

About me.

After a college diploma in Computer Systems from Algonquin College in 1982, I started work for a small firm called Canadian Avionics Programming Augmentation (CAPA). I believe it was initially a company that generated military spec documentation. They managed to obtain a contract for a Computer Based Training (CBT) program for an Inertial Navigation System (INS) for the Department of National Defence (DND). CAPA won over Honeywell, and some of the people we had to deal with at the DND weren't happy about it. Our technology, largely came from Cybernex (dissolved in Jan/2003). There were many challenges that were to be a theme for the tech industry for many years: that the vision and ambitions of many were ahead of the available technology. There were some amazing people, and the fellow who was responsible for the graphics was an eccentric mathematician and computer scientist who only wrote in assembler. He, and the head of Cybernex, Peter Wallbridge, were always at odds over technical issues related to the interaction between the operating system and the graphics software. I helped to write and code lessons on the INS in a language I forget the name of, and struck up a bit of a friendship with this mathematical genius, Dr. Eric Hope.

Soon, the conflicts resulted in Eric leaving for a new opportunity to write a graphics editor. He invited me to join him because the contract required writing the editor in C. Eric had other plans to explore 3D graphics and it was my job to fulfil his contract to write a 2D graphics editor. He loathed high level languages. I learned how to code in C, and Eric taught me the algorithms that everyone takes for granted these days. At the end of the project, nobody really cared about what I had done as all the interest was now on the 3D graphics demonstrations Eric had produced, and this was coincidentally, the time in which AutoCad was introducing the same. According to Wikipedia, AutoCad first released in Dec/82 and incorporated basic 3D solid modelling in Oct/90. But, as I remember, they had less sophisticated features before then. I was with a company that was exploring a number of R&D projects and I remember one fellow working on a spell-checker. It wasn't incorporated into a word processor yet but we were all quite fascinated when he displayed a word automatically being corrected as he typed. It was a novel idea at the time, and it's kind of funny now how amazed we all were. Eric was kind enough to write a glowing reference letter, and on that basis I obtained a contract position in Toronto with CP Rail to write the graphics for an upgrade to their train dispatch system from single to two-track. This was again in C, working in a much different environment, on a team of very accomplished individuals. It was my first introduction to doubly linked circular lists, and I simply accepted the notion without thinking much about it. The formality of data structures still quite lost on me, except for those available in C. This was a total rewrite and very different from writing a graphics editor. Conceptually, I developed the idea of a linked data structure of picture elements, and dividing the coding into functional modules of collection, manipulation and display. It was an intuitive level of abstraction to help me deal with the complexity of the task. At the end of this project, I was headed toward marriage and buying a house. So, I decided to get a regular job that wouldn't stress me too much, and allow me to get a mortgage.

I ended up in a small rail and air freight transportation company by the name Cottrell Transport in a implementation of Pick/Basic on Prime hardware using a database system called INFORMATION. There were quite a few small shops that ran similar setups and I stayed in that environment changing to shopping centre management (Cambridge Leaseholds) and libraries (Geac Computers). In each of these companies, I managed to make my mark in some way that nobody cares about any more. At Cottrell, I fulfilled the demand of the clients to have access to their invoices online. At Cambridge Leaseholds, I fulfilled the critical aspect of the Percentage Rent System that acceptance of the new system depended on. At Geac, there were a few significant occasions including playing a key role in rescuing an ERP and library system from catastrophic failure and pending lawsuit with the client Canadian National Institute of the Blind (CNIB), and writing a support ticket system with full text search capability using this new

technology called Apache. By this time, the mini computer market and related technology was dying. We were getting accustomed to client/server and the US branch of Geac introduced a client/server product using a browser with dynamic HTML rendering. However, it wasn't enough to save Geac when the new CEO decided to change directions into the mid-range ERP market. I bailed, and used my Solaris and AIX skills on a web banking team for the Canadian Imperial Bank of Commerce. These were fairly tumultuous times for me and the world. Within a few short years there was significant technology changes, 9/11 and a failed marriage. I wasn't impressed by the technology of PCs of the day. I was a Unix guy. I saw entire departments using NT get laid off because they just couldn't deliver. The guys constantly upgrading their Microsoft certifications. By the end of 2004, I was in Perth, Australia starting a new life. I was done with technology and for the next 15 years I worked my own business as a handyman. During this time, I developed some ideas around intelligent systems for managing the built environment. It started simply by installing X-10 home automation and when IoT became more known I was ready for it, and broadened my thinking to commercial buildings. Because I was doing some design work for my business with SketchUp, I became interested in Building Information Modelling (BIM). I took a part time job as security in commercial buildings and learned much more about the systems involved and how they were managed, and maintained. I got to know people, the cleaners, engineers, maintenance, and tenants both commercial, restaurant, and retail. At one place, the office network was available and it revealed virtually every file used by the management, including email. I learned much of the inner workings of a high level management firm and a high security class A building (some irony there, and even more that I can't mention). One thing that I learned about the best programmers: They know the business best. When I wrote the critical piece for the Percentage Rent System, it was because no one else knew it like I did. Not the people who worked with the system, not the other programmers who tried and failed. I studied the old spaghetti code and learned it. It contained every forgotten business rule. And it wasn't easy. During my time as concierge, I was in a unique position to apply my systems knowledge to the data made available to me, and my ideas for an AI enhanced commercial real estate (CRE) ecosystem took shape.

Then another disaster took over my personal life and once again felt I needed to start over. Now, I thought I would go back to school, perhaps meet some bright students who were interested in helping me with this project. I moved to New Zealand and settled on AUT. Their computer science program had a R&D component and the synchronicity appealed to me (I've been a student of Jung for some time). I was able to convince the University to allow me to do this project on my own. I am still working on it. It is the only remaining thing I need to do to graduate. Synchronicity is important. It is only recently that methodologies, tools and AI have evolved to the point where what I envisioned many years before are now possible. I imagined an LLM but had neither the vocabulary nor any idea on how to create one. Indeed, I have given talks on these ideas before the introduction of ChatGPT and no one understood what I was getting at. It is only in 2023 that AWS offered Bedrock and other generative AI services. It's an exciting time.