

How the 1969 IEEE Convention and Exhibition Changed My Life Forever

The story of how a single IEEE event attracted over 60,000 people and gave one young man a lifelong career



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Let me begin by telling you that 1969 was a great year—a really, really, really great year.

It was the year of the *Apollo 11* Moon landing, Woodstock, and the New York Mets winning the World Series. It was the year I took my mother and sister to see *Hair* on Broadway.

But all of that happened shortly after what made 1969 such a really great year. That was the day I visited the IEEE '69 International Convention & Exhibition and, in the process, found my future career.

An important call

The phone rang. It was my best friend, Jonathan Bird, a junior at Brooklyn Technical High School.

“So, what’s up?” I asked.

“I’m going to the IEEE show tomorrow,” he said.

“The *what* show?” I replied.

“It’s a show for electrical engineers,” he explained. “All the big electronics companies will be showing their stuff there.”

My interest was piqued. Ever since visiting the 1964–1965 World’s Fair, all things electronic had fascinated me. I was an avid *Popular Electronics* reader, eagerly devouring the latest news about developments in integrated circuits, computers, telecommunications, lasers, and so on. All in all, it was a great time to be a 14-year-old tech-crazed kid.

The idea of attending an event packed with news and presentations about the latest electronic breakthroughs sounded far more appealing than spending another dreary day at Junior High School 119 in Glendale, Queens.

“I want to go with you,” I told Jonathan.

“You’re too young,” he shot back. “They’re only admitting high school and college students.”

“I don’t care,” I answered. “I’m going with you.”

He sighed. It was something he did quite frequently when in my company.

Welcome to Wonderland

Bright and early the next morning, I met Jonathan outside my Queens, New York apartment. A bus and three subway rides

later we emerged into the light at Manhattan's Columbus Circle. The New York Coliseum was directly in front of us. The International-style structure, opened in 1956, featured both a low building with an exhibition space and a 26-story office block. A sign outside declared: "Welcome to the IEEE Convention and Exhibition" (Figure 1).

Jonathan and I entered the exhibition space's foyer. My friend presented his school ID to one of a series of women positioned behind glass windows. As a student at Brooklyn Tech, New York City's elite engineering school, he was immediately granted a pass.

Then, it was my turn. I approached the window looking completely flustered.

"Oh, no," I groaned while rapidly patting my shirt, trouser, and jacket pockets. "I can't find my ID! This is horrible!"

If I was on Broadway instead of Columbus Circle, I probably would have been nominated for a 1969 Tony Award.

Jonathan sprang into action "I'll vouch for him," he told the lady. "I don't want my friend to get in trouble. We're supposed to write a report about our visit."

The lady smiled, nodded, and handed me a pass. Jonathan looked at me and rolled his eyes, ever so slightly.

Hooray!!! I was in!!!

A different world

Walking onto any of the event's four convention floors was like stepping through a portal into a future world. Virtually every major electronics manufacturer was represented—as well as many minor players—all hoping to gain attention for their innovations. The event attracted approximately 600 exhibitors.

The exhibition had its own unique miniecosystem, quite separate from the world surrounding it. It was, in several ways, something of a throwback to earlier times. While the world outside

of the Coliseum was enveloped in turmoil, protest, and revolution, IEEE '69 was a calm and regimented oasis. As the exhibits and technical sessions (there were 48 of those) looked toward the future, the attendees and corporate representatives seemed blissfully oblivious to what was happening in the outside world. While the world was marching to the Beatles' *Helter Skelter*, the engineers were listening to Henry Mancini.

Of course, in an ironic twist of fate, it was the engineers who were the true revolutionaries, responsible for numerous technologies that changed the world forever.

Virtually all of the IEEE '69's 60,000 attendees were men. Nearly all wore the uniform of the day: a dark suit

with thin lapels, a white shirt, and a dark, not-too-wide necktie. Smoking was permitted just about everywhere; many engineers at the time smoked pipes. Women were generally relegated to support roles, dispensing admission passes, checking coats, and demonstrating various devices, batteries, cables, and other products.

Certain exhibits resonate with me to this day. For some reason, I was fascinated by the Nixie readout tubes at the Texas Instruments booth. They seemed so futuristic and cool. I figured that we would one day see these softly glowing little gems all over the place. What I didn't know was that four years earlier engineers at RCA Laboratories had developed something called a *liquid crystal display*.

Hewlett-Packard has a strong presence at IEEE '69. I recall that the company was promoting its brand-new Model 5360 A computing counter, which could measure the distance from the Earth to the Moon within one foot of accuracy. William Hewlett himself was there to meet and greet both current and potential customers.

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- REGISTRATION — Good all days — Technical Sessions and exhibits. In and out privileges. — IEEE Members \$3.00. Non-members \$6.00. Ladies \$1.00. High School Students \$3.00 if accompanied by an adult — One student per adult. Thursday only — limit of 3 students per adult.
- REG-IDENT CARD speeds request for exhibitors' literature. Ask for one when registering.
- ESCALATORS/EXPRESS ELEVATORS to the Fourth Floor.

IEEE '69 INTERNATIONAL CONVENTION & EXHIBITION MARCH 24-27, 1969

FIGURE 1.

The Motorola booth was a special treat. Since Jonathan and I were both avid radio experimenters, we questioned a friendly Motorola representative about his company's latest gear. He then asked us to wait a minute. He soon came back with a real *Apollo* space helmet, which he quickly clamped onto Jonathan's head. When Jonathan spoke, a nearby speaker amplified his voice and he sounded like a genuine astronaut! The representative then removed the helmet from Jonathan's head and placed it on me. Four months later, as I was watching the *Apollo 11* Moon landing, I thought to myself: "A few months ago I wore a helmet just like Neil Armstrong's!"

The one thing Jonathan and I wanted to see most—an actual functioning computer—we were never able to find. We searched all four exhibit floors to no avail. If there were any on-site computers, they were hidden to us. That's actually not surprising, given the fact that even the era's early mini-computers, such as Digital Equipment Corporation's PDP-8 models, weighed somewhere between 80 and 250 pounds—far from easily transportable.

The closest we ever came to encountering a real computer was a Model 33 teletype that was positioned at one of the exhibit booths (which one, I can no longer remember). The primitive workstation was linked to a remote computer via a telephone line through an acoustic coupler.

This particular teletype allowed users to play a game that required entering numeric values in order to land a vehicle on the Moon. The actual gameplay was a question-and-answer session, in which the game asked its user for the rocket fuel burn rate at each turn, which the user would then enter as a number from 0 to 200. Once the vehicle contacted the lunar surface, the player was given a report on the vehicle's landing speed and remaining fuel. My vehicle consistently crashed into the Moon. Even Motorola's helmet wouldn't have saved me.

After several hours, it was time to head home. Jonathan and I were burdened with so much product literature that we decided to hop on the courtesy shuttle bus to the New York Hilton, which brought us closer to the subway line leading back to Queens. Unfortunately, the bus was standing room only. Worse yet was the suffocating pipe and cigarette smoke. Still, we made it back to Queens safe and sound.

Life changing

As I previously noted, the IEEE '69 International Convention & Exhibition changed my life forever. In the years that followed, I continued to read every electronics magazine I could lay my hands on. I homebrewed projects, built kits,

experimented with radio propagation, hooked an early fax machine to my ham radio to send dirty pictures across the United States, and even restored a Model 19 teletype (Baudot, not ASCII) to communicate with other experimenters. I wanted to become an electrical engineer but, alas, my math skills were just too poor to even consider the possibility. (I could, however, send and receive Morse code at 20 words per minute.)

So, I chose to do the next best thing. I decided to write about technology! Over the decades, I've written countless articles on just about every technology imaginable. In the

pre-Internet days, I was a daily columnist for both the CompuServe and Prodigy services. I've also written for the *New York Times*, *Washington Post*, the Massachusetts Institution of Technology, *CIO Magazine*, *Electronic Design*, *PC Week*, *MacWeek*, and, of course, *IEEE Signal Processing Magazine*. It has been my honor to write about the engineers

and scientists whose research has led to the interconnected world that now allows instant communication, has led to an endless number of scientific and medical innovations, and places the world's collected knowledge at our fingertips. I am blessed.

Jonathan also never became an electrical engineer, although he certainly possessed the necessary skills. Like me, he decided to seek a media career. I'm saddened to say, however, that he died tragically young in 1994, a victim of the AIDS epidemic. I think about him every day.

The IEEE '69 International Convention & Exhibition's theme was "Unlocking the Future." Well, it certainly helped to unlock mine.

Fast forward

Every so often, perhaps once or twice a year, I dream that I'm back at IEEE '69. In this recurring dream, I'm surrounded by engineers who are shouting, saying things like: "It's impossible!" "Let me see that!" "What's that kid up to?"

As I hold the iPhone 14 Pro in my hand for everyone to see, a team of serious-looking men, headed by someone who bears a striking resemblance Efram Zimbalist Jr., moves toward me, and...

Then I wake up.

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