An Interview with

GARY HARPST

OH 383

Conducted by Tim Bergin

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Gary Harpst Interview

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Abstract

Gary Harpst describes how he and two of his friends from Ohio started a company called TLB ("The Lord's Business") to produce accounting software for one client and then produced an accounting package called Solomon for CP/M-based computers and later for IBM PCs and their MS/DOS clones. Harpst discusses the business philosophy and ethics of their business and how the three founders maintained their relationship and developed effective joint decision processes over a period of more than 25 years. He describes the strategy for selling to and through CPAs rather than directly to end users or through retail stores. After going through a major business drought, the company created Solomon IV and the business started to grow again. Finally, the three partners decided to sell the business to Great Plains rather than to rebuild the product for the Internet.

Preface

As part of the Software History Center's collection and preservation activities, and in conjunction with its meeting on the history of personal computer software held in Needham, MA, on May 7, 2004, the Software History Center (SHC) arranged for 14 oral histories to be conducted with computer software company founders and other key industry participants. All of these oral history interviews were conducted by historians well qualified by their knowledge and interest in computing history.

The following is a list of the people who were interviewed together with the name of their interviewer:

John Brackett and Doug Ross, interviewed by Michael Mahoney
Dan Bricklin and Bob Frankston, interviewed by Martin Campbell-Kelly
Dan Bricklin and Bob Frankston, interviewed by Paul Ceruzzi
Jerry Dreyer, interviewed by Thomas Haigh
Ben Dyer, interviewed by Nathan Ensmenger
Dan Fylstra, interviewed by Thomas Haigh
Gary Harpst, interviewed by Tim Bergin
John Imlay, interviewed by Bill Aspray
Luanne Johnson, interviewed by Janet Abbate
John Landry, interviewed by David Grier
Mike Maples, interviewed by Nathan Ensmenger
Seymour Rubinstein, interviewed by Jeffrey Yost
Jonathan Sachs, interviewed by Martin Campbell-Kelly
Oscar Schachter, interviewed by Thomas Haigh

Each interview was tape recorded, transcribed and edited by the SHC, the interviewer and the interviewee to ensure clarity and readability without changing the style or flow. The original tapes along with the edited transcripts were donated by SHC to the Charles Babbage Institute (CBI), which placed the edited transcripts on the CBI website and have archived the audio tapes.

On January 1, 2005 the Software History Center merged with the Computer History Museum, and its work is continuing as the Software Business History Committee as part of the Museum's activities (see www.softwarehistory.org).

Software History Center Oral History Program
Gary Harpst Interview

Tim Bergin: This is an oral interview of Gary Harpst, one of the founders and CEO of TLB, Inc (The Lord's Business, aka Solomon Software). The interview was part of the Software History Center's Conference on the History of PC Software on May 7, 2004 at the Sheraton Needham Hotel in Needham, MA. I am Tim Bergin of American University.

Our purpose is to try to capture the history of your company. Obviously, one of the more interesting aspects of your company's beginning is that you had different motivations -- or at least a different personal philosophy -- when you decided to found TLB, Inc. I'd like to focus this first hour on the origins of the company. Who started it? Why did you start it? How did you start? What were you all doing before?

BACKGROUND

Gary Harpst: I grew up in Findlay, Ohio, which is a rural community, and went off to college. I came back to the community in 1978. A friend of mine, Jack Ridge, had an engineering consulting business of 16 or so people. I was working at Marathon Oil Co. at the time as a systems analyst. Marathon is a pretty large company in Findlay -- a several billion dollar company. So Jack asked me if I could help him decide whether he could use a microcomputer in his business. This was actually in 1979, and at that time I didn't know anything about microcomputers but I had done a lot of software development for mainframes.

So I just did a little magazine reading and exploring -- at that time there wasn't an Internet, so I started to do research on micro- computers and found really only two names that had any promise at all: one was Apple and the other was Radio Shack. I was actually surprised as I looked at the offerings, that these were real computers. I mean they had input and output devices and printers and CRTs and all those things I was familiar with on a mainframe.

What we did find, however, is that there was almost no software and especially no business software. This was late 1979. So the germ of the idea was: there were lots of small businesses, microcomputers were new, and there was no applications software. Perhaps there's an opportunity to put together some real professionally-developed software as opposed to software developed at someone's kitchen table.

Bergin: Where did you go to college?

Harpst: I went to Ohio State University and got two degrees in business and computer science. They had a business degree with a computer science major. I don't consider myself a computer scientist. I'm interested in the marriage or the integration of business and computer

science. Actually, I worked for the university for six years, implementing a computerized accounting system for the Treasurer's office. So I've always -- from day one -- been interested in applying computers to solving business problems.

Bergin: At what time did you work for the university?

Harpst: From 1971 -- as a student -- through 1978 when I moved back to Findlay, Ohio.

Bergin: And you worked on mainframes?

Harpst: Yes, whole rooms of computers -- IBM System/360's and System/370's and stuff like that. Ohio State University had an instruction and research computer center with a staff of about 150 people, and they were doing some software development as well as engineering research -- those sorts of things.

Bergin: Where did Jack and Vernon go to school?

Harpst: Jack was local as well. He went to Ohio Northern University, which is a strong engineering school in northwestern Ohio. He had been running his own engineering consulting business for several years, and they didn't really have good ways of doing project costing, estimating jobs, tracking their bills, and those sorts of things. And at 15 or 20 people, they were starting to feel the pain of all that and rather than buy a mini-computer system which was very expensive, he wondered if he could do it using a small computer. Jack was kind of a visionary in a way, saying, "You know, maybe these little micro things could be used." So that was the beginning of the idea.

And Vernon Strong was working with me at Marathon. He was just out of college about a year.

All this dialog actually took place after a meeting of a Bible study group. We were having a Bible study in Jack's house. He's about 10 or 12 years older than I am and kind of a mentor. One of the things he said that really struck me was – "If faith is real, you should be living it out during the week; it shouldn't be a Sunday thing."

So he felt, and was very passionate about the idea that business is as great a platform for living your faith as anything, because you could impact a lot of people in terms of helping them grow personally and professionally and, help them raise their families. And so that was the motivation: that being in business is a good thing. It allows you to integrate your faith and make it real. The business idea was that microcomputers were just on the horizon and there were a lot of small businesses like Jack's engineering firm – a 15 or 20 person business -- that have no software. It was that simple. Today we would do a $100,000 market research study and we wouldn't know enough then.

So that was really the germ of the idea. Vern was young enough that he was the last one to make the decision to join the company. I left Marathon first. Jack put up the seed capital to

get the business started, and Vern came along to help us formulate the development strategy.

Bergin: What did Vern major in?

Harpst: He was a computer science major at Indiana University. So he did systems work at Marathon and that's how I got to know him. I knew Jack just because we were family friends over the years. So that's really how the business got started.

STARTING TLB

Bergin: So was Jack your first *client* or did he just come up with the money and you found other clients?

Harpst: That's very interesting because on the first day I went into the office -- I left Marathon on May 9th, 1980 and on the 12th, -- Monday morning at 8 a.m. I walked into this little A-frame building with one room in it that was my office. It's an interesting experience because only once in a business do you have this experience of nothing in your inbox, no customers, no bills and you're sitting there -- nobody working for you -- and you say: "Now what?" It only happens once; that's the beginning.

But what we did was build a system for Jack and it involved a whole suite of modules: general ledger, accounts payable, accounts receivable, job costing, inventory, purchasing - the whole range of accounting modules. And our second customer was a guy who put up $15,000 -- I can't believe it to this day -- Jim Koehler was his name. We hadn't written a line of code and he was willing to give us $15,000 to develop a system for him which would share the same code that Jack's did. Only Jim wanted a horse module. He had race horses and he wanted us to add a feature onto this accounting system to track some race horses.

Bergin: And he had a horse farm?

Harpst: He had lots of different businesses including real estate. He was a great customer to develop for, because he had such a variety of businesses. If we could satisfy his needs, then we knew we had a pretty generalized accounting system, a horizontal accounting system.

So those were our first two customers. And it only took us -- let's see, we started the business in May and the following April we installed our first system. So we developed all this in a year. It was very quick, and of course we didn't put all the effort into the design that you do now. Quality control wasn't what it should be, but the code literally got written in six months.

TECHNOLOGY ISSUES

Bergin: What restrictions or problems did you face? What hardware did you choose to work on?

Harpst: Regularly you would run into show stoppers and we'd just say -- it's over --- we can't go forward! We started with the Tandy/Radio Shack TRS-80 Model II, which was their more business-oriented machine. This machine had two large 8" drives built into the chassis and a little larger monitor than the TRS-80 Model I. We used the CP/M (Control Program for Microcomputers from Digital Research) operating system. The TRS-80 used a Z-80 (Zilog) processor and had 64K RAM (Random Access Memory). The biggest problem we hit right away was the lack of memory. You just struggled so much trying to fit everything you needed into 64K of RAM.

I remember there were different providers of CP/M. Digital Research licensed the core technology and others would sort of enhance that with different storage capacities and print drivers, and take it to the S-100 bus computers and those sorts of things. We used a variant of CP/M that was called Pickles & Trout from the west coast. P&T we called it - P&T CP/M. And the reason we used it was they had some innovations where they managed to load some of the driver code outside the 64K memory space and it ended up giving us 3 or 4K more of development room -- which was critical to us.

One of the innovations I think we kind of brought to microcomputer software development in the accounting space at that time was that -- up until then everybody had been programming in interpretive BASIC --and we wanted a much more integrated system that used a single database as opposed to a file-based system. So we picked MDBS (Micro Database Systems) out of Lafayette, Indiana. A bunch of computer scientists from Purdue University developed it, and it was like a Cullinane-type (hierarchical) database. .

So one of the problems with that approach was the database had to have certain things cached in memory all the time, so the bigger the database got, the more memory it consumed. So we really backed ourselves into a corner with our architecture and did not really understand these limitations and that we were going up against the 64K memory limitation. About the time we got that all working and realized what its limitations were, IBM introduced the IBM Personal Computer, and boy, were we relieved because we could see how tight this was going to be going forward -- as far as growth path for our customers were concerned-- because the bigger the database got the more memory we needed.

Bergin: The 8" floppy diskette- what was its capacity?

Harpst: About 540,000 characters -- something like that.

Bergin: So you could have your software on one of the 8 inches, right?

Harpst: Yes.

Bergin: And the database on the other.

Harpst: Yes.

Bergin: So in some ways, if you were trying to develop commercial applications, you almost had to go the database route, because with tape files you would require two of them. I don't know if the architecture would have allowed you to hang 3 or 4 tape drives on that Model 2 would it?

Harpst: No, I don't think so, no. And tape drives wouldn't have been fast enough, and it wouldn't be direct access.

Bergin: Did you implement the Radio Shack system for that customer?

Harpst: Oh, we did and it worked very well. The way we solved some of the problems was by using overlay technology and things from Digital Research that were very advanced. I was surprised. We used overlays in the mainframe world all the time, but this was rare in micros; Digital Research was ahead of the game with tools at that point in 1980 and 1981.

So over and over the industry was driven by the constraints of the hardware in the early days. We were more engineers than business people or marketers. When we finished developing the first version, we really almost didn't know what to do. We said: "How do we market this thing?" We really didn't have a plan for how we were going to market it. We built it for a couple of customers and our focus was on the engineering.

Actually, we traveled out here to Boston to a company called (CSSN). I have no idea what became of those guys -- they had kind of an innovative piece of hardware that had multiple processors in it and it looked interesting for a business machine, but nothing came of that.

My point was that because we were engineers, when IBM introduced the PC -- which was a whole different processor in 1981, (Intel 8080 and 8088?) and supported more memory -- we dove right back to building a brand new product from scratch. I think if we'd been smarter marketers, we would have focused more on getting a return on our investment rather than launching into the next thing. But it turned out to be a good thing, because the whole industry built quickly around the IBM PC. Just as Lotus was able to change the game in spreadsheets by having something optimized for the IBM PC, many companies created the first real professional software for the IBM PC and it quickly transformed their businesses.

THE SOLOMON SOFTWARE PRODUCT

Our *Solomon*™ product was like that. We were the first 16-bit product optimized for the PC, and we wrote it in C which was unheard of for accounting applications. At that point everybody was doing BASIC and maybe a little bit of Pascal. We wrote it in C because we wanted portability; back then there were 10 or 15 variants of DOS and there were questions about whether UNIX was going to be the next operating system.

So that really launched the company, because as the IBM PC took off, we were there with a system that was developed with a user interface that looked like real screens and forms

as opposed to a dumb terminal with just character input. So we used the video displays and all those things that made consumers feel much more comfortable with the software. Whenever we ran into barriers, we always over-engineered -- like we over-engineered for 64K RAM and then IBM came up with 640K. Later, when we needed more hard drive space, that came too. And then we needed faster processors and the IBM PC AT (Advanced Technology) came out -- just in time!

[Note the IBM PC AT was introduced in 1982. It used an Intel 80286 microprocessor (running at 6 MHz and later at 8 MHz). It had an expanded 16-bit bus architecture and used a new high-density 5.25-inch floppy drive (1.22 Mbytes). The memory was expandable to 16 Megabytes. Source: Dr Thomas F. Haddock, *A Collector's Guide to Personal Computers and Pocket Calculators*, Books Americana, 1993, page 171.]

Oh, I remember the day we unpacked our first AT and our jaws dropped! We couldn't believe how fast that thing was compared to what we had developed on, and it just made our software look great.

Bergin: Did you start with the idea that you would build it for a customer or two and then generalize it and try to market it? Or were you going to be a custom shop?

Harpst: Our idea was to be a software company and publish standard software, but we had the foolish notion that the way we would pay for it was doing consulting.

Bergin: Consulting with the idea of giving them packaged software?

Harpst: Yes, helping businesses build custom applications.

Bergin: You weren't just doing analyses and giving them reports -- you wanted to leave them with good accounting systems.

Harpst: Basically we said we would do anything the people would pay us for -- related to microcomputers. But really that lasted less than a year because we quickly realized that being good at consulting is very different from being a software publisher. We thought we could pay for one by doing the other, and we couldn't do that. So we had to invest a lot more in the business, and we got very creative over the years in various types of financing and those sorts of things.

Bergin: With the Tandy II and the first version of *Solomon*, how many installations were there? How many customers?

Harpst: Even though the industry quickly shifted away from Z-80 (from Zilog) machines and CP/M (Control Program for Microcomputers from Digital Research) machines to IBM PCs (using IBM Disk Operating System (DOS)), there was a market for at least three years for Z-80 software because that's all that existed. So Baby Blue cards (hardware emulator) and things like that enabled old CP/M software to run on an IBM PC. And we sold 3,000 or 4,000 sites of our CP/M based software, but almost all of it was on IBM machines with Baby Blue cards. So that got us to be

probably a $2.5 million business. Our price points were kind of in the $600 to $700 per module range and typical customers would buy 3, 4, or 5 modules.

Bergin: So you said: "Tandy has a business, stores, and products -- we'll hitch our star to them!" Then, you run into technical limitations and the Baby Blue cards came out that allowed you to dance between these choices.

Harpst: Absolutely.

Bergin: As the onslaught of IBM technology came rolling down the pike, did you think you had died and gone to heaven?

Harpst: Oh, it was exciting because the first year we didn't know anything. We put in two sites. Then IBM just changed everything. As one of the speakers at the session this morning said -- IBM's entry into the microcomputer arena switched the microcomputer to a business instead of a toy! And yes, we never really sold anything on a pure CP/M machine; in terms of units, just a handful. But we really rode the IBM wave. That's exactly what happened.

The industry was very innovative in riding that wave - creating the hardware and software for it -- like the Baby Blue cards. It was a limited life, but for a long time it really helped a lot. Yes, we did think we were in heaven; it was great!

BUSINESS ETHICS

Bergin: In the article you sent me, you are quoted as saying "TLB stands for The Lord's Business. We used the initials TLB as the official name. The Lord's Business was a reminder to us of why we started the company and our commitment to conducting the business according to Biblical principles of honesty and integrity…It's more important to us to be true to our faith than any particular aspect of the business."[1] What does that mean in the context of those very early years when I'm sure you must have felt like Job -- banging your head up against the technical limitations of the hardware and software.

Harpst: Well, I think everybody has different motivations, and one of the things that really helped the founders - Jack, Vern and I – was that we had a common purpose that was really bigger than the software business. I think one of the proofs of how important that was, is that we stayed together -- I think we were the longest running founder-operated micro-software company that ever existed in the U.S. We have more than 20 years together.

[1] Kathy Williams and James Hart, "SOLOMON SOFTWARE, Runs on Faith, Management Accounting , June 1995, pp. 56-61 Also see the excellent Solomon History website at http://www.solomonhistory.org which is a very robust website on the history of the company, its founders, its evolving products and even their changing physical facilities. The Museum pages contain 77 exhibits including early brochures, advertisements and product reviews, as well as photographs of the founders and other employees. Another page provides "Recollections of the Founders." Additional pages are in preparation.

Bergin: And you're still together?

Harpst: Well, we sold the business to Great Plains and to Microsoft in a combined deal. The sale was to Great Plains in 2000 and then about 90 days later we started talking to Microsoft to combine the company into Microsoft. But for 20 years, it was solely operated by the three of us, and we remained friends through it all. And I think that's probably the biggest difference between TLB and other software firms. When I listen to the stories told at this conference, almost every story has significant disagreements between the principals, especially when mergers took place. And disagreements can destroy the culture of a company.

I think one of our biggest assets was continuity and the fact that people trusted us – people in our company and people whom we dealt with outside of TLB. Even though we would make mistakes, our customers believed that our intentions were honorable and that really helped us through a lot of tough spots. It didn't make it easier to fix things. And to be honest with you, after 20 years, sometimes you say: "I'm not exactly sure what it means to live your faith in a business." I mean, you're learning every day what ***that*** means. But for us, most of all, it meant trying to tell the truth and being open and honest with people.

I read a book about a year ago; I can't remember the author. He was struggling with what it meant to live his faith and he said he finally concluded it meant paying his bills on time. You know, just little things like if a bill is due -- pay it rather than stretch this guy out, because that's dishonest.

Bergin: How about the customers? Did you purposely pursue churches as an opportunity?

Harpst: No, actually we weren't aimed at churches at all, although over time we did have quite a number of non-profits -- because the software worked well for non-profits -- but it wasn't a specific target. From day one, we wanted a horizontal product. We always saw the word processing products and the spreadsheets -- with their tremendously large markets and successes -- and aspired to that sort of horizontal, general, market. The truth is, accounting isn't nearly as horizontal as word processing, and every business is a little different in their processes, so it's much harder to have a generic accounting system than it is a generic word processing system, but we worked at it. So, we never really did target churches.

ACCOUNTING AND SYSTEMS EXPERTISE

Bergin: Where did the accounting expertise come from?

Harpst: My background was always business; my degree was business with computer science, so I was trained in that area. Also, I worked at the University in accounting-- fund accounting related applications -- for six years. And I designed the first products -- Solomon I and II. But we supplemented our thinking for Solomon III with much heavier input from accounting firms that we had been dealing with.

In fact, we worked with some local accounting people who had a lot of customers. The nice thing about accounting firms is that they deal with a lot of different types of businesses. We worked with Alexander Grant which was a second tier national firm in the early 1980s when they actually were getting into the software business. They were looking to license a product and spent a lot of time with us -- helping us with our product although we didn't end up licensing them. So we relied a lot on accountants in the early years to help us make sure we were doing the right things.

Bergin: Did you do the same with your systems analysts, programmers, and technical people?

Harpst: In the early years, we didn't do enough of that. The industry was so new and people who were less experienced were more inclined to go with the micro platform because in the early 1980s this wasn't a real business yet. People who were trained professionally were still attached to mini computers, which were growing very fast, and mainframes. So in the early years you got younger kids who loved the new technology but didn't know as much. Later on, after it became a real business -- in the mid-1980s -- you could attract people out of the mainframe and mini-computer arena, and that's what we did. We strengthened our team a lot as the decade went along.

Bergin: How about your competitors? Did you look at the Peachtree Accounting Packages and the other software packages that were available, to get ideas and ranges of features?

Harpst: Absolutely. The one in particular that we looked at was (TCS) which Ben Dyer gave us the history of yesterday.[2] TCS was really a spin-off of a company that developed the original Peachtree code and that group split and one group went on to build the Peachtree business and this group created TCS. The TCS group had a period during which they had to keep that software off the market, but after that period was over, they started selling source code for the whole thing for $500. So before we designed our product, one of the things we did was get that product for $500, looked at all their modules and said: "OK, this gives us an idea of the feature content." Solomon didn't look or feel at all like the TCS product because we built it with full screen editing and those kinds of things – Solomon was optimized for next generation, especially with respect to its "look and feel." But looking at the TCS product sure gave us a lot of ideas. It was worth way more than $500 to just play with it.

It's interesting how in this industry, there's sort of a bread crumb trail from the work other people had done. This group in Atlanta creates something, then Peachtree comes off of that, TCS comes off of that, and then we do some work off of that. In addition, our competitors did things off of our work -- and on, and on, and on!

Bergin: With respect to the technical side, did you do similar types of things? Did you look at how different packages access the database or wrote to the screen?

[2] Ben Dyer was the founding President of Peachtree Software in Atlanta, GA. He was a participant in PC Software: The First Decade, 1975-1985 sponsored by the Software History Center in Needham, MA, May 6, 2004.

Harpst: No, we didn't. We were much more innovative and kind of worked on our own because we wanted to do things that weren't being done, such as the screen interface and that sort of thing. On the database side, in retrospect, I think we got a little bit too far ahead of the market and where the technology was at that time. This gives insight into why decisions you make come back and bite you later. But we chose a single integrated database, and that was very innovative for the time. It's something that was only being done on the mainframe.

In fact, I brought along the *schema* for that very first database. I remember drawing this in 1980. Earlier, I mentioned this guy that had the horse -- there was his horse module on this schema.

Harpst: So this was a network database; any database person would recognize what it is. But only a mainframe person in 1980 would even have known what this was. But here's where this bites you. This really was the beginning of what became known as "*client/server architecture*, because the whole concept of *client/server* is you can do the main processing on the central computer and the little stuff (such as screen formatting) on the back end.

Well, because this was one database, you had to have everything running in one place. This worked great for a single user, but not when it came to networking. What was the main network at this time? It was Novell. Novell had no ability to execute a database in the middleware on the server. So this is where this whole architecture played really well for us in the early 1980s -- when it was primarily single user. As it shifted to networking, we had a huge disadvantage because *client/server* wasn't yet supported by the network; we had no clue that this would be a problem when we picked the database. We weren't even thinking about networking. Do you see what I mean?

We had tremendous success, I think. We had the leading market share in the middle 1980s and then as networking came on, our business flattened out because others leap-frogged us. And if you look at the industry, you'll see this leap-frogging going on. Peachtree was the leader in the CP/M era; we leap-frogged them because we got to the IBM PC first, we optimized our package for the PC, and we took off. Then networking came along, and those who did some things right leap-frogged us. And then Client/Server comes along in the 1990s with Windows and Sequel and all that stuff, and then we leap-frogged back again!

Bergin: So, at this time there is P&T CP/M which is a niche product, and then you got your database software from a bunch of professors at Purdue -- which again is a niche product. And you managed to put those together. What were the limitations of the (technical) environment that you were building?

Harpst: One of the biggest limitations was that the database could only get so big because every time you added data to the database there was a lot of processing required.

Bergin: Are you talking about the addition of more records?

Harpst: Yes, each additional record took a little more memory out of the 64K that was available (in the original IBM PC). And what business person would want to buy a system that they knew had a hard limit on how many records it could manage? Fortunately, the limit at the time was high enough that most people weren't concerned about it -- but it was a ticking time bomb. Fortunately that lid was taken off by innovation, but we didn't know how the problem was going to be solved.

As we improved Solomon, the memory requirements got bigger. Our original idea was to use one floppy for the software and one floppy for the database. However, the database, because it was integrated, had to all be there at once. If it didn't fit on a floppy, that was the end.

But on the software side, we had to swap the diskettes because eventually it got to the point we couldn't get everything on one diskette.

Bergin: Where were the records at this point?

Harpst: They were on the other diskette.

Bergin: With the database software?

Harpst: Yes.

Bergin: So the database software and the database are on the same diskette?

Harpst: Well, just the data was on the floppy. The database software and our applications were on the other floppy. This was before hard drives. Then along came a lot of third party hard drive systems. I'm back into the PC era now, but there were no hard drives. Having to put the software and the database system on the same diskette was a huge limitation.

BUILDING THE NEXT GENERATION PRODUCT

Bergin: So IBM came with the new PC AT which had a hard drive and more memory? What did you guys do first?

Harpst: Because we were engineers, we did what most engineers would do – we said: "Let's start over. Let's build something new." Engineers like building things. And we actually had an advantage -- because at that point we didn't have a lot of installed base and we didn't have a very big business.

On the other hand, the players who had a huge number of clients -- what do they have to do? They have to serve that installed base and migrate incrementally. They can't radically change their software or there would be a big discontinuity. So we basically went into development

again. We started from scratch and said we're going to build a next generation system, take everything we learned for the last two years, and build something new -- completely optimized for the PC.

Today, we couldn't have done that; with a large installed base and a $60 million business, you don't have that freedom. You've got to put most of your resources into taking care of the current business/customers.

So that caused us to go back and get another round of financing and expand our staff. We rebuilt from scratch. It probably took us about a year and a half. Interestingly, while we were building that, *PC Magazine* started a series of reviews -- at that time it was a once a month publication. They started reviewing accounting software in April 1984. Every month they would take a vendor -- and there were many accounting software vendors -- and feature it -- saying what was good and what was bad about their software. They finished the series in January 1985, and we were the last one reviewed. What had happened is that they had just reviewed all these products that had sort of ported over to the IBM from 8 bit technology and we were the only product that was 16 bit, built from scratch, for the IBM PC. And the user interface was completely different -- and better. It was kind of like the Lotus versus VisiCalc experience.

Bergin: So you were the only 16 bit package at the time

Harpst: We were, and the headline of the review was: "The Most Powerful Micro Based Accounting System -- 16 bit." We couldn't have written a better headline. And that happened in January and our business went from $150,000 a month to a half a million in three months. We ended up putting in 40,000 sites over the next five years, based on the tidal wave of the IBM PC.

Bergin: Describe that first PC and tell me what you think it cost.

Harpst: Well, it was around $4,000 or $5,000. We had to get two floppy drives. I don't remember how much memory we bought on the first machine. I think we probably bought 64K. I think we started low because we thought we wouldn't need it all, but it wasn't long before we needed it all. In retrospect it was pretty expensive for what you got, because it wasn't that powerful. I think there were 3.5 or 3.6 megahertz.

Bergin: No, 4.77.

Harpst: 4.77?

Bergin: It was an Intel 8088 processor.

Harpst: We still didn't have hard drives. So along came some third party vendors who really started to bail us out. DaVong (?) was one we used; eventually IBM brought out a hard drive. I guess that wasn't out on a regular PC was it? That was on the AT. The XT had a 5 or a 10 megabyte hard drive.

Bergin: Then everybody started hop-scotching, i.e., using each technical improvement as an opportunity to improve their software's capabilities or processing speed.

Harpst: That's right. But our first machine only had two floppys.

Bergin: And everything was super expensive.

Harpst: Yeah, our first PC was about $5,000 I think.

Bergin: And 2-3 years later someone gave me a 5 megabyte hard drive because it was just too small for their needs! Back to *PC Magazine*.

In every good story, there's a little luck. One of my favorite stories is about Marie Curie and how she put a piece of feldspar in a desk drawer with some x-ray photo plates. When she came in on Monday morning, the plates were exposed. In an interview with a newspaper reporter, she relayed the story of how she discovered radium. The young reporter reportedly said "Everybody reveres you as the discoverer of radium, but really it was just a bit of luck." Madame Curie is said to have replied: –"Young man, luck favors the prepared mind." Most other people would have thrown the film out. Curie won the Nobel Prize!

So it seems like you guys were much like Marie Curie: there were opportunities out there but so many people didn't see them -- yet you did. Why do you think that was?

Harpst: Everybody's wired a different way. By the way, this comes back to your world view and faith. I personally believe God is a designer. If you look at Genesis, He describes how He's creating this thing, and whether it's metaphorical or not, it's very much a design, and anything designed has purpose. It may not be a good purpose, but if you create something, it's got purpose. When you look at people, we're designed. I think it just so happened that the makeup of our team -- every team has a makeup -- our leaders were innovators. If you look at the strength of the *Solomon* software product over the years, it was our piecing together of what the next thing was, that made us successful. We were not nearly as good at executing after that happened. So that made us really strong in the early years where innovation was the primary thing. Later it became a marketing game. Do you see what I mean?

Bergin: I do.

Harpst: So we thrived when things were changing rapidly technically because we were always thinking -- how could we solve the problem differently given this technology. I think if we'd been more wrapped into marketing, we wouldn't have been so quick to respond to those things, but in the end it all turns into marketing. All products eventually turn into a marketing game.

WORKING TOGETHER

Bergin: In the Williams and Hart article (above), you talked about the way you and your partners made decisions -- which was obviously very different from the way most other partnerships made their decisions. Could you tell us about that?

Harpst: This goes back to when we started the company. The purpose was to honor God in what we did, and we felt like if we didn't do that then we didn't have integrity with our beliefs. First, we were three equal owners. We just said we would never *vote* on anything. I was the Chief Executive Officer (CEO) and Jack and Vernon respected me in that role. They worked for me in that regard, but when it came to a board-level decision-- a major strategy or major allocation of funds-- we would just get together (maybe once a quarter, more often if needed) and we'd pray about the decisions before us.

Then we would talk through them, and in 20 years, we never, ever walked out of the room in disagreement. Not once. I think part of the reason for that is that I never came to those meetings saying I'd made up my mind and had to talk them into something. We always came to the meetings with the attitude: here are the choices; what are the strengths and weaknesses of the choices? Frequently I saw things I never would have thought of by myself in those sessions. Jack is a much more aggressive visionary-kind of guy, Vern is much more reserved and cautious, and I'm kind of in the middle. At various times, that range of perspectives kept us out of a lot of trouble.

I think it was the respect we had for each other -- in believing that our motives were pure: let's be honest with each other and let's try to do things that honor God. And we made some real bone-headed mistakes, but we did it together and never accused each other of anything or said: "Well that was stupid!" It never happened in 20 years. I think that says everything, and I wouldn't trade all the money we made in the business for the experience of working together like that. I mean, I'd trust these guys with my life. I fail to see that in the world sometimes.

Bergin: The fact that you got together was self-choice, but the fact that you're still together is like a *business miracle*. As much as the software and other things about your company changed, the fact that you stayed together – and continued to get along --is amazing.

Harpst: It's a blessing and we can't claim too much. We're not that smart -- to be able to do this just by psychology or something like that. Our faith is real to us and it affects the way we act and think and believe.

GROWING THE BUSINESS

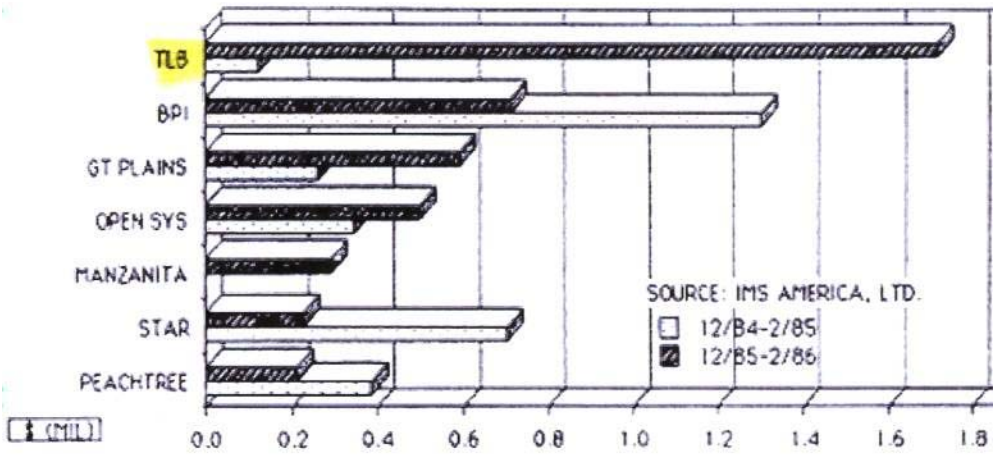
Bergin: You said you made some big mistakes. Can you pick out one or two of them and explain what the options were?

Harpst: One I already alluded to. I'll show you a little bit of the consequences of it.

Bergin: We're looking at the NCRR highlights which Gary sent me.

NCRR Highlights

Leading Software Packages
December-February 1984-85/1985-
Accounting



Comparing the three months ending February, 1986, with the same period a year ago, **TLB's Solomon Series** soared to the forefront to command 27% of stocking dollars in the accounting software category. Other leaders included the **GREAT PLAINS** series, the **OPEN SYSEMS** series and **MANZANITA's Business Works** series. The latter is a recent introduction for **APPLE's II** line.

All other major entries saw significant declines, especially the **BPI** accounting line which managed to maintain a toehold on second place despite a hefty 45% decline in stocking dollars.

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Harpst: What IMS America, the company that produced this graph, did was survey the flow of products and inventory through retail distribution channels. Because of the explosion of the IBM PC and the positive publicity from our *PC Magazine* review, there were so many PC-based accounting systems available, that nobody knew what to pick and how to pick them. At the time, there were thousands of retail stores, such as Business Land, ComputerLand, Entrée, and MicroAge. People would walk in and ask for accounting software. Well, when the *PC Magazine* review hit, they asked for the *Solomon* accounting software! So we got instant distribution in lots of these places.

And if you look at this chart, in one year from the Dec.-Feb. quarter of 1984 to the Dec.-Feb. quarter of 1985, our business through that channel went up 7-fold or 8-fold. And BPI, which was the only public company at the time, saw their share cut in half. So we were gaining market share. Great Plains doubled its market share and Open Systems improved its market share as well. But if you look at us, we were 2.5 times BPI which was in second place.

Bergin: In 1984, you were the smallest. One year later, you're in first place, second place is pretty far behind, and third place is way behind that.

Harpst: Yes. This was a result of the introduction of *Solomon III* around the time the IBM PC was brought to market. In 1984, we didn't have *Solomon III*; in 1985, we did! My point is that here was our point in history to dominate the accounting space almost like *Lotus* did the spreadsheet space. What took this lead away was that networking emerged and we had picked a database architecture unbeknownst to us that really would not fold into networking very well. And that's what kept us from sustaining this kind of a lead.

Bergin: You are quoted as saying: "We made some big mistakes…I can look back at some things now and say, 'That's not the way we should have done it!'" Can you tell us a few of these mistakes?

Harpst: One of our biggest mistakes was a technical decision related to our choice of a database engine -- which I made. It really had to do with when the decision was made, four years earlier. We had no clue about how or when networking would come and what it would require in the way of architecture. So that was an example of one mistake.

I think the second mistake was more general. Because we were engineers, we got a huge payoff from building a brand new product from scratch, i.e., going from CP/M to PC (and PC DOS). And when networking emerged, we decided to do the same thing again. We said: "OK, networking is coming; let's build a whole new product optimized for networking." It was a huge mistake. Because the tools weren't really there for a pure networking product, we had to build some of our own database stuff and our own screen managers, and we spent five years and probably $7 million on a product that we ended up canceling.

So instead of putting all our attention on solving the problems with our current product, we were diverting resources to create a next generation solution. So the very engineering mentality that really helped us early in the decade really hurt us in the last half of the decade. So

those are a couple examples of a couple of big mistakes.

Bergin: So you're saying you really have to have the "wisdom of Solomon" to make the right choices at the right time, that in your early years you were making the right choices and then you made a couple of others that set you back.

Harpst: That's right.

Bergin: So if you think of successful corporate life as a maze; in the beginning you were making the right turns.

Harpst: Yes.

Bergin: Let's go back a bit and look at the IBM PC "solution," *Solomon III*. You had 3,000 to 4,000 installations where *Solomon II* had been ported over.

Harpst: From CP/M, using the Baby Blue card.

Bergin: But now you've got a better baby to sell.

Harpst: I guess that's true!

So here you've got a fairly robust business going - 4,000 installations. And you redesigned the software to take advantage of a machine that gives you 640K of memory, and multiple, larger, faster, disk drives. What did you do with the database? Where did it come from? Did you re-write that too?

Harpst: We used the 16-bit version of MDBS for the PC product and it removed a lot of those barriers. It was faster and we were shipping probably -- at the time the IMS study occurred -- probably 500 sites a month. So, we shipped 6,000 packages a year. It was a booming, booming business. This was all PC-DOS-based. At the time, there were several PC clones - the Rainbow -- all these different IBM clones that were shipping at the time. It wasn't all IBM by any stretch of the imagination. Compaq was a big seller. So a lot of our issues around support were just making sure all those little minor differences between those versions were understood and accounted for.

Bergin: So it wasn't that there was this instant marketplace of IBM PC's, but it was IBM PC's *and* PC clones, of which there were many. I remember that the Texas Instruments Rainbow, the Wang, and the Leading Edge machines were very popular in the early 1980s.

Harpst: Oh, yes, there were so many.

Bergin: Each one had some quirks that differed from the IBM environment, so therefore you had to have a pretty robust maintenance staff or customer engineering staff to go out and make those little changes or tweaks.

Harpst: Right, and in that stage of our business the real growth was on the services side because our installed base was growing so fast that it was all we could do to keep up with new partners, train new resellers and handle support for customers. So we started building Call Centers and handling 80 phone lines and things like that. We had a whole different set of problems. I started as a software engineer and now I was engineering a business.

Bergin: What was the cost to me as a customer? How would you sell me?

MARKETING TO ACCOUNTANTS

Harpst: There were two issues: one was pricing and one was how it gets sold. I think one of our biggest innovations in the industry was that John Howell -- who headed up our marketing -- had a father who was in pharmaceuticals. And he began to piece together -- this was even before the IBM PC, probably in 1982 – a way to do accounting functions on a microcomputer. He began to see the analogy between pharmaceuticals and accounting software. Word processing was so generic and inexpensive that people didn't really need a lot of thought to decide to buy a word processing product.

When it came to accounting, it was $795 a module and a module would be general ledger, accounts payable, accounting receivable, inventory or whatever. And you might buy anywhere from 3 to 7 modules. So let's take 5 for an average. Five times $795 is $4,000. That's a lot different than a $400 word processing package. So people had to find some way to get comfortable with spending that kind of money plus the cost of a computer to run it on.

In the pharmaceutical industry, how do you decide what drugs to take? You don't do it by talking to the pharmacist. The doctor tells you. So if you're marketing drugs, who do you market to? To the doctor! The distribution channel is the pharmacist. So John Howell, in our organization, began to see that we had all these computer stores and they didn't know any more about accounting software than the pharmacists know about your individual health.

The people we needed to market to were the accountants. They're the “doctors” in our scenario. So basically we started doing seminars all over the country introducing our products to accountants and telling them: “Look, this is an award-winning product; you're safe recommending this product to your clients.” So we really pioneered that idea and I give John Howell the credit for catching onto that before anybody else. And that was probably our first "marketing innovation." We had been innovators technically, but now John was starting to bring that kind of business innovation to us. And we became a leader in that.

Bergin: So John went out with fliers, and mass mailing; advertised in the PC media and says: “We're doing a seminar on *Solomon* accounting software, please come”?

Harpst: Yes. And just think about the promotional value, in dollars. A *PC Magazine* ad was a fortune, and we didn't get good response rates from it. So instead, we took that same money and we marketed to a much smaller audience of accountants by inviting them to seminars. We'd

spend a fraction of the money marketing, and we could saturate the accounting marketplace. We weren't selling to them, we were educating them. We called them "Key Decision Influences" -- KDIs internally.

Everybody does that now, and it's taken for granted, but in the early 1980s that was a very innovative way to make your marketing dollars go farther.

Bergin: Did John attempt to leverage the professional associations?

Harpst: For the CPAs -- absolutely. We would speak at those events and we ran ads in the *Journal of Accountants*. We didn't put our advertising in consumer journals; we put them in accounting journals. We had 70 seminars a month going on around the country.

We had an outside sales force of about 12 people and an inside sales force of about 6 at the time. Inside sales was answering the phone, taking orders and that sort of thing.

Bergin: But 12 people in the outside sales force -- they were "missionaries?"

Harpst: If you want to use that analogy.

Bergin: No one else was doing it and they're bringing the new message, the new gospel.

Harpst: I guess you could say that, and it all fit together because of *PC Magazine's* reviews -- we won an enormous numbers of sales in that period of time because of the optimization for the PC. So that all fit together. We were getting a lot of PR. We were getting the influencers really knowledgeable on who we were and all that built our brand and made us sort of a default recommendation, and that's what gave us this kind of market share lead for a while.

Bergin: So you're giving 70 seminars a month and selling what?

Harpst: Selling 500 sets of accounting modules a month.

Bergin: 6,000 new customers per year -- it must have been like gangbusters.

Harpst: Right. And interestingly, once you sold a customer, they kept buying other things from you. –First, every year they would buy maintenance plans and support plans, and secondly, they would buy more modules. So if they started with 4 or 5 modules, then the next year they'd buy another one, and the next year another one, because we had a dozen modules.

Bergin: So I'm paying $4,000 and I have 5 modules. What does support cost? Most Americans knew nothing about computers, so there was a need for support.

Harpst: Absolutely. We ended up having two kinds of plans for services: the full service plan which provided unlimited telephone support and upgrades to our software. Then some of our

better business partners, resellers, wanted to provide the support themselves - the equivalent of what we were doing in support. And for those, we would offer a maintenance only plan which was just the upgrades. So in that model we weren't competing with our partners who wanted to sell phone support or on-site support.

For example, ComputerLand just wanted to close the sale and didn't want to support the client. So we needed both the full-support approach and the maintenance-only approach.

Bergin: So what would that cost a customer for a year?

Harpst: The full support was about 20% of the list price. So if you bought a $4,000 system, it would cost roughly $800 a year.

Bergin: And if I bought it through my local CPA and he was my support and I wanted maintenance only?

Harpst: Maintenance only would be about 12% instead of 20 or 25%. It was about half the price.

Bergin: Talk about the development of the partnership - using resellers. Not just resellers, but the added value that that local CPA firms brought to the process with their knowledge and experience.

Harpst: Let me make one thing clear. There ended up being two kinds of CPAs. There were the CPAs that were more advanced thinkers and they were a very small minority - maybe 5% who wanted to actually do consulting around accounting software. That group ended up often selling our products or getting to be *certified consultants* where they'd get trained on how to implement the software and support the customers. But that was a small percentage.

Most of the CPAs didn't have the staff to do that, and didn't have the expertise. But what they didn't want to do was have their clients come to them and ask for their advice and have no answer. They didn't want to appear like they didn't know what they were talking about. So they would sign up for what we called our "Recommender Program." It was a very light commitment, but it gave them access to newsletters and information. All we wanted them to do was to say "*Solomon"* if somebody asked! So there was a part of the CPA community that became the channel -- and they were resellers -- and then there's the part of the CPA community that were the recommenders, which was a much bigger group.

TRAINING

Bergin: What that says to me is that on top of everything else you had -- your 12 person outside marketing force -- you had to have a training function that went out to your recommender people and trained them to a certain level of comfort. Then you had to have an even heavier training relationship with your full service people. In a sense you were creating a real partnership. The

recommenders were nice and they're selling your product, but the full service people were a real extension of you.

Harpst: Absolutely.

Bergin: They could go off on their own. So how did you go about putting together those two kinds of training programs?

Harpst: We ended up creating a training organization, just like we had a services group and a development group. It was a big part of our operation, maybe 15% of our revenue at some point. But logistically it was much more than 15% of our effort, because we had to train all our resellers. We were doing version releases every year. So basically - we would create content and courses and instructors for courses, and then go train a few people outside -- work with our best resellers till they were really good and then get them to do the training. So we would train the trainers, because we just didn't have enough people, and then they would go do seminars around the country.

We ended up with probably half a dozen of our better consultants becoming so good that it was all they did for several years. They grew into being known as good trainers. So our role was to sort of schedule these training sessions, market them to get them filled, make sure we had the right instructor for the right course, design the courses -- a lot of logistics stuff going on that leveraged the knowledge of others. The big thing was that nobody wanted to fly across the country for a two-day course. The real cost is not what they spend for the course, it's taking them (the participants) out of their business. So we'd try to have them locally, within one or two hours' drive.

Bergin: So you went from being an engineer for systems and software, to an engineer of a company. You're coping with building the company, hiring people, vetting that population to make sure you keep good quality people and you built training, marketing, systems, and maintenance groups. You have call-centers and then you make this next jump which says: "We're going to trust certain of our resellers to literally represent us on a day to day basis with people in a geographic area." So you're creating a new style of organization where you could just buy the product or you could buy the product with full support. Did you do any support out of the main office in Ohio in competition with those high level resellers?

Harpst: The only thing we did in Findlay was telephone support. There were some resellers that were a little conflicted by the fact that we were offering a full support plan for X dollars but we had to -- because so much of our channel couldn't do it. But for those who could, that would compete with them price-wise, and sometimes they didn't like that, but it wasn't a huge issue. It was just something they had to explain to the clients: "Well, as a customer, we can buy an unlimited plan for support from *Solomon*; what can you (as a reseller) do for us?

The truth is -- if they were in the local market, they could always support customers better than we could. But they just needed to be able to explain that story.

Bergin: So I've got my CPA firm, and we're doing well. I went to a meeting and they talked

about *Solomon* software and it's a great technical package. TLB/Solomon Software is building relationships with companies like ours, for support, etc. As a decision maker, I believe that this could change who we are. This is a partnership that's going to be very difficult to walk away from. Everybody in my office is going to become *Solomon* knowledgeable. So it's a major commitment in terms of our knowledge resources. Why should I do that?

Harpst: It goes back to those two groups I was talking about before. The bigger group was more fear-driven in the sense of they just didn't want to lose an existing accounting client. Let's say I'm doing tax work for you and audit work and I've got 500 clients. Those clients are coming to me and asking for advice and I can't give them any advice at all. What are they going to do? They have to find somebody that does. They risk losing that client to somebody else that provides more service. So they'd like to provide just enough service that they're not threatened by this client talking to someone else. So rather than refer them to another accountant, they can refer them to maybe a computer consultant. They can solve those problems and they retain their relationship.

So there's this bigger group that's motivated by fear. The ones who make the heavier investment like you're talking about, they have a different motive. They want to expand their consulting revenue to a new arena -- which is the implementation of business systems. And in that sense, they're competing with the channel itself -- not the retail channel which just wants to inventory and sell, but the VAR channel, value added resellers, who want to do implementation.

So that latter group is very much in the category you're in, which is -- all these accounting software products are out there; which one should I carry because I've got to invest and train my people for several years to get them good at this. And it was a big decision because there were so many different players out there. So they looked for the market leaders; that's why things like this study (the IMS America on Leading Software Packages) or something that showed who the leaders were, was very important.

USER GROUPS

Bergin: Throughout the mainframe and mini eras, a lot of corporations addressed that need by creating User Groups which had newsletters, meetings, and training to bring users along. ADAPSO (Association of Data Processing Service Organizations) and the Software Publishers Association came out with a series of standard contracts. Yesterday, at one of the workshops or panel discussions, some people said: "That's why we joined. We didn't join for the coffee and Danish pastry; we wanted the standard contracts that other people had said were good."

Did you ever consider establishing a formal user group with officers, a budget, and goals and objectives -- to make the marriage with these full service companies work better?

Harpst: Yes, we did and we had people whose job in marketing was to facilitate, organize, and help the user groups form and then promote them. We tried to keep them very local as opposed to a national thing. There were times -- at the peak -- where there were maybe 50 to 75 user groups around the country.

Some of our competitors, Great Plains, for example, later in the 1980s, pioneered the idea of an annual conference for the retail channel. That was a very innovative move; they called it "Stampede," and everybody followed suit. We eventually started having our own conferences as well. That was not as much a user group as it was a channel conference where you'd get all the accountants and consultants and resellers together.

Later on, Great Plains added a national event for users -- just in the last five years they did that. So in the early industry (in the mid-1980s) it was local groups. A CPA might have hosted it. This was a way he could sort of invite people in, and kind of keep his finger on the pulse of what was going on, without a lot of work. Sometimes we would bring speakers in for them and sometimes we'd send one of our engineers or support people out.

Bergin: And these engineers or support people would tell the attendees what *Solomon* was planning to do in the next year or two; the latest maintenance issues, etc.?

Harpst: That's right. I went out to a lot of those meetings myself. They would invite me and I would go to them. It allowed me to stay in touch with the market fairly easily and it was good input.

COMPETITION

Bergin: You mentioned Great Plains. In 1984 or 1985, riding the crest of the optimized IBM package, who were the top 3 competitors?

Harpst: Let's take that apart year by year, because it was changing very rapidly. In 1985 when we first came out with our next generation product (*Solomon III*), the historical competitors were Peachtree and BPI. They were companies that sold their software through IBM. There was a bundling deal; when the IBM PC came out, Peachtree was on IBM's recommended software list. On the strength of that, MSA bought them. Management Science America was a large mainframe and mini-computer software company, and we were just scared to death.

Peachtree got to be a $20 million company when we were a million dollar company in the early 1980s. By the mid-1980s, Peachtree had kind of fallen apart; MSA had spun it off and it had gone down to a million dollar business from a 20 million dollar business. Later, Bill Goodhue took over and made it a huge success. But at that point in time BPI was pretty visible, Peachtree was declining, and Open Systems and Great Plains were just starting to show up.

Then the real crest of the wave sort of hit in 1987, 1988, and 1989. State of the Art came in and really picked up where we left off with the CPA channel. David Samuels was a CPA himself and he ran State of the Art. They did a great job creating a new product that was very easy to use and had great functionality, and so in the latter 1980s, they probably were the premier marketers to the CPA channel -- where we were in the early to mid-1980s.

Great Plains got stronger and stronger in those years... From a strategy point of view, they did some really interesting things. Doug Burgum, who headed that up -- he's now with Microsoft -- did some smart things strategically. He would pick something that was a major focus for 2 or 3 years and just put overwhelming resource in that area. So, for example, in the later 1980s he decided to build and expand his channel. We had 12 sales people outside, and he spent a fortune putting 50 or 60 sales people in the field. It had to drive him to zero profitability or below, but it was an overwhelming gamble. He put all his eggs in that basket and that allowed him to expand the channel by virtue not of winning awards or things like that, but just by virtue of feet on the street.

So he was gaining rapidly when we were investing in another product, which turned out to be a failure. So the money we spent there we couldn't invest in building the channel. So they got stronger and stronger and then later on he really focused on service as being the #1 thing. So Great Plains gradually chipped away and started to pull away in the early 1990s. State of the Art did a very good job as well.

So I'd say by the end of the decade, the four big players were Platinum, Great Plains, State of the Art, and Solomon Software. .

Bergin: Would you agree if I said that from 1984 to 1989 there was a little technological Darwinism going on, and that Peachtree and others had that? . Was it starting to weigh you down or weigh the industry down, that the newer companies like State of the Art and Great Plains were truly more state of the art and therefore more saleable to the CPA community?

Harpst: Yeah, I think it was a stage in the industry where later entry was beneficial. The industry hadn't consolidated so nobody had a dominant market-share. Coming in a little later allowed you to start from scratch and build on the strength of the technology and go forward. So I would absolutely agree with that.

I didn't talk about Platinum. Their big innovation was that they saw a hole in the networking, multi-user solution. None of the networking approaches were great, and ours in particular wasn't great. And in a very short period of time Platinum created a product which was optimized for networking. They went from nothing to being a very strong player in 5 years. Just like we did on the IBM PC, they came from nowhere on the network platform – Novell in particular.

I would say State of the Art came from nowhere based on probably the best engineered trade-off of features and ease of use. And it was just adequate from a networking point of view; it wasn't great. We were living on our installed base and had great success in the middle 1980s. So we were all playing to different strengths in the latter 1980s.

I wanted to tell you about the rest of the story. I think there's a good business lesson here: if you stay with it, some of your biggest mistakes can turn into some of your biggest assets. I listed as one of our biggest mistakes the decision in the late 1980s to develop a network-based product from scratch, as opposed to fixing the issues in our current product. That was a big mistake.

What it taught us was that we don't want to build from scratch database tools, screen managers, report writers, and all that. That's what we tried to do with this failed project. It was way too big in scope and so that drove us to the point that we didn't have much in the way of resources to do our next generation product -- because we'd wasted all this research for the last several years. But it convinced us that the Client/Server era -- beginning in the 1990s with Windows -- was exploding, and we had to get to that market or be left behind. It was a survival issue.

BUILDING A NEW SOLOMON PRODUCT

The failure of the previous product forced us to be very innovative again. We basically put less than 10 people on the project to create this next generation product where Great Plains had 100. How do you get to market in two years with 10 people, when your competitors are working with 100? The way we did it was by focusing. We said: "Look, we're going to use off-the-shelf report writers; we're going to use Visual Basic™." By the way, we visited Microsoft and said: "We were thinking about using Visual Basic™ for our next generation developer" and they laughed at us.

At the time, Visual Basic™ (VB) was in their games arena; it wasn't in their tools. BASIC (Beginners All-Purpose Symbolic Instruction Code) was a product they shipped with the very first PC and was not really part of their development tools.[3]

Bergin: We were still using Pascal for students during this time, and it was not until the mid to late 1990s that we switched to VB.[4]

Harpst: We took a pre-release version nine months before they shipped Visual Basic™ and decided it could solve all our GUI (Graphic User Interface) issues. It didn't have any database integration so we had to build a database integration layer and we built on Sequel (Structured Query Language, sometimes abbreviated as SQL). We moved away from a proprietary database to Sequel -- because that allowed us to write a lot less code. So the end result, *Solomon IV*, was this enormous breakthrough and it came out of the seeds of the failure in the last part of the 1980s.

All of a sudden we have another one of these industry transitions, and we went from ten million dollars to 60 million dollars revenue in about 4 years based on *Solomon IV*. We had a breakthrough again. So you can explain our history in a series of waves related to the transitions from CP/M to DOS -- we did that incredibly well; -- from DOS to networking -- we fell flat on our

[3] BASIC was an early computer language developed at Dartmouth College by John Kemeny and Thomas Kurtz. Since BASIC was in the public domain -- no one owned it, so no royalties were charged for its use -- it became the *de facto* development language in the early days of micro computing. When more robust languages evolved, the use of BASIC declined. For a history of BASIC see: Richard Wexelblat, *History of Programming Languages*, Academic Press, 1981, pp. 515-550.

[4] For a history of the Pascal language, see Thomas J. Bergin and Richard G. Gibson, *History of Programming Languages*, ACM Press/Addison-Wesley, 1996, pp. 97-120.

face; and then from networking to Client/Server on Windows™ and we hit another home run. So you can basically explain our 20 years as a series of ups and downs.

CPAs AS CUSTOMERS AND CONSULTANTS

Bergin: I remember talking at a national conference about early environments: having the uneducated user who knew nothing about computers buying a PC and having a big learning curve. On the other hand, there were some well-educated, structured, knowledgeable people around, and you'd expect engineers, scientists or CPAs to be this way. What was it like working with CPAs versus other customers you could have worked with? How were they different?

Harpst: Let me qualify this, because when you say CPA's, there were CPAs using our products as end customers. There were CPAs who wanted to be consultants for our products and then there was this "recommender" group. So as clients, they were very much like anyone else: they had certain business functions that had to be solved, and so we didn't really see them as different types of clients.

W really did see the consultants as different from the Value Added Resellers, because especially the big 6 accounting firms -- the major firms -- wanted to be in this business. But they didn't understand what they had to invest in order to do well in this business. So you take a VAR with a dozen people -- all they do day in and day out for years is install and implement systems. They know the bugs in the system; they know the strengths of each product, which one works in which market, and they know how to avoid getting themselves into problems.

A CPA firm looks at this lucratively over the fence and says, "Oh, this is exciting -- I'll throw a person or two at this and we'll do two installations and we'll be experts." Turnover is high, especially in the larger firms, and it was really hard for them to ever get traction and make it work. Over and over and over, the Big Six and larger firms would come to us, mount a major campaign in their headquarters to get all their offices up to speed, and it never worked. They would try for a year or two, but very few of them got to critical mass. Coopers & Lybrand probably did about as well as anybody in a few offices -- not nationally like they wanted to do. But the office in San Francisco did well for 3 or 4 years -- you see what I mean? They saw this opportunity with the whole industry exploding, and were trying to figure out how to participate in it, but they didn't understand the investment equation to make it work.

Bergin: So then I'm not correct in assuming that CPAs, like other registered professionals, like doctors, take an oath to do only what is "right". I would have hoped that their behavior, either as individuals or as firms, would have been a little bit better than a re-seller who just had to know enough to sell what they were selling. So the professionalism that's implied in the term Certified Public Accountant -- you didn't see that?

Harpst: Well, I want to be careful to say that there's a difference between local CPAs and national CPAs. The national CPAs have two divisions - they have consulting divisions and they have the audit division. We read in the newspapers sometimes, about the conflict that occurs

between those divisions. The audit group is very careful about wanting to have their integrity and stick to the pledges they make that you were just talking about. But the consulting group is truly a consulting group. That's not the same set of standards. The training to be a consultant is different than the training to be an accountant. But let's *caveat* this -- we never came across anybody who didn't want to do right by the customer. It was more an issue of not understanding what it took to do right by the customer.

Bergin: I am curious if the better firms would invest more in learning so they could be better partners to you and provide better service for their customers.

Harpst: The better firms would. I'm just saying it was the exception and not the rule. There were clearly some successes.

Bergin: What were ProfitWise and ImpAcct?

PEACHTREE PRICING

Harpst: There are two different themes here. I mentioned Peachtree was a competitor in the early 1980s; Peachtree got to be a $20 million business—one of the biggest, most successful micro products in the early 1980s. It fell flat on its face after its acquisition by MSA and it was managed poorly. Then it was spun off for (Bill Goodhue said yesterday) $1 million. Peachtree spun it off to Leland Strange Intelligent Systems in Atlanta, and Bill went to manage this spin-off. Leland was the owner and Bill worked for Leland.

Bill did a masterful thing out of necessity. He rode it down to the point that it had very low revenues and was about ready to close the door. Out of desperation, they decided to re-price this $6,000 product to $199. This was a transforming thing. Nobody had done this in the industry. This happened in about 1985 or 1986. The beauty of this master-stroke was that all the high end products had been priced at $595 or $600. The Peachtree brand stood for high-end accounting because it was associated with IBM even though it had been dying slowly. All of a sudden they ran an ad - I remember they listed all their modules $595, $595, etc. for a total of $6,000. Then, they had this big slash through it, and said $199! And it transformed the business; it drew in a whole different customer set. This was a true retail product. Now all of a sudden this is like word processing. What have I got to risk? People said: “It's a $6,000 product and I'll spend a couple hundred dollars and see if it works!”

So this really didn't compete with our current products, because when you think about it, somebody that's buying a $5,000 product wants a different level of service and consulting. But the $199 thing opened up a whole new channel and a whole new business.

PROFITWISE

We saw this going on and we thought -- like all CEOs who are not disciplined -- maybe we should be in that business, too. Goodhue’s going to capture a lot of clients and maybe we

can capture some of those. So we started *Profitwise*. We took the *Solomon* code base, took out some features, stripped it down, and put it in a little package called *Profitwise*. I think we charged $249.

From a unit sales point of view, it did help us gain market share. We put in 15,000 sites in about 3 or 4 years. But at the same time, we were working on this *ImpAct* product, and it really was de-focusing. We weren't in that business; it was a whole different channel of distribution. We didn't have the capital to invest in advertising, and as the business struggled. I decided to focus us much more. So we quit shipping that product in the early 1990s.[5]

Bergin: You said 15,000 sites; – did you mean copies?

Harpst: Only businesses would buy this; it wasn't like *QuickBooks.*

Bergin: But it was for tiny businesses, so you weren't competing with yourselves.

Harpst: No. And that reminds me of another innovation that we brought to market and I don't think anybody ever recognizes this: we built our very first products to be registered electronically in 1981!

Basically, at that time you shipped software and didn't know who bought it. We locked the software so you could open the database 20 times but then you had to call us, tell us who you were, and then we'd give you an unlocking code. So when you bought our product you were buying a serial number that we would put in our registration system. That means we knew the name of every client we ever shipped to in the history of the company. Nobody was doing that in the 1980s. We knew what they bought, where they bought it, and what modules they had in their system. And every time they did an add-on module, we knew that. That meant we could market back to our channel. We knew exactly what they had already purchased. That was unheard of that the time. That was in 1981. Now, of course everybody does that, but it wasn't true then.

So *ProfitWise* was very valuable to us because now we had 15,000 new names; we knew who they all were and a lot of those people upgraded to *Solomon IV* later on.

Bergin: When did you make the decision to stop marketing *ProfitWise*?

Harpst: I'd have to check. I think early 1990s. 1991 or 1992. But it was Bill Goodhue's fault! Bill's a good friend and he was having so much success with Peachtree.

[5] The Solomon History website has this to say: In the mid-1980s, Solomon expanded its market research strategy by developing a small business product line (*ProfitWise*) and as networking of personal computers emerged, began development of its next product line (*ImpAcct*) for mid-sized businesses that were downsizing their accounting operations from mini-computers to multi-user networks on Novell *NetWare*. *ProfitWise* was released in 1988 and *ImpAcct* was released in October 1990. In early fiscal 1992, both *ImpAct* and *ProfitWise* were discontinued and the Company restructured. See: http://solomon.aardnet.com/Story/default.aspx?id=9

Bergin: Was there any level of maintenance associated with *ProfitWise* or *ImpAcct*?

Harpst: Yes, we sold maintenance plans with them. And low-end product maintenance was a very good business, because where you might get 20% of the list for a high-end product, you might get 50% of list for a low-end product -- you see what I mean? You'd charge $100 for an upgrade or something like that. It's was a good business. The real problem was the marketing expenses.

Bergin: So out of $249 you weren't getting a lot in terms of bottom line profit.

Harpst: That's right. I don't think it ever contributed to the overall profits.

IMPACT

Bergin: Keeping up with the Joneses. So what was the purpose of ImpAcct?

Harpst: It was to develop a higher end version of *Solomon III* from scratch that was much more optimized to networking. And frankly, it never, ever, really worked. We just spent too much money. It was one of those projects that went way, way over budget. It took way too long - five years. We started to bring it to market in 1990 and by that time what was in the headlines? Now it was all *client/server* and *Windows*™. And here we had a product we'd been working on for five years and didn't know anything about *Windows*™. It was too little, too late -- the wrong approach. And we killed it. That was one of the toughest decisions I ever had to make in my life.

What happens when you make a decision as a CEO or a leader is that the more you get invested in that decision, -- personally, emotionally and in terms of dollars -- the harder it is to let go of it. And finally, we just got forced to let go because of finances. We said, we can't go forward and do this. So we killed the project.

Bergin: So it was five years?

Harpst: Yes, roughly from 1986 to 1990 we were developing that product. And we should have been putting all that money in marketing and solving the problems in *Solomon III*. So that's probably the biggest single mistake I made in my 20 year career.

But I also say it led to one of the biggest successes we had, which was the following year.

Bergin: Did you ever put *ImpAcct* on the market, or did you decide to kill it prior to marketing?

Harpst: We did some early test marketing work with about a dozen resellers in seeing whether it was going to be feasible -- kind of dabbled with it for a year and didn't invest a lot in marketing but just wanted to find out what we had. We finally said we can't do this.

VALUE OF THE COMPANY

Bergin: Do you believe as the CEO that your Christian principles aided you in making that decision? Because it's a hard decision after five years and $70 million.

Harpst: $7 million, not $70 million. I would say the way it aided us was that there was never any recrimination by my partners. This was one of those things that could destroy a company and destroy partner relationships. But we just looked each other in the eye and said: "Look, we made this decision together - it wasn't you or me." We were back to this unity thing; there wasn't any vote. The attitude was more one of "What do we learn from this?" And it turned out we learned a lot because that's what led to *Solomon IV*.

Bergin: I hope this interview and what comes out of it can be published and maybe somebody in a business school will say: "You know what? You can have all this stuff but integrity and belief in one another, and working as a team goes a long way. Here's a case study of a small company that shows this."

Harpst: In a way you feel bad because you look at people now who are at this Conference, and who have gone through the industry and helped it form, and they're out of these businesses now. Some of the businesses are history. And really what you've got left is the memories of the relationships and the people. After you get a certain level of money, it's not very important. So I think for me, the relationships I formed during this period of my life are everything. To go through a period like this and having these guys helping me and holding me up rather than chastising me -- that's worth everything. And it's the very reason we were able to turn the company around.

I remember a competitor, State of the Art. We were in such financial trouble that we considered selling the company in 1990. David Samuels offered us $5 million for the company and later withdrew that offer. We looked at each other and said: "We're not doing this; we're going to go forward."

Ten years later we sold the company. When we closed with Great Plains it was June and by December when our stock lock-up was over, it was worth $200 million much of which went to the team members who made the company successful!

Bergin: Even though our focus is the early time frame -- the starting of the company -- as you just pointed out, it isn't one long, successful stream that percolates along at a 5% growth level. There's an assessment of the environment and the need and creation of a very successful piece of software and business, versus a big organization *per se*. Then there's a little stumbling where you made some technical choices based on necessity. And then, finally, like most corporations you get *off the shelf software* (COTS, Commercial Off the Shelf Software) so you can focus your knowledge and experience on the application and its delivery to the customer.[6]

[6] Commercial Off the Shelf Software is software that is purchased to be used "as is," and not modified by the purchaser or end-user. As such, most software purchased today is COTS software, even though the term was

Harpst: That's right.

Bergin: Now we're up to the early 1990s and the idea of not doing *ImpAcct* or *ProfitWise*. You have to transform yourselves from a company going down the incline into a company that ten years later was sold for $200 million. How did that transformation occur? What decisions did you make?

TRANSFORMING THE COMPANY

Harpst: The first thing we did was re-group. We had just gone through this period that had really weakened our balance sheet. We kind of shut down those things, went back to the core business, got it solid, and then said: "Look, *client/server* is the next wave; *Windows*™ is the next wave, and why is it that in the last ten years we didn't make any $100 million dollar accounting software companies?"

If you look at spreadsheets, word processing, all these other really horizontal products, they were several hundred million dollar companies created in the 1980s explosion. In the accounting arena instead, we had 20 $10 million dollar companies. I don't think there were any bigger than $25 million.

One of the reasons is: accounting isn't horizontal. Every business is a little different. And in the seeds of that observation was a key element of our strategy for going forward. We said: 'Let's build a product that's built on standard tools, Visual Basic™, sequel-type databases, standard report writers, and put our energy into making products that are incredibly easy to change and are flexible."

So we again innovated and created what we called *Customization Manager* that let people do incredible things to the product, even though it was an off-the-shelf product.

Bergin: The customers could make the changes?

Harpst: Yes, the customer or our partners ended up doing it. So they could build Visual Basic™ code and integrate it with our product so as to be indistinguishable from the product. And because it was built on Sequel, we had a lot of flexibility at the database level. So this was a transforming thought. It really, really, caught the imagination of the channel and the users because the value of our partners' investment could be tremendously increased by adding value, by consulting and building custom solutions on top of our core standard product.

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originally intended to mean software packages generalized so that a wide range of users could use it without modification. Because COTS is mass-produced it is quicker and cheaper to use than developing an application in-house or having software written or modified by outside consultants.

I think we launched the product in 1993 or 1994, and we had another *PC Magazine* review, and all of a sudden we started growing at 50 and 60% a year for the next five years, and that took us from $10 million to $60 million by the end of the decade -- in about a period of five years.

For the user, you were really shifting into organizations that were more substantial. We were moving up market gradually, because in the early 1980s these were toys; in the mid-1980s they were single user but business-driven and in the late 1980s they could be networked, but they weren't that flexible. Then in the 1990s the shift was toward broad and deep functionality and having a very flexible ability to add to it. So now you started to get pretty good sized companies that wanted the micro-based solution instead of minicomputer solutions.

So you can sort of see the unfolding of the industry in five year chunks: the front half of the 1980s, the back half of the 1980s, and then the 1990s is sort of a ten year chunk. Does that make sense?

Bergin: Yes, some of it was hardware driven; some was software driven, and I think ultimately this last part - once we had open architectures -- where individual people could do things for themselves -- then you could focus on that user's need and not have to twist things around because the hardware was constraining you.

Harpst: That's right. There was one other sort of channel innovation that occurred during this time. Just like in the 1980s, we had to train people on what micro-accounting meant and how you implemented it. In the 1990s, the shift was much more toward how you integrate this into the infrastructure of the organization; how do you do software development?

So we were the first company to institute the idea of what we called *Solomon* Technology Centers. We had about 1/2 dozen of them; they were kind of like an extension of Customer Support. Remember in the 1980s we provided telephone support for those channel members that couldn't provide it to their customers? Now we provided development support and integration support for the firms in the channel that didn't have the capability to do that. It was like a level up from phone support. Basically that was a way for the channel to go out and sell the benefits of the next generation *client/server*, even though they didn't have the capability to leverage all those benefits.

Then as we helped them do that, they gradually came up to speed. So the Technology Centers were both a revenue source to us and a way of transferring knowledge to the channel. It was a very innovative concept.

Bergin: Were you really the innovators of that model?

Harpst: Yes, we were. We were the first ones to do that. I won't say others didn't have field consultants and programmers, but we were the first ones to build centers and it turned out to be 20% of our business by the end of the decade. It was a very profitable and successful business. It actually has now been folded into the Microsoft Consulting operation. So that was an innovation that really

worked.[7]

Competitively, Great Plains in this decade, I think started to move to *client/server*, and then they started doing acquisitions and growing more rapidly by acquisitions. We were not focused that way. And they went public and became a more dominant player by the end of the decade.

Bergin: Your early tag line was: "Solomon Software: Information for Wise Business Decisions."

Harpst: That's right.

Bergin: Your new tag line on the website is "Flexibility to Get You There Faster."

Harpst: Right.

Bergin: From the perspective of Christian businessmen, looking back over a very, very successful company, a very successful career, it must be very rewarding to you to see you really did something special here. What thoughts are in your mind and/or in your partners' minds about what you accomplished?

ACCOMPLISHMENTS

Harpst: That's a very penetrating question. In the end, most satisfaction in life comes from relationships with people. I think that is sort of the bittersweet part of letting go of a business. By the late 1990s, it became really clear that the industry was consolidating very, very rapidly. Sage, the British company, began rolling up companies in the U.S. They bought Best Software; they bought State of the Art; they bought Peachtree and Manzanita. Bottom line is --all that rolled up on their side.

Great Plains bought Real World and FRx Software which was a financial reporting product. We were the last of the big four: Platinum was public; Great Plains was public; and Sage was public. So Solomon was the last player at the end of the 1990s with any significant market share that was not public. So we began to say: "What's going to create the opportunity for our team members?" And we were at another one of these junctures in the industry where we asked: "What's the next platform?"

Client/server was not the next platform -- it was the Internet. We were at the juncture of reinvesting to develop our whole product line for the Internet. And by this time, our product line was four times as big as it was in the 1980s. We had added so much functionality. The investment to take it to the next level was so high, and we said: "Look, with the industry consolidating, Great Plains is going to have to make this investment, Sage is going to have to make

[7] The company was sold to Microsoft in XXXX? Can Gary fill this in?

this investment; Navision -- which was a European company -- is going to have to make this investment." And the economies of marketing said this it was going to be smarter for us to make one investment as an industry rather than ten of them. That's what got us to thinking about -- merging with somebody or selling the company. We should do it now, before we make this investment for the next generation.

We came to the conclusion that our people in the company would have a better opportunity in a consolidating industry if we did it then rather than waiting for 5 or 10 years from now -- when our market share might not nearly be as good.

So I think, in retrospect, we did what we believed was best for all the people -- all the stakeholders of the business. Before we did that, merged with Great Plains -- this is another whole story we don't have time for in this interview -- we talked to all the major competitors: Sage, Navision and Great Plains, and chose Great Plains. Within 90 days, here you have the #1 player combining with maybe the #4 player and that was a huge market share in the U.S.

However within 90 days of our deal -- the combined deal -- Microsoft started talking to us (Great Plains and Solomon combination). So then within 9 months Microsoft had acquired us. And then within another year, Microsoft bought Navision. So now all of a sudden Microsoft has a European, worldwide-presence in Navision and they've got Great Plains and, Solomon with a large share, in the U.S.

Of course, their publicly stated goals are to eventually move all those products to one product which will be a next generation Internet product developed by Microsoft. So if we hadn't put this organization together when we did, then we probably would have been left out of the rollup in the industry. So in retrospect, I think it was the right decision. Do you see what I mean? Because eventually industries mature. It happens all the time.

Bergin: It sounds like it was time to "render unto Caesar."

Harpst: Yeah, I think it was. We're not quitting. We're starting some other high-tech businesses in Findlay to provide employment opportunities. It's a small community and we want to keep high-tech in Findlay. Microsoft's got an office there with a couple hundred of our ex-employees. My partners and I are continuing to work. We don't believe in retirement.

Bergin: You're still young.

Harpst: Yes, that's right! So that's the story.

Bergin: I told Burt Grad that this interview would be exciting because what little I knew about TLB and Solomon Software showed that there was a difference. There was a certain charm and personality to the story. I've enjoyed hearing how you built your company and I think the interview and your experience will be valuable to others in the future.

Harpst: Thank you, Tim. I really enjoyed it. A little sidebar -- I sat with Burt's daughter yesterday and she introduced me to her sister. It turns out her sister worked for five years at the same place I did in Columbus at Ohio State! Isn't that strange? It's a small world.