

Homeland Security - Racine, Wisconsin



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Kerry Kriegel, WAN Specialist, Racine County

Racine County Police Uses fSONA Free Space Optics and RAD Access Products for Five 9s Reliability in Voice and Data Transmission

The Racine (Wisconsin) Police Department practices a proactive, community-oriented approach that looks for creative, long-term solutions. It has demonstrated this same inventiveness in defining its communications network.

Racine County is implementing a wide area network (WAN) to provide enhanced voice and data communications throughout the county, to support public safety and other local governmental needs. Specifically, it requires 28 T1 lines for deployment of a new police squad car communications system, and a 100 Mbps full duplex Ethernet connection between police headquarters and the sheriff's office located in the county courthouse. The network configuration protects against any single point of failure on the mission-critical segments. "Everyone involved in the project has demanded that this be the design criteria because a major part of the project supports communications that protect life and property," explains Racine County WAN Specialist Kerry Kriegel. "Delays due to system failure are not acceptable."

Wireless Fiber Improves Reliability

Since Racine County did not want to rely on the dark fiber already running between the police and courthouse buildings ("We learned last year how vulnerable the fiber is to a shovel," says Kriegel), a free space optics laser link with fSONA's SONAbeam™ 155-S equipment was installed by System Support Solutions (www.SystemSupportSolutions.com), a leader in the deployment of free space optics and radio frequency point-to-point, high bandwidth wireless links. The SONAbeam™ 155-S connects to the ATM interface of RAD's ACE-101™ access units, installed by System Support Solutions with the help of AccuWare Inc., a RAD value-added reseller.

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Fast Ethernet and T1 Support

Each ACE-101 access unit multiplexes the voice and data between the two sites, sending the 100 Mbps traffic via its Fast Ethernet port to an existing Ethernet switch, and the remaining 55 Mbps traffic to RAD's Optimux-T3™ fiber optic multiplexer for support of the 28 T1 links to the squad cars. "Racine County has been using RAD equipment for many years and to date, not one unit has failed. So when I needed a system that could provide me with five 9s reliability, I started with RAD," says Kriegal. "The dual power supply and failover features of the ACE-101 were major factors in choosing the product. These boxes have been thoroughly tested with simulated failures of each component," says Kriegal. "I am happy to say that the RAD equipment performed even better than expected. Not one packet was lost during the transition from fiber to laser or from laser to fiber."

"Agencies that utilize taxpayer money to provide services must always be cognizant of performance for the price," maintains Kriegal. "There are several multiplexer manufacturers, but none of them could provide the return on investment that we will receive from the combination of RAD and fSONA."

