The Threat of Electromagnetic Fields: Are Our Computers Killing Us?

JUST AS BLACK LUNG SLOWLY BUT SURELY FELLED SCORES of coal miners, the electromagnetic fields—EMFs—radiating from our PC systems may be killing us all day by day. Researchers may consider this prospect unlikely, but after spending most of my adult life in front of computers, it's unsettling to think that EMFs might be making my brain the consistency of hot farina.

In assessing my personal risk, I discovered through a literature search that beneath the obscure acronyms and mind-numbing technical arcana, everyone has come to pretty much the same conclusion: EMFs have biological effects and may be harmful, although the research (mostly on chicken embryos) is preliminary and inconclusive. As Gordon Miller, an industrial hygienist at Lawrence Livermore National Labs, puts it, "What we have is a lot of questions and a shortage of answers."

Literature also makes it clear that Scandinavia is far ahead of us when it comes to taking EMF risks seriously. In 1990, when U.S. computer makers considered such fears about as valid as UFO sightings, Sweden established nonmandatory EMF guidelines. Users there now refuse to buy any but the lowest-emission systems. Across the Baltic, Finnish researchers have identified an increased risk of miscarriage among women using video display terminals with magnetic fields that exceed the Swedish guidelines. The results are still preliminary, but as Robert Dieterich, managing editor of *VDT News,* notes, "They point to something serious going on."

I quickly concluded that testing my PC against the Swedish EMF standards was necessary for my peace of mind. Once, this would have required calling a guy dressed like Bill Murray's assistant in *Ghostbusters,* but these days a cottage industry is thriving on sales of personal EMF meters to worried nerds like me. For less than the price of a good modem, I purchased an Alphalab Tri-Field Meter, so-called because it measures three types of fields: electrical, microwave, and magnetic.

My TriField Meter is a gizmo freak's delight, complete with an industrial strength VU (volume unit) meter with the hazardous levels on each scale marked in red. PCs tend to be a problem only in the magnetic range, but the electrical setting is useful for ferreting out vagabond AC currents, and the microwave option detects leakage from microwave ovens.

Of course, I had no idea that the TriField was going to destroy my peace of mind forever. Magnetic emissions are measured in milligauss (mG), and the Swedish guidelines recommend exposure to no more than 2.5 mG at about two feet from the monitor. I sat down at my PC, turned on the TriField, and the needle promptly swung over to the far

edge of the meter's dial and hovered there, twitching. I was staring into over 100 mG—and I thought my receding hairline was inherited. I checked the rest of the 30-odd PCs in my office and could not find a single one that wouldn't have qualified as Swedish scrap.

Worse yet, I discovered that PC monitors were not the worst offenders. My fancy Italian desk lamp was bathing me in as many milligauss as my PC, and both were matched by the office copiers and fax machines. It's amazing that I don't attract iron filings, considering the magnetic soup I am immersed in each day.

If the EMF risk is real, I am no safer at home. My microwave leaks milliwatts, the TV spews out milligauss, and a dimmer switch in the hall bleeds kilovolts into my fingers when I flip it on. Adding insult to injury, the needle on my TriField twitched in time to the Grateful Dead when I placed it between the ear cups of my stereo headphones.

The Federal Communications Commission is the only government body regulating EMF emissions, but its interest is confined to interference with other electronic devices—humans fall outside of its jurisdiction. Worse yet, the federal government's most visible involvement in the EMF issue was to join a major computer manufacturer in challenging a VDT ordinance passed in San Francisco last year. One wonders if even irrefutable proof—as in the case of asbestos—could change this apparent policy.

Meanwhile, the computer industry quietly avoids discussion of EMF risks, even as manufacturers reduce emissions in their products. Most top-of-the-line monitors sold today apparently meet Swedish standards, but consumers will have to read the fine print in the back of the manual to find that out. The silent companies would do well to follow the lead of companies like Sigma Designs and Radius—both have made in-

Electromagnetic field emissions are the asbestos of the 1990s.

forming users about EMF levels and risks a high priority.

The Swedes have taken an even more reasonable stance. While they wait for the risk to be demonstrated or dismissed, Statskontornet, the Swedish administrative agency, is promoting a program of "electric and magnetic sanitation" aimed at reducing emissions from all sources, including PCs, as quickly as possible. As Statskontornet's EMF expert Olov Östberg observes, "Whatever the risk, we know the fields are of no benefit. So why not get rid of them?" Watching the needle twitch on my TriField, I couldn't agree more. I hope someone in Washington speaks Swedish. ◪

Do EMF emissions from your PC make you nervous? Contact Paul Saffo at Psaffo on MCI Mail.