The Commercial
Here is a three-part trivia question about televised personal computer advertising:

Name the companies responsible for:

1. The longest playing series of personal computer commercials?
2. The most creative single commercial?
3. The first personal computer commercial?

Answering part one is easy. IBM's "Charlie Chaplin" ads ran for more than six years. They were entertaining, effective, and nearly impossible to avoid. Identifying Apple as the maker of the most creative commercial may be more challenging. Apple showed the ad just once, during the second half of the 1984 Super Bowl. Nonetheless, some people consider it the most impressive corporate identity commercial in history. Now for the last piece of the puzzle. Who televised the first personal computer commercial? This is not a trick question. It wasn’t IBM, and it wasn’t Apple.

It was Xerox.

Xerox is not a name most personal computer consumers, let alone general television audiences, associate with the multibillion dollar personal computing industry. Fifteen years after it invented the world’s first personal computing system, and long after it portrayed that system in a 1979 commercial, Xerox still means "copy" to most people. Had it succeeded in marketing the computers shown in the commercial, however, Xerox might have meant more than copiers—much more.

Unlike Xerox, IBM, of course, always has been synonymous with computers. By far the most dominant personal computer advertising promotes the IBM PC. In it, a contemporary actor plays Charlie Chaplin playing his renowned tramp. The little man with derby, moustache, baggy trousers, and awkward walk twitters and jerks his way through the delightful discovery that computers can be useful and even fun for real people. IBM has spent massively on the campaign, as much to build interest in personal
computing itself as to identify IBM's product as the standard in the industry.

In contrast to the IBM barrage, the memorable Apple commercial was more like a proclamation. Less than a decade after being incorporated in the garage workshop of two kids in their twenties, Apple Computer stood out as the Fortune 500 corporation best positioned to challenge IBM's dominance in personal computing. The brash, young California company selected 1984 and the Super Bowl to broadcast its commercial, a video morality play celebrating the glory of iconoclastic individualism and condemning the sinister threat of organizations whose power oppresses rather than liberates the human spirit. Using imagery without words, Apple drew the battle line clearly between itself and IBM.

There might have been a third competitor. In 1973, more than three years before Steve Wozniak of Apple soldered together a circuit board that qualified as a computer in name only, researchers at Xerox's Palo Alto Research Center (PARC) flipped the switch on the Alto, the first computer ever designed and built for the dedicated use of a single person. Long before Wozniak, prodded by his friend and partner Steve Jobs, went on to build his second computer—the famous Apple II, credited with changing forever the American home and workplace—and even longer before IBM implemented a crash strategy for breaking into and then dominating the personal computer industry, Xerox employees ranging from scientists to secretaries were using personal computers that, in many respects, were superior to any system sold in the market before 1984, the year of the Apple Super Bowl commercial.

The scientists at Xerox PARC created more than a personal computer. They designed, built, and used a complete system of hardware and software that fundamentally altered the nature of computing itself. Along the way, an impressive list of digital "firsts" came out of PARC. In addition to the Alto computer, PARC inventors made the first graphics-oriented monitor, the first handheld "mouse" inputting device simple enough for a child, the first word processing program for nonexpert users, the first local area communications network, the first object-oriented programming language, and the first laser printer.

They called this entirely new approach to computing "personal
distributed computing.” Their design and philosophy challenged accepted wisdom about the relationship between people and digital processors. Mainline computer people scoffed at the notion of one computer for each person; the Xerox team built the Alto. Traditional computer applications centered on number and data manipulation; the Xerox team focused on words, design, and communications. By the mid-seventies, PARC had crafted a framework of machines and programs that were “personal” because they were individually controlled, and “distributed” because they were linked through networks to shared resources and knowledge. The entire system—of people, machines, and programs—advanced human productivity through computing tools in ways paralleled only by the exploitation of pencil, paper, printing press, and telephone.

Xerox, however, did not convert either the vision or the implementation of personal distributed computing into the commercial success and recognition now enjoyed by Apple and IBM. It’s not that Xerox failed to profit financially from its innovative technology. The company’s laser printer business is thriving, and its latest generation of copiers incorporates technology developed at PARC. But these successes related easily to the world of imaging well-known at Xerox. By comparison, the greater possibility to define and dominate the unfamiliar business of personal computing smoldered unproductively within the company for more than a decade, frustrating far more of the organization than it inspired.

The Alto confronted Xerox with the unknown. When Xerox established PARC in 1970, there was no market for personal computers. There were no compact disc players, no Walkmen, no portable telephones, no digital watches, no VCRs, no video camcorders, no personal copiers. Not even the now ubiquitous pocket calculator had been introduced yet to the marketplace. Furthermore, from the time of its invention in the late 1940s through the end of the 1970s, computer technology remained unaffordable, inaccessible, and useless to most people. Computers were owned by corporations and universities, not individuals; operating the technology required a knowledge of protocols as formalized and arcane as any used in international diplomacy; and, all the effort yielded results for a narrow set of applications. For the most part, computers manipulated numbers in ways and with speeds helpful
only to scientists, engineers, and accountants. Not surprisingly, popular films and novels depicted the technology as enigmatic and those who understood it as weird.

Except for the perception, all of this had changed by the time IBM introduced its personal computer in 1981. Consequently, IBM emphasized consumer education in its marketing strategy. If the Charlie Chaplin tramp could own a PC, the machine must be affordable. If he could operate one, the technology must be accessible. And if he could use a computer to better himself commercially and, yes, even romantically, then it must be useful.

The campaign was a remarkable success. By 1987, Americans had purchased more than twenty-five million personal computers. The machines were owned by one of every six households, and their absence in an office was far more remarkable than their presence. Children considered the technology routine. IBM's name was so identified with personal computing that IBM PC knockoffs, known as "clones," were grabbing a big share of the market for their United States and Asian manufacturers—so big that IBM ultimately changed its advertising strategy. The Charlie Chaplin character began touting the uniqueness of IBM products instead of merely demonstrating the wonders of personal computing in general.

IBM's early promotions made sense for a number of reasons. First, people did not have to be sold on the idea that IBM could make a good computer. Next, since IBM was the only personal computer manufacturer in the early 1980s willing and able to advertise extensively on television, it had no competition for what advertisers call the "share of voice." Television viewers simply didn't see or hear that much about the competition. As a result, IBM could educate consumers while relying on sheer omnipresence to associate its product with a safe and wise choice. Finally, the approach succeeded because, by 1981, enough personal computer hardware and software was available in the marketplace to back up the discovery claims made by IBM's little tramp.

Only five years earlier that had not been the case. The first personal computing products appeared in the mid-seventies and had limited appeal. They were sold by small electronics firms and individual hobbyists through clubs, direct mail, and word of mouth to other hobbyists and tinkerers. Wozniak's Apple I typified the early merchandise. It was an unpackaged circuit board wired by Wozniak so that a purchaser could hook it up to a power supply.
(not included), connect a tape cassette for input (not included), a television for output (not included), and then set about writing programs (not included) to fit within the Apple I's limited internal memory. Millions of Americans preferred spending their time in other ways.

Within a few years, however, astonishing advances in integrated circuitry provided the critical raw materials needed by hobbyists and others to build bigger, better, and more useful computing tools. Personal computer memories, speed, and power expanded. Disc drives, keyboards, mice, monitors, and printers were added. And, most important, programmers began writing routines to make the machines appealing to people other than tinkerers.

At first, many programmers focused on games. But by 1979, data base management, word processing, and the electronic spreadsheet all had been invented. With the emergence of these applications, large numbers of people realized that the small computers could help them manage information more productively, write and type better, and think more clearly. The personal computing market, having rung up its first sale in 1975, measured revenues in the billions of dollars by 1981.

Few opportunities have ever burst onto the scene so suddenly and with such force. To thrive on the shock of such an explosion required not only good, responsive products but the faith and hustle to profit from them. Apple had that magic combination. Theirs was the classic American business story starring two high school graduates with little money, no economic training, and big dreams. Wozniak built and improved the product; Jobs provided the faith and the hustle. When Jobs's energy exceeded his understanding, he recruited more experienced manufacturing, marketing, and financial managers to guide Apple through its rapid expansion.

By 1984, the year George Orwell predicted would witness a tyranny of computers in the hands of evil men, Apple Computer, like the personal computing industry at large, held out the opposite promise. Apple marked the event with its Super Bowl commercial. The ad begins with several indistinguishable cohorts of gray-clad ideological slaves marching in lockstep toward a great hall. Once inside, they take instruction from a larger-than-life image projected on a screen at the head of the auditorium. In the midst of this lifeless, impersonal scene, a powerfully built woman, dressed in bright colors and wielding a sledgehammer, charges
into the hall and spins herself around and around and around, frightening the brainwashed masses. With each of her revolutions, the tension grows in the great hall until, finally, at the end of the piece, she launches her weapon directly at the big screen.

The commercial's imagery richly conveyed Apple's perspective on its history, computers, and IBM. Perhaps more subtly, the television time purchased told as much about Apple the corporation. Super Bowl minutes are the most expensive advertising time in the world. Apple may have had an antiestablishment past, but its economic power in 1984 was as conventional and formidable as the beer, car, and financial services companies who also sponsored the annual football championship. The Super Bowl spot marked Apple's arrival; it was only the second company in history to have reached a billion dollars in sales in less than ten years on the merits of a new technology.

The first was Xerox. Less than a decade after the 1959 introduction of its revolutionary office copier, Xerox went over the billion dollar mark and claimed a position, along with IBM, as one of America's leading office products companies. By 1970, competition between the two giants seemed inevitable as each rushed into the technology of the other—IBM into copiers, and Xerox into computers. At the time, business computers were stationed in corporate back offices, handling the work of accountants and statisticians. No one expected them to stay there. So, in addition to taking on IBM in back office computing, Xerox established its Palo Alto Research Center to invent systems that could support executives, secretaries, salesmen, and production managers in what became known as the "office of the future."

The remarkable group of scientists and engineers who joined PARC responded with the Alto personal distributed computing system. Xerox's 1979 commercial demonstrates how the Alto functioned in an office setting. We see friendly "Bill," a balding middle-aged executive with a warm smile, arrive at work, grab a cup of coffee, and head for his office, saying good morning to people on the way. When Bill gets to his desk, he flips on his Alto computer, grins, and greets it with a "Morning, Fred." "Fred" the computer flashes the appropriate response: "Good morning, Bill."

Bill asks, "What's the mail this morning?" and then scans a list showing the times and origins of messages he has received since leaving work the day before. "This one looks interesting," says Bill. "Let's, ah, take a look at this." He selects the desired message
with the aid of his mouse, and the full text fills one section of Fred’s monitor.

After reading it, Bill tells Fred, “I’m going to need a couple of copies of this.” Bill presses a button that controls an off-camera laser printer, and the commercial cuts to some time later when a secretary delivers Bill the paper copies he’s requested from the printer. He thanks the secretary, then turns back to the computer saying, “Oh, and thank you, Fred. You know, Fred, I think everyone on the routing list should see this.” So Bill pushes a few more buttons, sending electronic copies of the message down the hall, around the corner, and across the country.

The commercial highlights many parts of the Xerox system including the graphics-rich Alto screen, the mouse, the word processing program, the laser printer, and, most prominently, the system’s communications capabilities. It’s an effective ad—other than the Xerox name, nothing about it would surprise a television audience even if it were shown today.

But in 1979, despite airing the spot several times, Xerox decided against marketing the Alto system. By then the organization barely resembled the buoyant company that a decade earlier had challenged both IBM and the office of the future. External factors including fierce competition, government antagonism, and economic recession all marked Xerox’s slide—from overconfidence to loss of confidence. Internal forces were even more combustible, as the company’s research, finance, and marketing groups each pursued a separate vision of the “right” Xerox future. In the end, the company that invented the first version of a personal computing future found itself struggling to recapture the advantages of its copier past.

In one fundamental respect, neither economists nor business people would consider the corporate histories behind the three different personal computer commercials that remarkable. Of course IBM waited for personal computers to move beyond hobbyist circles before entering and dominating the market. It’s a well known strategy for firms with established economic power to take advantage of the innovation and product testing done by others. Of course a start-up like Apple flourished. Rags-to-riches entrepreneurs are among the most cherished citizens in capitalist economies. Of course Xerox stumbled.

But why? Why do corporations find it so difficult to replicate earlier successes in new and unrelated fields? How could Xerox,
sired by one radical technology, bring forth yet another extraordinary invention, only to fumble away most of the economic opportunity it promised? It doesn't have to happen this way. One clue to why it did happen to Xerox, and why it's now occurring but shouldn't be at other corporations, is found in the conclusion of the Alto commercial. We cut to quitting time for a final dialogue between “Bill” and “Fred” the computer:

Bill (tired): “Anything else?”
Fred: A richly detailed bouquet of daisies spreads across the screen.
Bill (puzzled): “Flowers? What flowers?”
Fred: “Your anniversary is tonight.”
Bill (chagrined): “My anniversary. I forgot.”
Fred: “It's okay. We're only human.”