

Bonestroo

Firm Expands its St. Paul Headquarters
With 10-Gigabit NextLAN Cabling System

NextLAN[®]
LEVITON[®] SUPERIOR ESSEX[®]



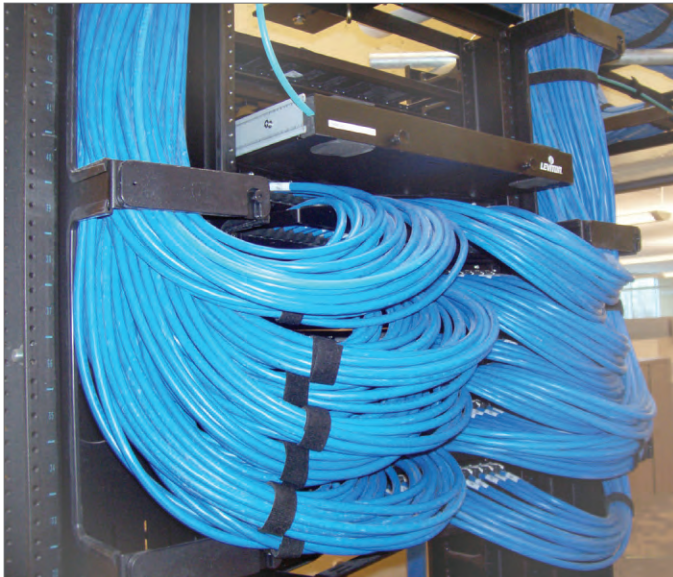
Bonestroo, one of this country's leading full service engineering and architectural firms, recently spread its wings and expanded its St. Paul, Minnesota headquarters campus to include a new low-rise office building. The preferred 10 Gigabit structured cabling system chosen for the project was NextLAN, jointly engineered by Superior Essex and Leviton.

performance without compromise

FOR ENGINEERS AND ARCHITECTS - PRODUCTIVITY COUNTS

In engineering and architectural environments, transferring data files that exceed 100 MB is common.

However, sending files through conventional shipping methods (disc or film) translates to costly time delays and missed critical deadlines. And, attempting to transfer and store bandwidth-intensive files using an outdated network can slow the process to a crawl, resulting in incomplete or timed out transmissions or worst case - the virtual collapse of the system.



The NextLAN 10G[®] cable is perfectly round, allowing for simple cable management.

Given the complex nature of Bonestroo's work, the reliability and quality of the network as well as bandwidth to accommodate current usage and future growth were all critical factors in the design process.

Bonestroo, a wholly owned subsidiary of Northern Environmental Technologies, Inc., was founded in 1956 specializing in municipal engineering. Since then its capabilities and experience have grown and Bonestroo's professional staff now includes Engineers, Architects, Natural Resource Scientists, GIS Specialists and Construction Managers. Bonestroo has three offices in Minnesota (St. Paul, St Cloud, Rochester), and offices in Mequon, WI and Libertyville, IL.

BONESTROO PLANS FOR THE FUTURE

When Bonestroo decided the timing was right to add to the headquarters, the preconstruction checklist included: erecting a building that could accommodate its growing

staff, constructing the building within close proximity to existing offices on the campus, and creating a future proof structured cabling system.

Bonestroo addressed the first two concerns by relocating a man-made pond to another area of the property, which paved the way for the four-story structure to be built between the two adjacent office buildings. The new building was preconfigured to accommodate about 80 workstations on each floor, or 320 workstations in total.

To address the networking demands, the company hired Parsons Technologies to oversee the design and execution of the structured cabling system. Parsons Technologies, part of Parsons Electric LLC, is an established leader in the electrical and data-com services industry. Since 1927, Parsons has successfully provided quality design, construction, service and maintenance to customers.

THE CHALLENGE

Parsons' challenge was to accommodate Bonestroo's existing demands on the WAN (Wide Area Network) and LAN (Local Area Network) infrastructure of one of the

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Colleen Moravek, RCDD
Parsons Electric's Account Manager

largest engineering and architectural firms in Minnesota. And while the existing network was not experiencing traffic bottleneck, adding a 10G copper cabling system at this juncture would prime the network for future growth.

“Bonestroo is very forward thinking,” said Colleen Moravek, RCDD, Parsons Electric's Account Manager for the Bonestroo project. “They believe that within the life of the building that they

will need to implement a 10 Gigabit Ethernet system, and they are going to need the bandwidth. By choosing NextLAN 10G network, they will be in a nice position to do that.”

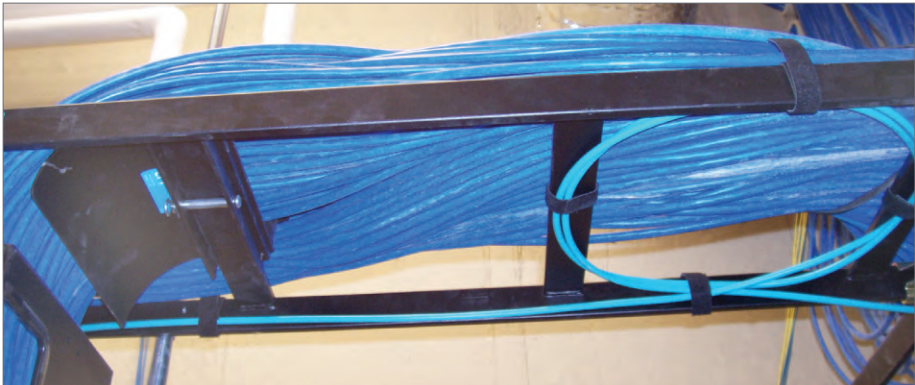
Parsons and Bonestroo considered several structured cabling systems before selecting NextLAN 10G[®], a UTP copper cabling system designed to support 10 Gigabit Ethernet transmissions for 100 meters, for the horizontal portion of the project.

Reliability that is substantiated by independent test results, the availability of an extended warranty, and Moravek’s experience using NextLAN systems at other high profile installations swung the final decision to the Superior Essex and Leviton co-engineered solution.

THE SOLUTION

NextLAN 10G^c was jointly designed and created by Superior Essex, one of the largest manufacturers of communications cable products in the world, and Leviton, which specializes in the design, development and production of advanced copper and fiber telecommunications connectivity solutions.

NextLAN 10G^c is guaranteed to exceed the current draft of TIA 568-B.2-10 for 10G requirements with 4 dB PSACR channel margins, and meet the rigorous “6 around 1” testing configuration for Alien Crosstalk. The system has been independently tested out to 650 MHz by the independent third party laboratory, ETL SEMKO.



Bonestroo has primed its network for future growth with NextLAN 10GC.

At the foundation of NextLAN 10G^c is the **10G**ain[®] cable from Superior Essex, which has been engineered in a design with 0 percent ovality and no asymmetrical filler rods. These characteristics make the **10G**ain cable easier to install without kinking, a great advantage over alternative cables.

Another critical element of the NextLAN 10G^c design is the Leviton eXtreme[®] 10G connector with Cone of Silence technology, which is manufactured using a special material that blocks Alien Crosstalk between neighboring connectors and provides unparalleled signal integrity.

THE RESULTS

With NextLAN 10G^c, Bonestroo can take full advantage of the 10 Gigabit network speed for enhancements that affect the Data Center (Aggregation, Consolidation, Back-ups to SAN or Remote Locations, and Virtual Servers) and Workstation Applications (CAD/CAM, Backup, Collaborative Workgroups and E-mail Attachments) for their Minnesota offices.

When Parsons installed the NextLAN CAT 6A system for Bonestroo, they created a worry-free voice and data network infrastructure.

The warranty covers the entire NextLAN Channel, including the horizontal cable, connecting hardware, work area cords, and equipment cords. For additional information about the NextLAN 10G^c warranty, visit:

www.NextLANsystems.com/warranties/10gc.htm

NextLAN 10G ^c Channel Margin Guarantee*		
	Margin vs. TIA/EIA 568-B.2-10	Margin vs. ISO/IEC 11801 Edition 2.1
Insertion Loss	3%	3%
NEXT	1 dB	0 dB
ACR	3 dB	2 dB
PSNEXT	2 dB	1 dB
PSACR	4 dB	3 dB
ELFEXT	5 dB	5 dB
PSELFEXT	6 dB	6 dB
Return Loss	3 dB	2 dB

*Guaranteed channel margin to applicable draft standard over specified 1-500 MHz frequency range; performance tested to 650MHz.

After Alien Crosstalk, Power Sum ACR is the best indicator of channel performance for 10G Ethernet applications. Power Sum ACR is directly proportional to the signal-to-noise ratio of the system and is a true gauge of channel “headroom.” The NextLAN 10G^c 4 dB margin guarantee for PSACR is the most critical of the many 10G^c channel margin guarantees.

Additionally, NextLAN 10G^c offers exceptionally matched electrical performance and superior usability to support current and future technologies. This means that the cabling system can easily support PoE and PoE Plus enabled devices, 10/100/1G Ethernet, 10G Ethernet and IP-based applications.

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HIGH PERFORMANCE CABLING SYSTEMS



Superior Essex is one of the largest manufacturers of communications cable products in the world, and a market leader in datacom copper and optical fiber cables. With more than 50 years of experience in telecommunications cable design and production, Superior Essex Communications has built a reputation for delivering products that lead the market in terms of technology and quality. From Outside Plant (OSP) to in-building LANs, Superior Essex cables carry the voice and data traffic for the largest telecommunications service providers in the world as well as many of the leading enterprises throughout North America. Visit SuperiorEssex.com/Comm to learn more.

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Leviton Network Solutions is part of Leviton Manufacturing, Inc., a 100-year-old company offering more than 25,000 products and devices for homes, businesses and industries. Today, the division is dedicated to producing network infrastructure systems for the enterprise, data center, government, health care, education, and residential markets. Copper, fiber and power solutions include structured cabling systems, enclosures, PDUs and much more. All Leviton products are engineered to exacting standards and offer guaranteed performance. For more information, visit Leviton.com.

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