THE NEED FOR ENTERPRISE-GRADE MOBILE TECHNOLOGY AND THE RESULTING IMPACT ON ENTERPRISE NETWORKS, ESPECIALLY IN HEALTHCARE, LEADS DENALI TO CREATE A CONVERGED MOBILITY PRACTICE.
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DEVICE EXPLOSION IN HEALTHCARE IT

Technology continues to expand and improve – at ever faster speeds. As it does, it brings tremendous opportunities to improve all facets of life, business and the world of healthcare. Of course, with major opportunities come significant challenges.

TOO MANY DEVICES

The explosion of mobile enterprise devices - scanners, rugged handheld computers, tablets, and mobile printers - is driving up accuracy and efficiency and is increasing safety and innovations. It’s also keeping CIOs up at night. The reality is the hyper-connected hospital is straining the entire wireless infrastructure as well as many IT resources.

MOBILITY IN HEALTHCARE

No wireless design is complete without accounting for the dramatic increase in mobile enterprise devices. They present a unique set of challenges to the wireless network designer. These WLANs usually require the capability to support both high device density and unusual environmental characteristics such as 40’ ceilings, metal shelving, constantly changing inventory, machinery interference, and devices roaming around sprawling medical facilities.

In the past, endpoints were commonly defined as a laptop on the wireless infrastructure. Now it has grown to a myriad of devices including consumer and purpose-built devices, smartphones, softphones, rugged mobile scanners, wireless printers and wireless IOT devices, to name a few.

The number of devices seen in these unique environments has been steadily increasing as more and more business functions are moved to mobile devices. This results in congestion in the wireless spectrum and overloading of access points.

Mobility has changed from simply having a wireless infrastructure for connectivity to providing a single end-user experience to business resources.
Wireless networks were originally designed and built for specific purposes such as guests, voice traffic, warehousing, medical equipment, workstations, etc. This tactical approach worked well for many years, providing limits and controls for a secure and robust wireless infrastructure.

Over time, organizations were asked to provide additional services and capabilities. Adding multiple requirements to purpose-built wireless networks presents challenges, especially in bandwidth. For example, VoIP will work fine until additional traffic from web and local applications is added. Another common challenge is definition and enforcement of security domains and access control.

Because of the incredibly fast-growing number of connected devices entering the healthcare ecosystem more devices mean more:

- Operating systems
- Training
- Security patches
- Service calls
- Third-party vendors to deal with
- More service providers in the mix for repairs

With healthcare IT teams already stretched thin worrying about HIPAA security and privacy issues, it only makes sense to turn to an advanced integration provider like Denali to help design and build a wireless infrastructure robust and secure enough to scale for the needs of tomorrow.
The emergence of mobility and the impact on enterprise networks, especially in healthcare, led Denali to create a Converged Mobility practice that focuses on any endpoint over any network to any resource.

Denali understands the differences between endpoints, workloads and network impact. A “one device fits all” model is emerging. This allows organizations to shed technical debt and unify multiple endpoint solutions to a single device that can be used for different workflows. Industry leading devices from Zebra are a superior fit when it comes to meeting the data demands of healthcare organizations for mobile inventory, tracking, voice, location services and workflow applications.

Denali’s knowledge, and expertise combines the industry leader in networking, Cisco, with the industry leader in mobility solutions, Zebra, to provide a best-of-breed wireless mobility offering, also known as Converged Mobility.

This Zebra/Cisco combination delivers high performance, manageability, and secure connectivity for business critical devices regardless of use case, role, or user. Denali has tested the spectrum of providers and proved that Zebra devices connected to a Cisco network provides the optimal solution when built and implemented by Denali experts.

**BENEFITS OF CONVERGED MOBILITY**

Denali’s knowledge and expertise combined with industry-leading enterprise networking and mobile technologies help organizations realize the full potential of their mobile assets by optimizing the network.

By using Denali’s Converged Mobility best practice strategy, organizations will realize numerous benefits:

- Consistent wireless operation in both coverage and throughput.
- Elimination of dropped connections – an application workflow nightmare.
- Reduction of IT debt through elimination of softphones, BT scanners, and accessories by moving to a single Zebra device model.
- Centralized managed services for all endpoints and infrastructure.
- Single point of contact for both Cisco Wireless infrastructure and Zebra mobile devices.
- Lifecycle management to prepare for end of life operating systems such as Windows Mobile/CE in 2020.
Denali has converged its architecture teams of Networking and Mobility Architects, Engineers, Administrators, and Support personnel to provide unified solutions to satisfy the increasing demands on your network.

Denali methodology for any new design is Strategize, Realize, Optimize™

### STRATEGIZE
- Applications
- Bandwidth
- Protocols
- Environment/Area
- Site Survey
- Frequencies
- Service Level Agreements
- Density, Cell Sizing

### REALIZE
- Pre-Installation Site Survey
- Install
- Baseline

### OPTIMIZE
- Monitor
- Troubleshoot
- Report
- Revisit Baseline
- Post-Install Site Survey

This method goes beyond a basic Plan-Build-Run IT methodology. The focus is elevated from status-quo to visionary. Denali looks past planning to meet necessary requirements.

While in the consultative process, we account for future needs and scaling (both horizontal and vertical). During the Optimizing phase, we are not just running or operating the network, we’re considering changes to make it better.

The Denali Mobility team provides product and configuration insight and designs a strategy to integrate your new Mobility model ensuring a tight partnership with your networking, configuration and application teams, device management platforms and your business units.
Our most successful clients also leverage Denali Managed Mobile Services (MMS) to address mobility end-to-end and diminish the burden of everyday tasks such as:

This end-to-end, strategic approach frees corporate teams from mundane tasks and enables redeployment to new projects and initiatives.

Learn more about Denali's complete services portfolio at: [www.denaliai.com/en-us/services](http://www.denaliai.com/en-us/services)
DENALI ADVANCED INTEGRATION
EXCEPTIONAL IT, DELIVERED.

Denali delivers enterprise IT solutions and services, powered by strategic experts and best of breed technologies to help guide you through the most complex IT challenges. Denali’s Converged Mobility practices helps healthcare organizations get the most out of their mobile solutions by leveraging enterprise-grade mobile devices and Denali designed, verified and proven enterprise networks.

Contact Denali for a consultation, product demonstration, or just an informative discussion.

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