



The

# **Broadcasters' Desktop Resource**

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... edited by Barry Mishkind – the Eclectic Engineer

## **Site Management**

### **Thar's Copper in Them Thar Fields!**



**By Kevin Kidd**

*[March 2011] Copper prices have been on an historic rise for months now. As it passes \$4.60 a pound, even scrap metal prices have risen to stunning levels where the scrap price easily exceeds the wholesale cost paid just a few years ago. Unfortunately, drug addicts and other thieves see transmitter sites as pretty easy “banks” to tap. Yet, copper is not the only valuable thing at these sites.*

In Mid-January, two stations were knocked off the air in two days as vandals ransacked sites. In one case, they even loaded the transmitter onto a pickup truck and tried to sell it at a scrap yard. While the police did catch these crooks, the costs to reclaim the transmitter and the damage to the transmitter site were considerable. In the last 10 days of March alone, at least three sites suffered vandalism, from New Jersey to Ohio to Utah. Reported losses ranged from \$3,000 to over \$30,000

More than ever, reports like this should be a warning to all broadcasters about the need to pay attention to site security.

#### **NIGHTMARE IN THE FIELD**

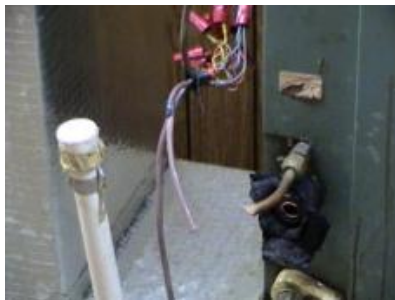
Today, it might cost anywhere between \$12,000 and \$30,000 to build a ground system for a single tower (depending on frequency and configuration). The copper alone would cost approximately one-half to three-quarters of the total install price.

As you can imagine, a directional array could easily run well into six figures.

Viewed from the other side, with scrap prices for copper now over \$3.00 a pound, a thief would get about 15-20% of the value, something like \$1,800 to \$6,000 for your beautiful new ground system, if they were able to pull it all out. And there are bad guys trying to do just that.

However, we typically find that most vandalized ground systems have lost only a small percentage of their total copper. Usually, the scattered damage caused by the vandals as they forcibly rip out copper materials often is enough to make the rest of the ground system unrepairable.

Imagine driving out to your transmitter site, only to be met with images like these:



**No question, these sights will take the shine out of anyone's day**

So faced with a scene like this, what can you do, aside from call the police, your engineer and insurance company, though not necessarily in that order? Sadly, not too much really can be done at this point.

But perhaps we can, as some of those TV shows and movies do, roll back the clock – at least mentally. At least that is what I am urging: take the time now to consider how much you would lose in time, money, and loss of airtime if your site were attacked. With all social and economic factors considered, it is not a matter of *if* they will come prospecting, but when.

## **PLAN NOW, BEFORE THEY ARRIVE**

Early last month, vandals attacked station WVOL in Nashville, TN.

Going from dog house to dog house at the bases of the six towers, they destroyed all of the Antenna Tuning Units, taking the station off the air. The General Manager was quoted as figuring the damage at \$1 million. That might be a bit on the high side, but there is no question that it will be expensive to properly rebuild the six ATUs and ensure the directional pattern is still correct.

I suppose one way to stop vandalism like this or copper thefts would be to tape \$100 bills on the tower fences, with a note: "Please take this and leave the copper alone!"

No, I did not think you would prefer that solution.

Perhaps a better way is a security plan I recommend, one you can remember by using the simple acronym: **FLAP**.

## **FLAP**

First, let us start with the meaning of FLAP. Although when we discuss FLAP, we are not talking about a scarecrow flapping in the wind, there are some aspects of a scarecrow that do play into what you need to do.

FLAP stands for **F**ences, **L**ighting, **A**larms and **P**resence. If you implement these four strategies, you will at least reduce or maybe even completely prevent further vandalism. The only thing more effective might be opening a donut shop on site with free coffee and donuts for cops.

In this series of articles, we will want to discuss these strategies in detail and, since no two sites are the same, offer some alternate suggestions and experiences that have worked for others. We hope you will find something that works for you. Indeed, if you get just one good idea from our discussion, it could save you many tens of thousands of dollars in repair costs.

## **UNDERSTANDING THIEVES**

A determined thief *will* circumvent any and all attempts to secure articles of value. The good thing about most thieves is that they are looking for a quick grab *and* typically have a very short attention span. You may read this as “thieves are lazy and not real smart.”

In the past we almost always assumed that copper thefts were drug related. Nevertheless, as the world economy headed downhill and scrap copper prices climbed above \$3.00 per pound, we began to hear reports of non-drug related thefts. As in, Billy Bob’s truck payment is due but the bank account is dry, “Let’s go down to the local transmitter site and git some of dat thar copper”.

With this in mind, making a site as unattractive and troublesome (to the thief) as possible will discourage most intrusions. When properly instituted, FLAP will even usually give some advance warning of a planned intrusion and may make a vandal/thief move on because he just does not have the ambition to defeat multiple layers of defense.

Some thieves will, however, work harder to steal something than if they had a regular job. Thieves compelled by economic challenges will typically be more motivated but less willing to chance prosecution if caught. At least up to a point.

Law enforcement agencies have been making a concerted crackdown on meth labs in all areas of the country. These efforts have resulted in noticeable reduction in the supply of meth on the street. When substance abusers cannot get meth easily, they typically go back to heroin or other Schedule I or II drug. Although still an impetus to larceny, most other Scheduled drugs do not produce the aggressive and destructive behavior associated with methamphetamine addiction.

Please do not confuse “noticeable reduction” with “the threat is gone.” Meth is still a huge threat both socially and technically. Technically at least for us engineers that have to deal with the aftermath of vandalism or theft.

Over the next few installments we will investigate techniques to protect remote sites and increase both personal and property security. We will be discussing the benefits and implementation of FLAP and hopefully share some information that will assist all of us in keeping ourselves and the sites entrusted to our care, safe.

See you next time, when we will discuss the F in FLAP - Fences that is. In the meantime, let us all stay safe out there.

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