Oral History of John B. Landry

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Recorded: August 30, 2000
Wayland, Massachusetts

CHM Reference number: X5747.2010

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John B. Landry

Conducted by Luanne Johnson

Abstract: John Landry describes how he got into the software business and became one of the earliest employees at McCormack & Dodge (M & D). He describes how he led the team that developed Millennium at M & D and his views on the advantages of small development teams. He talks about how M & D was internally financed until they finally sought venture capital in 1982 and how the company was subsequently sold to Dun & Bradstreet. He also discusses his participation in ADAPSO and the Massachusetts Software Council and contrasts the benefits he derived from the two organizations.

[Editor's Note: This interview was recorded in Mr. Landry's home in Wayland, Massachusetts.]

Background and Education

Luanne Johnson: I've been interested in the history of the software industry for a long time, but Burt [Grad] and I just recently formed The Software History Center so we can pursue it in an organized way. What made it all come together was that there was an article in *Fortune* magazine last November – one of those "end of the millennium" articles – which listed the top four business men of the 20th century. One of them was Bill Gates. In the article about Bill Gates, it stated that the most important thing Gates had done was not the technology he developed but the fact that, prior to Microsoft, there were no pure software companies.

John B. Landry: Oh my God.

Johnson: I've become aware over the last couple of years that almost no one is researching and documenting the early software industry. The PC industry has been very well covered with a lot of books written about it but the egregious error on the part of the writer of the *Fortune* article just made it that much more apparent that there hasn't been any major work done on the early software industry because otherwise his research would have found it and he wouldn't be so ignorant about it.

The fact that that article was so wrong gave me a good basis for asking for funding to do some research and document the origins of the industry. We got some seed money from Computer Associates in honor of their 25th anniversary celebration and that allowed us to get incorporated and put some plans together to preserve the history of the software industry.

We're focusing on two primary things. One is to identify where there are records from early companies in the industry, because once the companies are gone, their records are, for the most part, in the personal files of people who worked for them. When we can find those records, we're asking people not to throw them out but to donate them to the Babbage Institute at the University of Minnesota or some other institution that can preserve them in perpetuity.

The other piece of it is to capture the personal recollections of people who were there at the time. And that's really important because so many of the contemporary records of those companies have disappeared and so what we know about that period in time is what people can recall.

Landry: Which is less and less all the time.

(Laughter)

Johnson: Right. That's why we've got to do this now, John. So, what I want from you is to answer some questions about your personal background and then how you got into this field and some of the various companies that you've been involved with. In your case, you've also been involved with some significant technological developments too, which not everybody has. Could you start with your background and education and how you got to the point where you got into this business?

Landry: Totally by accident. I'll be honest. In short, I grew up in Illinois outside Chicago. My father was a banker who taught me how the stock market worked in about fifth grade. I started trading stocks with a buddy of mine in the sixth grade and became an addict of the stock market. I self-taught myself all the traders and their techniques and all that sort of stuff. Traded throughout high school enough to buy a 327 Malibu Super Sport and a 427 Corvette. I paid half of my college education, but cars were more important. I went to Europe twice on the winnings and I was typically a contrarian. I would be buying gold, which was a converse deal back then, but made a lot of money.

I figured this is what I was going to do, got accepted at some very good schools, and went to Babson College. Babson was founded by Roger Babson who was one of the best stock market traders. I figured I was going to learn more about stock market trading.

Johnson: Okay, I didn't know that.

Landry: As it turns out, it was at that time much more of an accounting and finance school. It was where people typically went before Harvard B School became popular. Rich people would send their kids to Harvard for an education and then to Babson to learn business.

Johnson: They've got an entrepreneurial focus now, don't they?.

Landry: Yes, they're No. 1. I'm on the board of trustees. It's an excellent place, much better than it was when I was there. But nonetheless I learned accounting there. It was 1969 when I graduated. I was 1A for Vietnam, I mean, it was a bad time. I went into the National Guard. In the National Guard, you had to wait a year before you could go on active duty so I washed cars with my college degree and then got married and had a child.

I did my six months at Fort Jackson, South Carolina, came out, met a guy I went to school with who said, "Shawmut Bank is hiring in the accounting department, do you want me to see if I can get you an interview?" I said, "Sure." Two days later, I was working in the accounting department. There were 80,000 brokers out on the street in 1969 so there was no hope of going into the investment business. So, I thought, okay, I'll start there and see what happens.

It turns out two weeks later, I got a call from the deputy controller who said, "We've just fired the only guy that was running an automated system in the accounting department." It was a system that was built by Peat Marwick and Mitchell. It was a responsibility accounting system. It was a first class budgeting and expense system that recorded expenses and payroll.

Johnson: And what was it running on?

Landry: It was an IBM Mainframe 360, probably a Model 50.

Johnson: When was this?

Landry: This was 1971. And so he says," I've looked at the backgrounds of all the people in this department and you're the only one that had a computer course." Which is exactly the number I had.

(Laughter)

Johnson: You'd had one computer course?

Landry: Right. And he says, "You did well and you got the job sink or swim." And I said, "Oh, my God." So I got the job and was quite fascinated by the combination of accounting and computers with my kind of geeky background.

Johnson: What was that system written in?

Landry: Cobol. But at the time, I didn't even know what question to ask. But it wound up being a very good system because it affected all parts of the bank. It was the budget control system at a time when budget control systems were just coming out. There were no general ledgers at that time that you could buy. Software International had one, to a degree, but that didn't work for banks.

So I wound up eating it up and when the users would ask for enhancements, I'd go over to the DP guys – because I was a user guy, not a DP guy – and they'd say, "Oh, no, you can't do that." Eventually, I got fed up with it. I decided, okay, I'll find out how this stuff is written. I taught myself Cobol and when they'd tell me it couldn't be done, I'd say, "Let's go to the code. Here's the segment that I want you to work on." I eventually started writing it myself and handing it to the programmers to insert into the program.

As it turns out, it was a good system, but it didn't do enough. It didn't do ledger functionality and I was getting involved with ledger.

Johnson: I assume Peat Marwick was long gone.

Landry: Oh, yes, they were gone. And the DP people said, "It's too expensive to develop a ledger system." Same old stuff. So I started looking at alternatives and software was just starting to emerge as an alternative to writing it in-house. It turned out that I got the responsibility for buying software for the bank, not just for accounting, for everything, commercial loans, installment loans, all that stuff.

And wound up bringing guys in like John Imlay [of MSA] and Charlie Seagraves of Hogan Systems. He was a first class sales guy. And a bunch of other people. They wanted this deal and one of the reasons they wanted it is because I was very familiar with the application and had done a lot of research. I knew which systems had the right functionality and which didn't. And so they presumed that: one, if they got the business, they'd get a good reference and two, if they didn't get the business, they'd get a lousy reference. So, they wound up fighting pretty hard over the Shawmut Bank ledger system.

Johnson: Where was Shawmut Bank located?

Landry: Shawmut was in Boston. It was the second largest bank in Boston at that point and then it got bought by Fleet and then Fleet bought Bank Boston. Anyway, I wound up going to my first user meetings. Well, user meetings back then were pretty raucous events. I mean, I'm 24 and I'm thinking oh, man, this is terrific. I quickly came to the conclusion *this* is a hell of a lot more fun than the bank. I wound up buying the UCC system and installed it. It worked

beautifully, we were one of their best references, The guys at MSA, Howard Smith, Denny Vohs, etc., hate me to this day for doing that because they remember that's how it started.

I wound up getting a job offer from UCC to move to Dallas and run their customer service operation. By that time, I was single. I went down to Dallas, did all the interviews, was really impressed with their building and their operation, and got a good offer.

Meanwhile, my father thought I was doing something illegal. He could never figure out how you could charge l$100,000 for a reel of tape and two books. Hey, what else is in that box?

Developing General Ledger for M & D

But about that time, I went to my second UCC user meeting. MSA had a complete product line by that time. They had fixed assets, payables etc.. They all stunk, but nonetheless, they had them and they could sell like crazy whereas UCC had much better software but didn't sell quite as well because their product line was too limited. They didn't have fixed assets, didn't have payables. So, UCC affiliated with McCormack & Dodge, which at that time just had fixed assets and were building payables. Jim McCormack was at the UCC user meeting and I was in the market for fixed assets and payables for the bank. Jim says, "Well, why don't we go have a beer and we talk about it?" We go have a beer and he says, "I don't care what you want to buy. I want you to come here and write the general ledger system."

I thought, "Wow, this is pretty interesting." I had already accepted the offer with UCC to run customer service, but when this came about, this sounded like a much better opportunity. It was much more interesting and it was local and I was really resisting going to Dallas. So I said, "Done, let's go." Well, there were five people at McCormack & Dodge: McCormack, Dodge, Dudley Clark, a secretary, and I was No. 5.

So I went to work in a one-room office in Newton and started analyzing general ledger systems. Obviously, I knew MSA's and UCC's well. I looked at Informatics and Software International and essentially did a synthesis of everything I thought was good about those systems plus what I thought was missing in all of them.

And two and a half years later, we came out with the General Ledger System for McCormack & Dodge. We only had a five-person programming staff, it was an all Cobol system, but it was, even in retrospect, a first class piece of software.

Johnson: At that time, they were selling the Fixed Assets System.

Landry: Right, and Payables. I actually got involved in the later design of Payable because the original design wasn't very good. They subsequently had other problems with

Payables, like it couldn't write checks. So, in any case, Ledger came out and to be perfectly honest, I didn't know if it was going to sell across the street. But it went like freaking hotcakes.

Johnson: So, that would've been in 1975?

Landry: No, we came out with Ledger in 1976. Late 1973 is when I started writing it.

Johnson: And that was just at the point when people were finally starting to trust software products to do something as comprehensive as general ledger.

Landry: Right, and immediately we were hitting very large companies. William B. Riley Company was the first user. It was a coffee company in New Orleans and why they decided they needed the system was beyond me, but nonetheless, they were the first user. And then I think it was Anaconda Copper and then Teladyne. I can't remember which ones were next but it went very quickly.

Johnson: Was Jim doing the selling of the Ledger System?

Landry: By that time we had hired a guy named Bob Wilbur, who had a wonderful academic background, but turned out to have zero people skills. We subsequently brought in a guy named Maurice Giguere and Maurice was a great salesman. He started selling it himself and then was an incredibly aggressive hirer of the competition's sales people. We were getting all the best UCC salesmen and all the best MSA salesmen. They were losing them and they didn't like it.

And, of course, Ledger is the draw application that pulls all the other ones in. So McCormack & Dodge just started going on a tear. Like I said, we were five people when I started and I believe we had 1,600 at the point that we sold the company. So, Ledger did very, very well and I became head of Technology, Executive Vice President, whatever. I was head of development.

Developing the Online System Millennium

So these were batch systems and they were good batch systems, but nonetheless they were batch systems and, you know, the wave that was coming was online. The question was what we were going to do about it. So I spun off a group and hired a couple new guys in who were online experts and essentially said to Dudley, who was the guy who was running support, "You've now got responsibility for the old systems. I'm going to go and try to figure out what we're going to do on the online stuff." Most everybody else was essentially taking an approach of taking what they had and putting an online front end on it.

Johnson: I'm very familiar with that. It failed for me.

(Laughter)

Landry: Well, I thought it was a great opportunity to do something different. The thing with packaged software, although you parameterized yourself to death, is that parameterizing and online was not something that people thought could be done. I thought from a technical perspective that you could do that and that you could give much more power to the user to describe how they wanted the system to work and feel. And that on top of it, online could be a wonderful device for unifying multiple different systems as far as the user was concerned.

Essentially you could eliminate the borders where, you know, here's your cost center account, you're over budget, okay, click, now you're down one level, you're looking at accounting detail for that particular account. Part of that is a Payables transaction that's now been fed to Ledger. Well, let's see what the detail of the Payables transaction is and trace it down to the purchasing system. Whereas in the batch days, those were all very much in separate towers, online I thought could be a very interesting vehicle to unify those. So instead of just extending the existing systems, I wanted to create a kind of a shell that ran across the systems and that's what we did. That was Millennium.

And we also wanted to provide such things as very powerful search capabilities. In the old days, if you didn't know the key to the record you were looking for, you'd never find it. At that time, the database systems were starting to emerge, but they were all different and their search capabilities were pretty primitive because most of the paths that you would take had to be pre-defined. Whereas I was saying, well, what if you wanted to make a more random search so that whatever the user wanted to chase, he could go chase.

So we wound up building our own database into Millennium. It was an inverted list database that for the most part looked like Datacomm's system in terms of its architecture. Inverted list is a very, very effective way of doing searching. It's not that efficient to do updating with, but it provides very, very high-speed queries and very low resource utilization on the computer.

A lot of people to this day, I don't think realize that we actually built a full-blown database system into Millennium because we couldn't count on the ones that were there and they were going to be all different. So therefore we had to kind of neutralize it and we could layer our system on top of an existing database system, but for the most part, we wouldn't optimize around the database system because there wasn't a big enough market for any one database system to spend the amount of money that it would take to optimize that system. Only one company, frankly, optimized their own database system and that was Cullinet, which optimized around their own database system because they could do that. We were a general-purpose application.

So that was the beginning of Millennium. Again, I think we took two plus years to develop it. We had actually preceded it with a version of just the query system, which used this inverted list

database system, which we actually produced as a separate product, which was called Hilite. Hilite was a query system that layered on top of the existing McCormack & Dodge application systems, but didn't update its database in real time. You ran a batch job to update the database and then you did the queries against that.

Millennium did update the database in real time and so it was a very powerful system. As arrogant as this sounds, sometimes facilities like that are wasted on the user. They don't get it, you know, and a lot of it has to do with who the user is. I mean, if there is a perception that accounting systems are for the accounting clerks, then the only thing they want to know is did the books balance. They're never going to discover that you have this incredible repository of information there that you could go after.

So, Millennium was introduced in late 1982, I believe, or early 1983. It did very well. It redefined the whole online space, it put MSA really to bed. They had an outstanding sales force. Software sales is an area that I think we all respect quite a bit. I mean, it's certainly a discipline all of its own, and they were tremendous salesmen.

We found, for example, that the women salesmen were by far the best. Our No. 1 salesmen almost every year was a woman. At MSA, that didn't seem to be the case, it was the guys. And Howard Smith was one of their best salesmen and then one of their best sales managers. At McCormack & Dodge, we wound up just clocking MSA in every region of the country except one. We could not crack the West Coast because that was Howard's region and the reason was because Howard was ultimate schmoozer. You know, let's go out, I got tickets for the Lakers' game, front row, by the cheerleaders. Eventually, though, with Millennium, we got him and he essentially got out of the business at that time.

Partnering with Lotus

So that became the second knee in the curve for M & D at that point. And then we hooked up with Lotus. McCormack & Dodge was the second licensee of Lotus 1-2-3. We did a deal on Lotus 1-2-3 to bundle it together with PC Link. When we built Millennium, we built the foundation that PCs could talk to the system in the same way that the user would talk to the system. Essentially, it would dialogue with it, but it would be doing it automatically and, therefore, with all that powerful query stuff, we could essentially bring down to the PC anything that was queriable, which was really good.

Obviously in the case of accounting systems where that was going to go was then Lotus 1-2-3. So we bundled something called the Pizza Pack, it was PC Link and included 1-2-3, the software to do the downloading and something that people back then thought was really scary, which was uploading. We could take a budget that was done in 1-2-3 and push it up to the database by emulating somebody putting it into Millennium's screens. We had that all done and that turned out to be, again, very, very popular.

At one time, when there were a lot of independent PC-linked applications, we were No. 2 and we weren't independent. I mean, we were selling it as kind of an add-on to our application. So, it went very well and the company did extraordinarily well during that time. In Massachusetts, we were the second fastest growing software company, the first being, of course, Lotus, which was printing money back then.

Financing McCormack & Dodge

So, 1983 we introduced it and in 1985 we got the knock on the door from Dun & Bradstreet saying it's time to for you guys to sell. Most of McCormack & Dodge's history was bootstrap, we didn't raise venture capital until about 1982.

Johnson: So it was all internally financed?

Landry: Yes, we essentially financed it ourselves. I mean, we made the money. It wasn't that it was a lot of money that was coming from any one of us, it was just we funded it on the profits. Not profits, really, but cash flow because of the way accounting works. It wasn't until 1982, I think, that we raised money. We raised it from Fidelity, Greylock and TA and the money went, believe it or not, not to the company, but to the stockholders: me, Jim, Dudley and Frank. There was no big stock option program or anything, it was owned by the four of us.

Back then it was acceptable that when the venture guys came in, they wanted a piece of this company so much that it was a liquidity play for the owners. So, they were buying the stock from us and there was no cash that went into the company. That's not the way it works anymore. I loved those days, but of course, we sold it theoretically cheap, you know, because then we got acquired. And valuations weren't quite as nuts as they certainly are now.

It's funny, we sold the company for about $85 million. By today's standard, that's like, are you kidding, that's a rounding error. By the standards in those days, it was huge. Why would anybody pay that much money for a software company?

Johnson: One of the things that I always touch on in my interviews is the funding issue because there really weren't VCs out there.

Landry: Yes, they were just starting in some ways.

Johnson: Yes, but in the 1970s, there was nothing out there.

I interviewed both Jim and Frank years ago and they told me the story about how they had originally priced the Fixed Assets System written in RPG really low, $600, in order to sell

enough copies to pay off a debt so they could cleanly go out of business. But then it really took off.

Landry: Well, actually, there's a corollary story there.

Johnson: What is the corollary story?

Landry: They didn't sell them at $600. The raised the price to $2,500 and they sold them like hotcakes because there was a perception that the value wasn't there.

Johnson: Well, they did sell at least one at $600.

Landry: Well, yes, they did, but they found that the demand went up when they raised the price and it was a good lesson.

Johnson: At that time, I was working with a client on a joint development project where the client was paying for development of an accounts payable system. I didn't have my company yet, it was the company I worked for before that. The accountants at the company said they had to have a fixed assets system and the DP manager had been trying to get them to agree on the specs, but they couldn't come up with a definition of what they wanted.

So, he paid $600 for the M&D RPG Fixed Assets system. He put a bunch of data in it, ran the reports and took them into the accountants and said, "Okay, I bought a system, this is what you're going to get." They went crazy and said, "This isn't what we want." They wrote all over the reports in red pencil and he said, "Fine, now I've got my specifications."

Landry: Is that right?

(Laughter)

Johnson: Anyway, so many people during that era, the 1960s and 1970s, weren't able to finance entirely from their own cash flow so they were taking out second and third mortgages on their homes to finance their start-up companies. There was a big run up in real estate values in the 1970s which helped to finance the beginning of the software industry.

Landry: That's probably true.

Johnson: But what you're saying is that M & D never had to do that because they were able to generate enough cash to finance their growth.

Landry: Certainly I didn't. I mean, there wasn't a dime of capital that I contributed to M & D. The lore is that Jim and Frank started with $2,500 and I don't think they put in any of their own money after that.

Johnson: Well, that's quite unusual.

Landry: They had struggled for a long time though.

Johnson: So when they hired you, they had only the Fixed Assets System.

Landry: Yes, they were just coming out with Payables.

Johnson: Were they doing any custom programming?

Landry: They had started as a consulting company. They got into software because they started thinking that was a better business, but from 1969 to 1972, they hadn't really grown at all. I was the fifth guy so they were right on the edge. I'm sure they weren't making a lot of money and Jim probably had four kids at that point.

Johnson: That's interesting. Somebody told me that the situation in the early 1970s was that if a venture capitalist saw a software guy coming down the street, he'd cross to the other side. It was a missed opportunity for the investors and for the software companies.

Landry: Greylock was the lead in the venture funding we did at M&D. To me, they're the Kleiner Perkins of the East Coast. They were the ones that led McCormack & Dodge so they have done spectacularly well. I think they're a good example of guys who were taking risks in businesses that really paid off big for them.

I have a lot of respect for Jim and Frank for founding the company. As time progressed, Jim got less and less involved. He didn't want to keep flying around the country and subsequently kind of divorced himself from the business. Frank was largely running the support area of the business, and they brought in Bob Weiler, who was No. 17 in the company.

The requirement back then, given that sales required a lot of schmoozing, was that a sales guy had to be able to hold his liquor. So there was a place called Callahan's in Needham, which was right down the street from where our offices were. Callahan's was renowned for serving drinks in a frat glass. You know, like the big 20-ounce tumbler and you could get a martini in one of those glasses. It wasn't exactly the best booze either. So, the pre-requisite was to take Bob to lunch and if at 4:00 if he was still on his feet, he had the job. Well, he had the job. We were pretty well tested.

(*Laughter)*

Bob was from Providence, with kind of a street fighting mentality, and just fired up. He became head of sales, marketing and support, and one of my best friends. I'm godfather to one of his kids. Bob and I were kind of ham and eggs with me running development and him running sales and marketing. And that relationship is one that I think is critical in a company. You never find it in the same person and if you can build a high degree of confidence and trust between those two functions, it's crucial to success.

Johnson: Which doesn't happen often.

Landry: And it doesn't happen often, right. I use that a lot in my boards to try to see that we get to that pairing because otherwise it can be a horror show. Subsequently, of course, we've been in four different companies together, including Lotus, in those same roles and it's really worked out. I think one of the reasons for the success of McCormack & Dodge was having that relationship established very tightly and that there wasn't a marketing guy saying, "Well, you didn't develop it right" and a development guy saying, "You don't know how to sell it right."

Johnson: Unfortunately, that happens too much.

Role of ADAPSO and the Massachusetts Software Council

One of the things that I think is interesting about the software industry is that it didn't really have a locus. There have been some sociological studies about Silicon Valley that indicate that it is so successful because of the geographic proximity of the companies. I think if there has been any place where there was some advantage of geographical proximity in the software industry, it was here in the Boston area.

When you look at the early companies, they were all over the place. Pansophic in Chicago, MSA down in Atlanta, ADR in New Jersey, Informatics in LA.

Landry: Software International is here, they're up in Andover. Cullinet obviously was here.

Johnson: Well, the Mass Software Council has been a very strong force in the industry.

Landry: Largely because the leader of it, Joyce [Plotkin], is a just a terror. She's wonderful. I really think the success of that group is largely because of her. She inspires people to do stuff that they would normally say, "Why am I doing this again? This is a lot of work and I'm not really getting anything out of it."

Johnson: Some people have told me that ADAPSO played the role of providing a "locus" by getting people together twice a year. And then, of course, the roundtables that grew out of that were another way that people could exchange knowledge and not have to learn everything from scratch.

Landry: It's also a networking vehicle. First of all getting to know your competition at a different level I think is very valuable. They're not evil people. Maybe they know something you could use. I mean, we used to engage in massive disinformation campaigns. I'd go out to dinner with Dennis Vohs, who was running development at MSA, and I'd tell him a whole bunch of bullshit that we were doing and some facts. And he'd tell me whole bunch of bullshit and some facts, And then we'd each go back and try to figure out which were the facts

So it used to be intellectually stimulating, it was like a poker game, but you also got to know the person. And, you know, occasionally you'd have talks about what do you think Cullinet's doing in this space where you start sharing stuff because you have a mutual enemy. So, that became very valuable.

I left McCormack & Dodge in 1985 and started a company called Distribution Management Systems with Weiler which we sold 18 months later to Cullinet. I went to Cullinet, stayed there a year and a half, and sold that to CA [Computer Associates]. Then started a company called Agility Systems, which was in the same space as Lotus Notes and wound up selling it to Dun & Bradstreet, largely via [John] Imlay and Jim Alberg, I don't know if you remember him, he was the lawyer.

Johnson: Yes, I remember him.

Landry: It was because of those relationships that I was able to make those deals and they all grew out of ADAPSO.

Johnson: This is really interesting because you're saying that one of the primary things was really getting to know your competitors both as people and as to what markets they were in. Software products companies, unlike professional services companies which had local or regional markets, were always in a national or international market so you needed a national association to meet your competitors . What do you get out of the Massachusetts Software Council since that doesn't give you the same opportunity to come up against your big competitors that aren't in the Massachusetts?

Landry: Well, to me it's very different as to what Mass Software's role is and what ADAPSO's role was for me personally. This is an opportunity to meet guys that are close by. I try to keep my board companies close by. I've got some that are not close by, but given this is a pretty much of a hotbed still, particularly for Internet stuff now, I want to build new relationships

with people that I don't know. And for the most part, Joyce does a very good job. I have been on the board of trustees for Mass Software forever. She does a very good job of putting what I would say are the players onto the board of trustees.

So, when you go to the board of trustees, you're there for the board of trustees, but you're also there because you want to get to know personally guys that you know what they do and you know what they're about, but you don't have a vehicle to get to know them. So, again, it's that networking piece, which I really think is underestimated.

Johnson: Okay, that's great.

Landry: That's one thing and the other thing that Joyce does is she does grab some of the best speakers. I mean, [Scott] McNeely, [Bill] Gates, and so you wind up going because you want to hear these guys talk and they're right in your backyard.

Johnson: Sure, and you can go hear these guys speak and be back in your office by 10 am. When the ADAPSO Board wanted to compete with the regional associations for members, that fact made it impossible to compete when what we had to offer was the ADAPSO conferences where you have to spend three days away from your office.

Landry: Right.

Johnson: There's been a lot of work done in the computer history field on how hardware technology was invented and evolved but not as much on software. And even less on the business side of software versus the software technology. What I'm interested in is how the technology creates business opportunities.

Landry: Business opportunities for the software company or business opportunities for the customer?

Johnson: Business opportunities for the software company. There's this incredible body of knowledge that's been developed over the years that continues to expand. It's a huge body of knowledge about how to use these digital devices to accomplish certain tasks.

An incredible amount of that knowledge is deployed within user organizations. There is a piece of that that becomes a business opportunity and what I'm interested in is how you structure a business model to make money from it.

For example, one piece of technology is the development of the Cobol compiler, and how that was developed is an important part of computer history. But if you've got a Cobol compiler and you know how to use it, you can create a service bureau, you can create a professional services

company, you can create a software products company, you can create a turnkey products company. How do people create those markets? How do they solve the underlying business issues in order to be profitable? That's the piece that I'm interested in focusing on.

Difficulty of Software Companies in Handling Transitions

Landry: The thing that is the most interesting for me is the transition points and what happened to the companies. If you live long enough, you get to see the same pattern over and over again and I can never quite understand why it works the way it does. It's the same thing we talked about on the transition from batch to online. There were a lot of companies that never made the turn. Infonational, a first-class company in the batch days, that absolutely disappeared. I mean, they vaporized.

I would say MSA never made the turn. They tried, but they never really achieved the dominance that they had. Fast forward a little bit to Cullinet. By the time we got acquired, and there was some question as to whether or not they should've even acquired us, but they had spent all their money on acquisitions that were not well conceived. But more specifically, they missed the turn on SQL database. They just missed it. They owned the market and they, dug their heels in and they just never made it and we sold it to CA.

I mean, if you just followed the Dun & Bradstreet line across, I know internally some of the thinking that went on. [Bob] Weissman [CEO of Dun & Bradstreet], when he acquired McCormack & Dodge, acquired it because Bain, the consulting firm, had their market share/market growth matrix and said, "Well, these are the portfolios that you want to get and this company's in there, so go buy the company." The whole deal on market share was a big thing. So what happened was they acquired McCormack & Dodge, and McCormack & Dodge flourished under Dun & Bradstreet until they bought MSA.

Why did they buy MSA? Well, they bought it because of market share. If McCormack & Dodge had this market share, we'll be the dominant player. Well, not in a technology business. It changes. You just essentially put yourself in the position of inability to change. So, you're going to probably die. They died. They still exist, but there're a remnant of themselves at GEAC and meanwhile, SAP comes out of Germany and becomes the lead player. How does this happen that these companies screwed this up?

So, it's astounding to me how many repetitions of that story have happened. And it's an interesting investing problem because it would seems to me – and what I continue to try to focus on – that the real opportunity lies in the point where the company goes from small to getting acquired and then get out. That's essentially been my history, but it seems like the more that I see, the more that that still continues to be the case and you wonder then why are those companies getting bought for so much money if the evidence is that they're going to go down, that they're not going to make it.

Johnson: What you're saying is really interested here, John, because I've always thought of the project strictly from the point of view of preserving the information for future historians. A hundred years from now, somebody's going to want to know how all this happened. But you're saying that tracking this information could have real relevance right now.

Landry: Sure, right, and I also think from an historical perspective, it's a theme that seems to present itself over and over again and from an academic perspective, it would be an interesting thing to research and document. It's not a pretty picture because there are a lot of disasters and you can look at it even from the personal perspectives.

You know, the people that were at ADAPSO were all major players. I don't think all of them have retired, but you don't see many of them anymore. I would've suspected that those guys would've been the players in the next waves as well and that's not the case. I don't know why that is.

I've got one other thing that I think is worth commenting on.

Johnson: Sure, tell me the other thing.

Landry: It's the size of development groups. I have always thought that the larger the development group, the less likely you're going to get anything done and all the innovative stuff seems to come out of small groups. My own personal experience is the innovative stuff came out of five- to six-person teams. When we did Domino for Lotus, that was a five-person team, which was kind of the Internet savior for Lotus.

And I think part of the problem is that you can innovate so nicely in that space with that degree of speed and communications and when it gets bigger, the geometry doesn't work. The number of communications grows exponentially and you spend all your times in meetings. Does that have a suppressive affect that causes the companies to fall out of bed because they're in a technology business at the end of the day and the small companies can always out innovate them?

And the question is: can you get that innovation back into a large company? We've gone through the whole intrapreneurship exercise and nothing seems to work. So, is it a given that it's mathematically impossible to make a large company be able to sustain itself in what you would call disruptive technology changes like batch to online? Some companies were able to do it, and I think that would be interesting to research. But, again, the way we did it at McCormack & Dodge was we spun off a very small team and left the rest of them out. You guys run the rest of the company, we're over here and it's going to take some radical surgery. I mean, spotting the disruption, I guess, is the thing and reacting to it is a big part of that.

Johnson: Very interesting. Okay. I've covered what I wanted to cover. I really appreciate you're spending the time with me. Thanks so much.

Landry: Thank you. It's been fun.

