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DECEMBER 2013

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SANDIA NATIONAL LABORATORIES FIBER-OPTIC NETWORK

WORLD'S LARGEST HIGH- SPEED LAN

When a national lab that supports research into nuclear weapons and national security decides that it's not happy with its download speeds, it doesn't call Xfinity to complain. It builds the largest fiber-optic LAN on the planet, connecting 265 buildings and 13,000 network ports at speeds that rival the world's best. The breakthrough isn't the system; it's the scale. Researchers at the National Solar Thermal Test Facility, way out on a remote site at the edge of Albuquerque, New Mexico, can now push and pull data or movie trailers faster than almost anyone on Earth.

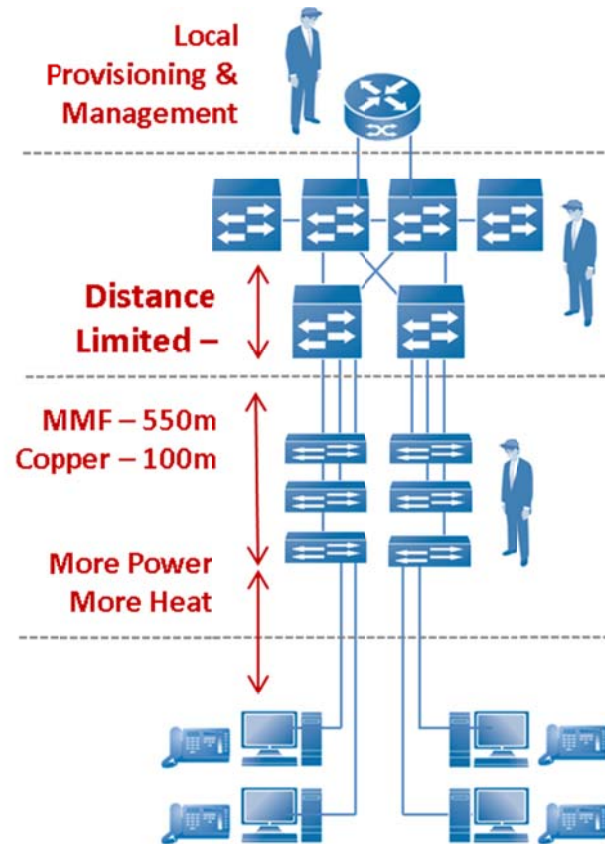
Sandia replaced its conventional four-inch copper cable with a half-inch fiber-optic one that's capable of transferring voice, computer, and security data along a single line. The network now tops 10 gigabytes per second—blazing fast, especially considering that all 13,000 ports crank at that speed; eventually, Sandia aims to have a 100-gig network. Think of it as a miniature version of the Internet as it should be.

STATS

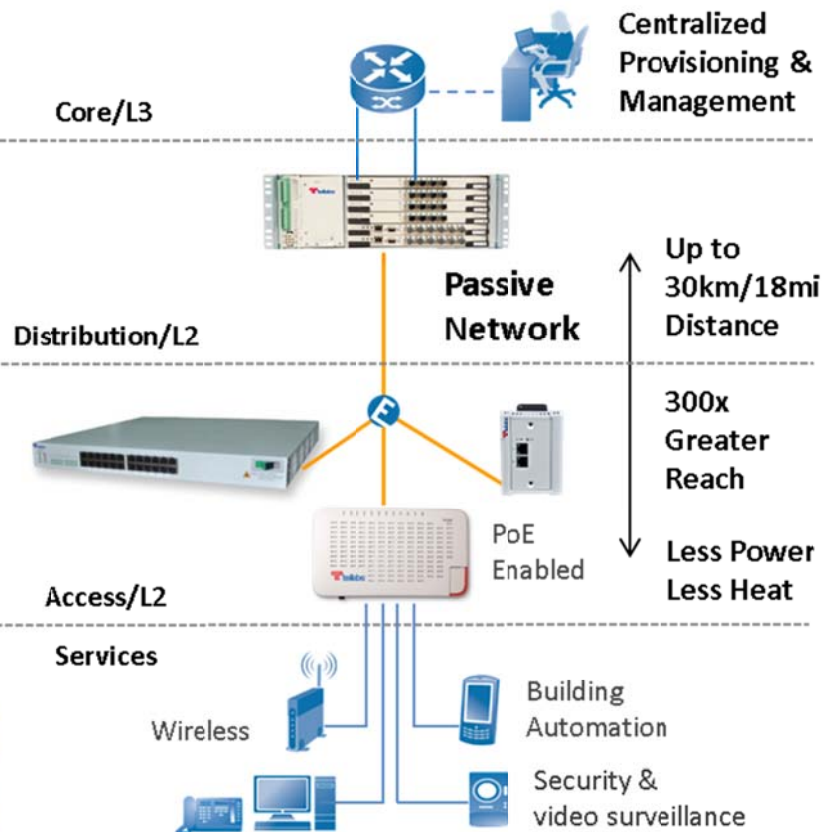
Speed At least 10 Gbps
Scale 265 buildings
Size Half-inch fiber
Cost \$15 million

Modern high performance passive Optical LANs compared to decades old copper-based LANs — Tellabs passive Optical LAN solution simplifies your LAN, while outperforming your old copper LAN. It converges all building networks across one infrastructure. This network convergence even includes wireless. Optical LAN improves sustainability to save energy and impacts green initiatives. It strengthens security with stronger physical barriers. And, passive Optical LAN saves money both capital costs on day-1 and operational expenses year over year.

Legacy Copper LAN Architecture



Optical LAN Architecture



Legacy Copper LAN

- 100m reach adds costs, power & heat
- Only IP voice and IP video delivered
- Waste space, materials, plastics, PVCs
- Intrusion without even a physical tap
- Is susceptible and introduces EMI/RFI
- 10GbE requires cable replacement

Optical LAN

- 20-30km reach eliminates closets/IDFs
- VoIP or POTS, and IP video or RF video
- Green, less space/material, much longer life
- Security at physical and protocol levels
- Immune to EMI/RFI, no interference
- 10GbE delivered over today's infrastructure

Next Steps — For more information about Optical LAN being simple, stable, scalable, secure, sustainable and costing less, please contact your local Tellabs sales representative or local Tellabs sales office (630-798-8800 – www.tellabs.com) or visit www.tellabs.com/solutions/opticallan/.