How Atex Helped an Industry Change the World

To tell my story regarding Atex, I must first provide a bit about my background. In 1952, I was 14 years old and living in Jackson, Mississippi. Between attending St. Joseph's High School and playing football, I worked full time as well at Parkin's Pharmacy as a “soda jerk.” Little did I know that I was beginning my training for my 60 plus year career. With this early beginning in the workforce, I learned that customer satisfaction is the most important aspect of my job. In 1955, I started working at Bakers Shoe Store and quickly, at the young age of 15, became one of the top salespeople. In my prime days at Atex, I used the same skills and sales strategies as I did at my humble beginnings at Bakers.

EARLY EDUCATION AND CAREER

In 1958, I moved to Indiana and attended Notre Dame University on the Fannie & John Hertz Family Scholarship. After graduating in 1962, I decided to attend Princeton Graduate School to obtain a PhD in information science. However, a year into the PhD program, my direction and life changed. One evening during dinner, one of the nonengineering students advised me to pursue an MBA instead of a PhD. I had to ask him what an MBA was because, as a young man from Jackson, Mississippi, I had never even heard of this, let alone known anyone who had pursued one. I decided to drop out of Princeton and went on to pursue my MBA at Harvard University in Cambridge, Massachusetts. I worked as hard as I possibly could and took the classes with the hardest professors in financial economics.

Upon graduation from the Harvard Business School in the summer of 1966, I went to work at Raytheon as a laboratory assistant in a department working on the Sam-D Missile Program. I mainly concentrated on financial project management for the department until 1970.

In 1970, a classmate of mine from Harvard Business School, Bill Hye, called me to say that two guys from Texas Instruments, Dick Hanson and Dick Petrus, were building a venture capital firm called New Business Resources. They invested in a company under this called Computech, where I soon became employed as a sales/marketing assistant.
At Computech I was selling a CRT (cathode ray tube) terminal (the 410, which was a storage tube) tied very tightly to a PDP-8 minicomputer, which in turn could be tightly tied to an IBM 360 (IBM’s best computer-aided design platform at the time). Computech was essentially one of IBM’s first competitors striving to build terminals for higher performance but less money. For $20,000 Computech’s combination of a terminal plus the minicomputer was doing the essential functions that IBM provided for more than $200,000.

I enjoyed traveling for Computech to major development labs all over the United States as a self-proclaimed “order taker.” (I traveled with two large cases that housed the terminals. I would actually go on the runway, bypass the ground crew, and place the cases on the plane myself.) After doing that for two years, I met Charlie Ying.

Charlie had started working at Computech a day after I started. He was a graduate student at the Massachusetts Institute of Technology (MIT) in the PhD program and had been recruited to also work for Computech by Professors Mike Detouzos and Don Herring, who had been involved in founding the company. Charlie was the lead hardware designer for an effort to make the CRT terminal have fast enough graphics that it could do what is called the “fitting problem.” I had been working with Charlie’s predecessor but began working with Charlie when he decided to dedicate most of his time to Computech while still pursuing his PhD.

BEGINNING ATEX

While working together, Charlie and I figured out how to make a system identical to IBM 360 user interfaces by concentrating on making the technology more simple and useful for the everyday person. In 1972, Charlie and I had the opportunity to travel to Canada to meet with Doug Wilson, who was, as I remember it, the top Canadian project manager working on computer design initiatives for Canada. He was extremely impressed with the terminal that Charlie had created and asked if Computech would sign a contract to deliver these terminals. Upon our return to Massachusetts, we met with a lot of the top engineers at Computech (many of them also MIT professors).

Ultimately, Computech rejected the contract. They asked whether we were a systems business or a component company. This in turn led Charlie and me to question why we were at a company that restricted our vision of providing more affordable and efficient technology to the world.

By the end of 1972, we decided to leave Computech, and Charlie introduced me to this brother, Richard. Richard had originally pursued an architectural degree, but he dropped out to pursue a career in software design.

Charlie and Richard took me to a restaurant in Chinatown (I think it was called China Sky) where few people spoke English. We continued to meet in this restaurant and similar restaurants because we felt we could speak freely without someone overhearing our ideas. Our initial idea was a continuation of our vision at Computech: recreate the 360 IBM terminals, but make them do more, be faster, and on balance be more affordable. This is when we decided to form the company Atex.

We had come up with an idea for a new type of text composition system. The name Atex came from one of our brainstorming sessions in Chinatown. I suggested that the name contain the word “text.” From there, either Charlie or Richard suggested that we add the letter A to the front of the name so that we would be first in alphabetical searches. Charlie and Richard had a bit of a background in publishing with Hendrix Electronics (a former employer), but essentially, we collectively had very little knowledge of the publishing and printing industries.

I decided to call my former Harvard Business School classmate, Roger Parkinson, who was working at Newsweek to run by him what we were planning to do. He said that he couldn’t work with us because we were too small of an operation. It was true; we were small. We all acquired credit cards with a $300 limit on each to pay our initial operating costs.
rented a space with one heated room where we stored our terminal. We then worked in the unheated loft of the building bundled in our winter coats. We did it just playing by guts and glory—doing it ourselves. We all acquired credit cards with a $300 limit on each to pay our initial operating costs.

Although we were too small for Roger to work with us, he instructed me to call *U.S. News & World Report* because they were in a hurry to make terminal changes. They were changing their printer, which in the early 1970s was a major ordeal. We spoke with a technical guy at *U.S. News* named Mike McDonald, who was extremely bright. It was decided that Charlie would meet with him. They sat in a room with a chalkboard for four hours and I think revolutionized the printing industry from top to bottom. Mike then spoke with his boss, John Touhey, and soon convinced him that they needed to hire us in order to outrun IBM and Time Inc. We kept this news secret for a while because *U.S. News* was taking a risk with us since we had no money. They did not want us to have to seek funds from venture capitalists, so they moved very quickly. Mike and John ventured to our loft (see Figure 1) to see our PDP-11 terminal. They offered us $200,000, and for six months, Charlie and Richard worked around the clock to complete the *U.S. News* order.

**NEXT STEPS AND THE ISSUE OF MONEY**

The next big thing that happened was our introduction to John Seybold, which I believe came via *U.S. News*. John was an early pioneer in computerized typesetting, and since Charlie was the only one of us with any publishing experience, we needed someone to teach us. That is exactly what John did. He worked tirelessly with Charlie and Richard and taught them many things about printing and publishing. John then brought in his son Jonathan, who went on to follow in his father’s footsteps.

I mentioned earlier that our starting capital for Atex was $300 per person from credit cards. Because we had no money, we decided on the following financial terms for contracts with customers: when placing an order, the buyer paid 30 percent of the contract value; 30 percent more was to be paid when their specific computer was configured; and then another 30 percent was paid when the system was delivered and basically working onsite. We would get the final 10 percent a year or two later when the system was doing everything the customer wanted it to do. In the specific case of *U.S. News & World Report*, I asked for a one-third down payment when we signed the contract. They said, “Why do we need to pay your down payment?” Richard replied, “Otherwise, you’re not going to get this because we will not be able to buy your computer to build your things for you.” To further convince them I said, “We will put your name on the computer. It’s yours. We buy it in your name, so if our system doesn’t work, you have the computer.”

We got our one-third down payment, and we used that as a template for all future sales. *U.S. News* also early on bought some shares of Atex stock. We were really in this innovative effort together.
TECHNICALLY SPEAKING

Our main hub was a PDP-11 computer, but we constantly were buying and building a lot of other parts to add onto it. My memory is that in those days our systems had 64 kilo words, so 128 Kbytes worth of memory running at submegahertz, which by the latter part of the 1970s actually broke 1 MHz. We were very happy about that. We couldn’t afford one computer per monitor, so Charlie’s hardware was bus connected to the PDP-11, which was driving multiple terminals.

Incidentally, wire services had to go in, which would have to send out to the telex network. We managed Associated, United Press International, and all of those sources coming in. Additionally, every now and then stories came in on paper tape, and the system had to keep track of these too.

In time I concluded that we could not afford to sell those expensive terminals. We needed a lower-end product that also supported more terminals. Thus, I came up with what we called the “reporter terminal” [system]. We had to put more terminals on the poor PDP-11. Being the hardware genius Charlie said, “No problem, I’ll give you an extra bit on the terminal number.” That was easy. Software-wise, Richard had to figure out how to run things with the same bandwidth that we had, which was not easy. He was constantly working on what to cut out and how to squeeze everything in. Somehow, we managed.

By creating these reporter terminals, we essentially produced an editing terminal that did not need all the features of our higher-end model. The reporter terminal ran 16 terminals versus eight and transferred its outputs directly to the copydesk. We built the first model in Ronkonkoma, New York, for Newsday.

In terms of technology, Charlie was responsible for hardware design and running system tests. Richard was the lead software developer and tester, and he designed the modern-day keyboard. My areas were marketing and the business side of things. We were well matched in our interests and capabilities. The joy of having brothers as business partners is they always communicated well and just worked everything out.

SELLING PHILOSOPHY

To grow the business, we were constantly going to trade shows attended by the top companies in the magazine publishing field. Years later, we branched out to newspaper trade shows as well. My strategy was to not have a booth, but to simply walk through the trade show aisles. I would ask exhibitors and attendees, “How are you? What do you do? What is interesting here? What should I see?”

My philosophy has always been to engage with people by asking honest questions and collecting business cards. I collected 50 business cards, but only about half of them turned out to be actual prospects. Many of the people that I would meet at these trade shows would call me before I had the chance to reach out to them. They would say, “Remember we met at the tradeshow?” The Atex technology was so outstanding, all I had to do was clearly articulate in engineering terms how much more it did from a hardware standpoint. For instance, a command would be executed in 1/30th of a second for the copydesk editing, and at the time, there was nothing else that could do this.

Early on, the customers used their own technical teams to do customer support. We had these really sophisticated clients doing it themselves, which is any supply company’s dream! As we began to grow internationally, we hired a technical support genius who was located in London to assist with our European customer care.

A few years, later Raymond Louw, the editor of Rand Daily Mail, the dominant newspaper in South Africa, was in Boston for a conference and decided to visit us at our plant in Bedford. He
recognized that our technology was way ahead of its time. Our head of sales at the time said that we were too small to go to South Africa; but, as Raymond was leaving, I ran out to tell him I personally would travel to South Africa. I traveled there, made a presentation, and wrote a proposal. We made the system, and they were then responsible for marketing, sales, and customer support in South Africa. Our joint venture acquired 90 to 95 percent of the market.

We went on to have clients such as Newsweek and Reader’s Digest. We branched out from magazines to book composition with Matthew Bender and to additional newspapers. Our strategy was simple: we would just go to the next big order that made the most sense. This strategy worked in terms of capital as we doubled every two years (42 percent yearly growth) and were profitable every year. I feel that my job selling our product was largely successful due to Charlie’s extraordinary and unique hardware that made our system 20 to 100 times faster. Early on we obtained patents, which gave us a strategic advantage over our competitors.

SELLING THE COMPANY

We became connected with Eastman Kodak when I was asked by a customer to start producing printing in color. Richard said, “It would take 20 man-years to do color by ourselves, and where were we going to get the money for that?” So, I went to Kodak and asked them to help us add color to our system. They already knew what we were doing, and they agreed. After working with them for a while, in 1981 we agreed to sell Atex to Kodak for $77 million. (Atex had remained a privately held company until the time.) With Kodak adding color, the system became dominant in the publishing world.

After leaving Atex, I got involved with Mort Goulder, Dick Morley, and George Schwenk in what was called “The Breakfast Club,” an early instance of an angel investing group. We met for breakfast and considered investments in the innovative ideas of fledgling entrepreneurs. Sometimes we invested as a group, sometimes individually, and sometimes we encouraged others to invest. We did this for years. I have always had a passion for adult learning programs and have continued my efforts in this area to the present day. For instance, a few years ago I invested in my daughter Alexandra’s company, Eliza, which she successfully grew. My current activity is HPT (high-performance team) development where our mission is to support individuals and companies that have innovative ideas and approaches toward learning, professional growth, and career development.

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