



Oral History of Aso O. Tavitian

Interviewed by:
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Table of Contents

COMPETING AGAINST IBM.....	3
DIFFICULTY IN GETTING A PATENT	8
DIFFICULTIES IN OBTAINING FINANCING.....	9

Aso O. Tavitian

Conducted by Luanne Johnson

Abstract: Aso O. Tavitian, a co-founder in 1968 of Whitlow Computer Systems (later renamed Syncsort Incorporated), describes the challenges of selling a technically superior sort product in direct competition to the free sort that IBM provided to its customers in the 1960s and 1970s. He describes the difficulties Syncsort encountered in trying to obtain a patent for their sort process because of the Patent Office's lack of understanding of software and about the problems of obtaining financing for a start-up software products company in the early years of the industry.

Competing Against IBM

Luanne Johnson: I'm researching the early software products industry and I've been told by several people, including Duane Whitlow, one of the founders of Syncsort, that the Syncsort sort product sold by what was then called Whitlow Computer Systems was one of the first to be accepted by customers into what were otherwise totally IBM-oriented computer departments. Larry Welke [of International Computer Programs] told me that it was ground-breaking in that sense and paved the way for more acceptance of other non-IBM products. That makes it a very key product in the history of the early software industry and I'd like to learn more about how Syncsort managed to compete with IBM.

Aso Tavitian: Syncsort was different from other early software products in that it was competing head-on with an IBM product, although ultimately other software products like the databases also did. When the customer bought Syncsort, they cancelled the IBM sort software they were previously using. So, in that sense when we started marketing it, it was very much viewed as a replacement of an IBM product and IBM didn't take that too kindly. IBM's concern was that if their sort, which was a key software that every customer had to have, was replaced, and the customer had a good experience in performance and service, this could lead to a customer mindset of "it is possible to successfully replace IBM". This could have led to the replacement of other IBM software and more importantly to the replacement of hardware. Indeed that is what ultimately happened and the plug-compatible manufacturers of tape drives and disk drives made inroads in what used to be IBM's exclusive domain.

We had difficulties at the beginning, of course, that had nothing to do with IBM. They were just the questions of how do you market a particular type of a product. What I mean by that is how you got the attention of the prospect, how you presented the product, how you convinced the prospect of the benefits of your product, etc. Those were things that to a large extent were somewhat independent of IBM. The IBM issues involved were...

Let me step back a second and say that although the sort itself was not a very expensive product, the sort was, and today still is, the most frequently executed software product and you have a lot of other software products that utilize the sort. So if you've got any problems with the sort, it can create a lot of problems in other areas. You know, your payroll needs the sort so if something is wrong with your sort, you can't run your payroll, or any of the other systems that have to sort the data.

So that created an opportunity for IBM to scare the customer and that's what IBM did. In your letter you asked whether I thought it was deliberate or not. There's no question in my mind that it was absolutely deliberate. In fact, I remember very specifically that at the beginning we targeted the large customers simply because they were the ones that had lots of data, big files. They were the ones that could have gotten the most benefit out of our product and in addition, obviously, as we were just starting out, the names themselves were attractive to us so it was natural to go after the big accounts. And with all these large customers, like large banks, insurance companies, etc. IBM's sales personnel used to make the point that to rely on a small unproven company for something that affected all their mission critical applications was foolish.

Johnson: Well, software has always been a reference sale, so I'm sure that having those big names as your references had to be beneficial.

Tavitian: Correct, and those big accounts are also the accounts that IBM was very sensitive to exactly for that reason. I remember one specific situation at a very large insurance company where we ultimately developed a relationship with them and IBM was making a lot of fuss. They were using delaying tactics by saying that they were coming out with a new release and so on. We would run benchmarks, we would show our performance and IBM would come up with some explanations or excuses and then they would presumably send somebody else to come and analyze it. I remember ultimately sitting down with, I think it was the second in command, and saying, "Why are they so upset? The amount of money involved at the end of the day, given IBM's size, is nothing." And I remember he very explicitly stated that that's not what they're concerned about. He said that at the same time they were just starting to look at either Memorex or Telex.

Johnson: This was your customer that you were talking to?

Tavitian: Yes, this was the time when the non-IBM disk manufacturers were beginning to make some inroads. And I remember that he explained very clearly that the concern of the IBM

salesman or account manager was not as much about Syncsort but that he was very much afraid that once Syncsort goes in it begins to psychologically alter the customer's perception that they had to stick with IBM products. There was nothing from anybody else but IBM in that shop at that time. This was 1973, probably. That was given to me in private as the reason and indeed what ultimately happened is they did buy Syncsort and six months later they bought new disk drives but not from IBM. So, it was understandable. IBM did take it seriously and I think they took it seriously from the standpoint that once the IBM wall is pierced then a lot of other things could be jeopardized including the hardware. That was their concern. Disk drives, tape drives, those are the things that they most certainly did not want to see replaced.

Johnson: That's the sort of thing that Larry Welke was eluding to. He said that Syncsort was in many, many cases the breakthrough product that broke down that barrier for the first time.

Tavitian: Yes. I'm not sure that one could have sold a sort by saying you can keep your current sort but you can use this better sort in those cases where you do need better sort performance. I'm not sure that would have worked but whether it would have or wouldn't have, that's not what we did. We went head-on against the IBM product. We were also the first ones to have full-page advertising in Computer World.

Johnson: Oh, really?

Tavitian: We had very, very aggressive ads going against IBM. We had positioned ourselves as hitting against the IBM sort and we went straight after it. Sort also is the kind of product that does have true technology in it. It's sort of like a compiler. What I meant by true technology is that, unlike a payroll system, it needs to have unique technology. I don't mean minimize the complexity of a payroll system.

Johnson: I understand exactly what you mean. My experience after having sold payroll for many years is that you're better off not putting sexy technology in a payroll system.

Tavitian: Right.

Johnson: You know, the emphasis there is on understanding the application and keeping the technology as simple as possible.

Tavitian: Right, but better technology is what made our sort run so much faster. We were trying to portray ourselves, within the David and Goliath context, as the inventors and developers of super duper technology which indeed it was. We hit on IBM's inability to do that and IBM's obvious preoccupation with the hardware sale. That's how we portrayed ourselves, so in spite of the fact that from a dollar standpoint the sort was not that expensive, IBM was

fighting us to the extent that they were not because of the revenue we were taking away from them but because we had created a situation where the customer truly had to make a decision between us and IBM. And once you accepted the fact that perhaps somebody other than IBM can produce something that is as good or better than what IBM does, than you're down a slippery road where IBM did not like you to be.

Johnson: That raises another issue that I have encountered in talking to a lot of people. The big issue as far as a lot of companies were concerned – even if they weren't competing directly against IBM – was that of the credibility of a small company versus a big company. Prospects would say frankly that IBM didn't do a very good job on the software they offered but they were afraid to get aligned with a small company that might disappear and not be around to provide them support.

It sounds to me like what you're saying is that you actually played on that with your advertising to emphasize that being a small company was a strength for you.

Tavitian: We did. I remember going on sales calls and saying, "We don't produce hardware, we don't do anything else. We just do one thing and do it better than anybody else in the world." There's no question that the customer was afraid, particularly for something that the customer considered very important. Because the IBM salesman would counterattack with, "Are you crazy? You're endangering everything that runs in your shop with a totally unknown newcomer."

Johnson: Did the IBM account managers really say things in those words?

Tavitian: Yes. In informal discussions with the customers, they would tell us that. You see, customers at the time had a kind of split personality in the sense that they knew what was going on. On one hand they would be literally afraid of IBM and on the other hand, they had the technological savvy to grasp that we were offering something that was technologically better. But how you square those two together was difficult.

We tried to make technical presentations at GUIDE or SHARE where a customer was supposed to sponsor you. That's how things were done in those days. I remember once I was pushing for a chance to make a technical presentation and I just had an awful difficulty getting anybody to get us in there. And when I dug into it, they would be afraid of IBM's response such as reducing their service. IBM didn't necessarily do those things but they certainly encouraged the aura that you should be concerned about it and people were legitimately concerned. So, those were the difficulties with marketing in those days, particularly something that was going directly head-on with IBM.

Johnson: That exactly the kind of thing that I keep hearing from people. They couldn't substantiate that IBM really did any of those things that customers were afraid of but they sure knew that the customers had the fear and the concern. You couldn't really prove anything but you still had to operate in an environment where you had to fight against it anyway.

Tavitian: Well, we ultimately filed a complaint with the Federal Trade Commission although this was much later. It was in the 1980s.

Johnson: Oh, you did? I didn't know that. You filed a complaint against IBM?

Tavitian: Right. I'll give you the background so that it makes sense. In the beginning, IBM's reaction to us had not much to do, as I said, with loss of revenue but with the concept of having "foreign" software in an all-blue environment. We learned how to cope and deal with that and, in some cases, turn it into our advantage which, I must say, made life quite interesting and enjoyable in some ways. But as we became more and more successful and our market share progressed to 40%, 50% and beyond, IBM got even more aggressive with some very specific actions directed toward us.

Johnson: Oh, really?

Tavitian: Oh, yes, and we felt that some of it was perhaps due to the example that we were setting. In the context of all that, some of the tactics they began to use were related to the microcode issue, the concept of including some of the software in microcode. And they did come up with a specific microcode for sorting.

And through that microcode, they got maybe 1% improvement, if that, and in some cases no improvement at all. But in presenting the advantages of this microcode to the marketplace they claimed 70% to 80% improvement in performance. And they demonstrated this level of improvement by testing their new sort release, which used the new microcode, against their previous release, which did not use microcode. And they emphasized not only the performance improvements, but the fact that they were achieved by the introduction of microcode in the hardware, something that no software vendor could do. This was intended to convey the thought that IBM would be introducing microcode functionality that previously used to be part of the software. And, of course, the customer was supposed to think twice before going to a software vendor who could not introduce microcode. This was at a time that the database vendors had begun to make inroads and they were very concerned about the effect of this in their competition with IBM.

But when we analyzed their claims and retested their new sort release against their previous sort release, we discovered that they had actually cheated in the test. What they had done was give their new sort release much more memory to operate in than they had given to their

previous release. The sort's performance is very sensitive to the amount of memory and therefore their new release performed much better than their old one, but not because of its use of the microcode, but because of its use of a lot more memory. When we gave the same amount of memory to their old release, the performance improvements dropped to about 1% or so. It's like if you're a car manufacturer and you come up with a new carburetor and you say that this carburetor tremendously improves gas consumption and you test one car with the carburetor and one without. And the one with the carburetor has got twice as big a gas tank and then you say, "Okay, on one tank this car with the new carburetor went five hundred miles and the other one only went two hundred and fifty." It had nothing to do with the carburetor.

So we went to the Federal Trade Commission and filed a complaint about false advertising. And ultimately IBM corrected their claim and backed down.

Johnson: Oh, they did?

Tavitian: Yes. They revised the literature and withdrew the claims.

Difficulty in Getting a Patent

Johnson: From my interview with Duane Whitlow, I gathered that getting the patent was a critical strategic part of trying to keep a competitive position against IBM. What can you tell me about getting the patent, which was pretty unusual in those days, and how that affected Syncsort's success?

Tavitian: Well, we wanted it to become a strategic component of our marketing, but it was very difficult to get a patent, so it never became a strategic issue. In those days the Patent Office just didn't understand the concept of a software patent. The decision of whether one incorporates a particular process in software or hardware is actually purely economical. Given the constant changes that software goes through and its constant maintenance issues, the incorporation of a lot of processes in hardware, like microcode, is simply not feasible from an economic point of view. But the Patent Office was used to granting patents for something one can see and touch..

In theory, one could take the entire sort and put it all in microcode. It's just that maintaining it would be an absolute impossibility. So, it is the economics that draws you to implement it in software and whether something is patentable or not should not be driven by economics and the Patent Office did not fully grasp that. I remember being there with Marty [Goetz of ADR] arguing with the Patent Office on this issue. So, it took us a long time to get the patent until the Patent Office became more receptive to it. IBM was against software patents and I am not sure that I would say that it had a strategic value. It was important to us but I wouldn't say that the patent

was strategic to our success. It was a factor, no question about it. But IBM did not infringe on it and therefore there was no problem.

Did you ever know Mort Jacobs?

Johnson: Yes.

Tavitian: He's the one that got our patent ultimately. I think, he's the one that I think got Marty's patent.

Johnson: Yes, he is.

Tavitian: He was a very passionate advocate of trying to get the Patent Office to understand the concept of patenting a software process and they couldn't. They would continuously link software with mathematical formulas and ideas and that kind of thing.

Difficulties in Obtaining Financing

Johnson: Okay, let me go to the other subject I want to talk about, the challenges of starting a software company back in those days. These days, when someone starts a software company, he stands planning for his IPO almost from Day One. Back in those days financing a software start up was a big challenge and people did all kinds of things in order to come up with the money. There wasn't venture capital available the way there is now. I'd like you to talk whether or not positioning yourself as in direct competition with IBM was positive or negative in that environment. Did your competitive position make it harder or easier to get the financing to keep the company going?

Tavitian: I suppose the answer is both yes and no. You are right that the possibility of going for an IPO as a software company was so remote in those days that it was almost not a factor.

Johnson: I'll just give you a statistic. I believe that the first true software products company was ADR. There were other companies that sold "packaged" software as part of services contracts in the early 1960s but ADR was the first one that actually changed their business model to sell software products versus selling services. That was in 1965. The first software products company to go public was Cullinet in 1978. That's 13 years. That's a long time for this industry to be developing to the point where an IPO could be done. So within that context talk about how Syncsort was dealing with this issue.

Tavitian: Well, because you did not have the IPOs you had to go and raise the money privately. Today you can still raise private money but when you do the expectation is that you

ultimately will go public. As a result, even when you go out for some private funding, life is much easier. In those days not being able to say that you were going to go public in a few years made it hard to get private money.

In our case we got some funding from outside on only one occasion. In 1970, 1971, 1972, we were doing poorly. We were certainly losing money. A lot of us were working without salaries or with very, very low compensation, just on a survival basis. We really were expecting that we would probably end up folding within a month or so.

I think it was in 1972 that we had our first benchmark with IBM and we were on the first page of *Computerworld* in an article that said that we had cut IBM's sort times in half. The week after that article appeared, I went to a wedding and I just happened to sit next to somebody who ultimately raised money for us. It came from a group of mostly doctors, dentists, and people who are traditionally known as not very savvy investors. They did all right ultimately but I'm not sure if they had been savvy if they would have invested in us.

At this wedding, I just happened to have a copy of the paper with me because I had taken it to show it to my father-in-law, who against my better judgment I also got to invest in the company at that time. The person sitting next to me was just getting into the venture capital world. This was his very first venture. He had nurtured all these relationships with a particular set of dentist and doctors in Long Island, New York, and we just raised the money and it ultimately worked. Had we not been able to do that, which obviously was a fluke, I don't know what would have happened. But we probably would have had to fold.

So, it was very difficult in those days. There is just no question about it. Before we got to that point, we did go to several banks. I know we did a lot of work with Chase and we just could not borrow money. We did go to a private venture group, as well. I think they were in Boston, and then another one in New York and were not able to raise any money. The concerns were mostly, I think, the fact that it was software, it was new and people didn't have a good feel for it.

Johnson: Yes.

Tavitian: Whether the fact that we were going head-to-head with IBM was a factor or not, I'd say probably not because they never even got to the point to try to analyze you as carefully as that.

Johnson: They just didn't really understand what software was and how you could make money on it.

Tavitian: Right. People just did not understand what "software" was. I recall that in early 1970s when I started developing out business in Europe and on my returns to Kennedy, New

York's airport, I would be asked, "What business are you in?" And when I answered "software", they used to assume I was peddling lingerie and they would ask me if I was carrying samples.

Johnson: What happened with those original venture capitalists? You eventually bought them out?

Tavitian: We eventually bought them out and they were happy and they did pretty well.

Johnson: That's a great story. I have just one other thing that I wanted to ask you about. Is Syncsort essentially still the same company? I know there was a name change but it is essentially still the same organization that it was when Duane and the others started it?

Tavitian: Oh, yes. The reason we changed the name was because the product became very successful and we began to be known as the Syncsort company. So when we began to try to introduce additional products and said "We're from Whitlow Computer Systems," they said, "Who?" When we said we were from Syncsort, they knew who we were. So that was the purpose of the change.

Johnson: Are you aware of how unique that is? I mean, I've only been able to find about three companies that were started in the 1960s which are still around.

Tavitian: Yes, I am.

Johnson: They've all been bought up. They've either been bought up by Computer Associates or Sterling Software or they've gone out of business. Cincom, Boole and Babbage and Syncsort are the only three that I know of that were started in the 1960s and are still around. Do you know of any others?

Tavitian: Yes. Innovation in New Jersey. They have back-up products.

Johnson: OK, thanks. I'll check into that. There are thousands and thousands of software companies out there but only a handful that have been around and survived through all the changes in the market, so it's quite an accomplishment to do that.

This is been very interesting. I really appreciate your time. Thank you very much.

Tavitian: You're welcome.