



Case Study - Princeton Radiology in Focus



"Our ultimate goal was to improve patient care by providing service more promptly. Redline's wireless broadband solutions helped us move large amounts of patient information quickly resulting in better patient care from more efficient doctors. This is a significantly less expensive alternative compared to our existing broadband service."

- Jamie Pugh, Network Engineer



Redline's AN-50 drives significant cost savings for leading radiology clinic

Perpetually driven to provide premier patient service, Princeton Radiology knew that one of the greatest administrative challenges for any medical facility's operation is record keeping and retrieval. Princeton Radiology recognized they could improve operational efficiency by moving the storage of MRI, CT and Nuclear Medicine studies from paper files to digital media.

As a global leader in disease research, diagnosis and treatment, with multiple facilities located throughout Princeton, New Jersey and neighboring towns, Princeton Radiology needed a large amount of bandwidth to connect all their facilities, and to support digital archiving of all patient images.

At the forefront of technology, Princeton Radiology recently introduced Picture Archiving and Communication Systems (PACS) to their medical practice. PACS is a state-of-the-art system that serves as a secure database for medical images - improving the efficiency of imaging departments by allowing medical information to be stored, recalled, displayed, manipulated and printed digitally for medical imaging departments and the medical enterprise at the touch of a button.

Radiology clinics all across the country are implementing PACS only to discover that their existing communications networks cannot provide reliable or cost-effective delivery of these large data files. Clinics are experiencing considerable increases in their telecommunications costs as their bandwidth demand rises exponentially. In more extreme cases, radiology clinics are now paying in excess of \$50,000 / month in telecommunications charges.

While PACS provides the advanced digital imagery and data storage capabilities that radiology clinics need for the diagnosis and treatment of their patients, existing broadband networks did not provide the quality or cost-efficiency that Redline's wireless broadband solutions can provide.

The Challenge:

Princeton Radiology needed a reliable broadband network that would provide the high-bandwidth connections required to support their advanced Picture Archiving and Communication Systems (PACS) and minimize the impact of increased telecommunication charges.

Solution:

Princeton Radiology chose Let's Think Wireless (LTW) to deploy Redline's AN-50 non-line-of-sight, point-to-multi-point (PMP) broadband fixed wireless system to establish reliable and robust links to seamlessly connect several remote offices.

Result:

In just a few short months, the implementation of Redline's advanced wireless broadband system led to many improvements for patient care, including decreased waiting times and faster diagnoses - and fast ROI. The wireless broadband network significantly reduced telecommunications costs and is set to pay for itself in less than two years.



Strategic Benefits

- Seamless networking between multiple locations
- Reliable, secure, high-speed data transfer
- Improved patient care and shorter hospital stays
- Superior doctor collaboration
- Faster diagnoses and patient care
- Reduced waiting times

Operational Benefits

- Increased operational efficiency
- Quick return on investment (ROI)
- No monthly recurring costs for leased T1 and T3 lines
- Improved record keeping and data retrieval
- Uninterrupted access across broad region
- Scalability allows the network to grow

"Princeton Radiology needed a wireless network that could provide uninterrupted, high-speed bandwidth between multiple facilities. Using Redline's AN-50, we were able to build them one of the most advanced wireless broadband networks in the healthcare industry today".

Craig Lerman, Let's Think Wireless

How the Solution Works

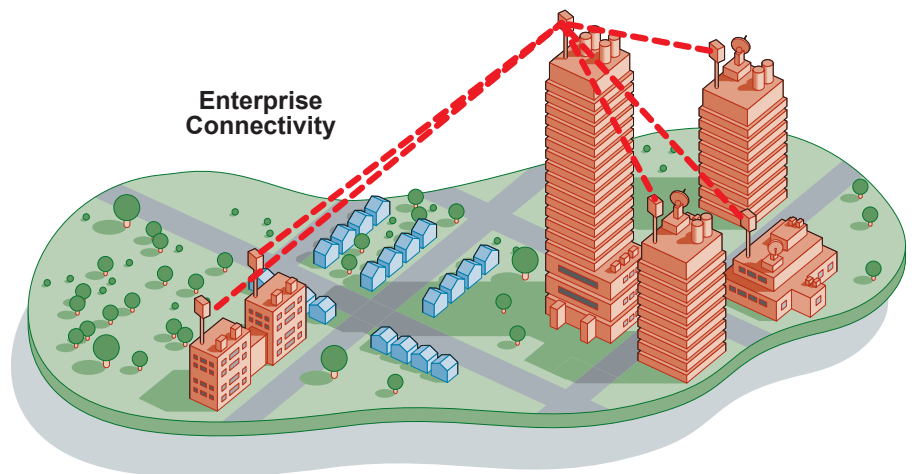
Looking for a way to avoid steep recurring costs for leased T1 and T3 lines, Princeton Radiology turned to premier wireless integrator Let's Think Wireless (LTW), a subsidiary of WinMill Software. LTW worked with Redline Communications to implement a three-day survey and proof of concept, deploying temporary network equipment to simulate a proposed solution. The trial was a success, and led to the deployment of a full-fledged system.

The highly-secure system designed by LTW uses Redline AN-50s to provide five Princeton Radiology locations and one partner hospital with a wireless broadband network to share critical voice, data and imaging applications. The network and the applications it supports are vital to the overall quality and promptness of healthcare that Princeton Radiology provides to its patients. The solution provides a scalable, fixed-wireless network that provides uninterrupted access across the greater Princeton area.

The solution's success largely depended upon OFDM - short for Orthogonal Frequency Division Multiplexing, an FDM modulation technique for the wireless transmission of large amounts of digital data. OFDM offers robust non-line-of-sight wireless communications, which enables the connection to operate in a variety of environments.

The hallmark of the solution is the enablement of enhanced, real-time delivery of medical applications that allow doctors to collaborate more effectively to improve response time for critical patient care. Princeton Radiology's broadband network is one of the most aggressive forays into wireless technology by any healthcare institution in the country.

Let's Think Wireless (LTW) Princeton Radiology Network



Redline's AN-50e was used to connect this advanced broadband wireless network.



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