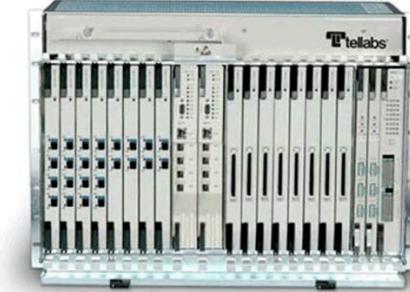


Network Revitalization Project Overview

- NRP is a comprehensive end-to-end redesign of Sandia's SRN/SON networking and communications architecture using Gigabit Passive Optical Networking (GPON) technology
- Sandia is an industry leader as one of the first large enterprise implementations of GPON technology. Extensive performance and security testing completed at Sandia has been used to improve GPON hardware and firmware
- Will provide voice, video, and data services over a single infrastructure to over 13000 end-users across the Sandia Albuquerque site
- Replaces older network access layer technology with individual ONTs and bringing single mode fiber to the office
- Decreases long term capital and operational expenses. Collapses 3-tier architecture to eliminate a large number of power-consuming switches and routers
- Success of this project is vital in positioning Sandia to adapt to newer communications technologies and protocols including VOIP , IPv6, enabling Cloud Computing, enabling Unified Computing, and replacing the Sandia's 5ESS phone system





GPON Cost Saving Overview

Cost Savings to Date (11/28/2012)	Dollars in Thousands
Legacy Upgrade/Replacement Cost Avoidance	\$6,200
Operating/Support Costs	\$1,000
Power and Cooling	\$15
New Drop Installation	\$338
Reduced IDR Floor Space for New Buildings	\$63
Recycled Copper - Recovery from Cable Removal	\$6
Total Average Savings:	\$7,622



Projected Annual Cost Savings After Completion	Dollars in Thousands
Operating/Support Costs	\$1,825
Power and Cooling	\$87
Reduced IDR Floor Space for New Buildings	\$63
New Drop Installation	\$338
Recycled Copper - Recovery from Cable Removal	\$16
Total Average Savings:	\$2,329

Projected Cost Savings Over Next Five Years with 3% Annual Inflation is \$12,370K

Total Projected Savings (Cost Savings to Date plus Projected Cost Savings Over Next Five Years) is about **\$20,000K**

In addition to Power and Cooling Savings we have diverted 7.2 tons from landfills/waste streams so far by trading in decommissioned equipment



Sandia National Laboratories