

Use it or lose it – How I got my VAX 11/780

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“Got a second?”

Uh-oh. I have learned that those dreaded three words usually mean weeks or months of hassle. It was back in the early ‘80’s and I had been working at Bell Labs for a couple of years, and almost no one ever told me what to do. Bell Labs was about research. I suppose they figured that if they didn’t tell you what to do, you would invent new and interesting things. Which was often true. You just kinda show up and figure out what to do. But every once in a while, someone pokes their head in your door and asks if you’ve “got a second.”

“George, what’s up?”

George Kutska was my boss, and probably one of the smartest guys I had ever met. He was big, not beer bellied, just rotund, and had some sort of medical problem, in that he always smelled. The kind of smell that deodorant or antiperspirant couldn’t hide for very long. Oddly, that never bothered me, I enjoyed his company because I was always laughing. He had a wicked cynical personality, which one gets, I suppose, from working inside the world’s largest monopoly for too many years.

“Well, it’s almost the end of the year,” George started.

“George, isn’t that always true when December rolls around?”



“Yes, I realize that, Mr. Wisenheimer. Just listen for a change.”

“I’ll try.” It was around the 20th, and I was looking forward to a week off.

Just then, Ewald Anderl walked in, with a sheepish grin on his face. Ewald was my mentor, although he never volunteered for this task, nor would I ever ask him to play that role. I just hung around him, learned by osmosis and then bugged him constantly with a million questions, and learned from him how to write software, design chips and

the architect complex computer and telephone networks. Pretty cool. For all that help, I returned the favor by giving him the nickname Waldo, which I think he hated. Mind you, this was a decade before the Where’s Waldo books, but except for the red striped shirt, Ewald looked just like Waldo, big thick glasses and all.

“Waldo, come on in,” George said. Ewald lost his grin for a second at hearing his nickname, but he put it right back on.

“Hey, Waldo, I think George is about to ask me to do something, which I am probably going to have to turn down on general principles. I can’t start having my boss tell me what to do, what would others think?” I said.



Bell Laboratories

“Yeah, but you’re going to like this. This is going to be reeeeeeeally good.” Ewald practically drooled out these words - he was so excited. I was now intrigued.

“So, it’s almost the end of the year,” George continued.

“We’ve already established that,” I said.

“You haven’t been here long enough to appreciate this, but the end of the year can be very special around here.”

“Yeah?” I didn’t think I was up for a bonus, this was the phone company for God’s sake.

“Well, it’s budget time. And the geniuses around here aren’t very good at it. Usually we run out of money, and need Executive Director level approval to buy paper clips. But this year is one of those dream years.”

“Yeah, this is great!” Ewald sputtered out.

“It turns out that his year, our department is under budget.” George said.

“So?”

“So, Einstein, if they don’t spend the money in this year’s budget, they have a hard time justifying a bigger budget for next year.”

“OK, I understand. That’s 5th grade math.” I said.

“Well, Andy, this is your lucky day. You’ve can be a hero around here if you can figure out how to spend a bit over \$1 million, sort of by the end of the tomorrow.”

“You’re kidding, right?”

"Listen, people have gotten promoted for a lot less around here. Whatever you spend it on has to be on our loading docks by December 31st. If not, it's considered spending for next year. So you not only have to figure out what to get, but you have to make sure it gets shipped right away. Got it there, poncho?" George asked as he got up and headed out.

"George, that was more than a second. And for the record, you didn't really tell me to do anything. I've got a reputation to maintain." I lobbed in.

"Ha ha. Get going."

"I told you this would be great," Waldo added. "I've got some ideas."

"Like what?"

"Well, we design all our chips around here by using time on other people's machines, like those IBM mainframes in Illinois and those crappy UNIX machines in Murray Hill. I'm sick of dialing into those things. Do you know the UNIX story?"

"No. But I'll bet you are going to tell me," I answered.

"I think it was around 1964, GE still made computers that didn't work very well, so they got together with MIT and Bell Labs and announced a system called Multics, which was a time sharing computer where users connect in via a video display terminal and an electric typewriter. It was a classic vaporware, the thing never worked. It took five more years until a couple of guys up in Murray Hill, Ken Thompson and Dennis Ritchie started playing around with it.

"You mean those two guys with the ZZ Top beards?"

"I guess. Any way, they had their own PDP-11, get the connection, and wrote a simpler version for DEC minicomputers and named it UNICS, which stood for 'castrated Multics.'" Programmers live for these kinds of jokes at 4 AM while waiting for their programs to compile. "Adult supervision took hold, and the name quickly changed to UNIX. But the point is, they had their own machines and are now famous, we need our own too. It's just ratepayer money, no our yoblem.

"So we should be in the computer service business?" I asked.

"No, dummo. We should just buy our own, and not let anyone else use it."

"Like a VAX? The minicomputer from Digital?" I asked.

"That's it, Andy, the DEC VAX 11/780. Those big software development groups around here all share VAXes, I want one just for us. It's sturdy. A 32-bit architecture, 4 megabytes of memory and 1 MIPS."

"MIPS? What the hell is that?" I asked

"A 1 million instructions per second. This is the first real computer from DEC. Those PDP-11's we have in the back barely do a couple of hundred thousand

instructions per second. 1 MIPS is the dream machine, and the VAX is it. Those IBM mainframes aren't much faster, but those things cost \$10 million, maybe \$20 or \$30 million or more, and they require a nuclear reactor for power."



"Are those the machines in Indian Hill in Illinois?"

"Yeah. From what I understand, IBM sells hundreds and hundreds of them. A 1 MIPS VAX can be had for under \$1 million. DEC and Data General and Wang sell thousands of them. We all should have one. Quite amazing times we live in."

"I guess." I said. I had read about the IBM PC that had been out about a year. \$6 thousand bucks, but it didn't do much. They were really slow and came with an ugly amber screen. It looked cheesy. Some article said that IBM thought they could sell 250,000 of them.

"I've always fanaticized about a VAX of my very own," Ewald said dreamily, kind of spooking me out a little bit, but only because of the way he said it. EVERYBODY at Bell Labs wanted a computer of their own.

The first day you show up at Bell Labs, you are issued two things – an ID card and a cheap fake leather brown 15x10 inch satchel with a Bell logo on it. I still have mine. All my buddies at the Labs called them their rippin' bags. They were treated like diplomatic pouches, untouchable.

There were guards at every entrance to the massive buildings at Bell Labs. They check your ID on the way in, and inspect your bags on the way out. The unspoken rule is that they required official paperwork with big mucky-muck signatures for anything taken out at the end of the day, except for what was in your Bell Labs bag.

There was an episode of the TV show M*A*S*H where Radar O'Reilly took apart a Jeep and shipped it back to his home in Atumwa Iowa, box by box. It wasn't much different at Bell Labs, the homebrew computers were put together at home from pilfered parts. Legend has it that Shockley, Bardeen and Brattain invented the transistor because it would fit in their Bell Labs bag. Perhaps the whole era of miniaturization was invented at Bell Labs. Probably not too far fetched. I started wondering if I could get a VAX out board by board, but first I needed to buy one.

"They aren't even a million bucks?" I asked Waldo. "Look, if I've got a million to spend, it must be pocket change.

"Well, we also need a special room, with air conditioning and a raised floor to run all the wiring." So much for a VAX at home.

"Yeah, and some Tektronics graphics terminals," I added.

"And probably a couple of 100 megabyte disk drives."

"That big?" I asked.

"Who cares? Only the best for us. Ma Bell can be very generous."

I finally got Waldo out of my office and picked up the phone and dialed the phone number for a sales guy from DEC I had met a few months before.

"Bill Dilger please."

"Just a minute, he is just finishing up a call with a customer."

"I'll wait."

Five minutes of waiting got me a little steamed.

"Bill Dilger here."

"Bill? Andy Kessler from over at Bell Labs."

"Oh, hi Andy. Nice to hear from you. Sorry to keep you waiting."

"Not a problem, I have a few questions that maybe you can help me with," I said.

"I'm pretty busy. Trying to close a few things, without much luck. It's been a tough year, especially trying to make quota. I'm not there yet, and so I don't have much time."

"Well, I'm interested in a VAX 11/780."

"Yeah, aren't we all?"

"Is the RP03 or the RP06 the way to go?"



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"Hey, you've done some homework. I've got to look this up...lemme see here...yeah, the RP03 is about 67 megabytes and the RP06 is more like 176. Can I call you back, I've got some other calls to make?"

"I'll be quick. The 9 track tape drive matches those?"

"Yeah, sure, most people get that? Listen, I gotta go. You guys are the Labs are always kicking the tires, I'll be glad to stop by in maybe February to go through this with you."

"I'll take one," I told him.

"Yeah, sure, I know, I'll come in February and..."

"No, I need one right now."

"Now?"

"Yeah, right now. In fact, I can't get it unless you guarantee to me that you can ship it in the next three days."

"Funny. Why don't you think about it? I know you need all sorts of levels of authorization and signatures and whatever other stuff you need."

"I've got all that. I'll take a top of the line 780, 3 RP06's, but you've got to get it on our loading dock by December 31 or the deal is off."

"You're not kidding, are you?"

"No, help me out here. I've got the authorization, just tell me if you can ship it."

"OK, yes sir. I'll move as fast as I can," he said. I was only 24 years old, and always loved when someone called me sir, since it never happens. "You are going to make my year."

"Well, move faster than that."

I had a similar conversation with the Tektronics salesman, buying 3 top of the line graphics terminals. This was getting fun.

Waldo helped me order air conditioning systems and power supply monitors and special chemical fire suppressing sprinkler systems. The sprinklers were cool because you can't spray water on computers as it would destroy them, so when the detectors sense too much heat, they sound a warning alarm to get humans out of the room and then spray these noxious gasses and freezing chemicals that suck the air out of the room and suppress the fire. Any person who didn't figure out what the alarm was for would be both suffocated and then gassed, but at least the computer was saved.

"Nice work, Andy," said Frank Sansone, the director of our group at Bell Labs, who poked his head into my office. I didn't think he even knew who I was despite two years of working there. These guys were serious about spending money.

I was back on the phone with Dilger, the DEC dude.

"I'm having problems finding a 780 for you. Seems there aren't any sitting around. We like to end the year with very little inventory."

"Well, you gotta find one."

"I'm trying."

"If you can't ship it today or tomorrow, I've gotta cancel the order."

"You can't do that. My bonus formula goes into multiplier mode when I go over quota, and you're my only live order. I'll get you something."

"Steal someone else's," I kidded.

The next day, John Sheehan, who was Frank Sansone's boss and ran about 5 departments in a division, walked by my office and told me I was doing a great job. But I hadn't heard from my salesman. I sweated it out for most of the afternoon, until around five my phone rang.

"Andy? Bill Dilger here."

"Did you ship it?"

“Not yet, but I think I may have pulled this off. I flew up to Boston last night and went out to Maynard and begged all day for a machine. Parts were not a problem, they just didn’t have one put together, so I went out to the loading dock to see what was shipping, and I found a machine. It’s not quite what you want, wrong disk platters and no tape drive, but I sort of, kind of switched the paper work, just swapped your shipping information into the packet. I hope you get it. They’ll figure it out around here in January, and um, who is this, let’s see, E.F. Hutton, they’ll get a new one next year. I made my year.”

“But what if it...” I heard a click, he was gone.

I sweated it out for the next week, praying this machine would show up. On December 30, I came back from lunch with George and Waldo at Perkins Cake and Steak and had a hard time getting back to my office, the hallway was jammed with about a dozen boxes. I started cursing someone out until I realized that the boxes were all

from Digital Equipment Corporation. I then started laughing when I saw many of them were even labeled E.F. Hutton.

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Bill Dilger called in March and took me out of lunch. He pulled up in a brand spanking new Maxima and wearing a new tailored suit and a \$50 haircut. I guess he really did make his year. By then, DEC was on a roll, with a new lower priced 11/750 and plans for a MicroVAX. I didn’t hear from Dilger again until late November. He told me they had three systems assembled and ready to ship on the loading dock waiting to ship to Bell Labs. 1 MIPS was getting cheaper and cheaper, and lots of groups in Bell Labs and lots of companies were getting VAXes of their very own.

Andy Kessler is the author, most recently, of [Eat People and Other Unapologetic Rules for Game-Changing Entrepreneurs](#).

