

Small Business WAP200 Wireless Solution

James Sanders of Shared Resources uses the Linksys WAP200 and WAP200E Wireless Access Points to win the day ... and save the Town of Cornelius, North Carolina \$6000 annually.

The Town of Cornelius, North Carolina, a SharedResources customer, planned renovations to their Fire Department. The opportunity was ripe for SharedResources to implement a wireless WAN solution. A dedicated T1 to connect the new Fire Station to the town's network was also considered, at a cost of \$500 per month.

Shortly after groundbreaking on the new Fire Department, James Sanders, President of SharedResources, attended a Cisco seminar on new technologies. Among the new products demonstrated were the Linksys WAP200 and WAP200E, introduced by Steve Crimmins, Cisco Small Business Market Manager, and Dave Hornstein, Cisco System Engineer. When Dave claimed these wireless access points had a four-kilometer range, James called his bluff and invited him and his end of the connection to Cornelius for testing.



The Wireless-G Access Point with Power Over Ethernet and Range Booster.

The intent of the first wireless connection was to verify that the product would provide a solution for the challenges presented by the town. The host side of the wireless bridge, a Linksys WAP200E powered through PoE, was positioned on top of the Cornelius Town Hall roof. The temporary remote side of the wireless bridge, part of Dave's personal tech kit, was perched on top of the SharedResources van and connected to a notebook on the backseat. The connection worked and

worked well, but Dave suggested the addition of external directional Yagi antennae.

Larry Davis, Cornelius Municipal Network Engineer, qualified the Police Department's existing antenna station for this project.

The town's return on investment is four months with an annual savings of \$6,000 and up to 20 times the throughput of a T1.

The following pictures provide a closer look at the installation.



The Police Department had an existing antenna station.



The antenna station provided an excellent foundation for mounting the WAP200E and Yagi antennae.



The WAP200E is mounted on the Yagi antennae. Note the antenna cable on top, network cable on bottom, and an unseen grounding wire attached to the back. The antenna is also grounded. Both ground wires are attached to the grounded antenna mount.



While choosing the Cisco/Linksys equipment was easy, choosing the appropriate antenna cables was trickier. PK Patel of SharedResources worked closely with Andrew Cooling of CDW and Andrew's contacts at TESCO Technologies to select the appropriate jumper cables and connector adapters for the project.



The red circle represents the line of sight to the Fire Department's Yagi, located on the other side of the trees.



The Fire Department's Yagi is hidden behind the window at the top of the building to maintain aesthetics.



The Fire Department's WAP200 is connected to the LAN through a Linksys Business Class router.

About SharedResources

Established in 2000, SharedResources assists clients with information technology strategies and solutions, including evaluation, procurement, and installation. Their expert services include network support, office automation systems, web sites, data and telephone cabling, and home computer applications with the goal of excellent results for all clients. Visit the SharedResources website at www.sronc.com.

James Sanders is President and Founder of SharedResources. He is a computer consultant, IT Director for the [Town of Cornelius](#), and a golfer. James is a veteran of the United States Air Force and has recently achieved a Certified MBA through Western Governors University.

For More Information

For more information about Cisco solutions for Small Business, visit <http://www.cisco.com/smb>.



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