



Don McCarty is the OSP EXPERT columnist for OSP® and OSP WORLD magazines, discussing the issues around provisioning, testing, and maintaining copper for all services from POTs to IPTV. Don is also president of and the lead trainer for McCarty Products, a technical training and products company training field technicians, cable maintenance, installation repair, and Central Office technicians and managers. For more information, email [dmccarty@mccartyinc.com](mailto:dmccarty@mccartyinc.com) or visit [www.mccartyinc.com](http://www.mccartyinc.com).

## Stolen Copper

Copper theft is a serious problem facing Telcos across the nation. Copper thieves are stealing copper cable from Telco yards and from the field, compromising the outside plant and crippling critical infrastructure. Nothing is more frustrating for a technician than splicing and replacing the same cable every week because it has been stolen repeatedly.

Recently I talked with Matt Bordoni, a former police officer for a large city in California, who now heads the Copper Theft Division at System Studies Incorporated.

Copper thieves tend to act in groups, and each has their own way of doing business. Some groups climb poles or trees to cut the aerial span before making off with a few hundred feet of cable. Other groups take only what they can reach either on foot or by standing in a truck bed or on a shopping cart. In rural areas, criminals cut and attach the end of a cable to an ATV and pull direct buried cable straight from the ground.

Regardless of how they steal the cable, what happens next is virtually the same. First they cut the cable into manageable sections, usually 3-8 feet. The thieves strip the outer sheath off the cable and place the insulated wire bundles into a 55-gallon oil drum for burning. Once burnt, the cable is just a mass of tangled wires that looks like a dirty wig. (See photo.)



Stripping and burning the cable serves 2 purposes: it removes the identifying information which could tie the cable to the crime scene, and burning also removes the insulation which increases its purity and value at the scrap yard. Oftentimes, burnt cable will have the same value at the scrap yard as bare-bright copper.

The usual way to combat copper theft in an area is through creating new statewide scrap yard laws. In many of the more restrictive states, scrap yards take a thumbprint and a copy of the sellers photo ID as well as a photograph of the seller and the material being sold.

Still, building a criminal case against thieves at the scrap yard can be nearly impossible. Even though the scrap yard staff and the police department may be fully aware that the copper cable is stolen, it is often impossible to tie the suspect to the victim and the crime itself.



## OSP Expert

With the cable burnt, it is often impossible to identify the location of the theft. Even if the location of the theft can be identified, the initial copper thief has fenced the copper cable -- and the seller at the scrap yard is often not associated with the theft. Low staffing levels compounded by these reasons have made follow-up by local police and sheriff's deputies increasingly rare.

If the police can make a case against a criminal at the scrap yard, it is because the suspect confesses to his crime or because the stolen cable gives officers reasonable suspicion to detain the suspect. In the rare case when an arrest is made, it is much more likely to be for another charge (usually drug or probation/parole related) than for the initial copper theft.

Most frustrating of all is that the EPA fines for burning the cable are much worse than the penalties for stealing the cable in the first place.

Police know that the only place where you are going to find the criminal, the evidence, and the crime all in the same place is at the scene of the crime. If police arrive at the scene in a timely manner, then they have a very good shot at arresting the copper thieves.

So far, System Studies has been very successful at doing this with their CopperWATCH cable theft monitoring application. Building upon their cable pressurization monitoring systems and PressureMAP software, CopperWATCH generates alarms that give responding personnel a clear alert that a theft is occurring, plus a concise geographic area to search. Because of this, the company has achieved an arrest rate of about 65% with its Verified Copper Cable Theft in Progress Alarms. This figure can be compared to the national arrest rate of 12.4% for burglaries.

Copper cable theft is a crime of opportunity. If we can take away the opportunity to profit from these crimes, and increase the opportunity for jail time, then the criminals will start to look elsewhere for a quick buck.

## Signing off

Tell me what's ailing you at work. Or share a shortcut. Anything to help technicians do their job. Contact me at [dmccarty@mccartyinc.com](mailto:dmccarty@mccartyinc.com) or call or text 831.8181.3930.

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**System Studies Incorporated**

2-1340 East Cliff Drive, Santa Cruz, CA 95062

email: [sales@airtalk.com](mailto:sales@airtalk.com)

**831.475.5777**

**800.247.8255**