

From the Very Beginning ... from My Vantage Point  
By: Dick Orenstein 1/14/05

I was, and perhaps still am a computer programmer. My first job out of college (1962) was on the research staff at MIT's Computation Center working on the Compatible Time Sharing System under Fernando Corbató. We were developing a time-sharing system on IBM 7000 series computers. It was here that I had my first exposure to email ("You've got mail" was a phrase used then, albeit our user community was about 20 users), typewriter terminals, communications over telephone lines, storage backup (my project) and myriad other computer operating system technical issues.

By 1966 I was working at Adams Associates (a precursor of Keydata Corp.) as a programmer assigned to a graphics project at Lincoln Laboratories. Later, my assignment was to develop and write a "line-by-line Fortran interpreter." This must have been something that Keydata would have liked, as that company was commencing an on-line service whose specificity escapes me now.

Along the way, my management called in Digitek Corporation, known for writing FORTRAN compilers or interpreters. The idea was to see what they had to offer versus our writing it from scratch. Bob Bernard, from Digitek, came and made a presentation. For whatever reasons, we "connected." A short time thereafter Bob called me and asked if I was interested in coming to work with him at Digitek. I believe I came to Connecticut for an interview, however, I told Bob that I would not accept any offer since I was just 25 years old, had a 2A draft exemption from working at Adams Associates, and would consider something after I turned 26, the age at which I would be much less likely to be drafted.

I remember having dinner with Bob, his wife Marilyn and her cousin who they wanted me to meet. I think we did this in New York.

Sure enough, some time after my 26<sup>th</sup> birthday (March 1967) Bob called me to re-commence discussions. However, he had left Digitek and formed Computer Software Systems ("CSS") along with Ken Bridgewater whom I didn't know at all. Ken was working in England at the time. Bob and I did come to an agreement for me to come to work at CSS, in Wilton, Connecticut where our first and perhaps only customer in the US was the Perkin-Elmer Corporation ("PE"). There our work focused on PE's operating system and possible time-sharing applications on an SDS 9300 (Scientific Data Systems, bought by Xerox sometime in the early 70s). There were thoughts about going into the time-sharing business using SDS equipment, but from my own point of view I was used to IBM equipment, so SDS machines seemed kind of foreign to me.

In my spare time I wound up working on a text editor modeled after the text editor I had used years earlier at the MIT Computation Center and at Lincoln Labs. I wrote this editor but had nowhere to use it, or to sell it. A person also working at PE either worked for, or knew about the time-sharing efforts at ITT Corp. in New Jersey and put me in touch with them. I paid them a visit to show them the editor and to possibly sell it to them. I think Bob and I had agreed that I should ask \$8,000 for the editor.

That visit was quite interesting. I had discussed with Bob how much I should ask as a price for the editor. I no longer recall whether this was a one copy use, or any of those matters. In any case, the significance of the visit was their telling me how much effort was required to change the editor so that it would work within their system as a system program. Further, a demonstration of their system and software convinced me that it was quite cumbersome compared to other systems I knew about, for example CP/CMS (Control Program/Cambridge Monitor System) or even "CTSS" (Compatible Time-Sharing System at MIT) years earlier. I returned to Connecticut to prepare a proposal to redo, sell and install the editor on the ITT systems.

After discussion with Bob, I roughed out the effort from the meeting and we discussed the price for the changes. After we thought about it, and talked about it, we came to the conclusion that I would essentially have to rewrite major portions of the editor and since they didn't have anything like this and so on, we should ask an additional \$4,000, for a total of \$12,000 for the completed task!

Bob and I returned to ITT together for the next visit. We were treated nicely and I don't remember if they

said “no” then, or later. That’s not the point!

On the drive home, shortly after we left their offices in Paramus, NJ, as we got on the Garden State Parkway, I said to Bob that if they were in business with a computer and software system like that, we should go into business with CP/CMS and the IBM 360, Model 67. Bob said something to the effect, “Let’s do it! Let’s order a 360/67.”

We returned to the offices we were using at Perkin-Elmer and I telephoned Dick Glazer, the IBM salesman for Perkin-Elmer and told him we wanted to place an order for a System 360 Model 67.

This next paragraph is Dick Glazer’s story from his side of what happened after the telephone call:

Dick G went into his manager’s office (Hugh Saxton was the branch manager at IBM Bridgeport) and told him, “Bob Bernard and Dick Orenstein want to order a 360 Model 67!” Dick G says that Hugh came around from his desk and literally grabbed Dick G by the scruff of his collar and seat of his pants and threw him from the office. (I’ve heard this story a few times and it’s always the same.) Dick G sat at his desk for several minutes calming down and thinking what to say or do next. He went back and told Hugh that he thought they (in this case, “we”) were serious. It was a Friday afternoon and Hugh suggested they discuss it the next week.

#### Next Steps

There were important next steps for us ...

1. Get IBM to accept our order for a System 360, Model 67, renting for about \$50,000 a month.
2. Get the CP/CMS software into IBM Type 3 status which is available to customers for use, but with no warranties, guarantees or support of any kind.
3. Raise capital so that we could finance the start up.
4. Hire key people both technical and marketing.

I focused on hiring Dick Bayles who I knew from my first job at MIT. Dick B was at the IBM Cambridge Scientific Center in Cambridge, Massachusetts – just a few steps from the MIT Computation Center where I worked at my first job. I recall sitting in Dick’s apartment sometime in 1967 and coming to a money (\$18,000) and stock agreement (6%) with him. He was employed by Computer Software Systems as the fourth employee; however his employee number was 5. I recall this because it was Dick B who hired Nick Pissaro, who was number 4 to officially be employed. Dick B didn’t actually join the company until sometime after Nick and was #5.

Ken Bridgewater, #2, was continuing to work for CSS as a software consultant in England; I believe it was for GE, but not the United States GE, another company.

Alan Rievman, a friend of Bob Bernard’s became our “finance guy.” Alan was early in a CPA practice and asked questions like, “Why don’t you guys start with a cheaper computer?” And, because Alan had a prior experience in the computer business where his firm was attempting to offer some services to their clients, Alan was under a non-compete clause and was unable to become an employee with us. Nonetheless, he assisted our early efforts on a part time basis; he became full time when his “non-compete” was finished.

Other employment efforts continued ... Nick Rawlings, Eric Walstead, Joe McCarthy and Harold Feinleib were hired.

#### Money & Starting

At the same time, Bob and I went about trying to find financing. We put together a business plan (I remember it being 4 pages) which basically specified our advantages in bringing IBM compatibility to the time-sharing market. At that time, the time-sharing companies in the forefront were Tymshare and perhaps Comshare, using Scientific Data Systems 940s. Even ITT (see earlier) which used IBM computers did not make “IBM programmability” available to the user, but made certain programs available. Our

advantage was the virtual machine concept and implementation, i.e. making the full use of an IBM 360 computer available to the user through a virtual machine and typewriter-like terminal. In addition, because of the System 360/67's size and power, resources available to the user were much greater than were available in other commercially offered systems.

The financial part of our business plan forecasted a slow progression of revenues to come from time-sharing services, with the bulk of the early revenues from batch processing which we would offer at nights and on weekends, and some additional revenues coming from consulting services. Breakeven was forecasted for 2 years, or so I recall.

I remember being told that we should not "shop the deal," that the money people were a small community and would talk to each other and find out whom we had talked with, and whom we were going to talk with. Since we weren't immediately successful in raising funds, we had no choice but to go wherever someone would listen ... and we did. I recall having lunches where Bob didn't eat anything as he was too busy talking!

One of our contacts was Bob's stockbroker, Bob O'Conner. At the time, he was with Moore & Schley, a small-ish brokerage firm that cleared transactions through a larger firm, Clark, Dodge & Co., Inc. Because we were looking for about \$600,000 to start, Bob O'Conner introduced us to the larger clearing firm and we met several of their people and clients in a couple of meetings. As an aside, on the wall of the Clark, Dodge & Co. offices was a framed \$10 bill, currency used during the Civil War backed by the firm!

Eventually, Clark, Dodge & Co., Inc agreed to finance us with \$600,000 of equity capital in a deal that was structured something like this:

- 40% equity of CSS was to be owned by a partnership named Fortune Slave whose members were participants from Clark, Dodge & Co., Inc.

- 40% equity of CSS was to be owned by the current CSS shareholders in proportion to their then current ownership

- 20% was to be placed "in escrow," ownership of which was to be decided over three years according to certain criteria, those being

- To the management shareholders if there was a public offering, or

- To be divided pro-rata between the management shareholders and Fortune Slave based on profit figures.

This valued the company at a minimum of \$1 million, if Clark, Dodge received 60% for their \$600,000, and \$1.5 million if Clark, Dodge received 40%.

This transaction was concluded days before the \$150,000 deposit was due on the IBM Model 360/67 that we had ordered. We had been told that IBM would not deliver the computer without a 3 month deposit being paid.

Back to hiring

During the financing efforts, somehow, somehow, Joe McCarthy heard about our plans and contacted Bob Bernard. Joe was a salesman for the Service Bureau Corporation (a service subsidiary of IBM), and thought our idea sounded like an interesting project. Bob and I met with him a couple of times (maybe?) and decided we liked him, customers would like him, he had the right background – selling IBM services – and he would know where the business opportunities for us were. We came to a deal with Joe McCarthy just about that easily ... I think for about 6% (pre-diluted) ownership. Everyone else that had been hired so far was technical; Joe was our first marketing type!

There was a substantial selling effort required to attract and hire Harold Feinleib, who Dick Bayles said was a "key individual." Dick B knew Harold from the CP/CMS project where Harold was participating at Lincoln Laboratories. Harold was considering an offer from his boss, or former boss, to go to work at Interactive Data Corporation which had somewhat the same idea as us, but with emphasis on the financial community.

It was a bit like a fraternity rush. We courted Harold and I remember a dinner party we held at Bob Bernard's home in Wilton. I'm not sure who was there, but I would guess the whole team that we had. I remember meeting Harold's wife, Judy. And, I learned that evening that Judy's mother lived in New York City. I felt confident that our location would be a very important consideration for Harold in that his wife would prefer living closer to her mother. This was correct, and we were able to hire Harold. [As an aside, Judy's mother moved to Cleveland a few short years after Harold and Judy moved to Connecticut!]

#### Early Marketing

Before we actually got the computer we did do some groundwork marketing and were able to make sales calls demonstrating the capabilities by connecting to a computer IBM's Scientific Center. I remember going with Joe on calls to Bell Labs (I think I might have even flown to one or two of these calls as I was an active private pilot at the time), Western Electric (remember them?), First National City Bank (now Citibank), Exxon and other oil companies, and a few other banks as well.

Also, Bob Bernard had some connections to the optical design team at Perkin-Elmer. They were looking forward to the availability of our service because it would give them a place to buy more computing power than they currently had available to them at PE on the SDS 9300, and to use that resource to design and sell better lenses to the camera market among other places. These guys (the optical team) were thinking of leaving PE.

#### Back to business

So now we had

The Money, \$600,000 less the \$150,000 paid to IBM as a deposit

A technical team

And a marketing head

It was time to begin.

#### Computer Delivery and Service Commencement

Prior to the delivery of the computer system, the technical crew was using CP/CMS and making our version, renamed VP/CSS – Virtual Program, Computer Software Systems. This work was carried on with systems provided to us by IBM at Yorktown Heights, NY.

The computer was delivered and was "accepted" just before Thanksgiving, 1968 – and I mean just before. It might even have been the Wednesday just prior to Thanksgiving. I remember this because when we realized that this was a possibility, we tried to delay the "acceptance" of the computer until after Thanksgiving when businesses would be back at work. As it was turning out, we would be paying for the computer and there would not be any users at work to try it!

We had decided the pricing based upon our competitors and our estimates of usage. We saw that General Electric (also in the time-sharing business) was charging \$.40 per minute of computer usage on their GE computers, so we did. However, their minute was to be counting all system overhead time and ours wasn't. Also, we charged \$5 per hour for connect time, and I think we thought this was not a significant thing, so we put in a charge just so people would "hang-up" if they weren't using the computer. And we charged \$10 per month for 110,000 bytes of storage. We figured this out somewhat based on the cost of storage to us, but I have no recollection at all.

And, key to beginning, we decided to give the service away free for the first two weeks in December. In fact, two week free trials were an early sales method.

#### **Monday, December 16, 1968 was the first day we charged for services.**

Opcon (those guys from Perkin Elmer) were perhaps our first paying customers. Exxon, FNCB (First National City Bank), American Express and other Fortune 500 companies were also early on the list. Volume was immediate and welcome.

Early customers used the system just as we imagined: for brute force computing at their fingertips. The oil companies ran exploration models and interacted with them, the banks ran simulations of various business

models, and the optical designers designed new and smaller lenses for cameras and other uses.

Also at this time, we began advertising in order to announce the availability of our service. We spent hours brainstorming with David Lyon, then of Westport, but formerly of New York, on our headline, that is, what made us different and better. We concluded that “4 to 40 times more computing power” captured our user benefit and advantage, and Dave wrote an ad that went into the New York Region of Time Magazine – our best thought of getting to the most corporate users.

What an ad! I got a call from a fellow working for Motorola in Phoenix, Arizona. He had seen our ad and was inquiring about using the service. “Wow, I said, how’d you see the ad. It ran in the New York edition!”

He told me he was in New York on a business trip and bought Time at the news stand for the flight back. How could he start using the service? I told him that we had no way to service him as a customer, but he didn’t seem to mind. And, he said, Motorola had the telephone lines and would pay the communications costs. So, we sent him an agreement and he, and Motorola, became our customer! Months later we sent Dick Glazer out to see them and pay a “courtesy call” as we were billing them about \$10,000 per month! Dick had come to work for us earlier. Remember, he was the IBM salesman that sold us our first computer.

At the end of December it occurred to me that we had no mechanism to send bills to our customers. We had the necessary information; our high tech computer would punch a card (yes, punched IBM card!) with the billing data for each login session. However, we had no method to sort the data, extend the prices and then add them up to a bill! Sometime around then, New Years, I began to write a computer program to do just that, print bills. It took me three weeks and then we sent out bills. However, not being proficient in accounting, and because our customers were the bluest of the blue, it never occurred to me that they wouldn’t pay, or that even a question might arise. I didn’t make any computer provision for accounts receivable. For some years we had a computer billing system and a manual accounts receivable system. Further, just for fun, I wrote the billing system in FORTRAN, and used floating point arithmetic. There would be rounding errors, i.e. the total of the bills would be different from the total of each bill printed at the end of the billing run. So for some time we had a “rounding error account” so that the pennies would eventually match!

As we got some trade press, we received a letter from David Fehr who was a salesman for Rohm Towers around the Boston area. Dave’s letter indicated that reading about us, “this is the kind of company I’d like to work for one day.” Since he was from Boston, and flattering, we invited him down, interviewed him, and Dave was hired as a salesman in the Boston area. He had no computer experience, but somehow Joe and whomever, taught him what he’d need to know. In our naiveté, we didn’t think he needed to know much because we all knew so many people in the Boston area that he’d just be an “order taker” for the services. Of course, we learned quickly (as did Dave), that it’s not quite that way!

Within 3 months three things occurred: first, we were very successful with revenues, our growth was extremely good; machine capacity was being used fully and we weren’t going to be able to generate more than \$50,000 per month in revenue – just covering the cost of the computer and nothing else; and three, we were running out of money! What to do?

As for the first problem, computer resources, Dick Bayles, Harold Feinleib, Bob Jerurum (formerly Bob Jay and another great technical hire) and Nick Pissarro were put to work to solve the problem ... and they did.

As to the money running out, in the spring we went back to Clark, Dodge hat in hand for additional money. Revenue growth was clearly way ahead of plan. None of the other revenue sources we considered, batch processing or consulting, delivered even one dollar. However, time-sharing revenues were soaring. Also soaring were our hiring and expansion plans – West Coast, England, Europe and beyond. We were adding equipment for additional capacity from the day the first computer came in the door.

The second round of financing, as I recall, was in June, 1969, for \$850,000 and at the rate of 17% of the company, valuing the company at \$5 million.

**Sikorsky Aircraft was down the road from us in Connecticut and seemed a likely prospect. They were customers of ITT (remember the very beginning). Our Connecticut salesman, Doug Kuhn, had made several calls on them but we were not able to get their business. Joe McCarthy (I guess) received an unsolicited call from 3 salesmen at ITT. They offered to come to work for us and bring us the Sikorsky business. We had some reluctance to this proposal because these men didn't seem to fit our "culture," and we were unsure of their ability to "bring us the business." So we asked Doug Kuhn what he thought, and in his mild mannered way said he thought we'd get the business ourselves. We waited a bit and stalled the ITT guys. Fortunately, we did not take the ITT guys up on their offer. Within weeks we had all the Sikorsky business, and more!**

The Public Offering

Growth continued, expansion continued, hiring continued, ideas continued. We needed more money for expansion and, remember, "we" would get the 20% if there was a public offering. We focused on doing that, and getting rid of this aspect of the original financing purchase agreement.

The use of proceeds would be working capital for equipment and office expansion as revenue growth continued.

On January 8, 1970, National CSS, Inc. became a publicly owned company. We had to change our name along the way because "CSS" and "Computer Software Systems" were not available in other states. So, as we opened a sales office in New York City, it was National CSS, Inc. that did that. And when we opened an office in California, it was Pacific CSS, Inc. that did that. So, with the public offering, we went to the one National name, abbreviated as NCSS.

That offering raised \$3.5 million for the company and valued the company at \$14 million.

There was some activity that focused on applications. Bob Bernard was interested in word processing and got involved with Andries VanDam at Brown University who was doing some interesting work in the area and looking for funding. We opened the Brown Center and began developing some word processing capability.

Things were happening very fast over the next six months. In California, we opened our own computer center and sales office in Sunnyvale, and sales offices in Los Angeles, San Francisco and Chicago. We started to work on a computer center and sales office in London, staffed by locals. And we were negotiating a joint venture with Greyhound Computer in Canada (Olie Swanky) where they would sell our services there. All the while growth in the US was continuing.

There were stories around about how fast we were growing and our financial controls. I don't remember much about what was leading up to the problem, but one of the comments making the company rounds was that "Alan Rievman would get to the bottom of his 'in basket' and find out we were out of business." I guess one reason for this was that there were no regular financial statements, and when they came, they were out of date as things were moving so fast. Further, there was no budgeting or structure to review budgets or financial statements. And, we weren't on top of our receivables, so customers weren't paying and we weren't "paying attention" as we didn't really have the data and infrastructure to deal with this important part of business.

You might ask what the Board was doing at this time. The Board consisted of Bob Bernard; myself; Ken Bridgewater; Bob O'Conner, a stockbroker and assisting us in our first financing; Jimmy Settle of Neuberger, Loeb, the firm that took us public; and George Reynolds, a local businessman in the then new cable TV business. Likely, the outsider directors were mesmerized also by the revenue growth, the customer list and all those good things.

Then in June or early July of 1970, just 6 months after the public offering, Alan Rievman, the CFO, came into my office and said, "When we pay IBM in September, we'll be out of money!"

My response was something to the effect, "What should we do?"

To which he said, "Cut expenses."

#### The Night of the Long Knives

By this time we had a real organization – perhaps inflated, but nonetheless substantial and real perhaps 150 to 160 people. We had hired Bob Degan from MIT to head our computer operations centers and physical facilities. He had an organization under him. We had a marketing and sales operation including several former IBM salesmen and marketers. We had a large technical organization some of whom were working on future projects. And, we had a somewhat large administrative staff, secretaries, and so on, to support all this.

In response to Alan's dire warning, he and I spent several days and nights working on a "cut plan." People to lay off, expenses to reduce. Those members of senior management who were brought into the circle clearly knew this was going to happen; it was just a matter of when.

We called an emergency Board meeting for early August, 1970. At this time, Geoff Simmonds, president of Simmonds Precision Products, had been invited to attend Board meetings. Through my friendship with Steve Colhoun (a member of Fortune Slave), we were introduced to Geoff Simmonds. Geoff was reluctant to join the Board of a new company, but was willing to sit in and help. His first meeting was this emergency meeting.

Up until the meeting, Alan and I, along with Bob Degan and Joe McCarthy worked on "cut plans." Bob Bernard had been away on vacation and had left the work to us; he came in to review the plans prior to the meeting.

There are only a few recollections that I have of the meeting. We reviewed the financial situation of the company, the dire emergency, and our cut plans. At this time, the "plug-compatible" manufacturers were just becoming a force in the industry, so we were able to save a large amount by returning the IBM month to month rented equipment and leasing equipment from Memorex and others. Another large area for cuts, although quite a bit more painful, was layoffs of personnel in pretty much every department. Other cuts in expenses were reviewed but were not material.

One thing we did about our receivables was to begin billing every two weeks. This was not much of a factor at the bigger companies although sometimes they did pay more quickly. But with smaller companies, we were collecting faster and we were on top of problems more quickly – a definite advantage to us.

The very first question from one of the board members was, "How much of a pay cut are the officers taking?" Bob began an answer that was not directly on point, and was interrupted with "Ten Percent," from the board member asking the question. "Now go on," he said.

For a financial presentation we had only profit and loss statements and I remember Geoff Simmonds saying he would not trust an income statement without a balance sheet! Alan took this as a personal affront!

Geoff made several other points. When we expressed concern that customers would see us "in trouble" and their reaction would be to go to competitors, Geoff felt just the opposite. He said the customers would see we were taking action and would stick by us. He was correct! Geoff also felt we should make a "plan B" in case our projections of savings and revenue increases did not come to pass.

We left the meeting sober, solemn and ready to put the plan into effect. We had yet to decide who would fire whom! One job I got was to terminate Ken Bridgewater. Another obvious result of the meeting was that Bob Bernard was no longer president, although the exact nature of any change was not decided.

Ken Bridgewater, as you may recall, was Bob Bernard's first hire at Computer Software Systems, when it was a consulting business. Their exact meeting and relationship was never clear to me, however nonetheless it was there. Ken and I also had equivalent stock positions; we were major shareowners of the company. Ken was never comfortable, nor proficient in the time-sharing business of NCSS. We had tried

to give him various assignments and responsibilities, but he never “settled in.”

I called Ken into my office and told him we could no longer afford the luxury of keeping him aboard. I remember him as being visibly shaken, he asked for some time to adjust and accept this, and immediately left the office. He returned either that day, or perhaps the next day, and asked me if we would consider sending him to business school as a severance arrangement. And we agreed. Ken left, applied and was accepted to the Wharton School, and upon graduation went to work for the Xerox Corporation.

I’m sure there were other direct terminations that I made, and surely some of the other people involved will remember stories and people and add to this. This is the one that stands out in my mind.

One other aside to this event is that months later I remember stopping for gasoline at a nearby filling station and recognized the attendant was a former computer operator at NCSS. I asked how he was doing and remember him saying this was the only job he could find. As you may surmise by the fact that I remember the incident, the layoffs had a profound effect on me!

Directly after this, there were a series of meetings among the next tier of management about who would or should become president. I only know these meetings took place and I was told about them well after the incident. The board must have been meeting or talking also about management succession, but I actually don’t remember exactly what was going on. I’m sure there was a conversation with me about succession, but I’ll need something to jog my memory to recall something more specific.

In August, 1970, I was elected president and CEO of National CSS, Inc. Looking back, and with some conversation with others, clearly I was picked because I was a co-founder and there. I was 29 years old.