

# Temple, Texas, Deploys Wireless Links to Deliver Voice, Data and Video Services

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The city of Temple, Tex., has deployed seven BridgeWave FE80U point-to-point wireless links to transport citywide voice, data and video traffic. The BridgeWave links provide full-rate 100Mbps backhaul capacity with software-key field upgradeability to full gigabit Ethernet capacity in order to support emerging public safety, video surveillance and disaster recovery applications.

The city's 18-member IT team is responsible for supporting 650 employees working at 32 buildings and facilities across a sprawling 70-square mile footprint. While City Hall and major facilities -- including the Police Department, Fire Department, Library, Public Works, Court and Fleet Maintenance Center -- are connected via fiber-optic links, the remaining sites initially utilized an ad hoc combination of low-speed wireless, T1, ISDN, DSL and cable modem solutions.

Network congestion, bandwidth limitations and unreliable performance of aging 5.8 GHz radios led the team to explore other cost-effective connectivity methods. Temple's 10 water towers, which form a ring around the city, provided an excellent line-of-sight solution for reaching most locations. With assistance from Redmoon Inc., a wireless solutions provider based in Plano, Tex., Temple created a high-capacity wireless backbone, incorporating seven BridgeWave field-upgradeable 80 GHz wireless links with a 5.8 GHz mesh access system. The self-healing network aggregates and backhauls traffic over a mesh-ring topology with built-in redundancy for maximum service availability.

"Our overarching objective was to deploy a best-of-class wireless backbone that would support all our current and future networking needs," said Alan DeLoera, Temple's IT director. "BridgeWave's 'future proof' backhaul technology allows us to get a jump on various public safety and security applications while protecting our network infrastructure investments and allowing us to deliver superior services to the city's employees, residents and businesses."

In addition to dramatically improved data connectivity, the high-speed network is proving instrumental in the city's rapid effort to install video surveillance cameras on all city buildings and public works facilities. Temple also is migrating traffic from its previously separate traffic signal monitoring, public safety and fresh-water infrastructure monitoring applications onto the wireless backbone.

Other plans call for adding a series of Wi-Fi "hot zones" around the city to provide police, fire department and city employees with field access to central servers over the high-speed network. Since new network nodes can be quickly and easily deployed, an opportunity also has been identified to set up temporary mobile data locations around the city as part of a far-reaching disaster recovery plan.

The city of Temple forecasts a complete ROI on its high-speed wireless network in less than three years. Temple also estimates an annual savings of \$100,000 by connecting the city's facilities over a wireless network and projects an additional savings of hundreds of thousands of dollars in network deployment costs and access fees.