

DAS))))
((((Simplified

Poplar Bluff Medical Center: Successful Wireless Installation Despite Constantly Changing Scope of Work

What is a DAS?

Mobile devices and applications are driving massive changes in how we work, play and live. Productivity and mobility has improved because of applications and devices, but users are challenged because mobile service quality can be impacted indoors. The problem is that RF (radio frequency) signals are severely impacted by metal structures, thick concrete walls, and energy-saving windows. In addition, recent building codes dictate a public-safety wireless system be installed for emergency responders and police. The conventional approach has been to build two separate systems to accommodate wireless technologies, but now facility owners have the option of one combined DAS (distributed antenna system) for complete coverage of all wireless needs, lowering their overall cost and leveraging a shared infrastructure.

Poplar Bluff Medical Center in southeast Missouri is the area's foremost healthcare organization and largest employer. When plans were made for a \$173 million hospital complex, their leadership knew they had one chance to get it right. One chance to build a facility that would serve the community for the next forty years, including accommodating critical current and future wireless systems. They looked to **DAS Simplified** for a solution.

The Challenge

Poplar Bluff administration wanted the latest technologies for the state-of-the-art facility. But over halfway through construction, officials in charge realized that their initial plan to provide wireless service in only certain areas of the hospital would result in large gaps in coverage. As a result, there was a risk of the hospital not gaining their Certificate of Occupancy on time from government officials, a situation which was completely unacceptable to the stakeholders.



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The Solution

Fortunately, CommNet, a Missouri-based communications provider, had a solution with their partner DAS Simplified. They selected the firm due to several factors. First, they were impressed that DAS Simplified has never had a wireless carrier (AT&T, Verizon, etc.) deny any of their designs for in-building coverage. They also knew that DAS Simplified's methodology of pre-building cable assemblies in their production center ensured a higher degree of craftsmanship and easy, quick installation.

As building construction continued, changes to the scope of the DAS were given to DAS Simplified literally mid-stream. Officials wanted to make sure that doctors would be able to use smart phones for patient scheduling and care. They also knew that visitors want their cell phones to work everywhere, and not to have to traipse into the parking lot to make a call. As ceiling tiles were being closed, there was a frantic rush to modify the design to accommodate more wireless coverage, presenting obstacles in not only the layout of cable and antennas, but also the head-end equipment and how it was engineered to rebroadcast signal.

DAS Simplified was up to the challenge. Because they had a team of RF engineering experts well versed in these systems, changes to the design were modified in days. Because they constructed 50-ohm cable assemblies in their production center, they were able to quickly build and ship the needed assemblies to Poplar Bluff for immediate installation by CommNet technicians. Changes were accommodated in days, not the weeks that are typical of other wireless service providers.

The DAS installed at Poplar Bluff was designed to provide complete coverage over virtually every square foot of the 427,000 SF facility. The system supports VHF (very high frequency) and UHF (ultra high frequency) for public safety as well as all major commercial cellular carriers. Designers and planners knew that the proliferation of wireless devices would only grow with time, and wanted to be future-proof.

The entire DAS installation was finished ahead of the construction schedule and on budget. One last step for DAS Simplified was to work with cellular

carriers for acceptance of the design of the DAS, a very necessary requirement for operation of the system. Since the DAS actually retransmits the signal owned by the carriers, owners risk being fined by the FCC without this approval.

To provide maximum continuity, DAS Simplified integrated a UPS (uninterruptable power supply) with the system to ensure 8+ hours of run time in the event of a power problem. Additionally, they connected an SNMP-based, automated monitoring module to DAS Simplified's NOC (network operations center), to guarantee 24x7 system operation mandated by public safety codes.

Today medical professionals, support staff, and visitors alike **enjoy nearly ubiquitous mobile coverage because of the system installed by DAS Simplified** on the Poplar Bluff campus. For an organization that offers a full range of medical services to patients in the region, not having to worry about DAS means they can focus on what they do best: high-quality healthcare. Wireless technologies empower them to improve patients' lives.

Poplar Bluff DAS Simplified solution includes:

- AT&T
- Verizon
- Sprint
- T-Mobile
- 150 MHz Paging
- 450 MHz Radio
- 800 MHz Public Safety

Warranty & Maintenance:

- Five year warranty
 - Remote monitor & Control
-



Photograph by Ron Rizzo, Creative Sources Photography