

# REALITY CHECK

application solutions for your world

## Patton Brings Unified Communications to Boy Scouts of America Campground CopperLink™, SmartNode™ and SmartLink™ Deliver Data, Voice, and Video to Wyoming Wilderness

**Out in the wild mountains of Wyoming**, near the borders of Montana, Idaho and Yellowstone National Park, sits a rustic camp for the Boy Scouts of America—Camp Loll. The camp's communication system is powered by solar panels on top of the mountain. Surrounded by towering dense trees, the camp is only accessible by a rocky, dirt road. The closest town—Ashton, Idaho—is 30 miles away.

Although the scenery is majestic, communications were a major problem for the staff of this remote camp before Patton came along. Existing cellular service was costly and unreliable. Dan Ormsby, a scouting volunteer, and Byron Hellwell, a volunteer electrical engineer, wanted a better solution. They needed secure phone service to call for help during emergencies and to order supplies for campers. But, was it possible to receive quality, high-speed network access out in the back country?

The biggest problem facing the volunteers was the distance from the tower on the mountain to the camp lodge, which was over half a mile away. Because of the dense forest, there was no line of sight for wireless signals. A buried CAT-5 line con-

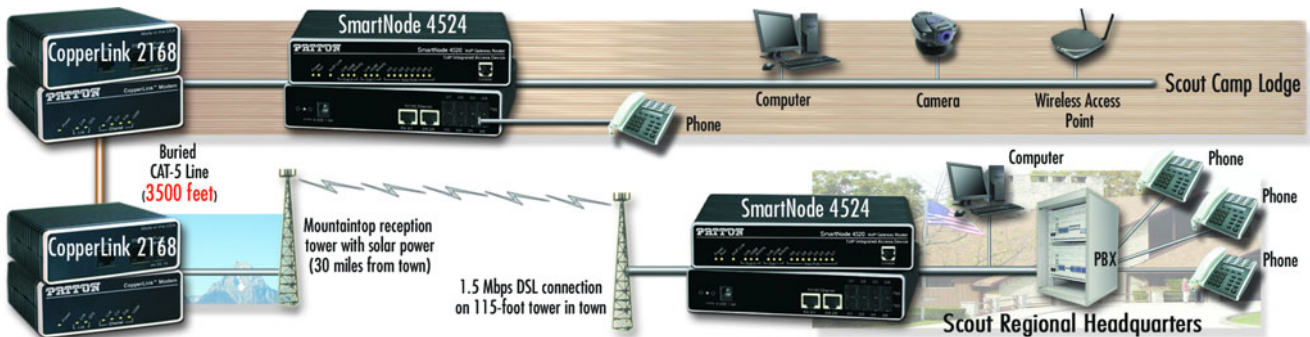
nected the tower with the campground's lodge, and the cable stretched 3500 feet—far beyond the 328-foot reach of standard Ethernet technology. Don and Byron needed a device to extend the Ethernet on the CAT-5 line from the top of the mountain to the lodge.

*"Patton solved the camp's communication problems, thanks to the CopperLink Ethernet Extenders. Now, using VoIP phone and e-mail, we eliminated the need for expensive and unreliable cell phone service!"*

— **Don Ormsby**  
Scouting Volunteer

**Simple and easy.** Thanks to Patton's CopperLink™ Ethernet Extenders, the solution was actually quite simple. The general infrastructure already existed. On top of the mountain, there was a reception site with solar power. In town, there was a 115-foot tower with a 1.5 Mbps DSL connection from the phone company.

With the towers linked by a wireless Ethernet bridge, Don and Byron installed a pair of CopperLink Model 2168s at each end of the CAT-5 line. Because Patton's Model 2168 can extend an Ethernet segment up to 1 mile over a single (24 AWG) copper twisted-pair, the 3500-foot segment from the tower to the lodge was completed. A Patton SmartNode™ 4524 Gateway Router provided PBX features and router functions for the camp office, which simplified the network and eliminated the need for a separate, additional piece of equipment. Another SmartNode 4524 in the scout headquarters provided the final link for complete access from the mountains to the scout headquarters.



### Key Benefits of Patton Connectivity Solutions

#### CopperLink™ Ethernet Extenders

- ✓ **Reach beyond Ethernet distance limitations**  
Break the 328-foot (100-meter) barrier of Ethernet
- ✓ **Simple, manageable deployment**  
Works anywhere you can access twisted pair
- ✓ **Easy to install and configure**  
Plug it. Set it. Forget it.

#### SmartNode™ VoIP Products

- ✓ **Seamless and secure networking**  
Integrates all your voice, fax, and LAN traffic
- ✓ **Interoperable and flexible**  
Enables VoIP deployments in any network environment
- ✓ **Advanced Toll-Quality VoIP**  
Patton's DownStream QoS™ enforces uninterrupted toll-quality voice over best-effort networks

#### Patton Service & Support

- ✓ **Free Tech Support**  
Quick response from skilled engineers
- ✓ **Money-Back Guarantee**  
Purchase Patton products with confidence
- ✓ **Responsive & Accommodating**  
From sales to support, doing business with Patton is easy

## Problems: Solved!

### PROBLEMS:

- ☒ Distance is too far for Ethernet to travel from mountain to lodge
- ☒ Expensive and undependable phone service
- ☒ Need a reliable communication link for emergencies, logistics, planning, and operations

### PATTON SOLUTIONS:

- ☑ **Patton CopperLink™ Ethernet Extenders**  
Extended Ethernet 3500 feet over CAT-5 cable
- ☑ **Patton SmartNode™ Gateway Routers**  
Converted existing analog phone and PBX to VoIP

**Safe and sound.** With Patton's CopperLink™ and SmartNode™ solutions, the Boy Scouts of America now have efficient, high-quality communications at remote Camp Loll in Wyoming, and are looking to outfit other campgrounds the same way. Patton's CopperLink Ethernet Extenders solved the distance problem between the mountain tower and the camp lodge. The camp staff no longer needs to worry about expensive and undependable cell phone service. They have a constant communication link between the camp and civilization, and they can feel confident in case of emergencies.



Don Ormsby,  
Happy Camper

Patton's solution was environmentally-friendly *and* convenient. Because the Ethernet Extenders used the existing CAT-5 cable, the volunteers didn't have to take out or replace anything in the existing infrastructure to make the solution work. The VoIP phone and Internet service is fast and secure, and the Patton devices were easy to install and completely interoperable with the solar-powered system. Even in the middle of the remote wilderness, Patton delivers reliable network access for unified communications.

### Try this at home...

Dan was so impressed by Patton that he bought a Patton SmartLink™ M-ATA for his own home.



Patton M-ATA – World's Smallest Analog Telephone Adapter!

### Using the M-ATA is easy:

- Connect one end to a standard telephone
- Connect the other end to a modem

Voila!— Quality VoIP access and smaller phone bills, all thanks to the Patton M-ATA.

## CopperLink...Going the Distance



The CopperLink 2168 was a key aspect to linking the mountaintop reception site to the camp lodge.

### COPPERLINK FEATURES:

- ✓ Extends Ethernet up to 1 mile over common copper cable
- ✓ Inexpensive to deploy and operate
- ✓ Plug 'n Play— Easy to install
- ✓ Highest possible data rate is automatically achieved in different environments and over different types and lengths of copper wire



Although the CopperLink Ethernet Extenders were sheltered in this particular application, Patton Ethernet Extenders are also available in rugged, dependable EnviroNet models that can operate in all weather conditions— rain, wind, snow, sleet, ice, and dust.

## SmartNode...More Than Just Talk

The SmartNode 4524 is a compact and reliable standalone VoIP gateway that supports simultaneous voice and fax calls on all ports.



### SMARTNODE FEATURES:

- ✓ Integrates all voice, fax, and LAN traffic for seamless and secure networking
- ✓ Connects to any legacy telephone or PBX using the SmartNode analog FXS ports
- ✓ Prioritizes voice traffic yet maintains efficient access to the Internet
- ✓ Easy to manage and configure

### About Patton

Patton is a multi-national manufacturer of voice and data-communications equipment for carrier, enterprise, and industrial networks worldwide. Incorporated in 1984, Patton markets a catalog of more than 1,000 products including **SmartNode™ VoIP** solutions that support SIP, H.323, and MGCP for analog and ISDN telephony; **ForeFront™** multi-service access infrastructure solutions for TDM and IP service delivery (T1/E1, G.SHDSL, xDSL, dial-up); **IPLink™** CPE solutions for last-mile/local-loop access (WAN routers, modems, remote access servers, NTUs, CSU/DSUs); **Copperlink™** Ethernet Extenders; and a full range of network connectivity **Micro-Products** (interface converters, short-range modems, multiplexers, surge protectors).



For more information or to request a free catalog, please contact:

**Patton Electronics Company**  
7622 Rickenbacker Drive, Gaithersburg, MD 20879 USA  
Tel: +1 301-975-1000 • Fax: +1 301-869-9293

[www.patton.com](http://www.patton.com)