

Oregon Judicial Department Removes Wireless Bandwidth Bottlenecks



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The [Oregon Judicial Department's](#)

(OJD) IT team supports the business practices and information needs of the state's Supreme Court, Court of Appeals, Tax Court and 36 circuit courts in 27 judicial districts. Technical support for more than 2,000 OJD employees ensures that judges, attorneys, paralegals and administrators can access crucial court documents and case files.

The Oregon Judicial Information Network (OJIN) traditionally linked 70 remote sites to its network backbone using a multitude of traditional leased-line T1s. However, continuous expansion, including ubiquitous wireless access and public Internet kiosks in Oregon's courtrooms as well as ever-expanding file sizes and increased use of video overburdened the slower network connections.

In early 2007, the opportunity to consolidate the OJD's network operations in a centralized secured facility located a considerable distance from the Supreme Court led to a review of backbone connectivity options. Since the new building lacked access to fiber, the team weighed the costs and constraints of installing a link to a fiber access point. The first option involved trenching to a nearby building, but the short "hop" required a one-time installation charge of \$150,000 in addition to \$4,800 monthly access fees. The second option, which also was quickly rejected, called for a one-time cost of \$250,000 just to dig a one-mile trench to the Supreme Court's fiber hub.

In seeking a high-speed alternative to costly fiber and low-speed T1s, the OJD briefly considered microwave, point-to-point 54Mbps wireless radios before honing its search on Gigabit wireless. They evaluated BridgeWave's AR60 product, a GigE link that operates in the license-free 60GHz frequency range. The bridge also includes a unique AdaptRate feature, which momentarily switches from GigE to 100Mbps transmission to ensure continuous operation during intense downpours. Using BridgeWave's link analysis tool, the OJD determined "five nines" network availability was achievable for the one-mile link. The OJD also was impressed with the inherent security of AR60's narrow beamwidths, which provided superior interference immunity for transporting sensitive judicial information.

Aided by ezWireless, a Portland, Ore.-based provider of broadband wireless technology solutions, the OJD selected a "double hop" configuration that linked the NOC with the state's Public Services building a block away, which then connected to the fiber hub at the Supreme Court. The bandwidth increase improved customer support, enabling the OJD to restore a remote desktop in less than five minutes. The future-proof solution also scales easily to meet growing capacity requirements.

The OJD is embarking on a transformation to an all-electronic paper on demand system that will propel the State of Oregon as a technology leader in Court Services. "We are excited about this new technology to help us provide an increase in critical network services while still being good stewards of public funds" says Bud Borja, CIO for the Oregon Judicial Department.

The BridgeWave links have maintained 100 percent network uptime, said the company in a release, while their ultra low-latency performance paves the way for the OJD's video applications and an impending move to VoIP. "The performance and cost advantages of GigE wireless over traditional leased-line T1 or fiber-optic based services make them well suited for a wide range of government applications," says Brad Kincaid, vice president of ezWireless.