ECLECTIC TECHNOLOGY

WB8IMY

Nontraditional Field Day? You Bet!

During Field Day 2006 the United Radio Amateur Club of San Pedro, California, left tradition behind in their quest for the "Nontraditional Mode Demonstration" bonus points. They set up a portable, battery operated High Speed Multimedia (HSMM) network at 2.4 GHz that kept everyone in touch through audio *and* video.

They used two tiny Sony UX-series PCs, which come complete with cameras, headsets and WiFi built-in. These computers functioned like HSMM handheld transceivers. (Think of the old Dick Tracy wrist communicators, but bigger.)

A traditional laptop PC at the site had a camera and headset attached as well, although it was wired directly into the HSMM

The central hub of the United Radio Amateur Club 2.4-GHz HSMM network at their 2006 Field Day site.

base station. All the PCs ran specialized audio and video streaming software provided off-the-shelf from IntraTel, LLC.

And about that base station, it was also an IntraTel product with multiple 2.4 GHz horn antennas and associated 1 W power amplifiers. The network packet structure was customized for synchronized audio and video transmission over RF links (ie, nontraditional IP packets). The video was low res (160×120 pixels), but that was all they needed to do the job. The audio was 64 kbps symmetrical.

According to Cecil, W6SYK, they conducted some distance experiments and found that they were able to communicate within their network to a distance of about 1.5 miles when running maximum power. Of course, at 2.4 GHz the distance will always be limited by terrain, vegetation and other factors.

Imagine setting up something like this for public service applications. Put an access point, an amplifier and a 2.4 GHz antenna atop a portable mast, run the Ethernet cable down to a computer and you're on the air. You could even set up multiple sites and establish a distributed network over several square miles.

Murphy Rates

Engineers have been quoting Murphy's Law since the 1940s. The simplest expression of the law is, "If something can go wrong, it will go wrong."

Murphy is the bane of Amateur Radio because of the complicated equipment we use, which these days also includes equally complex computer gear. If something can go wrong, it will indeed go wrong—and always at the worst possible time in the worst possible manner. (Just as a piece of buttered bread will always strike the floor butter-side down.)

There are people at Gartner Corp who keep track of "Murphy Rates" among computers and a couple of months ago they issued a report. The good news is that annual failure rates among desktop and laptop PCs have declined overall. The bad news is that laptop failure rates still range from 15 percent to 20 percent throughout the life of the product.

For desktop PCs purchased in 2003 or 2004, the failure rate for the first year of the computer's life was 7 percent, with a 15 percent projected failure rate for the fourth year, Gartner said. For desktop computers
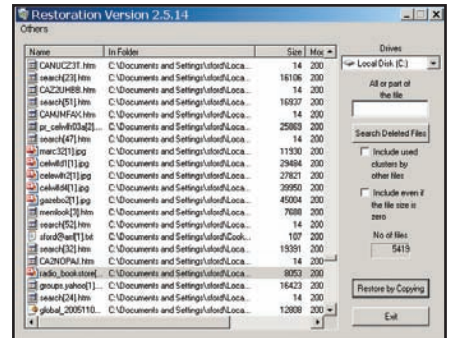
purchased in 2005 or 2006, the rates dropped to 5 percent for the first year of life.

When it comes to laptops, hold onto your smelling salts. Units bought in 2003 or 2004 experienced a *20 percent failure rate* in year one, with a projected 28 percent rate in year four. The numbers drop to 15 percent and 22 percent, respectively, for laptops from 2005 and 2006, according to Gartner.

With this in mind, always take time to back up your hard drives. Yes, I know it can be a pain, but the loss of all your data is infinitely more painful. There are only two types of hard drives on the market: those that have failed and those that haven't gotten around to it yet.
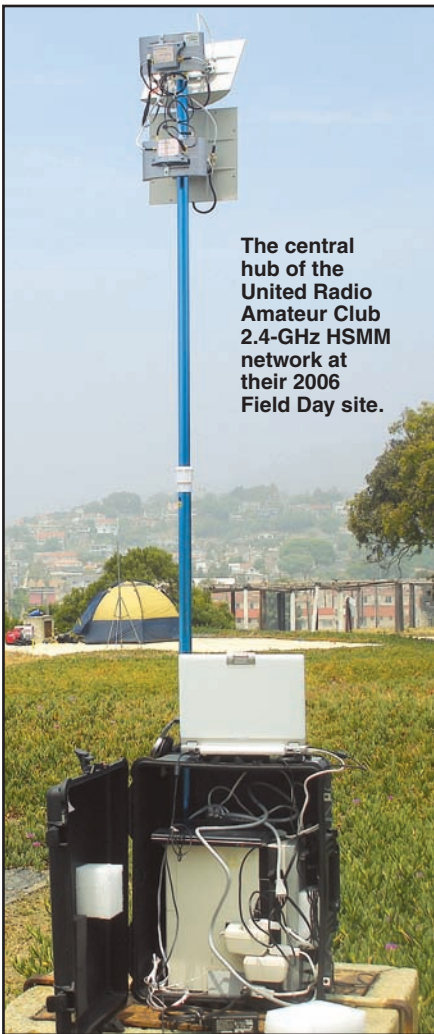
Speaking of Murphy…

You know you've done this. You erase a file, empty the *Windows* "Recycle Bin" and then, about five seconds later, realize that you've just sent a critical piece of data into eternal darkness. I committed this mortal sin recently with my daughter's homework and she still hates me for it. (I thought it was just a rough draft of her essay. How was I supposed to know?)

If you've deleted a file, *Restoration* might be able to save the day, and your dignity. It is free and available for downloading at www.geocities.jp/br_kato/.

Well, I've stumbled across a free application that at least offers the potential of redemption. It's called *Restoration* and you'll find it at **www.geocities.jp/br_kato/**. *Restoration* doesn't guarantee recovery, but when your child is glaring at you with that oh-Daddy-how-could-you look on her face, or when your club is about to burn you at the stake for erasing the Field Day logs, this program could be a lifesaver. QST

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