



LETTERS

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September's Mystery Antenna

In December 2008, when my husband Harry Baughn and I were visiting San Diego, we took a trolley ride to Coronado Island for lunch. However, when our return trolley failed to show up on time, we discovered that the Coronado Bay Bridge had been closed because two people were on the bridge threatening to jump. The evening's rush hour traffic and our friendly trolley driver were detoured around the bay on the Silver Strand highway, which took us past the wonderful Wullenweber array just at sunset that I posted in September's *Letters*.

Fifteen people correctly identified the type and the location of this antenna: Dave Anderson, Bruce Ames, Dave Billeci, Deon, Gary, Rick Herndon, Donald Kalinowski, Jeff Lee, Bruce Oltman, Rich Ortloff, Denny Reeves, Gordon Schlesinger, Gary Shapiro, Tim W6TWR, and Dave Wilcox (winner of the 3 months' subscription to *MT Express*). Congratulations!

Gordon Schlesinger, W6LBV, is a local resident who remembers the bridge closing – fortunately, a rare event. He adds, “The Wullenweber is an HF direction finding system usually constructed and used by the U.S. Navy. The two concentric circles of vertical dipole antennas that can be seen in the picture give it utility on two different portions of the HF band... There's some good background information on the Wullenweber and similar DFing arrays in: www.mapability.com/ei8ic/rhombic/wullen.php”

Jeff Lee claims the antenna was even featured in a couple of episodes in the first season of “John From Cincinnati.”

A couple of other locals wrote, as did readers who had been stationed in the area years ago. Deon said “Of course this antenna being in my backyard, I was very curious when I first moved here. This is the Imperial Beach Radio Receiving Facility, CA. The antenna is an AN/FRD-10 HFDF Wullenweber array (aka “Elephant Cage”). The array was for receiving signals in the 2-30MHz range operated by the NCTC and NSGD Dept. (Built in 1964 and used till 1999).”

Tim W6TWR, wrote: “I just went to this facility two weeks ago and asked the Main Gate security if there were tours available of the facility and got the standard answer of ‘I don't know.’”

Everyone enjoyed reminiscing about these rhombic direction-finding antennas, even those who weren't sure of the location. Derek Helling attached a picture of “the one at RAF Chick-sands in Bedfordshire, UK, taken in the 1960s, I believe. ... I used to see this antenna regularly as my parents lived in nearby Biggleswade, and

my grandmother lived in Shefford. The local nickname was ‘Elephant Cage.’”



There was a lot of speculation about how many antennas with this configuration still stand and how many are still being used. Readers mentioned operating or seeing similar antennas at other locations, such as Homestead AFB, FL; Misawa, Japan; San Vito dei Normanni Air Station, Italy and Edzell, Scotland; Goodfellow AFB, San Angelo; Elmendorf AFB Alaska; Bramstedtlund, Germany; Scaggs Island, California; Oahu and Honolulu, Hawaii.

Dave Anderson, Bruce Ames, and others doubt this particular antenna is being used, even though cars were present at the center building. Dave says that this one “is located on the Silver Strand Training Complex, which is a principal area for training special forces, though the antenna is no longer used. There are apparently two of these still in use at Elmendorf, Alaska, and at Misawa, Japan. Most of the others have become landmarks. I once was stationed in Augsburg, Germany where we used one of these – it's still there, surrounded by what looks like an industrial park.

“A particularly unique use of one is in the Philippines, where they've made it into an amphitheatre.” (photo below)

Frank McJunkins said he had the pleasure of using the antenna at Clark AFB in the Philippines. He also said, “I heard the FCC had been using the one at Bellingham, WA prior to its



<http://static.panoramio.com/photos/original/5414611.jpg>

being torn down a few years back, so maybe that is who the current tenant is.”

Francois Michaud said, “I had the chance to visit the one in Corea, Maine. It is very impressive in size.” However, that antenna was demolished in August of 2001.

Canadian Jon Huneault, VE1FTL, of Nova Scotia says, “Well I'll be darned! That's an AN/FRD-10 Circularly Disposed Antenna Array (CDA) affectionately known to the military as a ‘Fred-ten,’ and to techies as a Wullenweber Array.

“I worked at both of Canada's sites in Gander (Newfoundland) and Masset (BC) while I was in the Canadian Forces ... Both our sites had nicknames: Masset was known as the ‘Elephant Trap’ and Gander was the ‘Turkey Farm.’”

Bruce Ames confesses to being a former “NSA spook,” living California. Of course he nailed it, and included some other interesting information:

“The antenna in question is used for ‘huff-duff’ (HFDF) High Frequency Direction Finding and they were used by virtually all branches of the Department of Defense intelligence agencies during the cold war reporting to NSA (National Security Agency). The FRD-10 was code named ‘Classic Bullseye’ ...

“I was a Cryptologic Technician (maintenance) at many places around the world during the cold war. I worked on the equipment on the Wullenweber system at Naval Security Group Sabana Seca Puerto Rico, which was roughly thirty miles west of San Juan, in the mid-'70s.”

As to whether any sites are still active, Bruce says, “Nope, per my Crypto contacts all of the Wullenwebers have been de-established and just about every one of them has been taken down. There is a story that one may still be operating in Japan; however, that has never been verified. They were used only for receiving and would always be located far away from any transmitters.

“Because the Wullenwebers were so sensitive, periodic tests were done by other Crypto techs using test gear at the side of the access road to the [PR] site measuring any radiated electrical noise from a vehicle. If your vehicle was above a certain very low threshold, your vehicle was not allowed on the site and one had to hoof it.”

That's all we have room for in this discussion of our mystery antenna. We have lots more information links and memories of other Wullenweber sites worldwide, which we will post for your further reading. Just go to the *MT* homepage at www.monitoringtimes.com for the link.