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## **Chapter 11b Life After Joining Control Data Livermore 1970-1971**

### **The New Job at Control Data (CDC)**

I left Sandia Livermore Lab and moved a half mile west on East Avenue to the CDC office in December 1969. The move was to become a field analyst on the newest supercomputer, the CDC 7600.

I filled one of the two open positions. The other was filled by Mike Hendrickson. He had been a CDC field engineer in Sunnyvale and recently graduated from Stanford. Mike was a character. We became best buddies in a couple of weeks. He continued to live in Palo Alto and commuted on his motorcycle regardless of the weather. He and his family moved to Livermore a few months later.

The third person in the office was Chuck Breckinridge who was the Livermore account manager. He was one of the elite salesmen in CDC, and somewhat of a legend. It was nice to get to know him. We would become competitors in the future and good friends in later years. We were exchanging emails as late as around 2010.

The first five or so 7600's were to be fabricated in Chippewa Falls, Wisconsin. Then production would move to the CDC facility in Arden Hills, Minnesota. Serial number 1 had just been installed at the Lawrence Livermore Lab just up the street. Serial number 2 was in test mode before it would be shipped to Livermore.

Mike and I were told we would go to Seymour Cray's Chippewa Falls lab for two weeks to get hands on experience. Seymour Cray was the designer of the CDC 6600 and 7600. He was a brilliant, eccentric, and reclusive person. He would not work in Minneapolis, so he had his own lab on the family farm in Chippewa Falls. He allowed very few people to come there. The fact we were allowed access was a great privilege.

I flew to Minneapolis and got a rental car and drove across the river to Wisconsin. Mike would join me a week later. I was told to arrive at 5pm and a receptionist would give me pass keys.

The directions were to go to Chippewa Falls on a lonely farm road and look for the lab on the left side of the road. The only clue was S. Cray painted on a rural mailbox. I turned down a long and secluded driveway to a clearing. There was a home on one side and a low brick building on the other side which was the lab. An older lady unlocked the front door and let me in. She opened her desk drawer and pulled out a small piece of paper with my handwritten name on it, and signed S. Cray. I was told we could be in the lab after midnight. Seymour did not allow loud talk or noise. If I didn't abide by the rules, I would be told to leave. That was it. She took me back to show me where the computer was, and we passed an open door. I glanced in and saw a youngish looking clean-cut guy in a flannel lumberjack shirt looking at a large drawing of circuits on the wall. I assumed it was a design engineer as I expected Seymour to be an older bearded scientist. It was Seymour Cray and about a common looking guy as you would ever see.

I came back at midnight and got to work. The operating system was very limited, but I was able to run one of my tests. I did not get much done the rest of the time as there were all kinds of problems with hardware, software, and storms causing power outages. If the system was down, I would watch a couple of people in a back room punching miles of color-coded wires into the back plane of the next 7600. Seymour seemed to be around all the time. I was getting a cup of coffee in the middle of the night and heard someone getting ice out of the refrigerator. It was Seymour. He never said anything and neither did I. There was a sign on the coffee maker to make a new pot if it was empty, and a sign on the refrigerator to refill the ice tray. They were signed S. Cray. He ran the place with an iron fist.

I was joined by a CDC analyst, Evans Harrigan, from CDC headquarters to guide me through things. He was one of the few headquarters people allowed in the Chippewa Falls lab. He was black, a great guy, and very smart. He liked his beer also. Our paths would cross many times over the years.

It was a great experience even if we were not too productive. There were great taverns, and the Wisconsin people were fun to socialize with. One place we were told not to miss in Chippewa Falls was Leinenkugel's Brewery. The guys back in Livermore even instructed us to bring some Leinenkugel's back, which we did.

I would cross path with Chuck Breckinridge and Seymour Cray many years later. The background follows:

## Background

*CDC had a parallel design project underway in Minneapolis that was a radical departure from traditional computers. It was the Star 100. The Livermore Lab would be the first customer. In the Star 100 a single instruction would apply to all the operands in a vector of any length, so it was called a vector processor. It operated at a slower clock speed but did many things in parallel. Cray's 6600 and 7600 design was one instruction operating on one operand and referred to as a scalar processor. Cray's designs achieved the highest speed attainable with the existing technology.*

*Seymour Cray disliked the large corporation bureaucracy and the siphoning of funds for the Star 100. With the blessing of CDC, and startup funding, he took his 8600 design and founded Cray Research in 1972. The agreement was that CDC would retain first right of refusal on the new computer. CDC eventually passed on the 8600, and he renamed it Cray-1. He had great success with that design and later the Cray-2. This was a big mistake by CDC.*

*Chuck Breckinridge went with Seymour Cray as a salesman at Cray Research in Mendota Heights, Minnesota. After the Cray-2 Seymour Cray left Cray Research and started Cray Computers in Colorado Springs, Colorado. He had a new design called the Cray-4 that got its great speed by being very compact and immersed in an inert oil for cooling.*

*Chuck went with him as the VP of Marketing and Sales. Chuck and I had crossed paths in 1984 and competed against each other on a computer procurement in Idaho Falls when I was with ETA Systems, a spinoff of CDC. I left ETA Systems in 1989 due to their inability to deliver a working product and the lack of continued funding. I then re-joined EG&G in Idaho Falls.*

*In late 1994 I was invited to Colorado Springs to get a preview of the new Cray-4 computer. Chuck toured me around. I was really surprised when Seymour joined us for a chat and a catered box lunch. Seymour had a commitment he had to get*

*to. Chuck and I saw him off as he drove away in his Jeep. Before the day was over Chuck offered me a marketing position pending a new round of financing.*

*I was waiting for this to happen when EG&G offered an early retirement. I took the offer and we went into the mom an pop motel business in 1995.*

*Seymour Cray died October 5, 1996 from injuries in a car wreck. He was in his Jeep on I-25 near the Air Force academy and a reckless driver caused a three car accident. He rolled three times resulting in severe head injuries. He was 71 at the time of his death. He was one of a kind and that began the end of Cray Computing.*

## Our Life in Livermore (continued from chapter 5)

The Rambler Ambassador was nearly three years old and I wanted a larger V8 for pulling thr trailer over mountain passes and air conditioning. I started looking for a new car and looked all over the east bay. We were in San Jose and found a 1970 Dodge Coronet 500 station wagon with a 383 Magnum V8, 3rd row rear seat, air, leather seats, air conditioning, and an 8-track tape deck. It was dark green with fake wood on the sides and was a demo driven by the dealer's office manager. We struck a deal and I went back the next afternoon to pick it up. I drove home and pulled into the garage and noticed it was hot in and around the dash. LaRue came out and noticed the same thing. We decided to have a pizza, so I went to Potter's Pizza to bring one home. When I got the pizza and went to start the car it was dead. I caught a ride home and the next morning had it towed to the Dodge dealer in Livermore. He asked me where I bought the car and I told him San Jose and he told me to take it to San Jose! We had a few words and he finally agreed to get it going, but since it was Friday I would have to leave it over the weekend. We had tickets for the Oakland A's bat day game on Saturday and I had to rent a car. Kathleen and Brian each got a green Louisville Slugger bat with Sal Bando on one and Reggie Jackson on the other.

Livermore Dodge got the car running Monday morning and I took it back to the dealer in San Jose. They found electrical problems and worked on it all day. I got the trailer hitch and controller installed that week.

A Gibbs family reunion was scheduled in Idaho in late June 1970. Val was now the forest ranger on the Dubois District in Dubois, Idaho. The Forest Service

maintained the Kaufman Guard Station on Birch Creek just north of Lone Pine between Idaho Falls and Salmon. Val could use it for the reunion. There was a house and a lot of space for tents and trailers. We hooked up our trailer to the Dodge and headed to Idaho on Friday afternoon.

We started up the Sierra's and was nearly to Auburn when the car started bucking and jerking. I was afraid it was going to die. There was a trailer park just off the freeway and I pulled in about 6pm. The next morning I took it to the Dodge dealer in Auburn and they worked all day on it, but didn't find anything. We hitched up and took off late in the afternoon and it started acting up again, but not as bad. We needed gas and I stopped and filled it up. It ran better. I got more gas in Reno and it ran normally. It looked like a case of bad gas again.

We had a nice reunion, visited our friends in Salmon, and camped a night in Patterson. Then returned to Livermore. We drove 2,123 miles total and spent \$113 on gas at an average 45 cents per gallon. It computes to be 8.5 miles per gallon. Not good but par for the course.

After Mike Hendrickson, wife Sue, and family moved from Palo Alto to Livermore we enjoyed outings together. One was a tent camping trip above Yosemite National Park the summer of 1970.

We left after work and went through Modesto up into the Sierra's high above the north side of Yosemite and arrived late. We got our tents setup and went to bed. We then heard a loud bear like roar that scared the daylights out of us. It was Mike. The next morning, we sat on a large granite boulder and had bloody marys in the sunshine. Mike and I decided to take his two kids, Troy and Robin, and Kathleen and Brian on a long hike to the valley floor. LaRue, Julie, and Sue would meet us with our car in the late afternoon at Yosemite Village. We hiked along a creek and trail several miles to the top of Yosemite Falls where we looked down on the valley floor below. The trail then went straight down parallel to the falls. We got to the bottom extremely hot. Mike dived into the ice-cold fast running river. I thought he was a goner for a while. The women arrived, and we headed back up the mountain.

We had another outing the end of December. We took our trailer December 29 south of San Jose to Pinnacles National Park the site of underground caverns. Mike and family came down the next day and it was pouring down rain. Mike is a

Stanford graduate geologist and we were anxious to get his take on the caves. Once inside the cave entrance Mike gave us a detailed running dialogue.

We returned to Livermore the next day and had a New Year's Eve party at their place. Mike had a lot of beer. He had an old fridge with a large keg inside and a convenient tap on the outside of the door.

**1971**

## On the Move

After a year in learning mode in Livermore CDC was anxious to get Mike and I in a more productive mode. The National Center for Atmospheric Research in Boulder, Colorado had CDC computers and Mike was transferred to support that system.

An analyst was needed at the Hanford Lab in Richland, Washington. The job was to assist Westinghouse engineers in using the CDC Cybernet Data Center in Palo Alto. They were disgruntled with the Hanford Univac 1108 provided by Computer Sciences Corporation (CSC) and were looking elsewhere.

A CDC analyst on site would help them convert to the CDC system. That person would also be the pre-sales analyst for an upcoming procurement, and hopefully the sale of a CDC computer for the Hanford lab.

I was asked if I would be interested. If yes, I was to fly to Seattle and interview at the CDC Seattle District Sales Office in Renton. I was not sure I had an option so flew up to see what it was all about.

The Seattle area was in a depressed state. Boeing was laying people off by the hundreds. There was a saying going around which was, "The last person to leave Seattle turn out the Lights". I was told that over a 150 Boeing people applied after CDC advertised the job in the paper.

After my interview I was told to fly over to the Tri- Cities and spend a day looking around. I found the area to be depressed. The Hanford Lab was in a down cycle. However,

Westinghouse had a contract to build the Fast Flux Test Facility (FFTF) reactor so there was some hope. They were the people that I would be working with as well as an independent energy consulting company, Jersey Nuclear. I was to promote and assist them in using the CDC Data Center.

Everyone I talked to advised against buying a house if I got the job as it would be a bad investment. There was a lot to think about. When I got back to Livermore I was offered the job.

I knew that CDC would not keep me in Livermore much longer, so it was off to Richland, Washington. It was ironic that Mike's desire was a job in the Pacific Northwest and my choice was Colorado. Much later Mike ended up working out of the CDC office in Renton, so we would meet again.

I went alone to Richland to get started. I lived in a motel for a couple of weeks then went back to Livermore, and we listed the house with United Realty. We then decided to leave everything in Livermore and live in our travel trailer while we looked over the housing market in

End chapter 11b