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COMPUTER HISTORY

MY HIGH-TECH ADVENTURE: CHAPTER 05, BELL LABS

OCTOBER 5, 2018 | DICK

Dick wrote this post, which was part of a book, My high-tech adventure, *to record his memories of working in the computer industry, starting in about 1960. It was first published in 2012.*

My family at Bell Labs, Holmdel

After leaving SBC, I went to work at AT&T Bell Laboratories in Holmdel, New Jersey. At the time (1967), most computing there was done in FORTRAN with programs stored on card decks, just as they had been at SBC. My projects included telephone traffic simulation programs and research attempting to correlate the price of AT&T common stock with other economic indicators. I didn't stay at Bell Labs very long, because I found out I liked writing software a lot more than doing research.

Bell Labs was a research institution, and at Holmdel they tended to treat computer programmers like dirt because programming was considered to be a clerical task. This got them in big trouble while I was there. They had a programmer named Trude who was the only person that understood the giant Fortran program called TELSYN, which was used to simulate telephone switching networks. Results from running the program were the basis for many of the research papers written by my department. Because Trude was "only" a programmer, Bell Labs laid her off. Soon thereafter the researchers in my department discovered that a bug in the Fortran program Trude had maintained caused them to publish several pa-

pers with wrong results. None of the researchers knew how to read or fix the code. In a flash they hired Trude back as a consultant to debug the problem.

In 1967, Bell Labs was still collaborating with GE and MIT on an operating system project called MULTICS. This was a very ambitious effort of both computer hardware and software to produce an interactive computing environment. I never got to use it, but I heard people talking about how great it was going to be "someday." Someday never came.

The Holmdel lab was in the process of investing in IBM OS/360. The machines that ran my programs were IBM System/360 40/65 Attached Support Processor (ASP) systems running OS/360. I got several turnarounds a day, but I never even saw the computers. They were kept hidden in rooms in the basement. As an OS/360 user I got to learn about Job Control Language (JCL) and the OS utilities. It amazes me that some people are still wrestling with this stuff 30 years later! JCL was ugly then and it is still ugly now. Calling it a "language" was really stretching things.

While at the Lab I got my first exposure to interactive computing. We had access to a GE Timesharing terminal in my hallway, which was a Teletype machine with attached paper tape reader/punch. It was slow and noisy, but having a computer talk to me directly was really a kick. I think this was my first chance to play a game on a computer. It was tic-tac-toe written in BASIC. We weren't supposed to be using the work computer to play games!

My manager at Bell Labs was Gerald Faulhaber. Under him I carried out my stock market study. As of this writing (2003) Gerry is a professor at the Wharton School at the University of Pennsylvania. At one point in the study, Gerry and I and others went to visit Claude Shannon at his house in Massachusetts. Claude was an MIT professor retired from Bell labs and known to be very knowledgeable about the stock market. His house was full of science toys and practical jokes. Shannon was the father of information theory while at Bell Labs. He also did pioneering work in artificial intelligence.

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