

**Cell Phone Health Hazards: Threat and Opportunity**  
by Lavinia Weissman

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# Cell Phone Health Hazards: Threat and Opportunity

Mobile phone manufacturers are today where cigarette makers were in the early 1950s: facing risks that may — or may not — redefine the reputation of their industry.

by Lavinia Weissman

**T**he mobile phone industry, which had been one of the world's fastest-growing industries until recently, has begun to slow down. Its saturated market — 610 million phones in use as of 2004 — has yet to hit the once-projected high of 2 billion phones. To pump up sales, suppliers and network operators have put their energies into creating new designs and promoting the use of multimedia features for entertainment, messaging, and voice and data access. Companies have also focused on new markets — children in the U.S. and the general public in Asia, particularly China and India.

But the industry is missing one of its greatest opportunities and the chance to forestall a potentially debilitating threat. No cellular phone manufacturer has developed a strategic response to the growing number of disquieting studies of potential health hazards from the electronic magnetic fields (EMFs) emitted by mobile phones. Pointing to the Food and Drug Administration and the Federal Communications Commission, which hold that cell phones' effects on human health are neither significant nor harmful, industry leaders have thus far publicly shrugged off EMF risks. The reaction of a Disney Mobile spokesman as quoted in a *Business Week* story in June 2006 is typical: "Safety concerns 'really [haven't] been an issue here in the U.S. for quite some time now.... Disney is relying on the FDA.'"

This strategy of duck-and-cover might work in the short run. But smart players in the mobile industry would be wise to proactively provide consumers with designs that minimize exposure to EMFs, thus reassuring consumers and hedging against bad news in the future.

## What, EMF Worries?

Over the past decades, a number of studies have pointed to the risks inherent in cell phone technology. Michael Kundi, a professor at the Institute of Environmental Health at the Medical University of Vienna, has stated that since 2000, 17 epidemiological studies have suggested that cell phones, held close to the head, can cause brain tumors and cancer. "Never before in history," Kundi writes, "has a device been used that exposes such a great proportion of the population to microwaves in the near-field and at comparatively high levels." In 2005, another research team (Balkisi et al., published in the journal *Pathologie Biologie*) showed statistical evidence that long-term users of mobile phones may suffer from headaches, extreme irritation, forgetfulness, and decreased reflexes, among other complaints. A different study (S. Lonn et al., 2004) suggests that the use of mobile phones over a 10-year period might increase the risk of acoustic neuroma (a nerve tumor in the ear) threefold. And in October 2006, American scientists warned that men using cell phones for

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more than four hours a day might damage their sperm.

To be sure, the significance of these studies is inconclusive. Louis Slesin, publisher of *Microwave Journal*, a monthly journal that has tracked the issue for 25 years, told *Business Week*: “There is plenty of data showing that we may have a serious problem on our hands, but at this point no one really knows for sure.”

William Stewart, the chairman of the U.K. Independent Expert Review Group that studied the impact of mobile phones in 2000, explains the quandary: “In relation to radiation, it often takes a long time for things to become obvious.” The epidemiological effects of chemicals and other toxins are difficult enough to establish with certainty, but EMF is even more perplexing; it cannot be seen or tasted, and its effects on tumors, cancer, and allergies (for example) are extremely difficult to isolate from other environmental factors. Nonetheless, concerns about the data have prompted a number of groups of physicians and researchers to write to the European Parliament, urging members to heighten the precautionary approach and stressing the need for the adoption of new safety standards as well as full and independent review of scientific evidence pointing to the hazards of EMF exposure.

In his book *Who Really Matters: The Core Group Theory of Power, Privilege, and Success* (Doubleday, 2003), Art Kleiner, editor-in-chief of *strategy+business*, observes that the mobile phone industry could very well be at the crossroads the tobacco industry once stumbled across. Starting when the first definitive studies linking smoking to lung cancer were published in 1953, Kleiner writes, cigarette companies denied the health risks of smoking. Their decision “to deny, market, obfuscate, conceal and fight” worked for the short term. But by

refusing to take the moral high ground and go public with the information (and, consequently, not repositioning the cigarette business by, say, marketing the concept of smoking in moderation), tobacco companies ultimately faced skyrocketing legal fees and fines, as well as a public reputation as “merchants of death.”

**The Proactive Path**

The mobile phone industry could avoid that fate. Taking cues from the cigarette industry’s mistakes and being proactive, the smart cellular phone manufacturers might manage to build market share and increase user loyalty. Mark Anderson, who publishes the online newsletter *Strategic News Service*, suggests a proactive plan for cellular phone executives:

- Make sure your engineers and designers are the most exposed, aware group in the industry.
- Design cell phones for health first, in all segments. “Guess what,” says Anderson. “If you can position your company on this high ground before anyone else, two things happen: First, you get lots of business, and second, all your competitors look bad and lose share. It is a win-lose, and you win.”
- Make sure that *all* cell phones are sold with head sets or ear microphones in the box. Make these accessories easy to use and ergonomically appealing.
- In fact, sell children’s cell phones that will operate only when a head set or ear mike is attached. Include extra ear mikes in the box. Make them easy to replace.
- Since your lawyers won’t let you say why you are including these devices, just say that “smart users use them.”

- In the end, it might be necessary to invest more in researching the health impact of non-ionizing cell phone radiation. The technological underpinnings of cell phones might need to be redesigned.

“None of this bad news is going to go away,” Anderson warns, “but the first one to become proactive might take serious market share away from the other hundred companies still in complete denial.”

Carl Hilliard, president of the California-based non-profit Wireless Consumers Alliance, counts at least 20 patents that suggest promising advances in reducing EMF exposure. Hilliard, who was an attorney for AirSignal before it was acquired by Cellular One, says: “If I were still advising clients in the industry, I’d suggest that they look into doing research on the near field” — the health effects located close to the source of transmission. “We don’t know what goes on in the near field,” he explains. “What happens there is tumultuous.” In the meantime, Hilliard says, he too would urge including head sets or ear mikes in the packaging. “I always use a hands-free phone,” he notes.

Failing to be proactive might lead the mobile industry down Tobacco Road. In the United States, the number of class-action suits is growing. Hilliard counts eight lawsuits specifically related to the health hazards of cell phones currently making their ways through the courts. Last year, he successfully represented a woman who claimed that a brain tumor was caused by radio-frequency radiation at her job; a California judge awarded workers’ compensation of \$30,000 plus approximately \$100,000 in health and related damages.

“I think claims against the wireless industry will follow the same long path that you saw in the cigarette industry,” Hilliard adds. “There is a significant difference, however: The cigarette companies kept making the cigarettes more addictive and stronger, despite mounting scientific evidence of the risks. Cell phone companies are already trying to reduce power levels in cell phones by increasing the number of towers. It’s a Hobbesian choice.”

Although the United States offers no precautionary guidelines, Britain’s advisory body on radiological haz-

ards, the Health Protection Agency has urged parents to limit their children’s use of cell phones, recommending that younger children use cell phones only in emergencies. In Europe, the Vienna Doctor’s Chamber has warned expressly against excessive mobile phone use, especially by children. “If medications delivered the same test results as mobile phone radiation,” chided a spokesperson for the chamber, “one would have to immediately remove them from the market.”

The June 2006 *Business Week* article titled “A Phone Safe Enough for the Kids?” detailed the growing marketing of cell phone service aimed at kids and their parents by Cingular Wireless, Verizon, and, most recently, Disney Mobile. After reviewing the scientific studies, the article concluded: “So far, there has been no public clamor over the new services like Disney’s. Does this mean phones are safe for kids? Or is the U.S. hooked and in collective denial? For now scientists concerned about cell-phone safety say the only thing protecting kids from possible danger is their parents.”

Where children are concerned, the consequence of uncertainty is magnified. Effects might include diseases that are deadly, such as leukemia; diseases that are difficult to diagnose, such as autism; and diseases that don’t appear for decades, such as Alzheimer’s. Exposure to EMF could also alter a person’s DNA, which would make it possible for that person to transmute genetically based diseases to his or her offspring.

By taking the high road, designing safety features before they are legally required, cell phone manufacturers can help protect and reassure their customers. This approach means managing this short-term risk effectively and innovatively, and turning it into a long-term competitive advantage: the beginning of a reputation as a visionary, not a villain. +

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## Resources

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“A Phone Safe Enough for the Kids?” *Business Week*, June 19, 2006: The cell phone industry sees a hot new market, but critics are worried. [www.businessweek.com/magazine/content/06\\_25/b3989080.htm](http://www.businessweek.com/magazine/content/06_25/b3989080.htm)

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Dr. Elizabeth Cullen, “Report to the Joint Oireachtas Committee, Dail Eireann,” February 2005: Sums up research on EMF as presented to the Irish Doctor’s Environmental Association. [www.ideaireland.org/emr2005dailreport.htm](http://www.ideaireland.org/emr2005dailreport.htm)

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Gregor Harter and Steffen Schröder, “Start-Ups in a Time of Upheaval for the Mobile Industry,” Booz Allen Hamilton white paper, 2006: This white paper studies 3,000 startups and finds slowing growth, increasingly saturated markets, and difficult challenges ahead. PDF download. [www.boozallen.com/media/file/Start-ups\\_in\\_a\\_Time\\_of\\_Upheaval.pdf](http://www.boozallen.com/media/file/Start-ups_in_a_Time_of_Upheaval.pdf)

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Art Kleiner, *Who Really Matters: The Core Group Theory of Power, Privilege, and Success* (Doubleday, 2003): This book about “core groups” of organizations contains a chapter on fulfilling the noble purpose of great organizations. [www.amazon.com/Who-Really-Matters-Privilege-Success/dp/0385484488](http://www.amazon.com/Who-Really-Matters-Privilege-Success/dp/0385484488)

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Michael Kundi, “Mobile Phone Use and Cancer,” *Occupational and Environmental Medicine*, 2004: Overview of the epidemiological evidence, the resulting uncertainties, and a call for more focused study from a member of the medical faculty of the University of Vienna. <http://oem.bmj.com/cgi/content/full/61/6/560> An audio presentation by Kundi is also available. [www.healthandenvironment.org/articles/partnership\\_calls/475](http://www.healthandenvironment.org/articles/partnership_calls/475)

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S. Lonn, A. Ahlbom, P. Hall, and M. Feychting, “Mobile Phone Use and the Risk of Acoustic Neuroma,” Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden, November 2004: Medical journal article. [www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=15475713&dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=15475713&dopt=Abstract)

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Nancy McVicar, “Court Victory Is a First for Programmers,” *South Florida Sun-Sentinel*, October 2, 2005; reprinted on EMF-Health.com: Woman awarded workers’ compensation for radio-frequency radiation exposure on the job. [www.emf-health.com/reports-courtvictory.htm](http://www.emf-health.com/reports-courtvictory.htm)

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Ian Sample, “Warning to Male Mobile Users: Chatting Too Long May Cut Sperm Count,” *The Guardian*, Oct. 24, 2006: A summation of the research. [www.guardian.co.uk/medicine/story/0,,1929904,00.html](http://www.guardian.co.uk/medicine/story/0,,1929904,00.html)

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*Microwave Journal*: Includes a collection of studies regarding the potential harm caused by EMF exposure. [www.mwjjournal.com/](http://www.mwjjournal.com/)

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Strategic News Service: Weekly newsletter about technology and business, regularly covers emerging news and implications of mobile phone health hazards. [www.tapsns.com/](http://www.tapsns.com/)

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Vienna Doctor’s Chamber: Offers guidelines for limiting contact with mobile phones. [www.tetrawatch.net/links/links.php?id=vienna](http://www.tetrawatch.net/links/links.php?id=vienna)

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Wireless Consumers Alliance: This nonprofit organization site contains references to class-action lawsuits against wireless carriers. [www.wirelessconsumers.org/](http://www.wirelessconsumers.org/)

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