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WTR and the Betrayal Of the Public Trust

Microwave News Responds To Bill Guy

Bill Guy does not have a case. His mind is playing tricks with his memories. We continue to believe that Guy is the one who should be apologizing — to Henry Lai *and* to all cell phone users for letting them down.

Guy says that he did not call the National Institutes of Health (NIH) in November 1994 to report Henry Lai for carrying out allegedly unauthorized experiments on DNA breaks. We are not so sure.

Guy's recollections of incidents that took place during the past 11 years are so muddled and distorted that just about everything he wrote in his March 17 letter either does not make sense or is simply wrong.

To understand why we think he made the call, we need to go over some history. Not just about the DNA work, but about another study on the effects of microwaves on memory and more generally about the cell phone industry's \$25 million health research program, known as Wireless Technology Research (WTR).

* * * * *

But first, we should make clear that it was Henry Lai who told us that Guy had made the call to NIH. He told us about this — what he called a personal act of betrayal — in a number of conversations over the years.

Lai has consistently maintained that when Mike Galvin of the National Institute of Environmental Health Sciences (NIEHS) called him in November 1994 to follow up on a complaint about his grant, Galvin said that a phone call from Bill Guy had prompted the inquiry. Guy vehemently denies it.

Today there is no way to know for certain who is right. We do know — based on Galvin's recent e-mail to Guy — that Galvin has forgotten the incident. So, it all comes down to whose memory is more reliable: Henry Lai's or Bill Guy's.

We favor Lai, not because his memory is flawless (we all make mistakes when trying to recall the past), but because, except for what was said in the phone call to Galvin, we have been able to document and confirm most everything Lai has told us. Guy's recollections, on the other hand, do not stand up to the most casual scrutiny. Guy has totally mixed up two different incidents over two different studies, which took place three years apart (1994 and 1997). If he can't distinguish between the two in his own mind, why should we believe the rest of the story?

(continued on p.2)

Guy's credibility falls completely apart with his unprompted admission that in 1997 he wrote an open letter stating, in effect, that Lai is ignorant about the most basic facts of microwave radiation. This act of betrayal is no different in kind from the betrayal that Lai accuses Guy of carrying out by filing a complaint with NIH in 1994.

The 1994 DNA Breaks Study

Back in January 1993, the cell phone industry was being hammered by a torrent of negative publicity. David Reynard had filed a lawsuit charging that a handheld phone was responsible for his wife's lethal brain tumor. After Reynard repeated his accusations on CNN's *Larry King Live*, the story became front-page news around the world, prompting Congress to investigate and investors to dump cell phone stocks. The industry was in trouble and desperately looking for ways to reassure the public that its phones were safe.

The CTIA, the Washington-based wireless lobby, turned to George Carlo, who had previously helped the paper and chlorine industries fend off moves to regulate dioxin, a highly toxic chemical by-product from paper manufacturing. In 1992, the *Wall Street Journal* described Carlo's work for the Chlorine Institute as "a well-financed public relations campaign."

Carlo, in turn, recruited two consultants—Bill Guy and Ian Munro. Between 1993 and 1997, Guy was paid to help run CTIA's \$25 million health research program, known as the WTR. While Carlo was the headman, Guy was a key player because he was the only one of the three with any detailed knowledge about microwave radiation.

During the summer of 1994, as the industry and WTR's schemes were taking shape, Carlo learned that Lai and his collaborator, N.P. Singh, had found that microwave radiation could damage DNA. (The two University of Washington scientists had sent the WTR a funding proposal that included some preliminary data.) It did not take long for the WTR, CTIA and the rest of the industry to understand how dangerous this news could be. If microwave radiation could break up the DNA in the brain, the public could easily interpret this as meaning that cell phones can cause brain tumors. Lingering fears would be reignited and the future of what was still a young industry would once again be in question.

Guy understood all this. "I told Henry that 'You've got dynamite on your hands—if it turns out to be a real effect, the implications are tremendous,'" Guy told *Microwave News* at the time (see N/D94).

Carlo and CTIA must have felt they were lucky to have Guy on their team. Practically no one knew Lai better than Guy. They had worked together for more than ten years, and Lai had taken over the Bioelectromagnetics Laboratory from Guy when he retired from the University of Washington in 1991.

With the benefit of hindsight, it is now apparent that the

industry devised a three-point plan to control the DNA story: (1) To delay or better stop, Lai and Singh from continuing their DNA work; (2) To prevent others from following up, or at least to carefully select those who would; and (3) To convince the press and the public that the Lai-Singh work on DNA breaks results was of marginal importance with questionable relevance to cell phone safety.

The plan worked. Much of the story was recounted in the pages of *Microwave News* over the years. Briefly, here's what happened:

(1) Despite pledges of financial support from the WTR, Lai and Singh did not receive a penny for close to four years. Then in 1998, they were given a small contract to do some work in C.K. Chou's lab at the City of Hope National Medical Center in Duarte, California. (Chou had worked with Guy at the University of Washington for many years. By the time the experiments got under way at City of Hope, Chou had accepted a job at Motorola and moved to Florida.) Lai and Singh later described the WTR experience as "very strange." In an open letter to *Microwave News* (see M/A99), they stated that the WTR program was rife with "chaotic corruption and deception," and that it was a "disgrace to the American research establishment." None of the data from these experiments has ever been published. From his perch at the WTR, Guy had to have played a key role in the decision to deny Lai and Singh from getting any follow-up money, as well as in the fiasco that took place in Chou's lab.

(2) The WTR never funded anyone else to do an in-depth investigation of cell phones and DNA breaks. Motorola, which had its own research program, sponsored DNA work in Joe Roti Roti's lab at Washington University in St. Louis. Perhaps not surprisingly, those results conflicted with those of Lai and Singh. The reasons for the inconsistencies have yet to be resolved.

(3) The industry made a full-court press to discredit the DNA break study. A consistent and coordinated message was put out to marginalize Lai and Singh. For instance, in November 1994, Q. Balzano, then a senior Motorola executive, wrote to us that, "[E]ven if it is validated, the effects it purports to show may be inconsequential." Maybe so, but it had been important enough for Balzano to rush to Lai's lab in Seattle that previous August, soon after he had first heard about the new findings. Carlo also made a trip to see Lai that summer. By December, media han-

dlers at Motorola and Burson-Marsteller, a large public relations firm, were working overtime to prepare a strategy for Motorola, CTIA and WTR's response to the inevitable media inquiries. This is documented in the so-called "War Gaming" memos, which were leaked to *Microwave News* (see J/F97). CTIA did its part. "It's not very relevant," Ron Nessen, CTIA's top spokesman, told the Florida *Sun-Sentinel* (December 19, 1994). He also tried to cast doubt on the comet assay, the technique pioneered by Singh to measure DNA breaks. It "may not be scientifically valid," Nessen charged.

Given the cell phone industry's fears about the Lai and Singh findings—at the time, one participant said that the Motorola management was in a "panic" over how to handle them—it would hardly be surprising to learn that Guy had either decided on his own or had been asked by Carlo and/or CTIA to try and shut down Lai's lab. After all, Guy was on the WTR and CTIA payroll. Although this gambit failed, WTR succeeded with a bait-and-switch approach: Promise, but never deliver, research funds.

That NIEHS had raised questions about its grant to Lai is *not* in doubt. On November 22, 1994, Lai wrote to Galvin and his boss, Don McRee. The letter began: "After our telephone conversation of yesterday, I searched my mind on why I did the study on the effects of 2450 MHz radiation on DNA damage in brain cells...." Lai had been asked to explain why he had been doing experiments on DNA. The only uncertainty is who prompted the call from NIEHS. Was it Guy, as Lai maintains, or someone else?

Guy is the most obvious suspect. In 1994, Guy was one of the few people who would have known that NIEHS was supporting Lai's work. Lai's long-term NIEHS grant on the "neural effects of low-level microwaves" had first been awarded to Guy in 1985. Lai took it over in 1988.

Another reason to suspect Guy is that Mike Galvin was not the right person to complain to. Annette Kirshner, not Galvin, was Lai's grant administrator at NIEHS. Only someone well acquainted with both Lai and NIEHS would have known about Mike Galvin and known that Don McRee, Galvin's superior, was NIEHS' resident expert on microwave radiation. (Later, McRee would retire from NIH and join Guy and Carlo at WTR.)

In short, Guy had the motive and the knowledge to call NIH in 1994. We cannot be sure he made the call, but we do know that he did something very similar in 1997.

Lai and Guy's 1994 Behavior Study Makes Headlines in 1997

In the spring of 1994, while Lai and Singh were running

their DNA experiments, Lai published a paper in *Bioelectromagnetics* with Bill Guy and Akira Horita, on work they had completed some time earlier. They reported that microwaves could affect memory in rats. For three years no one paid much attention to this paper, but all that changed in September 1997.

On September 17, Lai gave an invited talk on the "Neurological Effects of RF Electromagnetic Radiation," at an industry meeting in Brussels entitled *Mobile Phones: Is There a Health Risk?* He covered a lot of ground in his allotted 30 minutes. The presentation, which was distributed to the attendees, was 24 pages long and included 109 references.

Lai devoted a single sentence to his 1994 paper with Horita and Guy on memory deficits among microwave-exposed rats. Immediately afterwards, he added the following caveat:

"However, great caution should be taken in applying the existing research results to evaluate the possible effects of exposure to RF [radiation] during cellular telephone use. It is apparent that not enough research data is available to conclude whether exposure to RF [radiation] during the normal use of cellular telephones could lead to any hazardous effect."

Every word in this paragraph was underlined for emphasis.

As it happened, Jonathan Leake of the London *Sunday Times* was in the audience and, for reasons known only to him, decided to focus on this one sentence in his story on the conference. (He neglected to tell his readers how this particular result fit into the larger framework of microwave health effects, nor did he tell them that the paper was three years old.) Leake's article ran in the September 21 issue of the *Sunday Times* under the headline, **MOBILE PHONES CAN BE CAUSE OF MEMORY LOSS.**

By the time Leake's article hit the newsstands, Lai was already back in Seattle. That same day, a television crew hurriedly set up an on-camera interview with him. The following day, two other English daily newspapers ran similar stories. The story had legs.

Lai was amazed and frustrated by the media attention being devoted to the memory study. "It's only a tiny part of my talk and yet it's headline news," he told us in an interview back then.

That Monday, September 22, Bill Guy confronted Lai and, as described in Guy's March 17, 2005, letter, he asked him to "do something to correct the misinformation." Guy wanted Lai to clarify that the 1994 experiment had used radiation signals that were different from those broadcast by cell phones. (Lai remembers it quite differently. "He asked me to withdraw the paper," he told us recently.)

Lai refused to do anything. He felt that he had included all the necessary caveats in Brussels and that, even if he knew how, it was not his job to police the press.

In his March 17 letter, Guy states that he waited "several weeks" for Lai to circulate a correction. The letter Guy wrote for

the CTIA shows that this is not true. Guy waited barely 24 hours before moving to discredit Lai. On September 23, 1997, Guy did what he calls his “public duty,” and faxed a letter to Tim Ayers in CTIA’s media relations office. This is part of what he wrote:

“If Lai had been a specialist in microwave radiation, he would have pointed out that the frequency, type of exposure, exposure levels and the type of modulation used in the experiments does not duplicate cellular phone exposures.”

Stripped of jargon, Guy said that Lai did not know what he was talking about.

By the following day, Guy’s letter was on Jeff Silva’s desk at *RCR* (now called *RCR Wireless News*), a trade tabloid. SCIENTIST FAULTS CLAIM THAT CELL PHONE USE CAUSES MEMORY LOSS ran the headline in the next issue of *RCR*.

If Guy would have taken the time to read the paper Lai presented in Brussels, he could not have missed the cautionary language that Lai had underlined. Lai had been doing microwave health research for more than 15 years and was acutely aware that not all microwave signals are the same or cause the same effects.

But Guy’s first impulse was to protect the cell phone industry, his long-term client. This was an act of betrayal no different from the one he now says that he could never have carried out against a person he calls his “friend and colleague.”

Guy’s March letter jumbles the events surrounding the two different studies. He begins by referring to the work on DNA breaks, then mysteriously segues into the media storm surrounding the memory-loss paper. His memory is far from clear and reliable.

Guy’s Misplaced Outrage

As early as May 1996, it had become clear to most observers that the WTR was not doing any research, even within the cell phone industry. As Jeff Silva reported: “Interestingly, the loudest protests about Carlo’s work and CTIA’s role in health issues are *not* coming from environmentalists.... Rather, the sharpest criticism comes from [cell phone] manufacturers.” Silva went

on to list eight different companies that were raising concerns, including Lucent Technologies and Qualcomm.

“The (cancer) research program is really nonexistent,” Lucent’s Ron Petersen, an influential—and far from radical—member of the bioelectromagnetics community, told Silva. “There’s nothing there. The emperor has no clothes.”

At that time, the WTR had been given about \$12 million by CTIA, or approximately half of the promised budget, and yet no one could tell what Carlo, Guy and Munro had done with the money. “It seems that CTIA spent a lot of money on things like PR,” John Madrid of Toshiba told *Microwave News* in the spring of 1996. By the end of the following year, Madrid was even more exasperated. “The bottom line is, a lot of money was collected and not very much research got done.... I would not give CTIA or WTR a plugged nickel,” he said.

While this controversy was being played out in the press, Guy kept silent. If he had raised any objections with Carlo or CTIA, he did not make them public. The Jonathan Leake article in the *Sunday Times* had provoked Guy to do his “public duty to set the record straight,” even if it demeaned a colleague in the process. But Guy felt no parallel obligation to make sure that the WTR and CTIA kept their promise to actually do the research, to actually learn something about cell phone radiation. He kept quiet and said nothing that might reflect badly on the industry.

There can be no question that Guy knew what was at stake. “If there was a health effect from cell phones, because of their popularity, it would be a major public health concern,” he told the *Seattle Post-Intelligencer* in May 1996.

By the end of 1997, there were more than 55 million cell phone users, five times as many as there had been when the CTIA set up the WTR in 1993. Today, there are over 180 million in the U.S. alone, and approaching two billion worldwide.

Where is Bill Guy’s outrage that all these people have been let down? Where is the outrage over the broken promises of research?

Guy rushed to protect the industry at Lai’s expense when the press got fired up over some old data. Did he also snitch on Lai back in 1994? We think it’s highly likely—though we can’t prove it. But we do know that Guy never rushed to bite the hand that fed him. He has a lot of explaining to do about why the public got peanuts instead of \$25 million worth of health studies.

Reprinted below is the text that appeared on the Microwave News Web site blog <www.microwavenews.com>. Bill Guy's March 17, 2005 letter was a response to this posting.

Commentary

From the Field

March 11, 2005

The March issue of the University of Washington alumni magazine, *Columns*, features a well-deserved tribute to Henry Lai and his colleague, N.P. Singh, who have demonstrated that low-level microwave radiation can lead to an increase in DNA breaks in the brain cells of rats (available online). The headline of the piece tells the story: "Wake-Up Call: Can Radiation from Cell Phones Damage DNA in Our Brains? When a UW Researcher Found Disturbing Data, Funding Became Tight and One Industry Leader Threatened Legal Action."

The article later identifies that "industry leader" as George Carlo who ran Wireless Technology Research (WTR) on behalf of the CTIA, the trade association of the cell phone industry. Of course, most people, except those on the industry payroll, now concede that WTR was misnamed. Something like "Whatever Happens Do As Little Research As Possible and Take As Long As Possible Not To Do It" would have been far more appropriate (even though it's hard to make an elegant acronym out of all that).

One important fact is left out of the story—for reasons that will become apparent in a moment. The piece begins with Lai recollecting how, back in 1994, someone had tried to stop his DNA-microwave work by calling the National Institutes of Health and alleging that Lai was misusing his research grant by

carrying out unauthorized experiments. After Lai explained what he was up to, the NIH was satisfied that nothing was amiss. Lai was allowed to go back to work, though he lacked the funds to do as much he would have liked.

The snitch is not named in the article but should be revealed. It was Bill Guy, who had received three degrees from the University of Washington, including his doctorate, and then spent much of his professional life at its Department of Bioengineering. No wonder the alumni magazine was squeamish about identifying him.

For more than ten years, Guy and Lai had worked together at the university's Bioelectromagnetics Research Lab. They were coauthors on close to 20 research papers. But that did not stop Guy from trying to sabotage Lai's research. At the time he made the call to Mike Galvin of the National Institute of Environmental Health Sciences, Guy was one of two key advisors to George Carlo, and was helping him map out the strategy for CTIA's \$25 million cell phone-health research project. Separately, he was also a consultant to the CTIA. Guy would stay on the WTR payroll for another three years.

Guy is a former president of the Bioelectromagnetics Society and the recipient of the d'Arsonval Award, its highest honor. Despite a lifetime in RF research, despite the fact that he chaired the committee that wrote the 1982 ANSI RF exposure standard, despite the fact that he chaired the committee of the National Council on Radiation Protection and Measurements that wrote the council's 1986 (and its most recent) report on RF biological effects, Guy's first impulse on hearing about some important new experimental finding that questioned the safety of a product that would soon be responsible for exposing more than a billion people to a constant stream of RF radiation was to blow the whistle and try to impugn Lai.

Does anyone still believe that the mobile phone industry ever made an honest attempt to get to the bottom of the cell phone safety question?

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