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An Aptitude for Mainframes

A simple test gave Martin Wills his start as a mainframe operator

April 2009 | by [Martin Wills](#)

I was born during an air raid. We lived in Hackney—what today would be called an inner city area—of London, England. Not only were we not well off, nobody expected much to improve. My parents thought my bookishness was unhealthy and encouraged me to be more sociable with the neighbourhood lads. In my modest way, I aspired to work in a shop rather than in a factory as my dad did. (He was also a bookie's runner—a somewhat illegal but vital service to our community that required outstanding mental arithmetic skills, which he passed along to me.) I left school at 15 and had many part time jobs. I sold vacuum cleaners door-to-door, washed cars, delivered papers and apprenticed to cut hair. (One of the hair wash girls in the Queensway salon I worked in was Leslie Hornby, later known as Twiggy). I married young and had a child. My career prospects weren't promising.

Notwithstanding my chaotic life, I was determined to better myself. I applied to emigrate and was rejected. I was a guinea pig for a London University post-graduate group doing career-based testing and got a very high score on an aptitude test. They recommended a career as a systems analyst and found a night school I could attend to boost my qualifications.

About the same time I came to the attention of an executive from an engineering company who came to the same Queensway salon for his biweekly trim. He thought I might be in the wrong profession and, after hearing my London University story, volunteered his computer services department to give me the IBM aptitude test. Apparently a job with that company would be out of the question, since they only hired university grads. I must have scored sufficiently well, because they hired me on the spot as an operator.

I loved the work. However the money was peanuts, so I continued to cut hair on weekends. I got quite tired, especially on a busy Saturday. My job as a computer operator was to make sure the batch cycle was completed by morning. Their mainframe was an IBM System/360 Model 40 running Primary Control Program OS (OS/PCP), which was a single-processing OS. When a job was printing, it could go no faster than the 1403 printer, so it could get quite boring while running a job that produced 60 pages of output.

While we waited, we learned an off-tuned radio placed close to the CPU would play sounds. A little investigation showed the sounds varied with the type of program that was running. While on shift I taught myself COBOL, Fortran, Assembler and Job Control Language (JCL), and I wrote a few programs, one of which was to experiment with sounds. I still

remember my headiness when my first programs ran.

The nucleus of the OS was assembled in those days, so I learned a lot of what the assembler language could do by reading that assembly, which of course taught me a lot about the OS. Most of the abends that occurred in users' programs were x13 and x37 errors. A colleague and I reverse-engineered the Open, Close and EOVS Supervisor Call (SVCs) routines from the dump output to figure out what they did; there were no Program Logic Manuals (PLMs) or fiche in those days. It was a true Eureka moment when I first scanned a real live dump in hex and it made sense. Then I got caught.

I had learned these languages, as well as the nucleus, by borrowing manuals and documentation from the system-programming manager's office, without his knowledge. Lucky for me, after tearing a strip off me, he admitted he appreciated my initiative and, rather than firing me, helped me out of operations and into his systems-programming group.

Two years later I applied to emigrate again and was accepted based on my IBM programming skills. I moved to Toronto and have had a career in and around data centers ever since. Interestingly I've come full circle: I'm now a product specialist for ThruPut Manager, a z/OS batch-management and automation product that makes sure your batch jobs complete within service targets. Every day I draw upon that early experience when I'm explaining the product to our customers, whether it's pointing out the way batch jobs progress through the system, which hasn't really changed much in all these years, or differentiating ThruPut Manager dynamic initiators from traditional Job-Entry Subsystem 2 (JES2) and Workload Manager (WLM) initiators. The foundation was all laid many years ago.

I've come a long way from Hackney. My career has been stimulating and fulfilling. I'm so grateful to the people who helped me along the way and feel lucky that I could be in on the ground floor when the IBM mainframe was young and oh so exciting. To it I owe my new country, my prosperity and my (relative) lack of chaos.

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