

Siliconconnections

COMING
OF AGE
IN THE
ELECTRONIC
ERA

by Forrest
M. Mims, III

SILICONCONNECTIONS

Mims versus Bell Labs

Order of Battle

LEGAL BATTLES CAN RANGE from quickly settled scuffles to contests having the dimensions of a military confrontation. My clash with Bell Labs certainly fell in the latter category, with a three-ring circus thrown in for good measure. Before the action begins, let's size up the combatants by reviewing what military intelligence specialists refer to as the order of battle, an inventory of troop strength, firepower, and so forth.

My second was Ted D. Lee, the white-suited knight of the Texas law firm of Gunn & Lee, now Gunn, Lee & Jackson. The half dozen or so patriots at Gunn & Lee were bivouacked in a cluster of offices on the seventh floor of a San Antonio office tower within sniper range of a windowless fortress housing the central office of a major enemy field unit, Southwestern Bell. Though few in number, the freedom fighters at Gunn & Lee were gifted strategists who possessed a solid knowledge of legal tactics, excellent timing, and a good sense of humor.

Our adversary was Bell Telephone Laboratories, the research arm of the monolithic monopoly American Telephone and Telegraph. When Gunn & Lee declared all-out legal war against Bell Labs on my behalf in May 1979, the AT&T order of battle included 985,000 regulars and a total annual revenue of \$41 billion. The Bell Labs division of AT&T included a corps of 20,000 high-tech engineers and a Patent and Legal Staff of 100 strategists commanded by William L. Keefauver, one of the best-known corporate patent attorneys in the United States. Keefauver's strategists were represented on the field of battle by several mercenaries recruited from two Texas law firms, and a detachment of shock troops sup-

plied by the legal division of Western Electric, another unit of AT&T.

Gunn & Lee's tiny squad appeared to be badly outgunned by an overwhelming force whose revenues alone exceeded those of many countries. Prior to the onset of hostilities, however, those odds didn't faze me in the least, for I knew something the enemy didn't: After graduating from law school in 1970, Ted Lee served a four year hitch as an attorney in the United States Marine Corps. He was a battle-hardened veteran of the legal arena with considerably more trial experience than most patent attorneys. What's more, during must-win engagements with the enemy, fearless Ted reportedly donned a white western-style suit that transformed him into Sir Ted the Invincible. With Ted Lee's help, defeating Bell Labs would be simple. Or so I thought before visiting Ted's office to read the imposing draft of a formal declaration of war entitled **FORREST M. MIMS, III, Plaintiff v. BELL TELEPHONE LABORATORIES, Defendant.**

Recall for a moment the issue at hand. In 1973 I had sent Bell Labs a suggestion that described how to send communications in both directions through an optical fiber by placing at each end a device called a diode that doubled as both a source and detector of light. After two of its scientists and several patent attorneys reviewed the suggestion, it was rejected. One scientist wrote, "A single . . . device usually cannot be designed to meet these conflicting requirements." His supervisor concluded, ". . . I think it extremely unlikely that systems considerations would permit a single device to operate as both a source and detector." In 1978 Bell Labs announced a new optical-fiber telephone, the key ingredient of which was a diode that doubled as a light source and detector that could communicate in both directions through a single optical fiber. This, of course, was the nucleus of my 1973 suggestion.

Marching Orders

Ted Lee's declaration of legal war against Bell Labs was entitled "COMPLAINT." The complaint included seven specific counts, each of which alleged a grievous violation of my rights by Bell Labs. These included breach of contract, unjust enrichment, detrimental reliance, misappropriation, libel, and fraud.

Within the allotted thirty days Bell Labs responded to the complaint by firing back a document entitled "ANSWER." Not surprisingly, this document denied the specific charges of wrongdoing alleged in Ted's opening salvo. (It also denied such seemingly straightforward statements as that Bell Labs was owned by AT&T and had a working relationship with Western Electric.) Ted shot back a demand for a jury trial, and then the two sides engaged in a skirmish over "discovery," the formal process of reviewing the relevant evidence possessed by each side. The ground rules for the discovery procedures were given in a protective order, an awesome document mutually agreed upon by the combatants and signed by a federal district judge. The protective order provided for the perpetual protection of proprietary and confidential information disclosed by either side. Violating the order by disclosing protected information to unauthorized persons could cause the violator to be held in contempt of court.

The compressed chronology of the events thus far implies a rapid-fire series of actions by both parties. Actually, the proceedings advanced at a snail's pace. From time to time, months of quiet, behind-the-scenes preparation would be punctuated by furious fusillades of hot air and paper bullets. In September 1979, for example, nearly a year after Bell Labs announced its new light phone, Ted and I made our first joint foray into enemy territory to take depositions from several Bell Labs scientists and William Keefauver. Despite Bell Labs' curious denial of a working relationship with Western Electric, this initial confrontation was held in the offices of Western Electric in New York City. After the protective order was signed, several attorneys for the other side surrendered some 2,000 pages of numbered documents from their files, and left Ted and me alone to survey our loot. The documents were provided in response to a formal itemized notice requiring Bell Labs to produce any records, sketches, memoranda, and so forth relevant to the lawsuit.

Aside from some copies of published technical papers, virtually every document was stamped CONFIDENTIAL, and therefore covered by the terms of the protective order. The most notable exception was a file containing the review of my 1973 suggestion by several scientists and patent attorneys at Bell Labs. Didn't they realize that after learning the names of the two scientists, a quick

phone call to the Bell Labs operator would reveal the unconfidential fact that their offices were within a few doors of one another and the scientist who invented the light phone? That these papers had escaped the confidential stamp seemed particularly curious since it had been applied to hundreds of documents having considerably less importance. Whatever the reason, the fortuitous absence of the ubiquitous stamp is why quotations from this file can be included in this book.

After an enlightening hour reviewing the booty, the attorneys for the opposing side reappeared and raised a white flag. The gist of the peace talks that followed was that they wanted to discuss settling the lawsuit out of court. Unfortunately, however, a letter I wrote about the dispute that was published in *Spectrum*, a slick monthly sent to members of the Institute of Electrical and Electronics Engineers, had angered Bell Labs' top management. This loss of face, Mr. Keefauver explained, might preclude the possibility of settlement, so he could make no promises. In view of this development, and because we needed more time to review the documents, Ted postponed the taking of depositions, and we returned to Texas. The letter to *Spectrum* apparently had struck a sensitive nerve, for the tentative settlement offer soon vaporized along with Bell Labs' repeated promise to acknowledge my publications.

Silicontentions

Shortly before Ted and I left for New York, Bell Labs filed a lengthy motion asking the judge to dismiss the suit. In retrospect, the then-unknown outcome of this motion rather than the truth-hurts letter in *Spectrum* probably caused Bell Labs to postpone settlement negotiations. Whatever, Ted Lee assigned Mark Miller, a trusted lieutenant at Gunn & Lee, to prepare a formal response. Meanwhile, Ted formally notified Patrick Leach, the Western Electric lawyer assigned to the case, that he intended to take the previously postponed depositions on November 14, 1979. I left for New York before Ted, and shortly after arriving at the hotel received a message that Leach had unilaterally cancelled the depositions. The best way to convey my reaction is to ask how you would

feel if you flew half way across the country, at your own expense, only to learn an important meeting had been called off. Yes, that's how I felt.

Mark Miller eventually assembled a shrewd response to Bell Labs' motion to dismiss the lawsuit. Shortly after it was sent to the judge, Ted rescheduled the meeting to take depositions. For five days Ted took from five witnesses depositions totaling 674 pages. During the testimony there were frequent verbal clashes between Ted and Patrick Leach. The initial fracas was over the presence as counsel of Michael Urbano, the Bell Labs patent attorney who had prepared the then-pending patent application for the light phone. Since Urbano was slated to give a deposition later, Ted objected to his presence. But Urbano stayed. Following two days of fireworks between Ted and Leach, James Curley, another Western Electric attorney, was sent in to replace Leach.

In Leach's absence the depositions proceeded without a hitch. Then Leach reappeared with an older and apparently more senior Western Electric attorney who mumbled a greeting and sat at a far corner of the table. Ted Lee, the lone litigating leatherneck, now faced four Western Electric and Bell Labs lawyers. Fortunately, this time Leach was more subdued and for the remaining few days the proceedings continued with only a few major clashes.

During the depositions, testimony was taken in several different conference rooms in both the former AT&T and Western Electric buildings. Each morning security guards at the door would carefully search our briefcases. Whether the precautions were to detect bomb-equipped terrorists or irate telephone company customers, I cannot say. Whatever the reason, the security procedures infuriated the court reporter who each morning was required to unstrap her transcription equipment from its dolly, open it for inspection, and then strap it back in place. Another ritual that seemed rather odd to a couple of Texans from the hinterlands took place at exactly 5:00 p.m. each afternoon. Before you can say "Gotta catch a train!" the lawyers on the other side of the table scooped up their goodies and made a mad dash for the door. These hasty retreats made Ted and the security guards downstairs a little uncomfortable, since each evening we were left unescorted in enemy headquarters.

Because the testimony taken during the depositions is covered by the protective order, what was disclosed cannot be revealed now or

ever. About all I can say is that by the end of the first day I no longer held any idealistic notions about the value of depositions in revealing the truth. Indeed, more enlightening than the 674 pages of confidential testimony was a brief aside with one of the scientists from Bell Labs who reviewed my suggestion in 1973. From the outset I never imagined that he and his coworkers had conspired to "steal" my suggestion. But I did think it reasonable to assume that the essence of the suggestion might have been remembered long after the letter in which it was contained had been forgotten. In any event, I was embarrassed about involving this scientist and his colleagues in the lawsuit, so I apologized for the inconvenience he had been caused. "Don't worry," he responded. "It's not your fault." Then whose fault was it, I wondered. Was he being polite? Did he think my attorneys had overplayed a trivial issue? Did he feel the Bell Labs-Western Electric legal machine had mishandled the affair? Or was there an overall breakdown of common sense during my pre-lawsuit attempts to arrange a settlement and have my papers acknowledged? The scientist's quiet response stayed with me during the rest of the lawsuit and lingers to this day.

Back in Texas, meanwhile, Mark Miller's carefully researched response to Bell Labs' motion to dismiss the lawsuit was being studied by a federal judge. Mark's superb scholarship paid off when the judge overruled nearly all of Bell Labs' weighty motion. Though a deceptive trade practices and fraud count was dismissed, the six remaining counts were left untouched. Bell Labs might have thought the lawsuit groundless, but the judge's action indicated otherwise. So far Gunn & Lee was more than holding its own against the largest corporation in America.

About a month later Bell Labs scored a round for its side when three of its lawyers spent a day searching my office. Although Bell Labs had produced hundreds of documents as part of the pretrial discovery process, they had not allowed us to inspect the famous light phone, nor did they produce several important documents Ted had repeatedly requested. To show the judge that our side had nothing to hide, Ted and I decided to do what we had requested of Bell Labs. Their attorney had sent us a four-page list of requested documents, to include ". . . the original and every copy of every kind of writing or recording . . . letters, memoranda, reports, notes, papers, books, graphs, laboratory notebooks . . ." and some

forty other categories “. . . of the foregoing in the actual or constructive custody, care or control of plaintiff.” They also requested the lightwave communications equipment I’d built. Ted responded that the attorneys for Bell Labs would be free to perform an on-site inspection of my files to locate the listed items.

On the morning of January 29, 1980, Mark Miller arrived at my home with a machine for numbering documents. Soon Patrick Leach and Edward Kozioł from Western Electric, and Michael Urbano from Bell Labs arrived. They marched out to my office and electronics shop, and began a thorough search of my desk, bookshelves, and file cabinets. In the process they pulled some 1,800 pages. They easily located all the files pertaining to the lawsuit, as well as royalty statements, college transcripts, résumés, correspondence, and other personal records that did not appear on their document list. We had hoped the searchers would examine some of my homemade lightwave communications gear so we could later demand an equal opportunity to inspect the famous light phone. Though equipment was included on their list, they declined our invitation and merely took a quick look at the gear.

My major complaint about the search was the examination of the eight laboratory notebooks I’ve kept since college. I had no objection to the Western Electric lawyers looking through the notebooks, particularly since I had placed them under the protective order by labeling them CONFIDENTIAL. I did, however, object to Michael Urbano inspecting them since he was a Bell Labs patent attorney and my notebooks described many possibly patentable inventions. Nevertheless, Urbano sat at my desk and reviewed every page in each notebook. The on-site search, which had seemed like such a good idea to demonstrate openness, was not a pleasant experience.

Near the end of the day while Urbano was still reading the notebooks, Leach and Kozioł asked about other locations where documents might be stored. I remembered a large box of book manuscripts in the attic and offered to give Leach a light if he wished to examine them. Instead, he insisted that the box be taken down from the attic, promising it would be replaced before they left. Mark and I then watched the fun as the two well dressed New York lawyers wrestled the heavy box through the small opening in the attic. After they inspected its contents, none of which they

wanted, Mark reminded Leach about his promise to return the heavy box to the attic. Leach turned away and announced, "The box will not be returned." Having spent an entire day watching Leach and his crew shuffle, crease and otherwise disrupt my files and records, I wasn't at all pleased by the prospect of having to replace the box. Though I was supposed to communicate through Mark, I told Leach he had promised to replace the box and I expected him to do so. "The box will not be replaced," droned Leach, as he stared out a window. "The box *will* be replaced!" I ordered. "The box will *not* be replaced!" Leach retorted. After a few more exchanges I gave up and announced, "None of the documents will be provided if the box is not replaced." My ultimatum quickly got Mark Miller's attention since failing to provide the documents would give Bell Labs the opportunity to tell the judge we were uncooperative. Leach, on the other hand, realized his failure to cooperate would give us an opportunity to complain about the way the search was conducted. Without saying a word, he motioned toward Koziol and began shoving the box toward the ladder.

About the time Leach and Koziol climbed down from the attic, Urbano finished reading my notebooks. Then without a goodbye the trio hustled through the house and out the front door. Just as they reached their fancy rental cars parked by the street, the clock in the living room chimed out five.

On February 19, 1980, three weeks after the search, my wife and I were in Washington for the opening of the Photophone Centennial exhibit. A few days earlier an AT&T publicist had called to ask if he could interview me for a film they were making about the event. Apparently Bell Labs got wind of his plans, for the interview was later cancelled. Fortunately they didn't cancel the exhibit. Thanks to the efforts of James Lowell, a bearded Bell Labs exhibits coordinator who bears an uncanny resemblance to Alexander Graham Bell, the photophone exhibit in Explorer's Hall was first-rate.

Victory

During the summer and fall of 1980 the attorneys representing Bell Labs issued at least ten deposition notices to people and companies

in seven states. They took a deposition from Dr. Robert Gallawa, my friend from the National Institute of Telecommunications in Colorado. In Dallas they deposed David Gunzel, the chief technical editor at Radio Shack. In New York they took depositions from Arthur Salsberg and John McVeigh of *Popular Electronics*. Meanwhile, Ted Lee served notice that he intended to take the depositions of several top executives at Bell Labs. He also fired off a flurry of interrogatories, and both sides exchanged broadsides of motions, answers, rebuttals, briefs, affidavits, and notices.

Finally, Bell Labs sent notice to take my deposition. The discovery procedures required me to bring to the deposition every relevant document (“ . . . letters, memoranda, reports, notes, papers, books . . .”) generated in the ten months since the search of my office, so I decided to have a little fun with the other side. I had recently completed writing a text and short course on lightwave communications for the IEEE, and had accumulated enough new documents to fill a briefcase and a large carton. The document request specified “every copy of every kind” so I included everything from used typewriter ribbons to an envelope stuffed with a thousand or so holes punched from the margin of the IEEE manuscript so it could be placed in a three-ring binder. A second briefcase contained lightwave communications equipment I’d built plus a camera.

On November 10, 1980, I rolled a dolly loaded with the new documents into a conference room high in an Austin office tower and took a seat opposite a large window that framed the picturesque Texas state capitol building. A few moments later a fellow wearing a sports shirt strode in and introduced himself as Richard Keeton. Bell Labs had hired Mr. Keeton, a notable trial lawyer from Houston, to represent them in the upcoming trial, and it was he who would take my deposition. Keeton said he enjoyed visiting his Austin office because of the spectacular view it provided of the capitol building. In fact, he observed, I was seated exactly where he liked to sit. Wouldn’t I prefer to move to the other side of the table? The books on the art of negotiation I’d read before the first meeting with William Keefauver at Bell Labs stressed the importance of seating arrangements during a meeting. Since Mr. Keeton preferred the seat I had selected, it seemed only prudent to stay put. “No thanks, this is just fine,” I replied.

After Ted Lee and the familiar trio of Leach, Urbano, and Koziol arrived, the court reporter administered the oath and the deposition began. After an hour of routine questions about educational background, military service, and technical experience, Keeton quizzed me at length about six pages of notes from my files that I'd labeled "Telephone Artifacts." Shortly before the lawsuit was filed, a scrappy Texas lawyer who had taken on Southwestern Bell in a highly publicized lawsuit told Ted and me to assume my telephone was bugged. Whether it was or not I do not know, but between March and November 1979 there occurred a rash of strange clicks, pops, taps, disconnects, volume changes, and interruptions unlike anything I'd ever heard before. Often these artifacts were noticed by the other party, and I jotted down some of their comments. For instance, on March 14 while I was briefing a reporter for *Electronics* magazine about the Bell Labs dispute, he commented, "You're not going to believe this, but your voice disappeared for the last ten seconds." Later that same day my paranoia index soared an order of magnitude when I spotted a man wearing a telephone lineman's kit climbing a utility pole down the street from my house. He was driving a blue pickup, not one of the vans used by the privately owned telephone company in my town.

The notes about the telephone anomalies were in a file that also contained several papers entitled "Bell Labs Action Plan." This was a guerilla law arsenal of "actions to be undertaken should Bell Labs fail to settle my claim against them." It listed such goodies as complaining about Bell Labs' conduct to the Justice Department, the American Bar Association, and the American Association of Patent Attorneys. After I learned that the action plan would have to be produced during the discovery process, I added more ammunition to the list—names of congressional committee staffers, magazines and TV networks to contact. Probably the most potent document was an annotated copy of the Canons of Professional Ethics of the American Bar Association. Ted Lee considered the action plan a hot potato, and I could hardly wait for the other side to see it. Richard Keeton was certainly interested in the action plan, for he asked lots of questions about it. Later I learned Bell Labs had marked the papers in the action plan with a special set of serial numbers different from those applied to the remaining 1,800 papers they selected during the search of my office.

Halfway through the morning of the first day, Mr. Keeton decided to inspect the new documents I'd brought along. After an hour of sorting, sifting and stacking, the other side gleaned what they wanted of the paperwork. I then opened the briefcase containing lightwave communications gear and removed my camera. Since Leach, Urbano and Koziol had not objected when I took pictures of them when they searched my office, I planned to photograph them examining the equipment. But suddenly Leach dove under the table and Urbano fled the room. There followed a lengthy and lively exchange between Keeton and Ted about whether or not I would be allowed to take pictures. Eventually the other side said they didn't want to inspect the equipment so I agreed to put the camera away.

Ted and I had been concerned that Bell Labs had made a wise move in selecting a smooth-talking Texan to represent them before a jury of his fellow citizens. But after the flap over the camera, Keeton and I got along just fine. Though he was a tough interrogator, after two long days of questioning I developed considerably more respect for Keeton than for his northeastern clients. Even though he was a product of the University of Texas and I was a graduate of arch-rival Texas A&M University, we were tuned to the same wavelength. He appeared interested in the books I'd written, respected my request that Urbano not view my notebooks, and asked about the Photophone Centennial. He even seemed sympathetic when I explained that Bell Labs had refused to acknowledge my publications in their light phone papers.

On the third day the depositions were moved to San Antonio. When I returned to the conference room after a break for lunch, Keeton and his clients were clustered in a corner discussing strategy. When I arrived they began whispering, but Urbano could still be clearly heard coaching Keeton about how to ask a very technical and crucial question regarding my 1973 suggestion. When Keeton asked the tricky question an hour or so later, I was ready with the correct response. Urbano scribbled some followup questions for Keeton to ask, and they, too, were easily answered.

On the fourth and last day of the depositions Ted Lee donned his white western-style suit and cowboy boots for the first time since the lawsuit was filed 18 months earlier. His uniform was soon to have the intended effect. Near the end of the day when the Bell

Labs people collected their materials and prepared to leave, Keeton asked them "What are you turkeys [going to do]?" Leach and Urbano looked uncharacteristically sheepish and didn't appear nearly as pleased as I was by Keeton's fowl appellation. After they left, Mr. Keeton continued the interrogation for another half hour, then plaintively observed for the record that all his colleagues had gone, and ended the deposition. Then he leaned back in his chair and propped his feet on the table. He announced that Bell Labs was prepared to fight the lawsuit in court, and that he was their "cannon" and was fully able to "shoot" us down. However, Keeton continued, in his judgment it would be better for both sides to settle the lawsuit out of court. Ted now propped his cowboy boots on the table, and quickly worked out the terms of a tentative agreement with the laid-back interrogator. Keeton even agreed to ask Bell Labs to include in the final settlement an agreement to reference my relevant papers in their light-phone papers. Not surprisingly, Bell Labs refused. A week before Christmas 1980, Ted and I met in San Antonio to sign the settlement papers and pose for pictures with a sizable check from Bell Labs.

With a little help from my action plan and a white cowboy suit, Ted Lee, Mark Miller, and I had successfully taken on the largest corporation in America. I have no idea what has become of Bell Labs' ambitious plans for the light phone. Their scientists published several technical papers on diodes that double as sources and detectors of light during 1979-80, but since the settlement I've seen no additional papers on the subject by Bell Labs authors. In September 1980 they suddenly abandoned their U.S. patent application for the light phone, but a few years ago I learned they had also filed at least one foreign patent application. Thanks to prior art requirements of Dutch patent law, the foreign application cited my 1974 article for *Popular Electronics* that concluded that a single-fiber lightwave link using dual-function source-detectors "is a precursor of what telephone systems of the future are likely to resemble." Despite their obstinance about referencing my papers, someone in that siliconized ivory tower eventually saw the light.