

An Interview with
JAMES McCORMACK

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Conducted by William Aspray

on

23 February 1984

Waltham, MA

Charles Babbage Institute
Center for the History of Information Processing
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Abstract

McCormack, co-founder of the Boston software company McCormack and Dodge, describes his career and the growth of his company. He begins with his work at General Motors in the early 1960s on the automation of a cost accounting system. He explains how he gained knowledge of computer systems while working as an IBM marketing representative, and describes his discussions with Frank Dodge, a systems engineering group leader at IBM, that led to the 1969 founding of McCormack and Dodge. He describes their first product (for fixed assets), their early financial problems, the establishment of a base of customers in the Boston area, and the successes of a mass-market pricing strategy. He then turns to the company's rapid growth over the next decade to over 750 employees and a range of products, including accounts payable, ledger, purchasing, capital project accounting, human resource, and accounts receivable systems. McCormack discusses at length the problems associated with managing a fast-growing company. He remarks on his company's strong reputation, and on the strategy and structure of the competition. He concludes with an appraisal of the acquisition of his company by Dunn and Bradstreet in 1983.

JAMES McCORMACK INTERVIEW

DATE: 23 February 1984

INTERVIEWER: William Aspray

LOCATION: Waltham, Massachusetts

ASPRAY: This interview is conducted by William Aspray on the 23rd of February with Mr. James McCormack in Waltham, Massachusetts. Can you tell me briefly something about your early home life, education, what your family did, where you went to school, that sort of thing?

McCORMACK: Sure. My mother was a second generation Canadian who basically worked all of her life as a secretary. My father was an Irish immigrant who came here in 1927, I believe, at the age of 21 and worked in various factory jobs, school systems as a janitor. He retired as a drill press operator out of the Pratt and Whitney Division in East Hartford, Connecticut. My mother had a high school education; my father had an eighth-grade-equivalent education. I grew up in Wallingford, Connecticut for the most part. I did all my grammar school and high school work there. I spent four years at Boston College, getting an accounting degree in 1959. I started law school immediately after that, going nights; but I realized early on that law wasn't what I wanted to pursue. So I left that behind, got a job at General Motors as an accounting trainee, and embarked upon an M.B.A. program in night school also at Boston College. I spent six years at General Motors, two years initially as an accounting trainee, two years totally accidentally as a programmer. In 1961 the Chevrolet Motor Division, which is the one I worked with, decided to automate their manufacturing and assembly plants with IBM 1401 computers. They went through the company and they gave what was then the programmer's aptitude test to everybody in the accounting department, the material control department, and what was then known as the tabulating department. They didn't have a computer; they had electric accounting machines like 407s, 604s. I don't know if you're familiar with this gear.

ASPRAY: Yes, I am.

McCORMACK: It was the forerunner gear to what we know as computers nowadays. So I was one of three people in the accounting department to pass the aptitude test for programming. Since 1) I was the youngest of the three and 2)

it was to be a two year job (which is unusual in GM's training programs --they didn't want you on any one job more than a year)...But because of my age and the fact that I passed the test, they thought I could afford the time. So I wound up being the plant programmer, which was interesting. I had left the cost accounting department and gone into programming. I was sitting in a particularly boring marketing class in my night M.B.A. program and I started developing an idea of automating the cost accounting system, the department that I had just left.

ASPRAY: I see.

McCORMACK: So I spent a fair amount of time on that and then showed it to my supervisor who showed it to the system controller who showed it to the controller; and everybody got all excited about its potential. They put it into an outline form and sent it into the central office of Chevrolet suggesting that our plant be given this project to do for all of the individual plants. It turned out that a team had just been in the process of being put together to do that same job. So my reward for my effort was to become part of that team. I spent six months out in Michigan working with four other people to put together this program.

ASPRAY: What were the backgrounds of the other four people on the project?

McCORMACK: Let me think. They were all college graduates. Oh, there were five people, let me take that back. One was an accountant, a straight accountant from one of the Chevrolet assembly plants. The other four people were programmers and from a technical point of view that was their career, their whole career path. They were out of the tabulating/computing-programming side of the house. I was the only programmer there that also had an accounting background.

ASPRAY: No assistance from IBM or some other company that was starting to develop equipment at the time?

McCORMACK: No, no. We went to IBM programming schools to learn the equipment and learn the languages, but that was about it. Then you just started writing programs and developing your technique for it. This is not terribly

difficult. It can be very interesting. I certainly had had it by the end of the two years; but during the two years that I was doing it I really enjoyed the capability because one thing you it does is broke down barriers; it broke down organizational barriers. Typically in a training program that I had been in I would work on one desk and do the function that went through that one desk. It might have been pricing car models and car options for what had been produced that month. It might have been paying bills from the letters A through E, or whatever.

ASPRAY: I see.

McCORMACK: Those jobs were very confined and not very far-reaching in terms of their function. Programming was different in that you did have this sort of profession, i.e. programming, that you did all the time; but you were actually programming to help applications in different facets of the company, like the project I was on for automating cost accounting and material control. All of a sudden as the programmer or one of the programmers involved in that you had access to all the information you wanted about those functions, which you typically wouldn't get unless you sat at every one of the desks in each one of those departments. So to me it was a very broadening exposure and experience because now I could see a lot more of how the company functioned than just what I was seeing in one little peg. So I liked that aspect of it. It was fascinating. I spent eighteen months programming out in Framingham, Massachusetts. Then the last six months on this project out in Michigan. Then I came back and I was made an accounting supervisor back at the accounting department, which I did for two years. I then left GM. My thinking at the time was that I didn't really like GM, and in fact I didn't. They were very much of a pressure outfit at that time, quite insensitive I thought to individual feelings and concerns. But I made a mistake and I went to work for Coopers and Lybrand as a staff auditor. It only took me seven months there to realize that my major problem was not that I didn't like GM; it was that I really didn't like accounting. I did not want to be an accountant and do what accountants do day in and day out, year in and year out. So I left there and after a lot of soul-searching I went to work for IBM.

ASPRAY: Now this would have been what year?

McCORMACK: 1966. GM from 1959 to 1965, eight months of Coopers and Lybrand and then in 1966 I went to work

for IBM as a marketing rep. A lot of soul searching on that too. You know I had a real profession as an accountant. Now I was all of a sudden going to be selling hardware. I had this connotation of a salesman as a peddler and a lower career path, if you will, than what I had been. I also had some reluctance to walk away from what I had for an educational background. I also had seven years of direct experience. But at the time I was 28 years old and my thinking wound up oriented around the notion that why should I at 28 look back seven years as opposed to looking forward to the next 37 years that I would presumably be working until retirement. That made the decision easy. Also, I found out that selling computer equipment was not so much of a peddling type of function. It was a more sophisticated sell and a more intellectual sell than what I had conjured up, like stocking leg hosiery in a drug store. So I did that for three years and I liked it. I found several things at IBM. One, their educational resources are tremendous. Information available to an individual working there is just outstanding. You have plenty of tools to work with to accomplish the job that they give you. They also give you a lot of latitude. I didn't get a lot of direction at IBM. I also didn't want a lot of direction there. You blossom on your own, if you will. You build your own techniques, your own territory, and your own successes in selling equipment. It was a tremendous confidence builder for me going around, knowing my stuff. Surprisingly, I had a rather unusual advantage over most of the other IBM salesmen in that I had been a programmer for two years. I had a much better technical comprehension of what computers were all about than the typical salesman did. I found that with an IBM business card I could get into all the 25 assigned accounts I had in the greater Boston area. I would be meeting with controllers and vice presidents and presidents of companies on a day-to-day basis. That wound up also being a tremendous confidence builder. I started to talk to people who have these, what to me then were lofty, positions that I thought were reserved for pure giants, and I found out that that's not the case. They're ordinary people just like you and I are, I don't mean this in an obnoxious way either. I just didn't meet any that scared the death out of me because of intellect or background. I said, "gee whiz, these people have accomplished this and can do it; I think that my own stock is equivalently valuable and I can probably do the same thing." That combination of thinking plus some events led to the start of McCormack and Dodge. The events were in the 1967-8-9 period at IBM. I saw John Keene, I don't know if you remember John Keene Associates.

ASPRAY: No.

McCORMACK: It is a good sized programming and systems consulting firm in Boston. Another guy named Dick Halstead left IBM and started a business similar to Keene's. Two other guys, Dick Lilly and Bill Watson, left and started a company called Manufacturing Management Sciences that eventually turned into Software International. We watched these people leave and they were all successful almost immediately in a big way. They all did quite well.

ASPRAY: Were all of these people with similar positions to yours in the company?

McCORMACK: Well, yes and no. Keene left as a salesman. Halstad left as a salesman. Watson had gone through sales but was in product management at the ed. center in Boston, as was Lilly. Lilly was more of a technical guy, application technician if you will. So our attitude was that some of these guys were really bright and others were not so bright. All bright, you know, but of what we thought to be various degrees of capability. We felt that we weren't short of measuring up to the standard that they had put out there. So I thought I'd like to go into business and Frank Dodge was working with me at that time. He was the group leader of the system engineers that supported my territory. Over a period of time I talked Frank into starting a professional systems and programming consulting company.

ASPRAY: Before you go on, can I ask a little bit about Frank's background?

McCORMACK: Frank was a Harvard grad with a physical sciences degree. He spent a year working at the First National Bank of Boston in some sort of training program. He spent a year at Rutgers and got a master's in math. Then he spent the rest of his time before IBM teaching math in either the Needham or Dedham school systems. I think he was head of the math department in the Dedham school system. He came to IBM about maybe six or seven months after I did. As a matter of fact the first account he went to was one of mine. So we had quite contrasting backgrounds, but also leading into quite different positions at IBM. Mine was marketing, selling the equipment. Frank's was as a systems engineer, which was basically helping to get equipment installed and supporting it after

that. So we did decide to do that. We left thinking of ourselves as consultants in the system programming context, not software. What got us into software was accidental. I felt as though when we were going to be out there, it was going to take awhile for clients to appreciate how talented we really were before they would buy much of our consultation time. I thought it might be a good idea to have a product to go out with. As it happens I had a customer over on the North Shore called Gorton's of Gloucester, a frozen seafood company. No matter what time you arrived in relationship to the appointment time that you had, you always waited ten minutes in the lobby to be ushered in. I was reading a magazine called "The Data Processors" I don't know if it's even still being published, but it was at that time and there was a very interesting article in there about a company that had automated a fixed asset application for their company. I read all through it. This was done on a 1440 processor So when would that have been, about 1969. They were being replaced gradually by the 360 line at that time. Anyway, it struck me that in all the time I had worked with GM as an accountant and the time I spent with Coopers and Lybrand as an auditor... Well, GM had me exposed to a lot of divisions. Coopers and Lybrand had me exposed to a lot of companies in the Boston area. At IBM I had been involved in about 40 different accounts in one way or another. Yet I had never seen any company that had automated their fixed assets application. Nobody had ever done it. Yet I knew from my own accounting background and experience that every company had that requirement. So I talked to Frank about it. He went and looked in IBM's programming catalogue, and there were none listed in there. There just didn't seem to be any generally available. So we decided that we would put together a fixed asset accounting system. We were doing that throughout the end of 1968 and the first half of 1969, spending nights and weekends. I did most of the designing of it because I had the background for that and Frank did most of the coding of it. So we wound up really by maybe by October or November of 1969 which was about four or five months after we had started the company, with a product that would do fixed asset accounting.

ASPRAY: Now you had left IBM by this time?

McCORMACK: Yes. June of 1969 was when we left. We did some consulting, but it really wasn't where we should have been at. It didn't really fit in. Consulting is a difficult business, particularly at that time when there wasn't a lot of savvy around for defining the scope and the extent of a system design and programming task. It wasn't done very

well. Also, there wasn't a good buyer of this kind of service either because they frequently didn't know what it was they really wanted. So we were kind out of there as babes in the woods and dealing with people that were sort of babes in the woods on this. Invariably in every consulting job we took we would do the work that was required as the task was assigned to us, but then the scope would change, the definition would change. They'd see a little output and say "that's nice, now if you could only do this, this, and that." Initially we weren't quick enough to say, "well, you know we didn't agree on this, this and that; we just agreed on the front part and that's going to cost you more money." We wound up getting in continual hassles over the ultimate bill that we would produce for a job. We also found ourselves in the late summer of 1969 in the middle of a recession that we weren't bright enough to see was coming down in June when we left IBM. We were having some difficulty with the consulting jobs in terms of pricing them and then ultimately collecting for what we wound up doing. We were also having difficulty with this recession, trying to sell the product.

ASPRAY: What sorts of customers did you have for your consulting work? Were they all financial applications, financial systems?

McCORMACK: Pretty much, yes. We did a general ledger system for Star Market. We did one for New England Nuclear, one for Instron, these last two are small local companies. Star Market is a division of Jewel. We did one for a company called Ludlow, another company called Asiatic Petroleum which is a Shell Division out of New York, Seiler's which is a food service company near here, actually out of Waltham. A variety of jobs like that. In the meantime, while this was going on, I was going around Boston. I actually took the fixed asset system and presented it to twenty different companies in the Boston area. At the time we had a price of \$3600 on it. It was well received but nobody bought it. Everybody said they liked our system and all that, but it was written at the time for a 360 model 20 8K card system, a small, small machine. So obviously a small company. They were all dealing with the bite of the recession and nobody would come up with \$3600 for the system. I think we wound up selling one for \$2400 to Damon Corporation, another one for \$1500 to Bird and Son in Walpole. That was it. We wound up running out of money, our capitalization. We each put in \$2500 at the start. Then we had a line of credit for \$10,000 with the First National Bank of Boston. That was our capitalization. We went through the \$5000 and the \$10,000 and each anted

up another \$1000 and then another \$600 before the end of the first year. So we each had \$4100 into it, which was all the money we owned. We had hired a third principal three months after going out and were experiencing a lot of difficulties over the next six month period which took us to nine months out in March. At that time we were just out of money. I went to the bank to try to raise some more cash, another \$5000. Our new principal did not want to have any more debt associated with his name, so he left at that time. That's when Frank and I put in the other \$1000 each and the other \$600 each. Frank took a job with Texas Instruments to lighten our payroll burden. He was working nights with me to do some service bureau work that we were doing to get steady revenue, such as it was. Not a lot of money, but just something steady coming in month to month. Frankly, we were up against it by about April or May of 1970. I said Frank that it wasn't going to make it. I told my wife that the business was gone. We just couldn't get it going in this economic environment. Frank took the job by agreement, and continued to work with me nights on this other thing. I was there trying to sell a few of the software products to maybe recoup enough money to pay the debt that we had at the bank and then go find a job. I had a very tempting job offer right in the middle of all this too that I gave some serious thought to. I decided that we had made the break, we had started the company and if it wasn't going to go I was going to see it right down to the grave as opposed to jumping out because another attractive opportunity presented itself. So we decided to try something as a kind of desperation shot. We thought that everybody really liked the program for fixed asset accounting. They said they did. We said "let's take price out of the question and see if in fact they won't buy it." So we priced it at \$595 for a limited time period, two weeks. I got on the phone and called all these twenty Boston companies I had presented it to and said, "you have an opportunity here for two weeks to buy that same system at basically \$600. If you want it, fine, and if not it will be back up to \$3600 after the two weeks." So surprisingly what happened is that ten out of the twenty bought it right away. A little ray of hope popped up there. We had about \$6000 in income all of a sudden, which was great. Frank was off the payroll working at TI. I was taking \$200 cash a week. At the time I had four kids and all the things that go along with that, so I needed some money. So that gave me another 30 weeks of staying alive in the business. We extended our thinking to mail order. We said, "gee, if ten out of twenty people will do this with a presentation and a phone call, I wonder how people would respond through the mail to a combination of an attractive price and a time limit." So we bought a mailing list and printed up a whole bunch of literature that showed how our programs worked and so forth, sample reports, and we mailed out about 35,000 pieces from April to January of 1971.

ASPRAY: Who did you target in the mailing?

McCORMACK: Anybody that had a computer. We bought a list of people that had computers, 360s, Model 20 and up. Our offering was \$355 for the Model 20, \$485 for the larger machines. In the last six months of 1970, which was our third six-month period, we sold \$90,000 worth of fixed asset systems through the mail without ever making a sales pitch. People bought it. I talked to several of them at different times after that. One of them said, "hey, we didn't care; if it didn't work we just weren't going to send you the money." He was in St. Louis, he said "how far are you going to chase \$355, from Boston to St. Louis?" Fortunately the programs worked which was a pleasant surprise since we had never done a real volume test against them. But they did work. People liked them and felt they had a bargain. Inside of six months we had a national reference base of almost 300 users of one product. People would call from Chicago and inquire about the product. I could go to my list and say "there's somebody two blocks over from you using it; why don't you give them a call?" So it did a number of things. It gave us the capital that we hadn't had. Frank was able to come back full time. We were able to hire another key individual then start to enhance the product. For the next couple of years that's what we did. We enhanced the product and then started raising the price. We had prices of \$595, \$745, \$995, \$1495, which brought us up to about the end of 1973 at which time we completed a major redesign and rewrite of the whole system to incorporate some very comprehensive new tax laws. At that time we raised the price to \$5000 and that was the end of the mail. People wouldn't spend \$5000 through the mail. You had to go and make a presentation. So from 1973 to 1977 I was on the road. I traveled constantly just selling the product, gathering information on it, bringing back the ideas to incorporate into the product and make it better.

ASPRAY: Was it still a very small number of people?

McCORMACK: Yes, in 1973 we were four people. By September 1974 we hired our ninth person. At the end of 1975 we were in the twenties and then it started really scaling up. We have about 750 people now, that was the end of December. There's probably over 800 now. We have a hiring plan for 400 people this year. We started having people problems, organizational problems, space problems, computer capacity problems and so forth. We started

introducing new products. In early 1974 we introduced an accounts payable system that went well. In 1977 there was a general ledger system that went phenomenally well. That was followed by our first purchasing system in '78, a capital project accounting system in 1979. We acquired a human resource system (payroll, personal benefits) in 1982. We're completing development of an accounts receivable system in the second quarter of this year. So our product line has rounded out. Last year we introduced some what we call "breakthrough technology" that is rather unique to us. It's called Millennium. It takes the requirements of most application systems and breaks them down to what their generic functions are. Then we wrote what we call "generic code" to do those generic functions. So that when you look at any accounting or typical transaction-oriented application 80% of the functionality that's required to automate that is common. It's editing, it's querying files, it's updating, reporting, and so on. So we've basically standardized that so that 80% of the code that's in the accounts receivable system will be the same code that represents 80% of accounts payable, and so on down the line. There are tremendous implications for this. One, if you learn how to use one system you will know how to use any one of the others because operationally you interact with the same code in the same way. Secondly, if you have 80% of an application defined and running in generic code, all you need to do to create a new application is the remaining 20% that is totally unique to that application. So the development process now gets shortened down in every aspect: in terms of design, in terms of code, in terms of documentation, in terms of support. It's all gotten much simpler. Maintenance. If you have a problem in generic code, you fix it. Now all of a sudden 18 or whatever number of applications you have running under that code have been fixed. It's reduced your maintenance to one source, one spot.

ASPRAY: I see.

McCORMACK: So what we've done is we've retrofitted this new technology into our existing products which has made them incredibly competitive. Our competitive situation eroded a little bit in 1983. We were accustomed to winning 7 out of 10 situations. By the summer it faded down to 5 out of 10 situations. We introduced a new technology retrofitted to our existing packages in September, and that's where our ratio went back to between somewhere between 8 and 9 out of 10 situations where we were winning. So we "millenniumized" our existing products, made them phenomenally more competitive. We packaged a piece of this technology that basically takes a

very powerful query language and combined it with a PC link capability. We're selling what we call PC Link. It can take a personal computer with this technology with most of its software and communicate directly with a mainframe computer.

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McCORMACK: It's fascinating. You sit at the PC and query up to the mainframe and pull down data in summarized fashion on a field-by-field basis or some sort of annotated field basis if you want. Work on the micro--let's say to build a budget, and then you can update back to the mainframe file which you've developed the budget. We introduced that portion of Millennium as a separate product in November last year and we sold 1.6 million of that piece of technology in two months, which is quite a hit. Then the other side of it, I mentioned that the product is a stand-alone development tool, has tremendous applicability. If 80 percent of the application is already done and contained within the tool itself people, we feel, can automate their data application backlog much more quickly than they could in the past. So we are now selling it as of January as an application development tool. Super product. Just going back retrospectively over some of the problems that we had. Let me back up. We did 58 million dollars in 1983. We have a revenue budget of 88 million dollars for this year. But going back from the 58: in 1982 we did 38, in 1981 we did 26. In 1980 we did 15.7. Then going back it was 7.5, 3.1, 1.8, 1.2, .8, .5.

ASPRAY: So it's about 50 percent growth each year, roughly.

McCORMACK: Yes, there were a few years there when it was a hundred. But once you get into the big numbers you really can't maintain that pace. It causes tremendous problems. We were adding people very quickly. We were using up space very quickly. We were always out of computing power. The power we had never lasted as long as we thought it would to fulfill our requirements. A couple of things happen in that environment. 1. Your organizational structure keeps breaking down because, let's say you decide you need to reorganize and put management positions in here and there, wherever. You build an organization that you think will work for your requirement, and in fact it will. But during the six month period of time that it takes really to implement it, the structure

that's being implemented is outgrown by the burden of new people and all the requirements that come with them when they arrive. So it was a constant reorganization struggle which we had and a constant training program with new people getting up to speed quickly enough. What happens in that environment is that people get burned out. Some people have the capability of staying with an organization while it grows to major size and major proportions. Others don't, and in an environment like this you find out fairly quickly that all of a sudden somebody's really been outstripped by what's going on, that he can't keep up with it.

ASPRAY: Yes.

McCORMACK: This creates some difficult decisions, because in an environment like this everybody really is excited. It's growing fast, it's exciting, everybody's fully involved, working a lot of hours. All of a sudden one of those cogs that's part of this team doesn't work and you have to face up to it. You find the rationale to do that, but it hurts. It hurts the person. It hurts you because you are more than just a co-worker; you've become friends in this jolly environment that's taking place. A lot of that has happened.

ASPRAY: Is a lot of the problem not technological rapid advancement but organizational/managerial? After all somebody starts as two steps below you, say, in the organization and as the organization fills out they may still be two steps below you but that now means that there are fifty people under them whereas there were three before.

McCORMACK: It happens both ways. Now there are much more than two people between the functions. The function that we are talking about probably has grown thirty-fold; so I mean it's an incredibly larger responsibility than it was four years or five years ago, whatever period of time you're considering. Then you find that new requirements are imposed at the same time, e.g. someone may be able to run you know a four or five man shop and can come in and do all the bookkeeping and all that relatively simply with no problem. But then all of a sudden you have a 15 person accounting department and transaction volume is way up. Your controls need to be established much differently than they would have been on the lower volumes. Some people aren't capable of making that switch-over. Either they've never had the exposure or they just don't have the ability, or both. Then as the company

gets larger your financing requirements become more and more sophisticated, more heavy. You need a banking relationship. Maybe your controller never dealt with a banker before. Perhaps he's always worked in an accounting function and somebody else did that. In other words you get treasury functions that start to be required. It's just been a constant learn-something-new all the time. You know the organization pyramid kept getting fatter and fatter and fatter. Frank and I, by virtue of being the equity people and the original founders, kept getting pushed up and up and up.

ASPRAY: Yes.

McCORMACK: So I always used to tell people there's no one year where I felt I was running the same job or the same company I was the year before. It was the same business, but by the sheer size of what was happening year-to-year it was a different company each year. So it has been a great learning experience, a great stretching experience for a lot of people. Take any one of us. Frank and I are probably the oldest two people of the company; we're both 46. There are some people older, but the average age in the company is about thirty.

ASPRAY: I see.

McCORMACK: Now take any one of us and put us in an AT&T or a similar organization. We would never have had the opportunities that we have here because an organization that goes from zero to 88 million in 14 or 15 years creates tremendous opportunities for people. You wind up not wanting to go outside because it's a kind of a new industry. It's a peculiar business in it's own way. Not totally unique, a lot of the functionality is the same as in a lot of other businesses. But it has it's uniqueness about it. You wind up with a 30-year-old vice president who would not obtain this position in another company nor obtain the six figure salary that he commands.

ASPRAY: Yes.

McCORMACK: But when you need that function fulfilled he's the best guy available to do it. He knows the

business. He's been in it for four or five years. He's got the appropriate academic credentials. He's the best guy you can do that with or best woman you can do that with. So we have some very young people in extremely responsible positions.

ASPRAY: You indicated that most of the promotion comes from within the company? Do you hire, say, at the vice president level from outside very often?

McCORMACK: Certainly we've done that. We've done that once. We hired a chief financial officer straight into the vice presidential level. That was one of those situations where our existing controller wanted to function but the job outstripped him. It grew up too fast, and he couldn't stay with it. That's not saying anything negative about him. He's got a much, much larger job than he ever had in any year prior to what he's doing right now. He's still in that same function. The function is just growing with the company; so he wasn't able to step up. If you've got a company racing ahead at an average of 50 percent growth a year and the existing job that you're in is growing by something akin to that pace, it takes quite an individual to leap up a whole new level in the organization while all this is happening. So we wound up going outside for a chief financial officer. It was a good move and, retrospectively, I don't regret doing it.

ASPRAY: You had said that you had been on the road for a period of three or four years.

McCORMACK: 1973-77.

ASPRAY: Through 1977. I noted that now you have a number of regional offices.

McCORMACK: We do. In 1973 we had one product, in 1974 we had two, in 1977 we had three. Initially I sold the fixed asset product and started selling the accounts payable product. I had two products and the whole country as a territory. You just couldn't deal with it. It was too much. So in 1974 Frank Dodge started selling Accounts Payable. So he was our national sales rep for AP. I was the national sales rep for Fixed Assets. Then we would go back with

our input to our product group and compete for those resources to improve our respective products during that period of time. Then gradually we started hiring sales people. We hired a guy to sell Fixed Assets and installed him on the west coast initially. Then we hired somebody to do Fixed Assets in the Chicago area. Gradually we back-filled the country, so that my traveling was going shorter distances all the time. Eventually we wound up with three Fixed Assets salesman that were covering those strips of the country: west, midwest, east coast and over time built a sales force. I think we have about 88 people selling right now, selling nine products.

ASPRAY: International sales also?

McCORMACK: Yes, we're represented now in 37 different countries outside the U.S. and Canada by a combination of direct sales representatives and affiliate representation. Predominately direct though.

ASPRAY: Did this happen after the 1977 period that you started to add these outside sales offices?

McCORMACK: Yes. Frank and I were selling right through 1977. We hired some people. I'd say that in 1977 we probably had three sales people other than ourselves. Then by 1978 we probably had four. In 1979 we went to nine and then started doubling every year after that. It's funny, what happened was we spent a lot of time and effort on product quality. We always had the best product, the best quality product. I can say that objectively too because you can't kid yourself and say you have the best product, if in fact you don't, because the marketplace is going to tell you that. We always won more than our share of business and a lot of it was product related. A lot of it was related, at least in my selling situation, to my background. I was out selling a product that I had designed to people whose disciplines I shared, both from a data processing point of view and from an accounting point of view. So when I was selling the fixed asset system there was no question that could be asked that I couldn't answer and make an accountant understand the answer and also make the data processing guy understand the answer. They couldn't talk to each other, but I could talk to both of them. I'd also had the selling experience at IBM. I don't mean this in an obnoxious way, it's just I wound up having a very unique set of experience credentials that I couldn't plan better for what I was doing. So frequently people would buy me as well as the product. They were just so impressed with the

presentation and the knowledge that came with it. That's what got our whole sales technique going into what wound up being sort of a consultative sale as opposed to a harangue sale. We didn't go out and peddle and bark our product. We went out and sold it in a teaching/consulting way. People liked that, particularly the audience that we were dealing with.

ASPRAY: I see.

McCORMACK: But the point that I was trying to make earlier is that we were very intense about product quality and support of the product, of the customer base. Personally we didn't want to be identified with a shoddy product, just from our own personal integrity point of view. Secondly, we also realized that selling software is very much a "pig-in-the-poke" type process and that sales products like this were going to be intensely reference based. So you had to have a good and happy base of reference, users to reference to your new prospects. So we did that and we spent an inordinate or disproportionate amount of our revenue went back to the product. In 1978 we started hearing about ourselves from outside the company. We started seeing things in print that said, "you know you can go to MSA for the sizzle, but if you want the real quality products McCormack & Dodge has them." This was nice to hear. It was all of a sudden reinforcing where we were at. We decided. We never decided this consciously. We always maintained product quality, but we decided to balance out our efforts between sales and marketing and product a little differently and not be so much total product. That's when we started doubling the sales force every year.

ASPRAY: Yes.

McCORMACK: The market was aware of who we were. We had a reputation for quality. It was now time to invest some money. Initially we invested money in sales people to get coverage. This worked, and we started, we went from 3.1, 7| million, etc. by doubling salesman and coverage. Then after that we started developing more of a marketing program to feed the sales side of it. So I'd say right now we are probably very well balanced. This is maybe obnoxious and self-serving, but we are a well balanced company between what we spend on marketing and what we spend on sales and what we spend on product. We have, I think, a pretty polished ad campaign now that is

image-building type of stuff. We have a well-honed seminar program that puts on a 120 seminars per year throughout the U.S. and Canada and more on a international basis. That feeds our lead system, feeds our sales people with leads too. It promotes business. So it was an evolution and it's interesting to reflect back on just how it happened and where specific awarenesses came along and how we changed our focus (not change the direction of our focus, but changed the balance of our focus over that time).

ASPRAY: In terms of hiring your sales people what kind of background and experience did you look for?

McCORMACK: We looked very hard initially for people that had, hopefully had, well the three things I described earlier: accounting, data processing, and sales experience. We spun our wheels a little bit for a while hiring people that had no sales experience. We would take accounting or we would take data processing and try to teach the other two. But it's easier really to go back and find a professional salesman and teach them a product, teach them the data processing and the application side that you need. Plus you find that when people are out in the field after about ten full presentations in front of a bunch of sharp potential or prospective buyers they learn a great deal about your system and their requirements.

ASPRAY: I see.

McCORMACK: So that helps. Now we like to hire people that have sold before, and hopefully sold software before.

ASPRAY: Does that mean you have to pay a specially high premium in salaries for these people?

McCORMACK: We pay a lot of money for our sales plan. Our commission plan is very rich. Right now it has to be because you've got a new industry basically, and it is not overly populated with talented sales people. There are barely enough to go around. As a matter of fact, our sales force is constantly being raided or attempted to be raided by competitors or people who are starting up similar type businesses. They'd much rather go and find a known

quantity, successful salesman and have him change hats than start with the laborious process of training and training someone that's a question mark. So we have a rich compensation plan that over time will tone down; but that won't happen until the industry matures and the growth curve starts to flatten out near the top. I don't mean to categorize people this way, but the sales effort or the sales people might be looked upon more as a commodity that you hire as opposed to a specialist that you hire.

ASPRAY: Sure.

McCORMACK: So we have people now that make over 200 thousand dollars a year selling software. Our competitors have the same situation.

ASPRAY: You've mentioned in passing a number of times training. What kinds of training programs or what kind of training do you give to new employees?

McCORMACK: We have a training function; unfortunately it's not as well budgeted or funded as we'd like to see it. We offer training in accounting to employees we offer training and data processing, programming. The interpersonal skills like listening, how to listen effectively, how to speak effectively. We offer training on our products. We have a qualification process or a certification process for our sales people where they have to pass a written test on the product that asks some four of five hundred questions on it.

ASPRAY: I see.

McCORMACK: Before they can go on quota they have to be certified on the product. They also have to pass a presentation skills review by their peers. In other words they'll make a presentation on a product to other sales people and they'll get graded positively or negatively. Until they get a positive one we don't put them in front of anybody and they can't earn quota, commission quota. We use some of the outside schools too, AMA sometimes or different programs that are coming through.

ASPRAY: I'm not familiar with what AMA is.

McCORMACK: It's American Management Association. I believe they are a not-for-profit organization based in New York. They give a lot of training courses there on different topics: management, skills, or accounting, or whatever have you. Some of the sessions are worthwhile. We've sent people to them. So that's it. I should say to add to that we have contracts with some of the videotape education companies like Eduware or Deltec that produce educational tapes that you can buy. You either buy a specific tape or buy 30 hours worth of training on a given program that are also available to our people to take at work.

ASPRAY: Can you tell me something about your competitors over time? Who were they? How have they changed over time?

McCORMACK: It has changed over time. When we first started out our major competitors were MSA (Management Science American of Atlanta), Informatics had an accounting product line. Software International was a major competitor. University Computing was a major competitor, and that's shifted. It's shifted quite a bit now. UCC mostly is in banking. They do have products in our application areas, but they don't compete well with us. They've not stayed abreast of the pace of technology in the accounting application areas. Informatics suffered from the fact that their accounting application division was just that, it was a division within a company that was widely diversified in other areas. I felt that the demise of their accounting products division was for that reason. Here we are with a full management team totally focused on an area that only represents a division to them. I don't think it got the same type of attention that ours did.

ASPRAY: I see.

McCORMACK: They wound up selling it off to a couple of insiders who have since resold it to somebody else. To Storage Technology as a matter of fact. So they're gone. UCC is not a real presence in our field anymore. Software

International since they were acquired by General Electric Information Services has seemed to fall on bad times. Their growth has been negative for the last two years I believe. When we were at 26 million that was the same year that they were at 26 million. When we went to 38 they went to 30. We went to 58 and they went, I think, down to 22.

ASPRAY: I see.

McCORMACK: I'm guessing a little bit on that down-swing, but they are having their problems. So UCC and Informatics are gone. UCC and SI are not effective competitors as they once were. MSA still out there and still is an effective competitor. We now have Cullinet in the business and we see them. There are other companies too that have one or two or three products that will not compete across our full product range. They get a certain share of the business in from the west coast. But the ones that I see, I think the "big three" if you will, that are going to be slugging it out in the accounting application field are McCormack & Dodge, MSA, and Cullinet. That's what seems to have evolved.

ASPRAY: What kind of relationship have you had with IBM?

McCORMACK: It's been kind of an on-and-off thing. We both left IBM. We have people from IBM. We've purchased some equipment from IBM, not the bulk of it for sure; but we have purchased some. We've had conversations in White Plains with them the last several years about what they're doing and what we're doing. There seems to have been an attempt made on both sides to be aware of what each other is doing and to be friendly--non-hostile if you will; maybe friendly is the wrong word.

ASPRAY: Yes.

McCORMACK: That may change now that we are making a major investment in the large IBM equipment. Although they may just turn around and enter our business. I know they would like to be in it. It may happen that they will do that.

ASPRAY: What effect would that have on your company, do you think, if they were to enter the business?

McCORMACK: I don't know. One thing it would hurt is in their new account business. If they sell a 4300 to somebody that didn't have any equipment before, if they have our type of products, in all likelihood that the sale of the hardware and the software could be consummated before we even know there's hardware in there.

ASPRAY: Yes.

McCORMACK: That could be an advantage to them. Knowing who the higher prospect is, having a better fix on where all their hardware is. We don't know. We have mailing lists, but they're probably 85 percent effective. They'll have 100 percent effective addresses and sites that are potential purchases of software. Frankly, I think they'll have a difficult time competing with us. We're specialists in this niche area and an IBM hardware salesman is going to have a tough time being trained in it too. If an IBM hardware salesman wants to come to work for us selling software, we just don't encourage him to come because all of a sudden he's got to learn a whole bunch of accounting, a whole bunch of data processing that he doesn't know. He's in a different frame of reference and we find that they're not very effective selling sophisticated software. So I think they'll have a tough time putting together a sales force. They'll have a real tough time competing with our commissions rate. I don't think IBM wants to pay a software salesman 200,000 dollars a year for having a successful year. I don't know that they'll like the support requirement. It's a very much of a service oriented business. We have thousands of phone calls come in per month. We teach probably 10,000 or 12,000 people that will physically come to Boston and go through course training here this year.

ASPRAY: I see.

McCORMACK: It's not something that you just jump in the water and you're there. It takes a lot of background, a lot of expertise and I think you have to grow it. Put it this way. I don't mean to be cavalier about it, but I'm not afraid of them doing that for logical reasons I think that make sense.

ASPRAY: You'd mentioned your advertising campaign earlier. Can you tell me something about how it has changed over time? Where did you advertise? Who have you used? Why did you choose them? What kind of message did you want to get out in your advertising?

McCORMACK: Well, what we were trying to get was recognition. MSA was the biggest. Early on it was getting a lot of... They were always on the back page of *Computerworld*, etcetera. When you look at these polls inquiring, do you recognize this software company and that one, we were always well down the poll. So our first effort when we started doing some serious advertising was really recognition, image building. We started buying the back page of *Computerworld* instead of the middle pages. Our main vehicle was *Computerworld* because that seemed to be the major trade paper that was around. We've gradually grown over a period of years so that we started hitting Datamation. We had some of the National Association of Accountants publications, but they were totally non-effective and we stopped that immediately. It just didn't do anything. We started moving into other publications as they arrived, like *Information System News* now and some of the other software publications, I think it's *Software News*. That's one. And all of the tabloid-type trade papers that are out. We're also now advertising in the *Wall Street Journal*, and *Business Week* as well. It's very expensive to do this, those pages in the *Journal* and *Business Week*. They're very expensive to buy. So we are starting to test the water and do that so we'll be again a more widely known name. Of course it helps to be part of Dunn & Bradstreet, which you know we are now, we were acquired by them last May.

ASPRAY: I didn't know that.

McCORMACK: You didn't know.

ASPRAY: I see.

McCORMACK: Last May, May 8th I believe it was, we closed the deal and sold the company to them.

ASPRAY: You'd been privately held up until that time?

McCORMACK: Yes. We're looking at the option of going public or I guess I'd should say we were pretty much planning going public when we were approached by Dunn & Bradstreet in November of 1981. We weren't too interested. As it happened, throughout 1982 Dunn & Bradstreet stayed close and we did keep talking with them. We also talked with other companies that came through. We were being sought after in that time-frame by companies like Westinghouse. I talked to them. I talked to Prentice Hall, H & R Block, Anacomp, Control Data, McGraw Hill. All these companies came through looking to acquire software companies. The more of them that I talked to, the better Dunn & Bradstreet was looking. I wound up categorizing acquirers into two main groupings: one is managing acquirers and the other is investing acquirers. Everybody I looked at seemed to be a managing acquirer, in other words they were going to come in and basically you were going to be told what to do and what not to do. I saw a fair amount of interference in our future plans happening under most of these scenarios. Dunn & Bradstreet is not that way; they're an investing acquirer. They have 26,000 people running, I don't know, maybe several dozen businesses throughout the world. They have their headquarters in New York with 299 people there. That by itself says that they're not even staffed to interfere with their divisions or subsidiaries. Plus they said they weren't, and we felt they had a lot of integrity--which, in fact, they do. So we thought they would leave us alone. One because they said so, and two because we didn't think they could if they wanted to interfere. It's been a good relationship and excellent. They have been very anxious to fund different investment projects that we want to make. They'll fund an advertising program to introduce a new product or technology, and so forth. And they're sort of arm's length. They're helping us rather than directing us if you will. So I'm not unhappy.

TAPE 2/SIDE 1

ASPRAY: How has your business changed from the Dunn & Bradstreet acquisition?

McCORMACK: None really. We've had access to resources such as cash, outside consulting that Dunn &

Bradstreet has on a retention basis. Their divisions are all using our software now, which is nice. We have access to skills that we don't have internally through corporate offices, e.g. people that are good number crunchers or good acquisition advisors, etcetera. They have not been camped on our doorstep. We do a monthly written status review and then spend a day a month going over that with the individual that we report to in Dunn & Bradstreet. He's a group vice president and easy to work with. I'd say there have been no changes. The changes that have happened mostly are caused by M&D by itself, the fact that it's growth has taken it to where it's no longer a little company. It's a big company. It uses a lot of space, a lot of resources. We'll spend 80,000,000 dollars running the business this year. It's gotten large. It's a big business and it has to have all the controls and processes and operational methods that go with a big company. You know we have a lot of memos now that we never used to have. We have distribution lists for the memos that we never use to have, and so on. Communication becomes a much more formalized process as does controlling what happens. Personally it's not as much fun as it used to be. I left GM which is a huge company. I left Coopers and Lybrand which is a large company in it's field. And I left IBM. A lot of the reasons I left were bigness and inability to affect policy at all or to affect it quickly.

ASPRAY: I see.

McCORMACK: Now that's the way M&D is. I compare it to driving a 14 foot motor boat. You can pretty much shift it in and out wherever you want and on whatever course you want, as opposed to a big steamship where you have to plan the move that's two miles down the road. You have to plan it now to make it happen then to get everything coordinated for it. So there are those differences which I think are major in terms of how you deal with your job on a day-to-day basis.

ASPRAY: In terms of product planning, how did you determine what your new products were going to be? Was it just based upon your knowledge and Frank Dodge's knowledge of the accounting field?

McCORMACK: Yes, some of it was with the market that we saw out there. Fixed Assets. I told you how that happened. We saw an empty spot there and jumped in it. We did Accounts Payable next because we thought it was

a popular product and I knew Accounts Payable. I knew we could get one. Also, while Frank worked for TI, his project was developing and implementing an accounts payable system for TI. So we had knowledge of it. We went to that one next. Then we thought GL [general ledger] was the next logical one after that. We had come to realize that there was a much bigger market for that system. Also, it was twice the price of the smaller applications. No more sophisticated but in the view of the prospect that's buying it, it had a larger impact on its organization and therefore it was worth more money. So that's why I went to GL. Then after that it was filling out the line. Purchase Order was a complementary product at AP in a functional business sense, as was Capitol Project Accounting which was a construction in progress, would relate to Fixed Assets. Then our awareness of the human resource market became more enlightened and we went after that one next. That and Accounts Receivable, we felt those were the two products that would round us out--which in fact they would. We tried a development effort on both of them which failed miserably due to some unavoidably bad hiring. I won't say unavoidably - one was, one wasn't. But they were two project leaders that failed miserably on those products, and we wasted a lot of money getting nothing accomplished. We wound up acquiring the Payroll Personnel System in 1982 which is getting to be what we thought it would be. It's a big market, a very expensive system, coming along quite well. Receivables we tried to acquire several times, but never really could pull it off. Then we came up with our new millennium technology as a development tool. We decided to develop our own receivable system under that, so that's happening now. There is not a huge market for Accounts Receivable, but we're selling more and more full product line now; and if you have that one product missing from the full product line, they'll go to someone else that does have it. So there's that kind of pressure to do that.

ASPRAY: I see. Can you tell me a little bit about how your job and Frank Dodge's job have worked out? How have you broken down the task?

McCORMACK: Well, it was difficult. That's been a difficult task over the years. Initially we both did everything up and through--no I shouldn't say that. I did more design and did more selling and more writing. Frank did more coding and testing, and the technical side. But then in 1973, at the end of 1973 going into 1974, we had two products. I couldn't sell both of them full country-wide, so Frank wound up taking one and I took the other. So then we were

basically functioning as two product managers, selling and marketing those products and also defining what would happen to them in terms of enhancements going down the road. So we did that for a while. Then as we stopped selling, we broke the company down into separate functions where, well, Frank might have sales and the product groups, and I might have accounting and some other function, whatever. I always handled the accounting, always handled the financial aspect of the company. So we broke it down functionally. In other words, Frank did certain areas and I did other areas. Then it got to a point where the company was too big for that to really work well because there was no one source where all the information was flowing up into. It was flowing up two directions. Frank and I were both very busy and frequently we didn't get to talk to each other; and so one end didn't know what the other end was doing.

ASPRAY: I see.

McCORMACK: So in 1980 we reorganized. Up until that time I was president and chief executive officer. Frank was executive vice president. So to make it work the way I just described I wanted it to work, Frank became president and COO and I became chairman and CEO. My functions from then on became more external and future oriented and Frank's became internal and current-oriented. So, from that point on, Frank was running the day-to-day operation of the company. He still does that and I still am more outside.

ASPRAY: I see.

McCORMACK: As a matter of fact more so than ever really removed from the day- to-day operation.

ASPRAY: In the production of new products, who was responsible for design and programming as the company started to build, to grow?

McCORMACK: Well initially I was design, Frank was programming as were some other people. Then gradually, on a product-by-product basis, that got turned over to product managers. We hired a woman that came in to work on

support and the Fixed Asset product in 1974. Then about a year later we made her product manager and I removed myself from it. It was then her product. She was responsible for seeing that it was up to date, competitive, functional, that its users were happy, and so on. The same thing happened on Accounts Payable over a period of time. Both systems were designed inside by us. We hired a guy to come in and join us to do the GL system. This was John Landry, who is senior vice president of our research and development right now. He did a whiz-bang job of it and became an expert in data processing. He had an accounting background anyway. Right now he's in charge of R&D; new products are under his wing. We don't have an immense R&D program. It's intense, not immense. Our R&D staff is maybe six to eight people. You don't produce a product by throwing an army of people and a ton of money at it. You produce it by finding out who are those people in your organization who are the premiere coders. We have programmers that we pay 60-70 thousand dollars to because they are that good. They're worth ten 20 thousand dollar a year programmers in terms of the code that they put out. It's right, it's clean, it's dependable and so on and it tests out early.

ASPRAY: Sure.

McCORMACK: So we have found a nucleus of these real heavy weight programmers that we keep as happy as we can and they keep turning out the code. That code then gets passed on to product groups that are groups that are formed to support the product, and our user base. They maintain the product from that point on. So that's basically how we do it nowadays. We didn't always; it was a mish-mash in the early days. We're a little more sophisticated than we were.

ASPRAY: I don't want to keep you, so the last question I'd like to ask you about is funding of the company over time. You mentioned to me early in our discussion the severe financial problems that you had when you were first getting started. As you started to grow very rapidly were there serious funding problems?

McCORMACK: Well, yes, we were always short of money. We dealt with it by borrowing. Initially we had a line with the bank--a person at the First National Bank of Boston--and the line kept growing. We ran into a hitch there at

one point. It was mostly a personality hitch, but we moved away from them and went to the Bank of New England, which was then New England Merchants. They individually had charged that their high-tech area was more high-tech oriented than what we were dealing with, understood what software was, and so forth. We established a new line of credit that before our acquisition by Dunn & Bradstreet was at about a 5,000,000 dollar level. We did our funding that way. We also did two rounds of venture capital, one in 1980 and one in 1981. The one in 1980 frankly was more to get money for principals. We did a 3,500,000 dollar placement of which only 500,000 went into the company. In 1981 we brought 2.6 million dollars of additional financing straight into the company. So it was a 3.1 million dollar capital infusion on top of the 8200 dollars Frank and I put in way back, and then bank-borrowing. Right now our bank is Dunn & Bradstreet and I think we might be borrowed into about a million dollars worth of cash from them, which is not very much at all for an 88 million dollar revenue business.

ASPRAY: Right.

McCORMACK: But cash is always tricky with us. There is a revenue skew that if you took the 4 quarters it's 10, 20, 20 and 50 percent of our business. We did 37 percent of 1983 in December. So it's just real ski-slope type of skew. We have a big bubble of cash coming in in December, January, February, and March which bleeds down so we're borrowing money going into the mid-summer and fall months, and then it replenishes it with the next, Sometimes we think we are in the Christmas Tree business.

ASPRAY: Yes. Well, thank you very much.

END OF INTERVIEW