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Clock #53528

My Univac/Sperry Univac/Sperry/Unisys/Paramax/Unisys/Loral/Lockheed Martin Career

I started this 38-year work life on August 6, 1973, at Univac Plant 4¹ in Roseville after an apparently satisfactory interview in HR at the old Midway Plant 2. Plant 4 is where Univac commercial customer data processing computers and peripherals were assembled and tested. Customers' products I was exposed to were for major banks, oil companies and airlines. My assignment as a second shift general assembly worker (where most non-technical hires were assigned) was in the department where the finished products were cleaned and fitted with doors, covers and grills. Each part or piece fitted was specific to the end item configuration. Door panels, handles and decals identifying the product were applied then inspected before movement to the shipping department. I think my starting wage was \$3.06 an hour. About six months later I upgraded to an electro-mechanical assembler that offered an improved wage and more responsibility for making product ready to ship.

The following Spring, I accepted a day shift position as an electro-mechanical assembler in the production department where bare frames were built up with the hardware components for circuit card chassis, control panels, power supplies and the like. Other assemblers performed wiring tasks and inspectors did their thing before the hardware was sent off to the test stand. My supervisor there was Art Blaisdell, the father of a high school classmate. Several Plant 4 bargaining unit coworkers would be rejoined at Plant 1 after layoffs in the Summer of 1975.

I had to decide in September of 1975. Production cutbacks in Roseville were resulting in transfers and layoffs (Reduction in Force (RIF)). I was offered a downgrade to second shift at Plant 1 or take a layoff. I had house and car payments so accepted the transfer from Plant 4 to Plant 1. I marveled at the lack of security for a defense plant compared to a commercial plant. Possibly industrial secrets were more valuable on the commercial side as every briefcase, purse and lunch pail was inspected in Roseville. Not so at Shepard Road. When I arrived at my assigned work center I was informed that I didn't get downgraded, so all was good despite the commute from my residence in New Brighton. The work center was Final Cleanup where products such as AN/UJK-7, 1218, 1219, etc. were cleaned, the paint touched up and every circuit card, subassembly, or chassis had the part number and revision level recorded or verified for quality inspection and DCAS. Then the system went back to the test stand for functional test and selloff to the customers.

My next assignment at Plant 1 as a bargaining unit employee was in the Final Assembly cost center. This was a large "floor" where subassembly chassis of varying complexities and sizes were produced out of kits staged from the parts cribs. A half dozen or so of my coworkers were transfers from Roseville Plant 4. Chassis back panels were wired manually by assemblers or on wire wrap machines operated by wire wrap operators using keypunch card readers or paper tape readers. In "cabinets" where I worked as a lead electro mechanical assembler we assembled the various AN/UJK-7 configurations, 1218, 1219, DEAC mag tape units, air traffic control (ATC) systems cabinets (ARTS I think), CP-901 chassis, Trident cabinets, AN/UJK-44 cabinets, and Mk-90 consoles.

¹ Plant locations and numbers are detailed in <http://vipclubmn.org/TwinCities.html>

There were inspection points throughout the process to assure assembly standards, wire wrap and soldering processes were followed. The Mk-90 launch console was a terrible mechanical design that was difficult to put together. Many jobs were untouched. I figured to give one a try and through assistance with production engineer John Brennan devised some tooling and rewrote the assembly process to get the thing built. I cut the actual assembly time to a little less than half of the industrial engineering time study (which had been applied to the cost proposal). So, the program made some margin. I received a letter of commendation from the manufacturing product administrator which was abnormal for a union employee at the time. The union stewards were not happy about this recognition.

I was married in June 1978 and adopted my wife's two daughters. A second big change to my life was forthcoming. I was in the Army Reserves as a Staff Sergeant E6 with leadership experience at the time. My foremen Gordy Erickson and Les Swenson at the behest of our manager Dick Sherlock approached me with the offer of second shift production supervisor – I accepted to the chagrin of my bargaining unit friends and coworkers because there was a lot of animosity between some union and company personnel in the day. It was a difficult role because there was much resistance to efficient work due to my previous positions in the union. My performance reviews were based on the efficiency of the bargaining unit members under my supervision, so these were challenging times for all of us, but I did receive favorable reviews nonetheless..

There was another RIF coming the Spring of 1980. It was suggested I see Roger McGrath and Chuck Sisson in Plant 1 Manufacturing Cost Estimating about their need for a Cost Estimator. They liked that I had experience at various levels in the factory, so I got hired. Vic Snider and Don Romano were my initial mentors in the department. Members of the group at the time were Norm Burmeister, Fred Kycek, Walt Matzek, Karen Milton, Leroy Grant, Regan Miller, Jim Nippert, Jim Paul, Jack Sticha, Gene Peterson, Joyce Arnold, Bob Krummel, Tom Bentrup, Pete Bock, Rod Cerar, Bob Kirby, and Darrel Tutewahl to name a few I recall. Purchasing fulfilled requests for material costs. Labor standards were applied or otherwise derived for new products. These were complimented by support labor and material factors developed through production experience or anticipated performance. Most of the estimating came together in rows and columns by pencil and a 10 key calculator before being entered on a terminal with "product family" costing software programs in the main frame in Roseville. I about lost my mind trying to manage all the variations of AN/UYK-44 material cost RIDs on Mapper but was saved from that by a change in responsibility.

Sperry had received an RFP from Martin Marietta Orlando (1983?) to bring TCCF (Tactical Communications Control Facility – I think Harvey Taipale wrote about it, <http://vipclubmn.org/Articles/WinningCNCE.pdf>. It got called other things too...) for the US Air Force to deploy as expeditionary airfield control centers. I got tagged to coordinate subcontractor and major suppliers' cost with Subcontracts and Purchasing as well as with Clearwater (Ed Gordon, Jim Gabey, and Stan Olson) for factory production and support costs. The baseline was solid from the development phase a few years prior. Miltope (Long Island, NY) had a ruggedized dot matrix printer with manifold paper, Data Electronics Inc (DEI) of San Diego had ¼ inch cassette type tape drives and Digital Development Corp (DDC) had a vintage hard disk drive memory. The Sperry built processor was based on the AN/UYK-20 concept if I recall. The subcontract to Sperry from Martin Marietta flowed down the typical mil-std requirements for environments and testing that we passed on to the subcontractors and suppliers.

Multiple iterations of cost and pricing proposals were generated in response to shifting configurations from the customer over the course of maybe a year and a half. There were different personnel in Plant 1 Cost Estimating at this point and most names escape me. Rolf Anderson was the manager I think before he went to Pueblo.

Martin Marietta let a subcontract in early 1984 and the program office lead by Marv Mirsch, Clay Wagner, Mike Frattalone was kicked into a different gear – these guys had been significantly involved in the proposal activity to date. By this time the system was named Communications Nodal Control Element (CNCE) to probably leave behind some of the development program's tribulations. Engineering was represented by Harvey Taipale, John Antoniou. Quality Assurance was represented by Fred Conrad, Clyde McAllister, Gordy Johnson. Folks I recall from Clearwater are Stan Olson and Hugh Brown in program management, Bonnie Ruehle in production management and Pat Marion who was then the receiving inspection quality engineer. There were many others from Reliability, Configuration and Data Management, Accounting, Subcontracts, Material Quality, Vendor Surveillance involved in this large program. I'm missing a lot of names and groups. A consequence of the program was need of a subcontract program manager. I applied for the posting and was hired in the Spring of 1984 and was sent off to meet the suppliers with Cy Schoener from Subcontracts to negotiate cost, schedule and requirements. Since the hardware baseline was fixed the program should have been a piece of cake. The tape drive from DEI did not meet the radiation hardening requirements so expert engineering was obtained by DEI to redesign the electronics to tolerate gamma and neutron degradation. During this exercise DEI sold off the tape drive line of business to Genisco in Cypress (Orange County) CA so another facility had to be set up and monitored. The printer from Miltope had failings too to be overcome. John Antoniou leaned into those design issues and formulated corrections that Miltope implemented. The disk drive from DDC was sensitive to handling, even in their facility, as well as a power supply that overheated but these issues were somewhat overcome. DDC also moved to Chatsworth, CA under a different company named PERTEK so more oversight was necessary. Throughout the program there were frequent status reviews at the subcontractors and with the customer, so travel was the order of the day. There were a lot of characters met along the way, faces and names forgotten, to execute this program and many lessons learned.

The late 80s was a period of tenuous employment. I had several "cats and dogs" projects to watch over such as BSY-1 for IBM Manassas with John Antoniou and another ceramics-based circuit module project (not UYK-44) at Plant 1 before that facility closed. We made a couple trips to the Naval Weapons Support Center – Crane in Indiana with Dennis McMahon (factory QE) to talk of their attempts for production support.

I had been an active Army Reservist since June of 1969 at this point and had my twenty years so transferred to the Individual Ready Reserve in September 1989. This change took a lot of pressure off my life as I had 43 subordinate enlisted troops as a Sergeant First Class E-7 as well as a couple second lieutenants in my section to keep occupied along with the deployments. I retired from the military in 1993.



Back to the late 80s and early 1990. I had been surviving barely with diminishing charge numbers and no opportunities when I got a call late Spring of 1990 from George Patrius the then manager of Subcontracts. He had two postings and asked if I would consider.

I had turned him down some time previously because as a program manager why would I take a subcontracts position to take grief from program management? Well, the time was ripe. My boss was out that day. We were in the 5-story on Pilot Knob and 494 at the time so I called up to Bob Alexander's office, our director, to meet. I went up to visit and Bob said, "If George has a position you should consider it." I took the Subcontracts job and later that year a significant RIF occurred that I fortunately missed out on.

My subcontract admin job was to support the Air Traffic Control (ATC) line of business in Eagan Plant 8. My boss was Carroll Cooper with cohorts Charlie Fischer, Jodi Janda, Mike Phillips and Dave Coleman. On my new desk was a \$60+ million bid from Magnavox in Ft. Wayne Indiana for 204 new Full Digital ARTS Display (FDAD) to provide to the FAA regional centers. The cost analysis had started by then, but it was several months to conclude negotiations and internal approvals up chain to Fred Jenny's office out East. (Talk about wet armpits!) The subcontract was settled around \$54M for production lasting about 4 years due to startup of a facility and a large program. So far as I knew it was the largest procurement for the corporation at that point in time. Our program management was Merle Cole, quality on-site was Chuck Proshok, project engineer was John Oehlenschlager. Magnavox developed some credibility problems along the way which resulted in immediate termination of their long-time program manager and project engineer. I still shake my head about what led to this measure. Again, a program with lessons learned.

As the FDAD production was winding down I got involved with international subcontracting albeit in Ottawa Canada. The ATC group was moving to COTS (Commercial Off the Shelf) so DY4 Systems in Ottawa had been selected for chassis (and modules?) to support ARTS programs. There were other chassis acquired from east coast and west coast suppliers that I got involved with for ARTS applications but not for the modules' procurement. There was a switching component supplier in Ft. Walton Beach Florida we visited. Purchased more of a different printer than in the 80s from Miltope then in Huntsville Alabama. There were a few support contractors for the FAA work in New Jersey and Maryland for which I was responsible.

During the mid-90s ATC had a contract with the Metropolitan Airports Commission (MAC) to complete the upgrade to the new control tower at the Anoka County airport. I think Brent Jordahl was the contracts representative; Hal Rogers and Dick Grishkowsky (Griz) were the engineers and contacts with MAC. My role was to acquire equipment for the tower, e.g., radios, consoles, antennae, etc. and a shelter for the remote equipment as well as local small business suppliers for support tasks.

A fiasco I got dropped into in the late 90s involved two airfield lighting contractors, bitter rivals, a predecessor of mine had setup for an airfield expansion in Salt Lake City due to the upcoming 2000 Olympics there. The contractors would not share their technical data in order to integrate the airfield lighting expansion but our project engineer Bryan ??? was able to coax out enough data to complete the project albeit extremely late. The prime had performance penalties, but the subcontracts were signed before my involvement without penalty clauses. So, the company ate the subs costs and prime contract penalty. Enough said.

Still in the late 90s Eagan had contract with the State of Minnesota dubbed Orion. The work involved several projects to do with technology for Minnesota Department of Transportation (MnDOT). There were efforts to modernize traffic control and incorporate 911 technology for the State Highway Patrol.

It was an unusual arrangement – the contract to the State Patrol was let through Owego, the program manager was from Ottawa and purchasing and subcontracts in Eagan. I was tasked with wrangling a supplier that had been selected prior to my involvement that had proposed a then new technology for integrating a 911 call system into a law enforcement call center. Turned out the company from Huntsville, Alabama had never installed the system anywhere despite their proposal package language, so the project was a beta site effort to everyone's chagrin. I got pulled off before the program was finished to work Maritime Surveillance and don't recall the outcome of this project.

It was late 1999 by now and I was speaking with several suppliers to understand if their products would continue to function when the clock passed midnight, January 1, 2000. Well, the world kept turning and it had not been a waste of time to get folks to look at how the "clocks" in their systems were defined.

The next opportunity in late 1999 was working in the Maritime Surveillance business area on the US Navy P-3 ASW upgrade program AIP as one of the interfaces with the LM facility in Greenville, SC. Although Greenville was another division of the corporation, we treated them somewhat as a subcontractor. Greenville folks were disappointed (to put it mildly) to have lost the prime contracts to Eagan because they alleged we weren't airplane people. We had also had P-3 systems integration work with the Japanese, Dutch, Portuguese, and Norwegians by this time. There were a lot of actors from Eagan interacting with a lot of actors in Greenville. It was worse than herding cats. There were multiple P-3s in work at various stages of the AIP modification. Out of scope, over and above costs were as time consuming as anything and involved hours and days of conversation to settle. Cost control was a figment in the ether so there was a lot of tension consequently. I enjoyed the comradery of the program, but the stress got to me so in early 2001 I sought an alternative. Shortly after I left the program, two and a half people were tasked with what I had been trying to keep up with.

I went to work for Gene Peterson and Mary Leopold in Pricing. Gene had been my boss, I think, back during my last Plant 1 cost estimating days and he seemed pleased to entertain my inquiry to work for him. Ed Schrotenboer replaced Gene shortly thereafter. We had our in-house legacy pricing mainframe-based software at the time, so I trained up on the system by processing some basic stuff initially. By late Summer I needed more challenge so volunteered to support the evaluation of the outsourced ProPricer software for Pricing. After post-911 air travel resumed I flew to San Diego for training at the ProPricer site. The evaluation entailed running pricing estimates for a major P-3 modification program for the Republic of Korea Navy (RoKN) utilizing the both the in-house and ProPricer systems for comparison. Inputs were evolving from Mapper inputs to Xcel spreadsheet inputs. Bill Rogers was the proposal manager and an Xcel power user so there was a major evolution underway to facilitate the variations and permutations of pricing input and output. Besides the proposal containing much engineering cost, other organizations costs, multiple subcontractor bids were involved in the multi-year proposal that went well past \$500M. I had taken off Thanksgiving Day, Christmas Eve and Day, New Year's Day and Super Bowl Sunday from October through early February when I signed off the proposal – no other days off. Burned out and exhausted my wife and I headed to Florida for a vacation. We lost the RoKN bid to L-3 in Texas.

My former Subcontracts boss and cohorts had been after me to come back to work there. Accommodations were made to my terms, so I went back in 2002. Jodi Janda and John Enstad were my bosses in this era. I managed proposals and subcontracts with Telephonics on Long Island, L-3 in Salt Lake City, and Rockwell Collins in Cedar Rapids and probably a few others at this point. In early 2008 John asked me to take up the Subcontract negotiations with Elta Systems in Israel for the Portuguese Air Force (PtAF) P-3 modification program. We made five trips to Tel Aviv and Ashdod during 2008 and 2009 for negotiations and status reviews. The Israelis were very accommodating to us as this was purportedly their first direct sale contract with Lockheed Martin. The Elta pricing for five systems was \$7M. Raytheon wanted about twice that per equivalent system and the Elta system had some better performance parameters, so Elta was integrated. We thankfully missed out on rocket attacks from Gaza while in Ashdod. Meanwhile I was subcontracting with Information Systems Laboratories (ISL) in San Diego for the classified acoustics analysis functionality for the PtAF program. There were two P-3 configurations the PtAF had acquired so the first of each were modified at Lockheed Martin in Greenville. The remaining three P-3s would be finished at OGMA outside Lisbon, Portugal. Jim Bitzegaio, and I flew to Lisbon in early May to evaluate the proposed subcontract with OGMA. Later in May I was accompanied by a subcontract manager from Owego to negotiate the subcontract because by this time there was a lot of “help” from out East. The pace of the program with a too short schedule and too much oversight (read interference) was hobbled by the “help”. The subcontract should have been in place six months prior, but the modification baseline was still in flux in Greenville, so the Eagan program office had bailed, and Owego and Rockville held sway. I spent seven weeks at OGMA over five trips for the duration between May and November 2010. A hangar was set up, staff hired by OGMA, and relationships established during my tenure. Lynn Tanner, Dennis Schatzle, Dave Mauck, Rich McGuire were on site at OGMA as LM reps. LM senior PM types arrived for program reviews with their imperious mannerisms to make certain OGMA new who should be in charge. I learned of the Eagan pending closure via voicemails when returning from Portugal during taxiing at MSP just before Thanksgiving 2010.

My last day of employment was June 23rd, 2011. That morning the last workplace email came to me from Portugal which depicted the first wheels up of a modified PtAF P-3 flight. It was a fulfilling moment.

I went into Full Spectrum Retirement but still savor most of the nearly 38-years of my work life due to the many experiences and many great folks I met along the way.

*“He is a wise man who does not grieve for the things which he has not
but rejoices for those which he has.” Epicurus*