Interview of James Dow

Interviewed by:
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James Pelkey: Why did you start Microcom?

James Dow: Principally because I saw an opportunity to improve the way personal computers communicated. I thought I could start a business and, if you will, take the combination of seeing an opportunity, wanting to start a business anyway, so the right chemistry was there to do it.

Pelkey: Where were you that you came in contact with – (I do not know)

Dow: I was at Data General. I was in sales for Data General and I was selling microcomputers, their microNOVA product line, to a computer retail outlet by the name of The Computer Store, which was one of the very first, and Dick Brown, who was the president of The Computer Store, was a friend of mine. I became quite friendly with him and, in fact, made a personal investment in The Computer Store in its early days, and he got the Apple product line. He was the exclusive distributor for Apple.

Pelkey: He was in New York?

Dow: No, this is Boston. In Sudbury, actually. I started playing around with Apples and said: "Boy, this is going to be an industry."

Pelkey: And what time frame is this Jim?

Dow: I first started playing around with them in '79 and left in 1980 to go start Microcom.

Pelkey: Spring of 1980?

Dow: Fall of 1980.

Pelkey: Do you remember the instant when you said: "Wait a minute." What was it that led you to the communications -- did you start off with MNP or was there something else that was the genesis of the company?

Dow: The genesis was the idea of doing file transfer of any type of document between Apples and perhaps Apples and Radio Shacks at the time, which was the other big machine, and with some thoughts of taking it to CP/M, possibly, a third platform. We needed to develop a protocol in order to do that appropriately, and that was the formation of MNP.

Pelkey: The concept of a protocol. Had you been exposed to protocols before?

Dow: I started life as a programmer, not a communications programmer by the way, but I have a degree in mathematics and am fairly technical. I'm not a design engineer, but I understand how this stuff works fairly well. I think it was fairly obvious that something needed to be developed if you really just intuitively studied the problem.

Pelkey: Had you been exposed to communication protocols before?

Dow: Oh, yeah, at Data General. There was Bisync and there were SNA protocols and there were X.25 protocols and there was the Zodiac Networking system, so you were exposed to it, not to the degree that people are exposed to it today, but I knew basically how it worked.

Pelkey: On a technical level, did you add some people to your team?

Dow: Yes. Very early on, I added a guy by the name of Ed Belove, who was the first real development engineer in the company, and Ed hired a guy by the name of Greg Pearson, and between Ed and Greg Pearson, they developed MNP.

Pelkey: What were their backgrounds.

Dow: Ed was Director of Advanced Development at Data General and was a very technically capable guy, and he today is vice president of development for Lotus. He's been there for -- he left here about three years ago, so he's been there for about three years, and he was here about four years. Greg Pearson is still here, and Greg had worked in the DECMAC group at DEC and at Bolt, Beranek and Newman, and was a very capable protocol designer.

Pelkey: Had he worked on the ARPA stuff at all?

Dow: I believe he had. I couldn't tell you for sure.

Pelkey: At first you were just doing Apple-to-Apple connections.

Dow: And then Apple to Radio Shack.

Pelkey: What modems were being used at that point?

Dow: Just standard dial-up modems. All the protocols were executed in software in the applications package. Hayes was the principal one. People would buy a Hayes modem and our software package.

Pelkey: Because Hayes at that point in time didn't have an error-correcting or any kind of application software, even a file transfer system?

Dow: That's correct. So we provided the software in many cases to customers and they provided the modem. What we learned, after a period of time, was people wanted to do more than Apple to Apple. They wanted to go Apple to their VAX. They wanted to go to PCs, of course. The PC came along in late '82 or early '83, and they wanted to connect their PCs to Unix machines, to Telnet, to a variety of sources, and it became impractical to try to put the protocol in every single computing machine that people wanted to connect to. Then, when you do put it in, it takes a lot of CPU cycles away, so other applications would suffer. So the obvious thing was to port it down into the modems, which was the genesis of forming something called the protocol modem, which is how the business started, how the business took off.

Pelkey: That was in what time frame?

Dow: Probably two years after the business got started.

Pelkey: So you started the business in 1980?

Dow: I formed in 1980. The first product came out in the summer of '81. The first hardware-based product came out about a year and a half after that, so it would be December, January -- December '82, January '83 time frame, I think, was the very first hardware product.

Pelkey: So that put you in competition with Hayes?

Dow: Not really, in the sense that Hayes was selling low performance, non-error controlled modems through retail distributors and we were selling higher performance error control products through data communications distributors. So our salesman would never say: "Well, we've got to compete with Hayes." It wasn't even a factor.

Pelkey: You saw this issue of interconnecting the Unix machines and all these different kinds of machines as the real benefit?

Dow: Unix, VAX, Data Generals, virtually any type of asynchronous computer you could think of.

Pelkey: Now, Vadic and UDS, who were the dominant dial-up modem guys; what happened to them?

Dow: Missed the market.

Pelkey: Why did they miss it?

Dow: You're going to have to ask them.

Pelkey: I'm going to, but what's your guess as to why they missed it?

Dow: They didn't think people needed error control. I think that was it. You see, those companies, from what I can recall, weren't looking to service personal computer and workstation users, they were looking to service their traditional terminal to minicomputer user. Terminals don't need error control, because they don't send files. Our mentality was we're going to be sending, at the time, VisiCalc and later Lotus spreadsheets around, and people need file transfer, and they need an error controlled file transfer protocol.

Pelkey: You're MNP was really the first modem protocol?

Dow: Yes, it was THE first. It was the first and it's the only one that I know of that ever got any degree of standardization.

Pelkey: Now, over a period of time, obviously, because you've been so successful, now the issue of modem protocols is an issue in terms of standardizing, and the entrenched competition like Hayes isn't interested in having your protocol be standardized on, but some other kind of a protocol standardized on, because these protocols now are seen as real competitive weapons, or a significant -- when did that mind set change about protocols, were they started to become something more significant?

Dow: I think, perhaps, when we first went public with MNP, which would be July of 1983, shortly thereafter a couple of different competing standards tried to compete with the MNP protocol. Tymnet tried X.PC. There was one other and I forget what it was.

Pelkey: Xmodem?

Dow: I don't recall, but X.PC had a number of technical problems, and didn't keep pace with MNP technically, and kind of faded out. MNP just had such a large installed base and technically it's a great solution. You can invent a protocol that is as good as it. It's damn hard to

invent one that's better, because you're dealing now with the last tenth of a percent of efficiency and who cares at that point? It's just, virtually every manufacturer uses it. Hayes is the only manufacturer at this point that doesn't use it. It was interesting to us that even some of the people -- when it got down to people trying to decide about a standard, a worldwide standard, and it got proposed before CCITT, people kind of took sides, and what it boiled down to was the camp that wanted a lap based protocol and then the MNP camp, and on the MNP camp side was France, Italy, Germany, IBM Europe, Sweden, the Netherlands and one other European country. The US had no position at all, because Hayes said one thing and Microcom said something else, so we couldn't have an official position. Then the British were the sole country advocating a LAP based protocol. With the British, but not representing as country, were Hayes and AT&T. AT&T and British Telecom sell MNP modems, so they're saying one thing, but their marketing guys are doing something else. Virtually everybody who is in the modem industry in the United States today, with the exception of Hayes, sells an MNP modem, because they can't compete without it.

Pelkey: When did the CCITT process begin?

Dow: I think -- it's been ongoing for years, but I think it became really -- it really came into an important cycle about a year and a half ago, maybe about 15 months ago.

Pelkey: And who caused the heat to be turned up?

Dow: Just the timing of when the plenary meeting was going to be to decide this. Their plenaries occur every four years, and so there will be kind of a period of time when there is debate, but not much need to make decision. Then it crescendos as you get nearer the plenary where they make decisions. The plenary is in April. It's only two months away. So decisions really had to be made in the fall to early winter to make the plenary.

Pelkey: Would it be fair to say that you don't care? You only care if something other than yours gets established as a standard because in fact you are a de facto standard. You're like the Hayes AT command set.

Dow: In some senses, I wouldn't characterize it as 'we don't care.' I would characterize it as 'it wouldn't be bad for us' if something other -- and I think virtually all of the LAP camp knew as well that no standard was just saying MNP. What we agreed to was put a standard in place and then have LAP and MNP.

Pelkey: Let me come back to earlier. You started off with Apple and the PC, and were of more of the PC mindset, although you had come from Data General. The process of selling through distributors and going after the large, the VAX, the Unix and so on, that was kind of a jump.

Dow: Well, it was going after PC to VAX, PC to Unix, as well as PC to PC. Our products are not sold for VAX to VAX communications. People connect minicomputers on leased lines, and they use DECnet or they use SNA or some such higher layer protocol to connect them. What people want is -- they'll have a network of asynchronous computers and they want to replace the terminals they've got out there with workstations and PCs. As soon as they do that, they say: "Well, I want to upload. I want to take a file from the mainframe and load it into dBase III and massage it," or "I want to use the electronic mail system on the mainframe, but I want to create my mail on the personal computer," or something like that. So they're going to be blasting files around, and you tell me how you're going to send those files error free if you don't put protocols in the modems?

Pelkey: The process of -- you could have gone through the computer stores, where you could have established some presence and market through there and go PC to PC as a primary channel versus having gone data distributors. Was that a big issue for you?

Dow: Oh, it sure was. We actually tried both and the retail stores failed miserably for us, and it was probably the time that I came closest to losing the business, was a period of time when we tried to crack retail. The product was way over the heads of the retailers.

Pelkey: When was this?

Dow: '83-ish. We lost money during those years. We wrote off inventories because we bought too much and couldn't sell enough and all the nasty things when you miss the sales forecast. It was all -- we tried two channels simultaneously, and the good news is that one of them turned out to be right. The bad news is one of them turned out to be wrong and hurt us for a year. But we just buried that. One day we just walked in and said: "We're out of that channel. That's the end of that business. Write off the inventory. Focus everybody on this one, and our business just went, whew, like this.

Pelkey: Now, did you get venture capital right in the beginning?

Dow: Yes, some seed capital in the beginning. Really our first serious venture capital in April of '82.

Pelkey: Of what scale was that venture capital.

Dow: A million-ish. Maybe a million and a half.

Pelkey: Do you go after venture capital?

Dow: Yes.

Pelkey: Because you needed the capital to grow the business?

Dow: Yes.

Pelkey: When you left Data General, was it a big issue for you to go off and start a company?

Dow: I never would have started a company if I knew all the things I didn't know. I suppose almost any entrepreneur would tell you that. I was just young enough. I was 30 by a month, so I was just young enough and inexperienced enough that I said: "Hey, other people do this. Why don't I do it," and raising money, sure I can probably do that. Recruiting engineers, I can probably do that. I hadn't done any of it before, so --

Pelkey: What motivated you?

Dow: I just didn't want to work for somebody else. I had been in sales and I had been reasonably successful, probably in the top five or ten of 800 people at Data General in the sales organization, and the next step for me was to be a sales manager, a branch manager and then a district manager and a regional manager, an area manager. Twenty years from now I might be reporting to Ed deCastro, and I said: "No way I'm going to do that."

Pelkey: Now up front, you had an e-mail package?

Dow: That's right, and it used the MNP protocols to mail the documents.

Pelkey: Now, mail is not part of your business?

Dow: Not at all a part of our business.

Pelkey: Why?

Dow: Customers didn't want mail.

Pelkey: Do they want it today?

Dow: I don't know. We're not in the mail business. They certainly appear to want it on LANs, but that's an entirely different business. They don't want it, as best I can see, to create mail here and create a list of phone numbers you want to distribute the mail to.

Pelkey: Talking more generally about the datacom business, Vadic and UDS didn't come after you, just like they missed Hayes too. They missed PC and understanding it because they were terminal-to-host, and they really haven't been able to compete even after you showed such success?

Dow: They compete now.

Pelkey: But you are the dominant market share holder.

Dow: I think we are, but Vadic is an effective competitor today, because of their installed base, large distribution network. They've got such a big customer base that they're going to get some sales from that. They're an effective competitor. I wouldn't say they're the most effective, but they are effective.

Pelkey: Why do you think the companies who were successful at one level of product innovation missed out on the next level? A lot of the modem guys missed multiplexers. Multiplexers missed LANs. LANs missed T1.

Dow: You must have been talking to Micom. Have you talked to them?

Pelkey: Spent five hours with Roger Evans.

Dow: I think people just -- it's very easy when you're running a business to talk to your customers, and everybody tells you: "Talk to your customers." I think there's an inherent danger in relying too much on your customers, because many times your customers don't see market changes. If customers were all so smart, they would have told DEC and Data General and everybody to go build PCs, and they wouldn't have missed that business. Or they would have told Data General to get into the 32-bit computer business before they did, so customers are important, but I think you can over-rely on them. I think many of these companies missed the fundamental shift away from terminal communications to workstation-oriented communications. If you logically follow the thought pattern that says there's going to be workstations all over corporate America, what communication problems are they going to need

to solve, and then you would have followed the path of getting in the LAN business or getting into the protocol modem business or some of the businesses that have flourished, and you might have been more cautious about investing too heavily in terminal oriented businesses, like multiplexers and traditional modems.

Pelkey: When you look back upon your experience, you obviously innovated technology. You then brought that innovation to the marketplace in terms of a hardware platform and the channels of distribution. As you look back on the issues of marketing and distribution, in terms of making a technology successful, a technology innovation successful, what was more important, innovating the technology or the marketing and distribution channels that came later?

Dow: I give a talk occasionally to some of the universities around here that teach classes on entrepreneuring at some of the business schools, and people ask me what the most important element is, and I think innovation overcomes a tremendous amount of shortcomings you might have in management talent and knowledge of distribution. If you're innovative enough, and the product is just such a great product, you can break down a lot of those barriers, so I would have to say that the reason we have been successful is we've been innovative. I like to tell the story: it's very easy to get distribution when you're the only person in town with a product. You can go to any distributor and any channel. If there's no competition and it's what the customer needs, you're going to get distribution and you're going to get it on your own terms. When you're fighting for shelf space with seven other products, you're not going to get it. I don't care how good you are, unless you're IBM or something. I think it was innovation that was the most important.

Pelkey: The issue of talent pool. Was it difficult for you, in those days, to be able to get the kind of talent you needed to grow your company?

Dow: I don't know if it was difficult or if I was not skilled, but I had a harder time than I would have liked to have, and I think it was probably more of the latter. I think it was just that I made some judgement mistakes. I hired some people I shouldn't have hired. The good news is I hired a few great people, and they were good enough to make great decisions along the line.

Pelkey: Let me come back to one thing. In the beginning, MNP was really a means to deliver the applications products that you wanted, but then you realized there was a real need for this error-correcting protocol independent of the applications. Let's market that as a product by itself.

Dow: That's right.

Pelkey: Can you talk a little bit about that decision. Was that perceived as being a bit issue, or was it just you broadening the products?

Dow: I think we believe, although we had no evidence to believe, but we believed pretty heavily that there was a need for this type of product. I'll tell you a quick, interesting story. One of the largest data communications distributors in the business is Colasco Communications. I think he's Roger Evans' largest distributor and he's been near the top of ours for years. When I took the product down to him and showed it to him, we also, at the time, had a little product that would convert ASCII to 3270 protocols. It was kind of a little side development we had done. And he said: "Boy, this 3270 thing is great. Great price point, but I'll never sell these error-control modems, but I'll order five of each." And two years later, he said: "Can I send this 3270 back," and he had sold $3 million dollars worth of our error-control modems. So many times,

even people very close to the situation don't have a vision, because they're used to relying on their customers, and the customers weren't coming in saying: "I want an error-correcting modem."

Pelkey: They were lodged into a mindset of that is the way the world was.

Dow: Nobody came into Apple and said: "Give me a computer with a graphics oriented interface and this little mouse," and that was in somebody's mind, that I'm going to give somebody something much better.

Pelkey: So you had confidence that, seeing the problem and understanding the problem about error-correcting, and that if you got error-correcting protocol out there it would be a success.

Dow: It had to be independent of the application, because I couldn't tell where my customers were going to -- what the application was going to be, or how they were going to try to use it, what the elements of the network were going to be.

Pelkey: So then, you said: "You need to have the platform and put the protocol into the modem rather than put this protocol in all these mainframes and operating systems," and "let's just stick it in the modem," and therefore you needed to be in the modem business in order to deliver your software.

Dow: That's correct, which is a backwards way of getting into the modem business.

Pelkey: These days we're led to believe the software drives things. You're an excellent example of that. I think you've answered the questions I have.

END OF INTERVIEW

