

# 100% Wireless Coverage in Critical Care Environments? **SIMPLE.**



“The installation of the DAS Simplified system at Swedish Issaquah was seamless. The entire DAS system, from the install to the testing and tweaking was ahead of schedule. It was the one thing I didn’t have to worry about.”

-J. Forrest Nelson,  
*Senior PM,*  
*Swedish Medical Center*

**W**hen Swedish Medical Center built its state-of-the-art hospital and medical center in the vibrant Seattle suburb of Issaquah, Washington, they re-envisioned how health care should be delivered in the 21st century. With the installation of a DAS Simplified Distributed Antenna System, Swedish Issaquah brought 100% wireless coverage of cellular, public safety, security radio and paging services to staff, patients and first responders.



*Giving you the tools for wireless expertise.*

## DAS Simplified includes:

- Site Survey of Existing Signals
- Complete, Guaranteed System Design
- Carrier & Public Safety Coordination
- Premanufactured Products for Easy Installation
- Installation Training for Installing Contractor
- System Optimization & Testing to Ensure Full System Functionality & JHA/Carrier Approval
- System & Product Certifications to Meet All Specifications
- Ongoing System Support, Including 24x7 Monitoring, Maintenance & Support Programs



## THE CHALLENGE

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As part of their effort to revolutionize healthcare, Swedish Issaquah chose to incorporate the latest advances in communication technology to ensure a highly patient- and staff-friendly environment. The delivery of uninterrupted wireless communication, which needed to function flawlessly throughout the environmentally friendly building, was deemed particularly important. To push the envelope further, Swedish mandated that the 700,000 square foot medical center was to open within a two-year timeframe to serve the needs of the Issaquah Highlands, an area in critical need of its own medical facility.

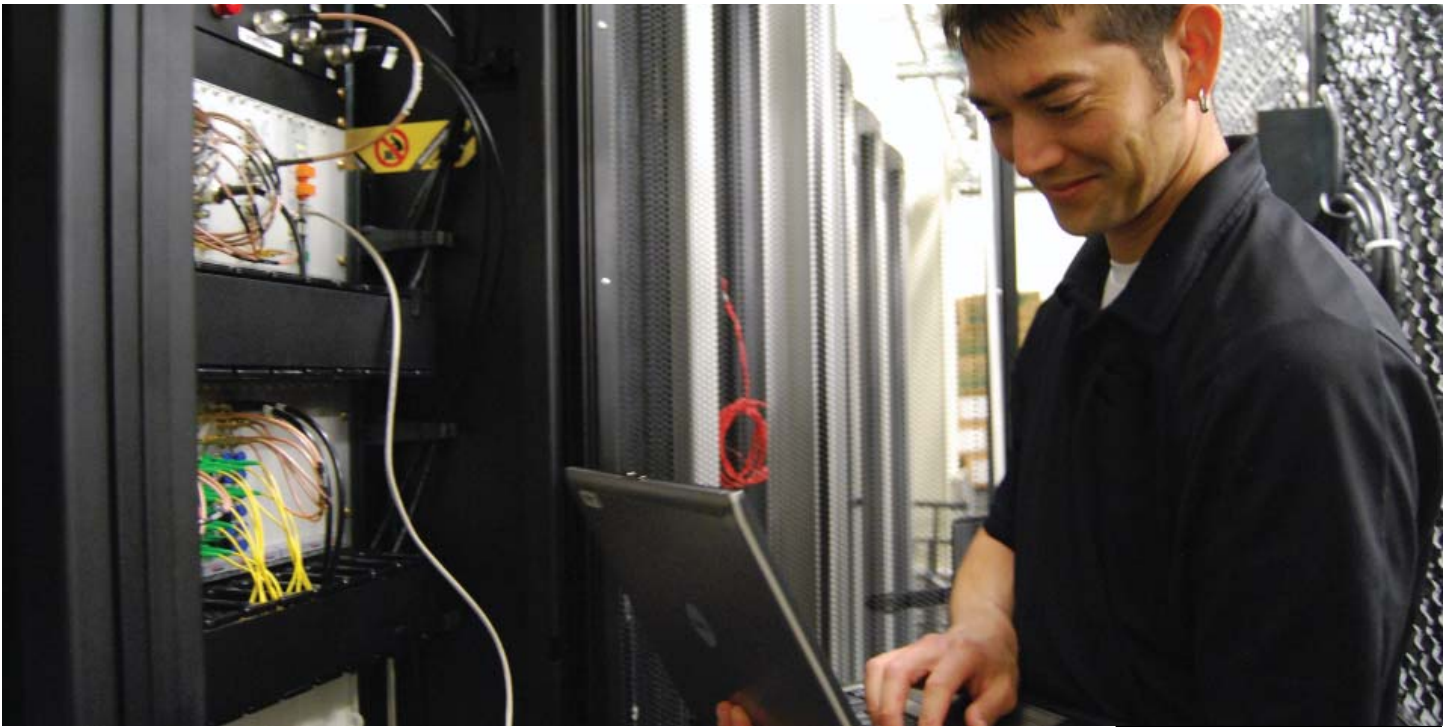
## THE SOLUTION

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Swedish Issaquah's forward-thinking influenced their choices for their wireless communications solution. In pre-planning, the design team determined that nothing less than 100% coverage through a Distributed Antenna System (DAS) of all incoming wireless systems would suffice. In fact, DAS was deemed a crucial utility, like water, gas and electric on the entire Issaquah campus. A DAS uninterrupted amplified wireless signal served the communications needs of staff in several ways. DAS provided the medical staff the ability to wirelessly input and relay patient information through the use of iPad and tablet devices, and the freedom to move and interact with patients and others without having to be chained to their workstations.

DAS also guaranteed the functionality of security communications, such as pagers and two-way radio systems. To satisfy International Fire Codes and for public safety and first responders, such as police and fire, unobstructed radio communication with a 95% signal strength requirement on each floor was equally important. Additionally, DAS met the need for uninterrupted cell phone coverage for staff, patients and family, regardless of carrier.

With Swedish Issaquah, there was an element of added complexity to finding the right DAS product: the requirement that the install meet strict time and money constraints. A DAS Simplified installation was decided upon as the ideal solution. The design and installation of a DAS Simplified system began immediately following the pre-planning phase of the hospital, with a comprehensive on-site survey to ensure a no-change-order system design. The survey included the testing of existing signal



levels and the elimination of signal interference. Additionally, the DAS Simplified installation eliminated the need for Swedish to interface with carriers, with DAS technicians performing carrier and public safety jurisdiction walk-throughs of the design; the coordination and installation of carrier-provided equipment, and the negotiation of rebroadcast agreements with carriers.

Overall, as a pre-manufactured product, DAS Simplified proved a time and money saving solution to a traditional Distributed Antenna System, because DAS Simplified had 90% fewer components to install. The pre-fabricated headend, rack-mounted remote assemblies, and pre-cut and labeled cable assemblies were manufactured to ensure easy, fast installations. For Swedish Issaquah, pre-fabricated ceiling-mounted omnidirectional antennas with box and jumper were installed to ensure optimum signal amplification.

Finally, to ensure the flawless functionality of the DAS Simplified system, after installation, a live test of the system was performed, with a map of the coverage area provided to Swedish for review and acceptance. Finally, ongoing system monitoring is achieved through an SNMP-northbound interface, GUI-client modem and user management with a Critical Level Support system in place to keep Swedish Issaquah's wireless systems up and running 24/7.

All told, the installation of pre-manufactured equipment meant less man-power and less labor cost which led to crucial time-savings on the install.

**In part due to the installation of a DAS Simplified solution, Swedish Medical Center, Issaquah opened its doors eight months earlier than planned.**

## Swedish Issaquah's DAS Simplified System included:

- AT&T 4G
- Verizon 4G
- 150 MHz paging
- 450 MHz paging
- 450 MHz radio
- 800 MHz radio
- 700 MHz public safety radio
- 800 MHz public safety radio
- 900 MHz paging
- Future Sprint
- Future T-Mobile

## Warranty & Maintenance:

- One-year warranty from substantial completion on workmanship
- Manufacturer's Warranties
- Existing System Maintenance & Upgrades
- Monitoring & Full Control Capabilities
- 1-hour Alert Acknowledgement.

