

## What Really Happened to Lucent Technologies?

Doug Pitt

In 2006, Lucent Technologies, once an elite American technology company whose stock price had risen to \$84, creating a market value of \$258 billion, barely avoided bankruptcy by selling out to Alcatel, a second-tier French telecommunications company.

In a short ten years, Lucent crashed from being the profitable sole-source AT&T R&D subsidiary to a failing independent company. Employees were shed by the thousands, dropping from 106,000 to fewer than 35,000. Over 70,000 American jobs disappeared from the company. Large chunks were sold off at bargain prices for cash. Others were shut down to lessen an overwhelming negative cash flow.

In only six years its stock price rose from \$7.56 per share to a high of \$84 after multiple stock splits, and then crashed to a 2002 low of 56 cents. Lucent's market value dropped to less than \$2 billion, not enough to meet two month's payroll expense. Individuals' company 401Ks sank to near worthlessness (divided by twelve). Retirees had to go back to work. Unexercised stock options became wallpaper.

How could a large successful American company with such powerful fundamental research and technology disintegrate so quickly? And how could Wall Street pundits not see it coming?

Lucent's story exposes a national affliction destroying America's future. It speaks to the contemporary American world, a harbinger of many other company futures. Perhaps the global future.

No analysis to date fully describes the forces that drove Lucent to the brink. Some illuminating articles did probe aspects of the situation (for example, [http://money.cnn.com/magazines/fortune/fortune\\_archive/2003/07/07/345538/index.htm](http://money.cnn.com/magazines/fortune/fortune_archive/2003/07/07/345538/index.htm)), as well as the book: *Optical Illusions*). But they didn't reveal the entire real dirty story.

Retrospective interest focused on the Lucent accounting events, the financial reporting fiascoes, and executive actions during the last brief critical period, and not the longer-term underlying problems that guaranteed Lucent's ultimate demise. *Optical Illusions* would have one believe it was the transmission product area failure to deliver the needed products. But that simply attempted to shift responsibility away from Wall Street and McGinn.

In key respects, what happened to Lucent and AT&T mirrors cultural, political and social shifts that were occurring in the U. S. at the same time. If there are lessons to be learned, it is that America is changing for the worse, and is losing its ability to cultivate talented, dedicated engineers and scientists. It is losing its nurturing, supportive managers, and the corporate cultures that inspire true invention and innovation.

Companies can no longer afford the luxury of big science and long term research and development projects. Conditions are progressively deteriorated over time. With every transition, the changes become more destructive.

### **In a nutshell, what happened to Lucent was a result of:**

Wall Street ego, greed, and malfeasance.

Corporate executive greed, incompetence, inexperience and ineffectiveness.

Meritocracy becoming mediocrity.

But there is lots of money to be made by Wall Street and Corporate Executives.

## **Wall Street Greed - Ego – Malfeasance**

Every few years a new, poorly understood investment product sparks a new Wall Street frenzy where money can't flow into the new product fast enough, until it becomes obvious that it's been oversold by disingenuous Wall Street hype, and collapses. These bubbles define Wall Street epochs.

The commercial real estate bubble resulted in the Resolution Trust Corporation Savings and Loan bail-out that cost taxpayers hundreds of billions of dollars. The Clinton era Telecom Reform Act of 1996 fueled the dotcom bubble that led to Lucent's demise. Clinton era legislation deregulating banking and investment fueled the subsequent mortgage bubble. Subprime only contributed to the problem slightly.

When the latest pyramid scheme ultimately collapses as they always do, it's relatively unimportant to Wall Street executives. They bank theirs up front and leave the investors to take the hit. It simply signals the time to take a break to regroup, give investors a chance to forget, rebuild investor trust, and begin looking for the next big play.

For all the investors and taxpayers that suffer financial loss, Wall Street is fine with the outcome.

Wall Street leads the greed game, and corporate executives follow. They know to bank their millions and billions before the curtain falls. Few CEOs win bucking Wall Street pressures. No self-respecting CEO wants to be known as the head of a stodgy "old-economy" company. Warren Buffet excepted, anachronism that he is. And that's why he's in Nebraska, not New York.

The only sustainable CEO role drives companies to MEET OR EXCEED WALL STREET QUARTERLY EXPECTATIONS. Those executives that opt out of the greed game or produce a bad quarter are punished mightily.

That's where the malfeasance comes into play. Wall Street blinds itself to the truth to keep the play going, when in more rational circumstances they would disclose legitimate concerns. Instead, Wall Street continues to encourage unrealistic expectations. Corporate executives bend the truth accordingly to meet those expectations. But even worse, executives will use accounting games to portray favorable quarterly results, even when the deception is not sustainable. Every quarter that the numbers are met, Wall Street smiles on their stock options, and they can bank their bonuses.

Once in a while someone is made a scapegoat after the fact. Jack Grubman had been a vocal hypster for AT&T for decades, when in fact significant negative information was ignored by him. It was as if he was on AT&T's payroll. But it took people decades to complain enough to make his conduct an issue. Long after he had banked his millions.

## **Wall Street and the Dotcom Bubble**

Entering the dotcom bubble, Wall Street heralded the "Internet Explosion". Entirely new corporations and innovations were going to knock out conventional businesses, and replace them with hard-charging, e-industry giants. All the while, Wall Street was peddling e-commerce companies with negative balance sheets that had no real chance of ever succeeding. A few made it. A lot more did not.

Wall Street loved the newly spun-off Lucent as the best play going. It was the best of both worlds. An old established company with a captive Bell Operating Company market, muscle, new technology, and new contemporary non-"Bell Head" management.

The timing was right. Lucent was nearing the end of the telecom digital technology cycle when analog was being replaced with digital, and copper with fiber. Wireline was beginning to be replaced with wireless, and circuit with packet. Just as the traditional equipment market was slowing, along came the Telecom Reform Act of 1996 to create a whole new set of telecom equipment customers: Competitive Local Exchange Carriers (CLECs).

Wall Street was rife with excitement. Money was flowing in fast, and the hot stocks were quickly being bid up.

There was only one problem: CLECs had no chance of succeeding. Even by buying customer access at "wholesale" prices, and criminally irrational equipment vendor financing, they had no chance of gaining enough wireline market share to survive. Besides, wireline growth was slowing, wireless access/cellular was beginning to erode wireline market share, and cable was moving into voice and data services.

Fixed wireless carriers were not going to fare any better.

So intoxicated with the proceeds from helping investors dump billions into these possibilities, Wall Street was unwilling to responsibly articulate the rational likely outcome assessments. Well beyond the time it should have been obvious that the CLECs were flaming out, Wall Street was still singing their praises. Stodgy old regulated Bell Operating Companies were boring.

The raw allure of more financial gain than one could ever hope to accumulate otherwise motivated the players to the malfeasance they practiced under the free enterprise logo.

### **Executive Incompetence/Inexperience/Ineffectiveness**

Contrary to what has been written, Lucent was first and foremost a victim of executive incompetence: elitist, arrogant, out-of-touch, inexperienced. Start at the top and work your way down.

The end began with divestiture. AT&T wanted to shed the stodgy regulated operating companies and the equipment and service restrictions that accompanied its regulated monopoly status. Operating companies generated no sizzle with Wall Street. The Information Age was upon us and AT&T had to unleash its technology to go head-to-head with the likes of IBM.

The problems really began with Bob Allen. Few remember that Bob Allen became CEO by default with Jim Olson's untimely cancer death. Few knew that Olson was working with Bob Allen and Hal Burlingame to re-invent the company. Allen was the bean counter and Burlingame was the Human Resources person. Under different circumstances Allen would have never been the choice to succeed Olson.

It was also becoming obvious that without the operating company experience AT&T was losing its way in bringing technology to market. It was losing its ability to manage Western Electric, NCR and Bell Labs. It held no sway over Operating Company technology choices. In fact, Long Distance and Operating Companies were becoming competitors. And, a major technology shift beyond digital switching was underway and they were unable to chart its course. Much less lead it.

Network Systems was becoming little more than unnecessarily expensive overhead.

Computer Systems became the boat anchor that never turned a profit. It was becoming a corporate embarrassment to report their results, or lack of. Allen thought a good way to confuse the books, and perhaps the only way out was to acquire NCR, another computer company that was struggling to survive. Merge the two, pray for some synergy, and buy some financial reporting write-off excuses. Ultimately, AT&T had to spin NCR back out and give up on the computer business.

In the course of doing that, AT&T completely divested itself of everything but Network Services. NCR was dumped and Lucent picked up the rest.

Of note, but commonly forgotten, AT&T saddled Lucent with as much debt as they could to get it off their books. The argument could easily be made that Lucent deserved to start its life with far less debt.

With Allen's sudden departure, Schacht became the Lucent placeholder until he could stabilize the situation and find a successor. None had been groomed, and the old AT&T method of moving executives up to corporate were out the window with no Operating Companies or Long Lines to draw experienced talent from.

### **And then came McGinn.**

Lucent was still well enough to survive intact until Schacht picked McGinn as his successor.

It was only when McGinn put Lucent under such capital and cash-flow pressure by virtue of irresponsible, reckless CLEC financial deals that it had no chance for success. These deals were not those of marketing subordinates far down the food chain. These were deals that by their very structure required approval at the top, and across multiple areas.

Indicative of the mess was the fact that there was no inside executive left standing to run the company after McGinn. Schacht had to step back in as a caretaker. He was always an outsider, never an insider. Carly Fiorina, another big part of the problem, had already bailed. Pat Russo had bailed to Kodak and failed as a "turnaround specialist". And she was the only executive acceptable and willing to take the helm.

By far, the worst executives were the last: The blind leading the blind, or the incompetent not knowing any better than to pick the incompetent as subordinates. If there were criteria for selecting people for executive positions within the company, it had nothing to do with competence.

But there's more to the last batch of executives than incompetence. Not only did they not know they were incompetent, they did not realize that what they were doing was reckless, dangerous, and questionably fraudulent. While some might not consider it fraudulent, it did not require any special genius to sense that the performance the top executives were requiring could only be accomplished with marginal, highly risky deals and cooking the books to the max.

If not guilty of fraud and corrupt accounting practices, at the least, they went way beyond the traditional business practices and dealings that had made Lucent what it was: a long-term technology leader with a stable well-heeled, well capitalized, profitable telecom customer base.

In a nutshell, McGinn and these executives tried to take the company someplace it had never been, and they had never been. Experienced, knowledgeable subordinate executives were run off, retired or fired, because they were strong enough to hold the traditional line and knew better than to go along with the new folly.

Rich McGinn was determined to scale the mountain peak of stardom and show the world what a superstar he was. And break Lucent out of the fuddy-duddy, lethargic telecom mentality, turning them into a fast-paced, best-in-class technical leader.

But Rich McGinn was widely considered to be an empty suit by those that knew him best, and Carly Fiorina was known as a demanding, slam-dunking shark most focused on self-promotion.

The widely discussed story inside Lucent was that Rich McGinn, ambitious person that he was, rose quickly within the Computer Systems Division after marrying into the Board Room. Computer Systems was the corporate boat anchor, capable of losing billions a year, and never turning profitable. If Rich had been a superstar, his results there did not show it.

There is more than a little irony to the fact that someone from the dog division would become the head honcho only long enough to turn the whole company into a dog.

### **Meritocracy Becomes Mediocrity**

First and foremost, Lucent was originally a technology company, not a marketing or financial enterprise. It made no sense to have anyone other than technology experts at its helm. Marketing was not a serious need when their market was in-house Operating Companies. Or when there were so few companies capable of delivering central office grade solutions to the RBOCs.

In the beginning, AT&T was a well conceived monolith. The Operating Companies each operated within their regulatory domains as independent subsidiaries under the AT&T corporate umbrella. Long Lines was the separate long-distance operation, keeping it's pricing and profits out from under state regulation. Western Electric (WECO) was the manufacturing subsidiary that produced the components needed to build and operate telecommunications networks. And Bell Labs was the R&D subsidiary, primarily tasked with advancing the network technology. In addition, Bell Labs became a premiere contractor for the federal government. It had the resources and expertise to perform as prime contractor on a number of huge projects: the Safeguard ABM project, the Autovon Military Communications Network including the Cheyenne Mountain NORAD center, the SOSUS Navy underwater sound system that implemented a global underwater sound network for detecting surface ships and submarines, to name a few.

Each subsidiary had it's own corporate structure and culture: AT&T Corporate, Long Lines, each Bell Operating Company, Western Electric, and Bell Labs. Bell Labs was funded jointly by Long Lines and AT&T Corporate, as a collective Operating Company voice.

Some employees would occasionally shift from one organization to another. Some Bell Labs employees would shift to more business-oriented organizations, particularly Western Electric, but rarely did employees shift from an Operating Company, Western Electric or AT&T to Bell Labs. In effect there was an intentionally controlled one-way flow of personnel only from more technical organizations to less, but not the reverse. In effect technical priorities were insulated from business priorities.

Over the years, AT&T organizations were stable. Time in rank was required for promotion. Some Bell Labs people would migrate to the Operating Companies or corporate AT&T. Bell Labs and Western Electric, chose their leaders from within.

Bell Labs was originally a strict meritocracy. Bell Labs was subdivided into Divisions, Labs, Department and Groups, in that hierarchic order. A Lab would typically consist of three to six Departments, totaling roughly one hundred employees or more.

Raises and promotions were based on an annual merit review. There was one primary value: technical competency. This merit review, performed by all Lab supervision, would rank order every engineer within an entire Lab. For every merit review and salary administration cycle, Bell Labs would publish the Green Book that displayed all employee salaries by years of experience, without naming the employees. Each engineer could look at one chart and see how they compared salary-wise with every engineer in their experience band.

As time went by and AT&T management became more enlightened, this strict meritocratic ranking system was eliminated. Lab-wide rankings fell by the wayside, and Department Heads administered salaries and promotions according to corporate guidelines. More of the salary administration became dictated by these guidelines. What was once a Lab-wide enforced meritocracy became Department Head arbitrariness.

“Shareholder Value” replaced technical competence as the over-arching value. Employees were asked to provide business-oriented quarterly goals and objectives, and to assess how well they were meeting them.

Originally, every Member of Technical Staff, MTS, was expected to have at least a Master's Degree. Those that were hired in with a Bachelor's Degree were sent to graduate school at company expense to complete their studies. There were a few lesser staff positions, but the vast bulk of Bell Labs employees were MTS.

As Bell Labs grew, and the work shifted significantly from longer-term research towards development, particularly for software, it became difficult and expensive to fully staff to those educational requirements. Consequently, the variety of employee categories expanded, and the graduate requirements disappeared. Bachelor's Degree graduates were fully capable of performing the software programming duties being asked of them.

While this enabled Bell Labs to revise their staffing costs downward and adequately staff the huge project undertakings, it did not preserve the caliber of the previous employees. Or their motivation toward technical competence.

If anything, it diluted technical competence.

### **Importing Mediocrity**

Animosity always existed at some level between Bell Labs management and Western Electric. Bell Labs designed the equipment and Western built it.

Western Electric respected and resented Bell Lab's expert power. And WECO had to share control with AT&T Corporate, which could lead to some humbling situations when Corporate over-ruled Western.

On the other side of the issue, Bell Labs managers probably displayed a little too much ego, arrogance and smugness about their technical superiority.

Western Electric dealt with customers, fronting for Bell Labs R&D, and probably looked down on the Labs as having no business or marketing savvy. And the usual conflicts would arise about the Labs inability to deliver the right product at the right time. WECO had frequent issues with the Labs funding required to obtain their products. And the Labs were not about to relinquish control of their organizations and budgets.

There was one really interesting WECO development during the Seventies that was the beginning of the change in corporate thinking about whether the Labs was in fact the best business partner model. A small department was formed within WECO of non-Labs software engineers tasked with continuing software feature development for the No1A ESS Switch. The results were quite favorable. That organization became the most profitable operation within WECO on a per employee basis. Of course, they were providing revenue generation business features for a huge installed base of 1-A ESS switches. The Operating Companies would pay whatever it took to leverage new business features across their switches. That's where their revenue gravy was.

During the 80s AT&T decided to hybridize Bell Labs. The boundaries between WECO and the Labs were intentionally made much more indistinct, and WECO managers were put in charge of Labs organizations. With the advent of the Lucent spin-off the corporate wall was removed totally. While there was effectively a “Bell Labs” organization, it was in many cases simply a scattering of heterogeneous organizations within Lucent. This further reinforced the shift in values from technical competence to shareholder value, a euphemistic term for profit.

Product Management had much more control over budget details and project funding. On the one hand, it was felt that the Labs R&D was running on a firmer business foundation. On the other, projects not directly associated with current revenue generating products became increasingly difficult to fund.

Mix into those politics AT&T still trying to drive product choices to suit their Long Distance needs, and the fragmenting technology choices in the marketplace, and Bell Labs was never able to develop a significant new in-house switch beyond the 5ESS. They got trapped between the Asynchronous Transport Mode (ATM) Operating Company telecommunications model and the Internet Protocol Internet services model. Their one effort, GlobeView, an ATM switch, was a miserable failure that was cancelled. Splitting development across multiple organizations and locations was more than the system could manage. And that was the end of that.

And the one exceptional product only Bell Labs was capable of developing, the lambda router, was canceled.

Bell Labs was unable to anticipate the technology shift within their customer base, respond to it, or direct it. They were being out-marketed.

When the shift became obvious Lucent tried to acquire products by buying companies at exorbitant prices.

While it was widely known among the former seasoned executives that the telecommunications equipment market was highly cyclical, it was not properly anticipated, nor did current executives anticipate the products the market shift would be demanding.

It had also become a time when corporations slowed developing new products in-house. The cost structures were frequently higher than quarterly reporting could support. It was cheaper, so the reasoning went to buy a new startup fueled by starving entrepreneurs. And it might reduce risk and time to market.

Actually, it created more play for the Wall Street mavens, and it put executives with little technical competency in charge of acquiring technology without having to acknowledge subordinates.

Lucent tried to buy their way into emerging products that could replace traditional switching. They paid premiums for mediocre solutions.

Lucent was importing technical competence, very little of which would result in other new product lines.

In summary, over the last forty years, Lucent had become increasingly pressured to shorten product development cycles, reduce development costs, shrink pure research activities, and be more responsive to more markets. The investment community expected them to outperform lean-and-mean technology startups in growth and earnings. The pressure for consistent short term revenue and earnings growth biased them away from larger, longer-term R&D undertakings. And when projects were undertaken, they were chosen on the basis of "stock market sizzle" not necessarily sound engineering practices.

R&D decisions became driven by business executives attuned to investment community motives and incentives, and poorly trained in the underlying technology and development processes.

In doing so they traded their technical soul for mediocrity. And gained their greedy incompetent executives.

[<BACK>](#)