Hewlett Packard Software Workshop: Session 1: Origins of HP 3rd Party Software Companies

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Hewlett Packard Software Workshop - Session 3: Origins of HP 3rd Party Software Companies

Conducted by Software Industry SIG – Oral History Project

Abstract: In this first workshop on HP software companies, the participants introduced themselves and then described the origin of their ISVs and VARs who served the HP end user marketplace with applications and systems software products. In this introductory session the software company participants described why and how they entered the HP minicomputer marketplace which set the stage for the workshops to follow. The HP attendees described their roles in HP and the historians provided some background on their experience and interests in the software and services industry.

Participants:

Name	Affiliation
Burt Grad	Moderator
Rick Bergquist	American Management Systems
Marty Browne	ASK Computers
Steve Cooper	American Management Systems
Steve Dennis	Smith, Dennis and Gaylord
Jack Damm	Palo Alto Group, Quasar and Cognos
Grace Gentry	Gentry Inc.
Martin Gorfinkel	Lark Computing
Chuck House	HP
Mark Klein	Abacus and Urban Software
Doug Mecham	INTEREX
Alfredo Rego	Adager
Phil Sakakihara	HP
Ron Seybold	HP, 3000 Newswire
Stan Sieler	HP, Allegro
Harper Thorpe	HP

Fred White	HP, Adager
Rene Woc	Adager
Doug Jerger	Software Industry SIG
Michael Adamson	Historian
Gerard Alberts	Historian
Glen Bugos	Historian
Michael Mahoney	Historian

Introduction to the HP Software Pioneer Meeting

Burt Grad: Thanks are due to Harper Thorpe who has helped us to get some of the HP people involved here as did Chuck House. And thanks also to Birket Foster who's not here but who was also very helpful; he made a lot of contacts and calls to try to get people to attend. Doug Jerger, who's a member of the Software Industry SIG, will be taking your pictures for posterity and will be working with us on the sessions here and downstairs to help make these sessions run smoothly

This is actually the eighth meeting that we've held of computer software pioneers over the last six years. We started originally, as the Software History Center. Luanne Johnson, who can't be with us today, and I are the co-founders and co-chairs of what is now called the Software Industry Special Interest Group, and is now affiliated with the Computer History Museum in Mountain View, California. We founded this organization because we were concerned then, and we're still concerned now, that software history is being lost. People get older, they sometimes even forget things and if their experiences and recollections are not captured, there's no record. It's as though they didn't exist; and what they accomplished is lost. We have three historians here with us this morning and they've told us over the years that what we're doing to collect this information is invaluable in the long run, whether it gets used this year, five years later, or even 50 years from now. This is a base of information that helps people understand how this incredible industry was created and grew.

There are so many segments when we look at the software business; it's not just a nice monolithic thing. You can look at semiconductors and follow a fairly straightforward chain. You can look at storage devices and follow a fairly straightforward chain. Unfortunately, or fortunately, in our area, we went in so many directions in systems software and applications and all of the different platforms that we've had, and it's still evolving and changing. And software was developed all over the country with thousands of companies. One of the people from the semiconductor area said, "Here's a list of every company in the

semiconductor field that ever existed; most of them are out of business." It fit on one page. How many pages would it take for the number of software companies and VARs that have existed? And there's a hell of a lot of them that still exist, but tens of thousands of them were formed, and most are no longer here.

So that's why we think this is important. And obviously, you do too or you wouldn't be here. And we do appreciate your taking the time from your schedules and incurring the costs involved in joining us here.

Just briefly, we started in 2002 with basically mainframe software and services connected to a trade association called ADAPSO, which has changed names and has changed its mission over the years. But there was a period when ADAPSO was critical in the beginning to the mainframe software companies. So that was our first set of sessions.

On the back table in the room, we have a book that Luanne put together of transcripts from all of the workshops describing what they talked about at that meeting. We also put out a special issue of the IEEE Annals of the History of Computing. And there's a series of articles about these pioneers and the people who worked for or with them. In 2004, we ran two sessions, both on PC software, one in the east coast and one in the west coast. And out of that we got two more issues of the Annals, one on spreadsheet companies, and one on word processing companies. When we do these Annals issues, it's the historians who write articles that provide overviews and interpret what they've seen and understand; and it is practitioners, people like yourselves, who write articles about their own experiences, how things happened, what worked and what didn't work in their businesses.

Then in 2006 we conducted our first meeting on professional services companies. I imagine that many of you have had professional services activities in addition to your products work. Some may have migrated from one to the other and back again at various times. We did a very successful meeting on the commercial professional services companies. And, we will get some articles out of that, but probably not a special issue. And then thanks to Grace Gentry, we held a meeting in 2007 on the NACCB, the brokerage type professional services companies. It was a wonderful reunion of so many people. And Jeff Yost, who is a historian at the Charles Babbage Institute, says he'll be taking advantage of the material collected there for a book that he is writing. And prior to these two pioneer meetings on minicomputer software, we did one on relational database management systems companies. We had IBM, Oracle, Ingres, Informix, and Sybase all here, and again, we captured significant material. We're going to do a special issue of the Annals built around that meeting in the future. So this should give you a sense that what you say is really being used.

What you're saying today will all get videotaped, and the transcripts will be edited, and then posted on the Computer History Museum Web site. So far we have some 82 oral histories and workshops posted on the Computer History Web site or on the Charles Babbage Institute website. So you will be there, too. Earlier this week, on Tuesday, we ran a similar session to this for those software vendors and VARs who primarily supported DEC and DG. Now, the lines were never clear as to everybody who covered which, but there was sort of a self selection process. We asked, "Which do you think you'd rather be at?" Clearly most chose to be at the HP meeting, as you can see. We had a smaller attendance at the other one.

Our focus is on the ISVs and the VARs, and the HP people here are to help us in talking about the relationships with them, and the competition with them in some areas. You'll tell us what HP did that was good, and what you didn't like. They'll tell you why you screwed up. So it's going to be some give and take that's involved in these discussions. We're looking at both technological and business history. With most of you, a lot of it will be business oriented, but we will have some time on the technical aspects, the use of the products from HP and your own technology developments: the systems and utilities, as well as the applications. So we ask you to please share your information, please be frank.

Now, please look at the folders you've got, at the right-hand-side of those folders. We don't know the players without a scorecard. The top item on the right should be the program. You all signed a release form, you do understand that? Therefore, we can use what you say on any Web site that we want to. We changed the program as of six o'clock this morning. Doug and I started to work it over this morning and said it's not going to work the way we originally thought. The problem was that we were trying to separate the people on the technical and the business subjects. And it just won't work. In many cases there is only one person from a company here. So, where would you go? In any case, we would miss one part of your story. So we've combined it into one set of sessions. The second item in the folders is the descriptions of what will be going on in each of those sessions. Behind that is the list of the people who are here and their e-mail addresses, I hope that they are okay. A couple of people couldn't make it, but they're still on the list. They were going to be and maybe they'll show up later if they didn't have some problems. And I think those are the main items. Behind that, and don't look at it now, we have some sales pitch stuff about the Software Industry Special Interest Group. We hope that some of you may be interested in working with us, and some of you may be interested in giving us money; that would be nice too. So take a look at that later on. I'd like to now get going with the program.

There are three things to say. One, as you can see it's a pretty big group, so you've got to speak up. These mikes are just to record you. They do not amplify. So speak up. Use your presentation voices, not your sotto voce voices like when you talk privately to somebody. But that's just one side of it. These are very sensitive mikes, so if you whisper

to your neighbor, if you rustle papers and do things like that, we'll not be able to transcribe what the other person is saying. So please observe that courtesy to everyone else here. Finally, put your cell phones and pagers in silent mode or turn them off.

We will first ask each of you to briefly state your name, and your affiliation that's related to this meeting. We'll start over there.

Participant Introductions

Phil Sakakihara: Phil Sakakihara. I joined the HP 2000 team to help develop the system in 1972.

Steve Dennis: I'm Steve Dennis. I founded the Smith Dennis and Gaylord software company.

Gerard Alberts: Gerard Alberts. I'm a historian of computing based in Amsterdam in the Netherlands which is affiliated with the University of Amsterdam.

Michael Adamson: Michael Adamson and I'm a historian and an independent consultant. Also, I lecture at California State University at Sacramento.

Michael Mahoney: Mike Mahoney, I teach history of science and technology at Princeton University.

Martin Gorfinkel: I'm Martin Gorfinkel, and I founded Lark Computing in 1976.

Doug Mecham: I'm Doug Mecham, founder of INTEREX.

Chuck House: I'm Chuck House. I was at HP for 30 years. I'm at Stanford now. And I'm just completing a book about HP history.

Grad: Chuck I acknowledged your help earlier but you weren't here, so I'd like to acknowledge it again. Chuck's been a great help to us.

Fred White: I was formerly with HP and subsequently with Adager. I'm currently retired.

Alfredo Rego: Alfredo Rego with Adager.

Ron Seybold: I'm Ron Seybold with the 3000 Newswire. We do a current newsletter on the 3000 and before that I was editor of the HP Chronicle from 1984 onward.

Stan Sieler: Stan Sieler with HP in the late 1970s and cofounder of Allegro Consultants after that.

Rene Woc: Rene Woc from Adager.

Jack Damm: I'm Jack Damm. I founded the Palo Alto Group which was acquired by Quasar and then Cognos. And I built an early spreadsheet running on the HP 3000.

Mark Klein: Mark Klein. I was with Abacus and Urban Software

Steve Cooper: Steve Cooper with American Management Systems starting in 1977 and then cofounded Allegro with Stan Sieler in 1984.

Grace Gentry: Grace Gentry, Gentry Incorporated. We were HP contractor consultants. We developed software that operated on HP. We were HP OEMs and HP fans to this very day.

Harper Thorpe: I'm Harper Thorpe. I spent 22 years at HP between 1977 and 1999 and my perspective is primarily the sales and marketing interaction between HP and its VARs and Resellers.

Doug Jerger: Doug Jerger, I'm really a mainframer, just helping out Burt because that's where I met him in that role. My company focused on financial applications; it was called Fortex Data Corporation in Chicago. We started appropriately on April Fools Day of 1970.

Grad: There are some people from the companies who are not here yet, and whether they'll join us I don't know. Rick Bergquist from AMS had said he was going to be here. Also, from ASK, we have both Marty Browne and Nick Elder signed up. Anna Mancini, an archivist from HP, said she would try and join us for at least part of the day here. Glenn Bugos is another historian with a very tight schedule. He said he might try to come in and spend some time.

Here's what we'd like to do in this opening session. We'd like to ask someone from each of the companies represented here to say when the company started, what the company did. And what was their principal role in that company. Mark, I'd like to start with you.

Abacus and Urban Software

Klein: I originally started with a company called AFG Financial Systems in San Francisco. And at that company, there was a business called Abacus Software which did facilities management. AFG was working on an HP 3000, the pre-CX machine. It was the first machine that they had. They moved to a CX, then a series three before I left. I think it was 1974 or 1975 when they began. I joined them full time in about 1979. I worked with them through 1981, as their VP of Technology, managing the 3000 side of the business, where we did software development primarily for medical and insurance billing systems. We also developed a transaction logging and recovery system for Image. We called it Recovery 3000. And it was the first rollback transaction recovery system, although I know some might contest that. We were about the same time with it. Anyway, we say we were first.

Grad: So you were doing applications work on the System 3000 primarily.

Klein: Applications work on the 3000, yes. We also were one of the earlier adopters of Transact, and we developed a container leasing and tracking system for some large shippers that used Transact 3000. And that's pretty much what we did until 1981 when I left the company and became independent.

And in 1987 I was contacted by Orbit Software. They were just moving into the United States from Berlin and they needed some support on their equipment here, and I became their VP of Technology. I was with Orbit until 2001 as a full-timer. And I still do consulting for them to this day.

Grad: What platforms do they support?

Klein: HP 3000, HP 9000.

Grad: And what applications?

Klein: It's a backup and recovery system.

Grad: So it's a system type program.

Klein: Yes, all systems code. Yes.

Adager

Grad: Next, Adager has a choice of three people to speak.

Rego: Let me begin before the 3000 for just a second with the HP 2100, and before that the HP 9830, the calculator. Rene Woc worked for the HP representatives in Guatemala, with the Epelsa Group. And they had a 9830 and a few other computers. I was teaching at the University in Guatemala at the time and they asked me to do some consulting, to help make these machines work. Now, those calculators were designed just for calculating stuff. But these guys wanted to run businesses with them. The 9830 had cartridge tapes. So I had to write a sort and a merge, and they had data entry and report producing, which was all interesting for me. And we made the machines work. And actually, a few companies in Guatemala used them.

Then, we moved to the 2100 that was running an operating system called DOS III, in those days. And Paul McGillicuddy and his group wrote something called TCS, the terminal control system, very similar to what was built within IBM. The Guatemala phone company purchased one of those machines with five terminals. And HP had promised them that this 2100 with DOS III would run with five terminals, but it didn't. So the Guatemala phone company had four terminals in the closet, and just one working. So my task was to make it work. But It never worked. So we bought RTE, an operating system that ran on the same hardware. And after that, we went to the 3000, and that was in 1973 or 1974. In 1978, we were working with the Image database system that Fred White and John Bale wrote. And then we formed Adager, Rene Woc and I.

Grad: So Adager was formed in what year?

Rego: 1978.

Grad: And what kind of products did you then build at Adager?

Rego: Adager means Adapter Manager and it was for the database that Fred wrote; it should have been in the relational database market with Oracle and Sybase and those guys. So we adapt and manage and transform and maintain databases. Then we moved from Guatemala to Sun Valley in 1988 and we've been there ever since.

Grad: But you stayed in that kind of a product area, a systems type utility product rather than an application product.

Rego: Yes.

Grad: And what was your role at Adager?

Rego: I was and still am the jack-of-all-trades. I program.

Grad: Did you have a title? Did you bother to call yourself anything?

Rego: That's always been a source of pride that I was Fred White's manager.

Grad: Now that would I think it be a major occupation.

White: I used to see him once every six months.

Grad: Rene, what was your role?

Woc: The way the initial Adager marketing went on, Alfredo had to be on the road 99 percent of the time, mostly at the user meetings and at some gatherings that the HP offices throughout the world organized for him to attend and help them demo the 3000. So I stayed back at home and took care of the order processing and customer support.

Grad: You did all of the in-house stuff. How about the technology, were you responsible for that as well?

Woc: I was in the area of testing, and managing all of the enhancements and kind of organizing things so that Fred would go and put them into the product.

Grad: OK. And Fred, when you joined them, was your role primarily technical?

White: Yes.

Allegro

Grad: Good. Stan, talk about what you've done at Allegro.

Sieler: Steve and I founded Allegro in 1983. And our initial work was strictly with Adager, working on R&D with their wonderful database product. Outside of that, in the early years, we had a couple of products that were perhaps not even critical successes,

something called Opus, which I think we sold to HP product sales. It was something to help keep their 3000 alive, and extend how many users they could log-on. We've always been in the system software performance tools area. We did something called generic search for the Harvard alumni association, which was a superfast look-up mechanism to sit on top of their Image database. It's not an end user product, but it's something that you bundle into other products, which pretty much characterizes, for the most part, a lot of our work for the early years.

Grad: What was your primary role? And what was Steve's?

Sieler: For the first year or two, we split R&D pretty much evenly. We both worked on, for example, "debt pack," Alfredo, all of us together. As we actually started getting business, Steve began putting his MBA to use. And I ended up being more in charge of R&D, would you say that Steve?

Cooper: Yes, that's true. At the beginning, I used to pretend that we were on the same level technically, but we realized early on that if you don't send out invoices, people don't send you checks. So somebody had to start looking at the business side of things, and I migrated in that direction.

Grad: Who was doing the marketing?

Cooper: Well, that's the interesting thing about Allegro, at any given time probably nobody. We've been in business 25 years now, but in a sense we're still half a company. We don't have marketing people. We don't have sales people. That's why our products are maybe at best, critical successes. But through the years we have partnered with other companies to provide the distribution channel and the marketing.

Grad: We're going to talk about those channels because I know a variety of them have been used. So you didn't really have a significant or separate sales or marketing force?

Cooper: That's exactly right. It was word of mouth. We did minor things at user group meetings, which I'm sure we'll talk a lot more about.

Grad: Okay, now I'm going to switch hats for you. You were with American Management Systems before.

Cooper: That's right. American Management Systems was founded in Arlington, Virginia back in the early 1970s, by five people who worked for David Packard at the Department of Defense. They were the "Wiz Kids" that were talked about in some books at the time. When Packard went back to HP, these five, led by Ivan Selin, founded American Management Systems. They were in the consulting and the application development business in Arlington. And they had become relatively successful to the point that they thought they would want to branch out; they opened some regional offices, one of which was here in the Bay Area. And I was actually the first employee they hired directly into a regional office. Everybody else had transferred out from Arlington.

Grad: Were you hired in a technical role or a sales role?

Cooper: I was hired in a technical role. I have an undergraduate degree in Computer Science, and a technical MBA. So that's the kind of thing they were recruiting. If I could tell a quick anecdote that's just humorous: everybody they'd moved out had families and cars and furniture so you had to sign a waiver that if you left the company within a year, you'd have to pay back prorated the moving charges. So they made me sign all of this for my move and they wouldn't let me move up here until I did. So I signed all of that, and they were all excited about dealing with the first one regionally and not at corporate headquarters. So I got into my car. I drove from L.A. with everything I owned in the trunk and in the backseat. I stopped at a Burger King along the way. So I submitted my expense vouchers, like $32 in gasoline and $5 for lunch, and everybody got a good chuckle about the $37 I'd have to pay back prorated.

Grad: What kind of products, if any, did AMS introduce in that period?

Cooper: In those days, they were building very large applications, typically IBM mainframe based.

Grad: I want to be specific to the HP.

Cooper: Back east, they were doing large systems for city governments on various platforms. The day I arrived, in fact, they had done a general design for Weyerhaeuser Corporation up in Tacoma, Washington. And we said, okay, at this point, it can be done on an IBM 4300, on a PDP 11 or on an HP 3000. We'd recommend IBM or DEC because those are the things we have experience with, and of course, Weyerhaeuser chose the HP 3000. So I arrived, and they said, "We need to know something about HP 3000, do you know what that is?" And I said, "No." And my very first day on the job was spent at HP taking classes. As it turns out, Stan and I both came from Burroughs and I was quite surprised to see that this looked awful familiar. And this thing they were calling SPO looked

a lot like ALGOL. And it wasn't as foreign as I thought. Very rapidly we started becoming HP experts. Then we were on the hook to deliver a large application to Weyerhaeuser, and we started finding bugs in, excuse me Fred, in Image, and in MPE, and in COBOL. And in the Burroughs world when you got a new release of the software, the source was right there. So we turned to HP and said, "Can we buy the source?" And they said, "Sure, $300 each." So we bought MPE for $300. We bought COBOL for $300. We bought Image for $300. And a year later, we had our own versions of all of these things with the bugs fixed and we found ourselves with a fair amount of HP 3000 expertise.

Grad: So did you actually sell HP 3000 systems software?

Cooper: No.

Grad: You had licensed it for your own use.

Cooper: That's right.

Grad: You stayed in the applications business?

Cooper: That's correct.

White: The reason that it was a lot like Burroughs is that a lot of the people were hired by HP in Cupertino to come in and develop the Omega project. At that time, Omega was a 32-bit hardware machine developed in about 1968 or 1969. It collapsed because of the economic recession in the United States in 1970.

House: I just didn't make the connection between Packard and the five people. Did they work for him? Or did he encourage them to do some specific work that led to forming the company?

Cooper: David Packard was Undersecretary of Defense. And these were his IT people in the Department of Defense. I don't really know exactly what went on in those conversations. But when everybody went to do their own thing, I'm sure Packard encouraged them.

House: Because the mythology, at least at HP, is that Packard didn't understand computers at all until he came back from the Defense Department. And then he mostly meddled.

White: And he didn't understand them after he got back, either.

House: Yes, I think we all rest our case. Thank you.

ASK

Grad: I'd like to welcome Marty Browne, who is now here. What we're asking you to do is describe briefly ASK getting into the business.

Marty Browne: ASK Computer System was founded in 1972 by Sandra Kurtzig. I think the actual incorporation was 1974. ASK was a concatenation of her name and her husband's name. Ari and Sandy Kurtzig. We went through a couple of iterations: ASK Computer Systems, ASK Computers and then just ASK Corporation. And my tenure with Sandy and ASK began in 1972 and terminated in January of 1994. So, 22 years.

Grad: What were the roles you played, primarily?

Browne: Initially, I was a programmer. I cut my teeth on the HP 2100, and the HP 3000, of course. I think I was appointed Vice President in 1974. I held a variety of vice presidential titles including software development, operations, and just vice president. Primarily my role at ASK was to manage the development group for most of my career there.

Grad: Most of us know that the major products you had were the manufacturing applications.

Browne: The manufacturing applications went by the name of ManMan which stood for "manufacturing management."

Grad: Was there any other significant application development during the 1970s or early 1980s?

Browne: ASK created an entire applications suite, and manufacturing was only one portion of it. We generated a whole complement of financial applications. It had a cute name of FinMan, it didn't last long but that was for financial management. Throughout the years, we developed a complementary set of things, ERP begat ERP2 begat ERP3. Basically the original manufacturing package was an ERP package. As you added the financials, it became ERP2. And then the surrounding kinds of things for planning work were added to that group.

Gentry

Grad: Grace, tell us about your company, Gentry.

Grace Gentry: I was President of Gentry Incorporated. We incorporated in 1974. We were providing contract programmers, technicians, et cetera, primarily on the IBM mainframe. Around 1974 my husband said, "You know, we should get into minicomputers, that is the wave of the future." I spent the next year or so actually low-balling into any project that involved minicomputers, a number of which were HPs, so that we could basically get our company's stripes and say, "Yes, we know how to do HP." In 1979, we purchased our first HP mini so that we could develop our own software products that operated on that system. The first product we developed was called REX, which stood for Report Expeditor. We used to call it "Pascal without tears" because basically that's what it did. We took the Pascal instruction set and kind-of got rid of all of the tough stuff around it. We then used REX to develop a second product, which we called PAL, which stood for Programmer-less Application Language. And that was a report writer that was so simplistic that literally secretaries could learn how to do it on their HP. We were an HP OEM. We were an MCBA software seller, et cetera. We spent a lot of years with HP.

Grad: Your personal role was obviously to manage the company. You were also the chief sales person, I understand.

Gentry: We had three divisions and the OEM division was operated and managed by our Vice President, Laney Keithly, who would have loved to have been here and wanted me to extend his greetings to all of you whom he worked with over the past years and of whom he thinks very fondly. But yes, I was president of the company, and they rolled me in when they needed me.

Grad: Did you personally have a technical role in the development of these products?

Gentry: No, I did not. By the time we got into that, I had been pushed up higher.

Lark Computing

Grad: Next up is Martin Gorfinkel.

Gorfinkel: My background also comes out of the Burroughs world. I remember a meeting not long before Lark started, I worked for somebody else, and some engineers from HP came over and described their machine. And from the description it sounded like the

Burroughs machine we already had. And we asked them why the hell they wanted to build another Burroughs machine. And their answer was, “This is going to be a minicomputer.” You can put it in your office. You can forget all the air conditioning and other equipment.

Lark was founded in 1976. And we started with the source code for the HP 3000 and the package that came from the user group that did formatting and produced a word processing editor and formatter that ran on the HP 3000. It was easy enough so secretaries could use it.

Grad: So you were competing with Wang and people like that at the time, then?

Gorfinkel: We were competing with Wang. We were competing with a number of other standalone word processing machines. And the HP sales force was really our sales force. A salesman named John Matt was our salesman. He contacted others and said, “If you’ve got a prospect who would be buying HP 3000 if it had word processing here’s how you can get it.”

Grad: Did you continue in that space? Or did the products change significantly over time?

Gorfinkel: That product continued in that space until about 1981 when HP bought it from us, and renamed it XTVD.

Grad: That became their product.

Gorfinkel: That became their product.

Grad: What did Lark continue to do then?

Gorfinkel: We then developed typesetting software that used a Compugraphic photo-type center. And after about two years of that we got tired of dealing with chemicals, and HP came out with the LaserJet printer and the beginning of what is now called Fantasia started as a format for the LaserJet. The biggest challenge we had at that point was that HP told everybody in the world that you couldn’t put a LaserJet printer on a HP 3000, it wouldn’t work. So we spent a good deal of our time running around saying, “Yes, it works and we can show you how to make it work.”

Quasar and Cognos

Grad: Thank you, Martin. Jack Damm. Please tell us about your Quasar and Cognos experience.

Jack Damm: I was a summer hire at HP when I was at Stanford Business School. And because of being at HP, I started playing around with the HP 2000 timesharing systems and subsequently the HP 3000, when it was finally made to work. After the Palo Alto Group was acquired by Quasar Systems in 1982, the engineers there were harassing me because I didn't seem to know as much about Unix as they did. And I said, "Guys, you have to understand that when I went to college and I went to Princeton, actually, it was before Unix had been invented. But my lab instructor in my first programming course was a guy named Brian Kernighan, and he had a lot to do with Unix. So I may not have studied Unix in college, but I studied under the man who wrote it." When I get out of business school in 1970, I started working as a consultant doing financial planning, using spreadsheets. I'm kind-of a numbers guy. And it became obvious to me that that was a very hard way of doing financial planning. So I, fairly naively, sat down and said, "Well, I can program that." And I started on an HP 2000 timesharing system and wrote a spreadsheet program. And basically it ran with terminals. I had an old teletype that was connected to this HP 2000 system. And to make a long story short, when the HP 3000 came out, people said, "The 2000 is dying. You've got to convert to the HP 3000 and everything is going to be great." So I did that. At that time, I would expect that it may have been the largest program in BASIC that ran on HP 3000. It was about 25,000 lines of code. At any rate, we sold it. HP was our first customer. I remained a consultant in HP through the early 1970s until about 1976. In 1982 Cognos acquired Palo Alto Group, and I became an employee of Cognos.

Grad: Clarify. HP bought the company or bought the product?

Damm: HP bought the product.

Grad: And you were a consultant to them?

Damm: The product was called Dollar Flow, and it was a spreadsheet.

Grad: But they were marketing the product? Or did you continue to market it?

Damm: No. HP never marketed the product.

Grad: So it was bought for their own use?

Damm: It was bought for their own use. And they would use it in their divisions.

Grad: Then your company was bought by Cognos?

Damm: Quasar was renamed as Cognos and their product line was Powerhouse. In 1982 my company was bought by Cognos and joined that organization. We rewrote Dollar Flow, and they renamed it Power Plan. And, as a slightly amusing technical issue, they were saying, "Well, since it's written in BASIC it's very slow, but as soon as we convert this thing into SPL it will really scream." So it took us about a year to convert it to SPL. We ran speed tests and it was about the same speed.

Grad: When you joined Cognos, did you stay in that area, or did you take a broader responsibility?

Damm: I intentionally stayed in R&D at Cognos. So for the first couple of years there, I was involved in the rewrite project. By the way, we sat down and made the thing run faster, but it had nothing to do with SPL. No, I stayed in R&D. I worked on new products there. In the late 1980s, I got involved in a project that was kicked-off by Procter and Gamble, which was a customer of ours. I saw Quiz, Quick, QTP. I was there when the deal was signed with ASK to resell Quiz. But Cognos gave it away.

Grad: Because Cognos becomes a very big player.

Damm: Cognos became a very big player. Cognos grew to about $125 to $150 million a year in revenues, based on the Powerhouse fourth-generation language. But then the Procter and Gamble project kicked off what we called a multidimensional analysis, eventually became called business intelligence. And I must confess that in our early project meetings, the Procter and Gamble project was running on the HP 3000. And I was one of the people who said, "You really ought to make this run on laptops, so that sales reps can carry it around and people can use it and so forth." And one final comment, Cognos was acquired by IBM just this past February. It was a $1 billion a year company when it was acquired.

Grad: Okay. Steve Dennis.

Smith Dennis and Gaylord

Dennis: I started our company in 1973. I actually was with GE Information Services and had come out to California to do Sandy Kurtzig's job when she left to form ASK. I left a year later to form, I guess it was only Dennis back then; we added Smith in 1974, and Gaylord in

1975 to become Smith Dennis and Gaylord. We started out on the HP 2000 timesharing system and similar stories to Jack. We moved over to the HP 3000. Initially we focused in on three areas, financial management, order management, and project management. Later on, I can't remember what year, HP added our order management system onto their price list. It didn't sell a whole lot of them. And then we also got heavily involved in healthcare. And later on we split off into a second company, SDG Healthcare Systems, also on the HP 3000 where we focused in the fields of radiology, and --to a lesser extent-- cardiology.

Grad: So you stayed in the applications side?

Dennis: We started, really, on the consulting side, custom systems, and then, as more and more of our Silicon Valley clients were asking for the same things, we moved into the standard products software.

Grad: Did you continue to provide consulting services?

Dennis: We did. In fact, our primary advantage was having a custom systems background. We went into companies that needed standard products, but also needed some customization. So we did a lot of customization as well as providing standard products.

HP Responsibilities

Grad: Thank you very much. What I'd like to do now is ask each of the people that are here from HP to describe briefly what roles they played in the company over what period of time. Chuck, can we start with you?

House: I started at HP in 1962, which might sound pre-Neanderthal. I started working for the oscilloscope division and the reason that's significant for HP is that all of the early computing work came out of the fact that we moved that division from Palo Alto to Colorado Springs, and not very many people wanted to move. We had been doing a project for IBM to help them measure fast drive times, and things like that. And a kid named Kim Agalby. I got intrigued with the computer and in lieu of moving got Packard to sponsor a Ph.D. program at Stanford; that resulted in the 2116. I built a trigger for an oscilloscope -- an and/or gate trigger, if you will -- for IBM. And Dick Monet was our project manager. Dick became the manager for the 9100 desktop calculator, the first desktop. So we've kind-of traced the origins of HP computing to the oscilloscope division's move to the sticks, and the fact that not everybody wanted to do make the move.

The next thing that was significant was we had a fellow named Dave Cochran working at HP Labs on a digitized voltmeter. It turned out we were the ninth entrant in the digital voltmeter

field. We owned the analog voltmeter business, but in digital we were very late. When we turned the first ones on with customers, this thing could record six voltages a second and no technician could write that fast. So the question was, "How are you going to record that?" And that became what Kim Agalby's project was. It was to be an instrument controller and an instrument data recorder. The problem was that voltmeters were used on manufacturing floors and on the Alaska Dew Line, and up in airplanes. And computers ran in air conditioned, low humidity rooms. So the 2116 was a ruggedized data logger primarily. I built the display for it called the HP 1300, which was the first commercially sold computer graphics terminal. A kid named Alan Kay bought one and built the flux machine around it. And then Dick Monet built the tube into the 9100, and then Alan said, "Gee, that'd be perfect, we'll call it the Dynabook."

So HP had a lot of impact on the early personal computer stuff. Then Doug Engelbart bought one of our boxes for some Fall Joint Computer Conference, and that had all of the displays back and forth between San Francisco and Menlo Park over here. And then we started the Omega. We had this fantastic project that was going to be the end of computing definitions. It didn't work. So I built what we called logic analyzers to try to understand what was happening in the data register flow. We convinced the kids like Burt Forbes and Jake Jacobs that we could understand a simpler machine. That became Alpha, which then became the HP 3000. So in my view, the 2100, the 9100 and the 3000 all sort-of came out of a core group of about six or eight kids over about four or five years.

That brings up through about 1970, when I started on the logic analyzer. I was always in the lab; I got thrown out of the lab several times, but I was pretty much always in the lab. And then the logic analyzer line became HP's one digital instrument that was the cornerstone. We were involved with all of the companies in a little different way than you all were. We were trying to understand what the machines were doing. So Motorola had a look-ahead feature on the 68000. They couldn't figure out how to tell what the look-ahead feature was doing. But this was set-up so that when the machine crashed you could figure out the route by which it got there. When DEC built the VAX-780 they couldn't figure out what to do with the virtual addressing scheme and how to track that, so we wound up building all of that. The reason those two stick in my mind is that I had to get the approval of the boards of those companies, as well as HP's board, that we could be a competitor measuring their stuff. It was a fairly interesting time.

I got involved in software when we took the logic analyzer line and began to build microprocessor development systems, but it was really crude compared to all of the application stuff. We were building compilers, and how to help people write low-level drivers and things like that. And then in 1982 for reasons that still escape me, I got asked to become the corporate engineering director for the company. And the first thing they said is, "There's this company up in Sun Valley, Idaho that builds" – I've forgotten what you guys

built, but it was, “Why don’t you go up and give the keynote at some meeting about why application software is really cool.” And I thought that would be great. And it turns out Sun Valley, Idaho was pretty hard to fly into particularly in an environment where there were a lot of winter snowstorms. So my acquaintance with most of the topics in this group dates actually from that particular meeting. And as I recall, one of you was there.

Rego: I was there.

House: That’s right, that’s where we met first. And I had a great dinner that night. And I was charmed and took up skiing as a result. So I owe a lot to this group.

Grad: Phil, talk about yourself.

Phil Sakakihara: I was recruited out of grad school in 1972 to work on the HP 3000. It was still being developed. And I was asked to create an environment where you can take 2100 code, compile it and load it from the 3000 down to the 2100. That was my first project as an engineer. And then shortly after I got there, we released the HP 3000 and our first customer was UC Berkeley. And it stayed up for about 15 minutes, and we were elated. We were just so happy. Shortly after that, Bill [Hewlett] and Dave [Packard] came down and asked us what we had built, and they weren’t very happy about us trying to go into the computer market segment. I think, at that point in time, they gave us about a year or so get this thing done and get our act together. They brought down, I think, Paul Lilly at the time. And I have a lot of respect for Paul because I grew up with him, but we worked very hard and we got the system up and running and stable. Maybe it’s because you wrote some code for us, I don’t know, Steve, based on your analysis. Shortly after that, I ran all of networks for HP and developed all of the software. I was always developing software, never the hardware. And then I was asked to go to the U.K. and set up a software operation where we developed something called HP Desk Manager, I don’t know if any of you know that, and Open Mail. And it took things like TDP and on a desktop, a terminal based system, we could store it in a file system. We could fax and it we could store it in there. And that actually became profitable a year-and-a-half after we released it.

I came back from the U.K. and then I was asked to run all of the PC and workstation software groups. And then shortly after that, for some unknown reason, John Doyle and John Young wanted me to coordinate software architectures across all of the software groups, as well as the instrument groups, which I thought was a thankless job; and as it turned out, it was a thankless job. But coordinating those types of architectures across the various software divisions resulted in creating something called the Object Management Group; I found it was easier to coordinate activities outside of HP than inside of HP and get the other computer companies behind an architecture and then bring it back into HP. So

that's what I did with the Object Management Group. Then I came back and managed the software at the Apollo Computer Group, all of the distributed computing stuff. And then, shortly, after that I was recruited out of HP to do startups for PCs, and that's what I'm doing today. So I'm dong startups just like I did within HP.

Grad: Like you did 30 years ago.

Sakakihara: Yes, right.

Grad: Thank you, Phil. Harper.

Thorpe: I joined HP in 1977. I was originally a desktop computer systems engineer in the old 9800 series product line. The first product I worked on was the 9830, which has been mentioned this morning. I went into sales a couple of years later, kicking and screaming because when you're an SE at HP being called a hero or a genius four times a day was typical, and when you're in sales, it's not so typical. I had a territory in Santa Clara, and ended up taking on the HP 1000 product line. I think I sold the first HP 1000 ATE system to Lockheed. I took on the HP 3000 product line as a territory assignment in Sacramento. And that was when it became very apparent that the customers were not very interested in buying hardware without software; so, it was important to find all of you. I became a district manager in the East Bay with an HP 3000 focus. And at the time we called these districts, horizontal districts, meaning you just roamed the zip codes, and I verticalized my sales force so each portion of the sale force had a specific vertical responsibility -- distribution, manufacturing, state and local government, education, and so forth. And as a result, I got to know our software partners very well.

As a result of that focus, I actually was asked to create sort of a third-party focus for the greater geographic area which was Northern California. I eventually moved into channels, broadly speaking, meaning I was both on what we used to call the CPO side of the business --computer products organization, PCs and LaserJets-- as distinguished from computer systems organization -- HP 1000, 3000, 9000. And this was a timeframe when we couldn't decide at HP if we liked resellers or ISVs, better. So probably, some of you had occasion to have this schizophrenic conversation with us over time as to how we wanted you to act. Eventually, I ran the channel marketing organization for the Americas in Cupertino, and we decided that all of you were good, and we'd let you tell us what business you were in and how most effectively to work with us. I really enjoyed that part of the business. When I left HP in 1999 we had about 900 resellers of HP 3000s and 9000s, which we called VARs, value-added resellers. There were probably 30,000 resellers of PCs and LaserJets, which the computer products organization also called VARs --but we were fairly sure that stood for virtually any reseller. At any rate, my claim to fame prior to leaving HP is developing the

distribution activity for HP and North America for HP 3000s to 9000s, which became a fairly big business, and I'm proud of that. And I'm happy to be here with all of you.

Grad: Thank you. Fred, you were at HP for a while, what kind of role did you play there?

White: I was working at IBM in San Jose and I got a phone call from a gentleman, whose name, I think, is Dick Moley who worked for Paul Lilly . And he asked me if I happened to be in the state of mind where I was looking for possibly a change in career path; I said, "Yes," and they hired me. Apparently, they were forming this Omega group for a 32-bit org machine that they planned. Apparently, they felt that they needed someone to take charge of file management, and my name came up because I knew some of those other people from other companies that I'd worked with before in the technology center in IBM. So I got hired in to do the file management project within the lab.

Grad: You were working on the technical engineering standpoint, primarily?

White: Always. When I got kicked out of the lab because I refused to change one of my specifications for the software, I got sent to a black sheep squadron in a different building. And that's where I met Jonathan Bell who had been working, I believe, on the 2600. We were told by our common boss to go ahead and do something that might be useful for the second release of the HP 3000. So, if I hadn't been kicked out of the lab, Image would never have existed. I thought you might find that an interesting historical anecdote. Anyway, Jon Bell and I, through a variety of events, wound up developing the Image database management system. And as soon as we demoed it, the project was cancelled. That was the end of the project. HP didn't seem to know that a database management system had been developed/ But all software has an ongoing life. So I got assigned to clean up some bugs in query and a few other projects like that. And then, I got to meet Alfredo Rego somewhere in time maybe 1978.

Grad: So that's when you joined Alfredo?

White: No, I didn't join him until 1981; I think it was November 1, 1981. And I didn't really become an employee because he was in Guatemala and he didn't want to worry about tax things in California and the rules and the regulations in the United States. So I just became a consultant for him at that time. Some years later, I guess, in 1988 early, 1989, I got a phone call saying, "We're here in the United States now, how about coming up to Idaho and working for us up here?" And I said, "Great." I'd never lived in Idaho before, so I went up there.

Grad: So that was a change for you.

White: It was nice. I liked it.

HP Users Group and Publications

Grad: Doug Mecham. Did you ever work for HP?

Mecham: Yes, but not until very late in my career. I had started out looking for a job at HP, and it didn't come through. I was pursuing a master's degree. I was hired by Hughes Aircraft because I had just done a paper in school on the MPE external reference facts. And, we got the last machine on the second production run, with version A of the operating system. Needless to say, it was a challenge. And as a trivia question, does anybody know what the HP 3000 was called when it first went to market? It wasn't the HP 3000. It was called the HP System 3000. And here is the manual. And what turned on the Hughes Aircraft Company was the real time aspect along with batch and timesharing; and there it is in print. I'll pass it around. The famous three circles.

Of course, that didn't work, and I was being technically challenged to run the lab there in the microwave area. I suddenly realized there were a couple of problems with this machine, and we probably should communicate with users. So I probably wrote one of the first external software items for HP. It was called an index to the MPE manual. They neglected to put an alphabetical index on there. They didn't have a sort. So I had to use the IBM machine at Hughes to sort the index. That was my big public contribution. I did write a bunch of other pieces of software and things. But because we wanted to communicate with other users I, in my compulsive manner, contacted a number of people and we got together to form a users group, The first meeting was, I think, in 1972 And it was truly international in scope. We had somebody from Brazil, somebody from Canada, Dr. Gary Anderson. And that began the users group which I think played a very significant role for HP with software and vendors.

Gentry: Yes, it did.

Mecham: We took on the mantra of HP and "the HP way." We wanted to be independent and we were. But we worked very collaboratively. Over time, I think we got together a forum that really allowed vendors to show their wares. But, more importantly, I think, it allowed users and individuals to grow, vendors to grow. I saw programmers grow into corporations. This was very significant, I think, over time, in having conferences that provided this forum. There's, of course, 1,001 things I could say about that. But, I guess, in that capacity my role was as a facilitator, although I was technical and I'll talk about some of that later.

Damm: Doug, just a comment. If you had not founded INTEREX I know for myself, our company would not have existed. Our marketing was almost entirely through the HP users group.

Grad: Now, you were marketing as a vendor, but you joined those user groups and you marketed through those groups?

Damm: Well, yes. Starting at the show in Issaquah, Washington with tables that weren't even draped, we did the show every year. Cognos used to spend $100,000 per show to display their products at INTEREX.

Grad: I have that on the agenda for later on. I really want to hear more because a number of people are here because of Doug's efforts, and his help in contacting you, and your communication through INTEREX; and I appreciate that.

Mecham: As a matter of fact, I did bring two of the items that were in the users group office, and we can look at that later.

Grad: That's what I'd like to do. Ron Seybold, tell us a little bit about what you did.

Seybold: I joined the PCI Wilson Publications group in Austin, Texas, to be able to create and help publish a monthly newsletter/newspaper about the HP world. The HP 3000 was just a portion of that. We covered the 1000s and we covered the 9000s as well. But we found that the 3000 group was the best organized, had the strongest community, and most important was willing to teach a young general journalist something about the IT business. I owe whatever I know about this to everybody here.

Grad: What timeframe, Ron?

Seybold: It began in the fall of 1984. So if you want to mark this on HP system time line, the Mighty Mouse series 37 is just being released on Marvel because it operates in an environment where you don't need special cooling and flooring. And the very same year, the HP LaserJet is also rolled out. So we really have two areas where HP is still focused on: printers and business computing, which are still growing businesses. I was busy learning all of the players, and there were just so many at this point. And this was a period where HP published the thick catalog of everybody who allegedly offered anything on the HP 3000s, which was where our software went. And we learned over time what was in the catalog was not necessarily on tape, something that you could ship to a customer. But at that point, HP was a $6 billion company. We could call, perhaps, 12 people in order to find out what was going on in the environment as far as HP was concerned. And user groups were the

strongest allies as far as really reaching out and touching the customers. We were really focused very strongly on monitoring the HP's hardware releases, as well as the improvements in MPE. But as I joined, HP was just crossing over into this area of RISC-based computing. They had a failed project that eventually was renamed Spectrum. What was the prior name?

House: Vision.

Seybold: Thanks. Vision was introduced because, of course, they were trying to catch up with Digital. So I'm kind-of doing the overall history here.

Grad: Yes. So what you did was a print publication that you distributed.

Seybold: Yes. Published once a month, distributed worldwide. I had overseas advertisers as well as people based domestically.

Grad: Was it free to anybody? Or did you make your money off subscriptions?

Seybold: There was a subscription based program, primarily, as I began. Later on, it became what we called control released. In any case the advertisers were always the largest share of our revenue.

Grad: When did the 3000 Newswire come in?

Seybold: The 3000 Newswire was developed in the summer of 1995. I took a few years off after I left the publishing company. But my wife, Abby Lentz, took note of the fact that the 3000 didn't seem to be getting any more press because HP was already trying to make it obvious to the customer base that the product was going away. Nevertheless, we knew of a very large community that was still using it, relying on it for building their own products, and were leaning on third parties. And she said, "If we just focus on them, we'll be able to provide something that's useful." And we were extraordinarily grateful for the rise of Interex because it was a strong HP 3000 user group that was active at the time, so we knew we had plenty of material. So the Newswire started in 1995 and we continue to publish it today.

Historians

Grad: Thank you. We have four historians here now that Glen Bugos has now joined us. We need as many as we can get. There's so much material to be covered and interpreted and analyzed. So the more we get historians interested, the better off we are.

Just very briefly, Michael Adamson, tell briefly what your interests are and what you've been doing.

Adamson: I should preface my role as a historian by saying that during the eight years between my going to business school and going back to get a Ph.D. I worked in professional services, splitting my time between Andersen Consulting and a third party software company, mostly working on the IBM 4300 and AS/400. My principal interests as a historian relate to organizational behavior, urban development, public policy.

Grad: Thank you Michael for joining us today. Gerard Alberts.

Alberts: Within the history of computing, we come to develop a more thorough interest in software. And in Europe, we're having a major project we call Software for Europe which is done in the framework of a history of technology program. That's the European side of it. Now, what we see in Europe are patterns of cooperation between academic people and industrial enterprise. I'm surprised to see here all of this spaghetti of entrepreneurs coming from one company developing their own company, then rejoining another company and people all seem to know each other, which from a European vantage point is just HP and that big company. And only when you come in closer do you come to see all of these layers of interest, the influence of user groups, and not just the clients and the company, but all of those intermediate people who really created the HP culture, the ones you have here, around the table. And so, what from a distance looks as the America of enterprise, from a closer look, looks like real life. It looks much more like the entrepreneurial culture we see around us in Europe with all of the intermediate entrepreneurs, with all of the intermediate people. And that has come as an eye opener to me.

Grad: Glen, briefly, what do you do as a historian?

Glen Bugos: I do a contracted look at history. My background is in computer science and technology, most of it directly related to computing. Of course, in recent history, technology inventions have been fused with computing. Right now, I'm spending most of my time at the Masane Research Center as a historian there. And I'm fascinated just in what I've heard of the conversation; you hear how creativity happened within a large organization. There was a time here when innovation was done within larger groups like Hewlett Packard, and these firms had a way of allowing innovation and customer focus to happen from within the form. So I'm hoping to hear a little bit more about all of that from you.

Grad: Thank you, Glen. And then Mike Mahoney.

Mahoney: My first experience in computing was in my senior year at Harvard, 1959-1960 programming an ElectroData 204, and then the Datatron before it became the Burroughs 204. So I think I may be able to claim seniority in this group. I go back before Burroughs. I spent a year wrestling with that machine and decided that computers weren't very interesting and they weren't going anywhere. With that kind of foresight, I became a historian and spent the next 20 years doing the history of ancient and medieval and early modern science. And then in the early 1980s when computers had somehow acquired a history, I went back to school and have since been working in the history of computing. I'm interested in the new formation of new theoretical disciplines. So I've been doing a study on the formation of theoretical computer science as a mathematical discipline and on the efforts to create a discipline of software engineering, as yet, starkly unsuccessful. So I have one success story, and one un-success story following, but that makes me interested in the history of system software, in particular, programming languages, software engineering.

Grad: Michael Mahoney has been one of our stalwart supporters. Since we first started doing collecting software history, about 15 historians have been working with us, taking the time to come to these meetings, conducting the oral histories. Almost all of our oral histories have been done by historians, by Michael and Bill Aspray and Martin Campbell-Kelly, people like that who have written history books about the industry, written articles in the Annals of the History of Computing that you may want to take a look at. And it is now 10:30. It is time for coffee. And we will get back together in 15 minutes. I thank you very much.