

An Interview with
BEN PERSONS and HERB PELNAR

OH 327

Conducted by Philip L. Frana

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Ben Persons and Herb Pelnar Interview

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Abstract

In this oral history Ben Persons, most recently Technical Assistant to the Lab Director at IBM Rochester, and Herb Pelnar, retired AS/400 System Administrator, talk about their careers at IBM, focusing in particular on the development of System/38. Persons shares his experiences repairing World Trade equipment, contributing to the design of an underground command and control system for the Pentagon, and his work on TSS at IBM's Yorktown research facility. Pelnar discusses his employment as a SAGE display system technician and in coordinating the RETAIN maintenance system. Pelnar also speaks about about his work coding System/32, and on the role and environment of the programmer within IBM before 1980.

Oral History:

Ben Persons and Herb Pelnar

This is an oral history conducted by Phil Frana under auspices of the Software History Project of the National Science Foundation. The interview date is July 17, 2001, in Rochester, Minnesota.

Frana: Could I have each of you state your name and then your last position before retirement, and when you retired? Would you mind?

Pelnar: I am Herb Pelnar and I was AS/400 System Administrator and I retired in 1991.

Persons: Ben Persons. My last retirement was I was a Technical Assistant to the Lab Director. That was in 1988.

Frana: Maybe we could start just by describing your education and how you came to be at IBM. Do you want to start?

Pelnar: Okay, basically I received- I did not have a degree. I received technical training in the military and after I was discharged, I was hired by IBM to work in the Federal Systems Division working on the Sage System.

Frana: When was that?

Pelnar: This was in 1959.

Frana: You worked on Sage?

Pelnar: Right.

Frana: And Ben? Your experience?

Persons: My experience is that I graduated at the University of Minnesota, and I worked for IBM Commercial. And in 1954, I moved out east to Boston and worked on the Sage Project and I was part of a nucleus of the instructors that were going up to Kingston, so we worked at MITRE Corporation for about ten months. And from there we went up to Kingston and started the school up. I taught classes there and I did the courses for the systems side of it. (non-I/O, [Input/Output] side)

Frana: And did both of you work together then?

Pelnar: No, we missed each other by about six months I think.

Frana: Six months. You didn't know each other?

Pelnar: Right.

Frana: Now, what was your role in Sage then?

Pelnar: I started out working as a technician repairing the display system. And then I became a systems field engineer; I guess that was the title at that time. I was trained on all the parts and worked on all the parts of the system. As well as after I became a systems field engineer, I was the person that taught all the programming.

Frana: Now I think the answer is probably obvious given where you've been over your career, but was not having a degree any hindrance to you at all?

Pelnar: Probably it helped me more than it hurt, because I always felt I had to work twice as hard in order to get the same results. I was willing to put the effort in. I look at it as it helped me.

Frana: Now Ben, when you were at the University of Minnesota was this vacuum tube technology that you were studying at that time?

Persons: Right. At MITRE Corporation, 4096 bytes of memory, involved something about five foot by five foot by about eight or nine foot high, with hundreds of vacuum tubes in it for 4K bytes.

Frana: And when did you start encountering integrated circuits and transistors?

Pelnar: I thought we had some and later engineering changes for Sage System incorporated some of the transistors already.

Frana: Okay.

Persons: Well, my exposure was in '59. Canada was going to get the first transistorized Sage System. They wanted an advisor up into Ottawa for their engineering people and to the site people where they were building the site underground huge springs. I went up there for a year as a consultant to The Royal Canadian Air Force. I transferred at the end of that in 1960 to Washington DC to work on a totally different Air Force Project.

Frana: Do you remember, when was Sage dismantled?

Pelnar: I was stationed at the Sault Ste. Marie Air Defense Sector. I left that in 1963 because it was going to be shut down. And then probably within six months after I left they dismantled it. I don't know when the other sites were dismantled, but that one in particular, I know.

Frana: You know there is this story, I don't know if it is a myth or not, that Sage began as human beings standing in these lookout towers for fires, along the northern border. Had you heard that?

Pelnar: No.

Persons: No.

Frana: Okay.

Persons: Those were gap filler up there. That sounds like hokum. I worked on radar repair in the navy in WWII.

Frana: I don't know what you would do, or how what your reaction would be...

Pelnar: I don't know how they could feed that information into the computer. All the inputs to the computer were electronic.

[laughter]

Frana: I'd read that somewhere and I thought that was rather remarkable. So, when did you then get to IBM? Were there intermediate steps or then did you go directly to IBM?

Persons: Well, I was working for IBM while I worked on Sage. IBM had the contract with Sage and I was working for IBM. I think each of us had a contract with the Air Force. I joined IBM in 1950. Yes, I worked in Saudi Arabia from 1952 to 1954, for Arabian American Oil for IBM. We reported in to Paris and Sindelfinger, Germany.

Frana: So you were both consulting on this system?

Persons: No, I was repairing world trade equipment. Germany was designing all the new World Trade IBM equipment then.

Frana: Was it still called IBM Deutschland, or ...let's see, what was it called at that point?

Pelnar: I wasn't part of the German part. But this was when you were working for...when you were working overseas for...?

Persons: Yes, I was working for the IBM World Trade Corporation.

Pelnar: You had asked the question earlier and I was trying to respond to it...I can't remember what it was anymore...

Frana: So, but then you ended up in Maryland. You were telling me at some point...

Persons: Yes, IBM had a contract to design an underground Command and Control system for the Pentagon. There were three stages. First stage, second stage, and third stage. And IBM had the contract for the first stage and the specs for the second stage. And so I lived much of the time in the Pentagon for about a year working with the Air Force to understand what information was coming into the Pentagon at the Air Force. We put out the specs for that contract, and IBM bid

on it, along with another company called General Precision. IBM eventually got the Phase II project work.

Frana: So you moved up there to work on TSS?

Persons: So I worked up there from '65 until '69. In 1965, Joe Rogers, the manager of the Washington Systems Center asked me and a few others to join him on the TSS Project in Mohansie, New York. I really didn't want to go. I said I'd only go if Joe Rogers, who was going to manage the project, would commit to me that I could come to Minnesota when my son was thirteen years old. I also wanted to switch careers from engineering to programming so that was the second part of my request. He agreed to both requests. In 1967 I switched from engineering to programming. I went to programming school and then my next two years of assignments were in programming, but at a management level. I never became technical in programming.

Frana: Where did you go to programming school ? This was an IBM...

Persons: Poughkeepsie. IBM.

Frana: At IBM. And did you ever attend any classes there?

Pelnar: I attended a class on programming in Sage. Yet, I was one of the few programmers out at the site. But then before, about a year before, they closed down the sector where we were at, the Air Force took over the maintenance. They brought in Air Force personnel, and they were trained. But they weren't trained on the programming and my job was to train them on the programming part of it so they could figure out how to fix bugs by writing little short blurbs of code.

Frana: Did either of you have any contact with Safeguard people?

Pelnar: No.

Persons: No.

Frana: Neither of you were...? Although I'm told many of them streamed into Rochester eventually and took up jobs.

Persons: I'm not familiar with the Project.

Pelnar: I've heard of it but...

Persons: ...that's all, I've heard of it, the name, but that's all I really know.

Frana: I talked to Dick Hedger a little bit about that- that is why I ask. So then, your first operating System was with Sage?

Pelnar: Right.

Frana: Did you actually work on the programming of the operating system for Sage?

Pelnar: I understood it, I knew what it was, but I did not work on it. Another company had a contract to do the programming and the maintenance of the programming. But, there were two parts: there was the active program and the standby program. And on the standby program I wrote routines to be able to do maintenance and things like that.

Frana: Okay. So Herb, when did you meet Ben? At Poughkeepsie?

Pelnar: No, here in Rochester.

Frana: Here in Rochester?

Pelnar: Right. As a matter of fact, I worked in Ben's area. I was, my first program assignment was in Ben's area. Or not quite, the second one was in Ben's area.

Frana: Okay.

Persons: What year was that? About 19...

Pelnar: 1973 I think, was the first time we met.

Frana: Now you told me that you worked on System 360.

Persons: Right.

Frana: And did you have any contact with System 360 ?

Pelnar: Yes, before I came to Rochester. Well, after I left Sage I was a Customer Engineer (CE) out in the field fixing hardware and a Program Support Rep (PSR) fixing software in the upper peninsula of Michigan. I did that for nine years. And then...

Frana: Lots of snow?

Pelnar: Yes, but it was easier getting around there in the middle of winter than it was in the middle of summer, because they had all two-lane roads and everybody that had a Volkswagen was pulling a camper. You couldn't go more than thirty mph on one of those; it was all curving roads. You couldn't get anywhere. But anyhow, I worked there for nine years, and then before I left I worked on the RETAIN System in Raleigh, North Carolina.

Frana: What's the RETAIN System?

Pelnar: This is the maintenance system for if you get bugs. It keeps the history of the bugs and all the fix information for the Customer Engineers (CE's). The intent was to retain a history of

failures, so that the next time somebody called in with a failure you'd be able to look it up in a database and be able to assist people.

Frana: And this was nationwide?

Pelnar: This was nationwide. And so I worked there for- it was just a temporary assignment- but I wrote the front-end for all the capturing of the data for the RETAIN System. And this was on 360.

Frana: And the database was the standard 360?

Pelnar: No, they had written their own database specifically for that. I didn't work on a database, I just worked on the user interfaces. There were displays at the time; I can't remember what it was, one of the older display types.

Frana: Okay. All right. And your OS 360 experience was pretty extensive?

Persons: No. No. It was very narrow. I was really the planning manager for TSS and then I wanted to get technical, and before that I was trying to keep myself technical and manage. So when I took a management position I always said I didn't want to stay in it more than two years, because you lose out technically. My technical assignment was to head up the schedule plans and work with the programming group. It was big, long...I can't remember- 48 bits instructions. It was terrible to write in.

Pelnar: The 360, yes, depending on what model you had of the 360, because you had different microcode on each one.

Persons: Yes. Anyway, then I took over from a person named Pat Goggins. She had the performance that we were talking about earlier, she came out here to Rochester, and so I took over the performance area. And then my son got to be thirteen. And I went into management and said, 'I want management to honor my request to transfer to Rochester.'

Frana: Oh, there's a direct correlation there because you had so little time? Is that to raise your teenager?

Persons: No. In '68 I went in and said, 'Next year my son is thirteen and I want to be out in Minnesota. Joe Rogers, who managed, committed to this.' About that time he left, so in '69 there was a new manager of TSS. But it was in my file that they had to honor this commitment to come back to Minnesota.

Frana: Now, Ben you are from Minnesota. Then you are a native, you went to school here? You knew this was the 'best place to live in America.' The sign says so when you come into town?

Persons: I grew up in St. Paul, Minnesota, and you know, having done so, I liked a certain - we liked Maryland, Bethesda - that was nice. I did not particularly like Boston. And New York City, I did not like. And when I was working in New York there, we were working out at the - Time

Life was doing our software. And so I used to drive, an average of probably ten days a month I was in the Time-Life Building, working with CUC, the vendor we had doing all the compilers. And driving down the expressway everyday at the...

Frana: Was this for their publishing operation?

Persons: No. They were writing, they wrote the COBOL FORTRAN compilers.

Pelnar: Time-Life did a lot of coding, and programming work for other companies.

Frana: I didn't know that. Wow. That's a new story to me, I never heard that before. They must have got out of it at some point? They never developed any hardware systems like General Mills tried to do?

Persons: No. No, no, no. They were strictly software.

Frana: Okay. All right.

Pelnar: And they did a lot of the languages itself rather than the -they seemed to specialize in that area.

Persons: Well, they eventually closed down and we got a few of them that came to Minnesota.

Frana: Now, Herb, are you a Minnesota native or not?

Pelnar: No, I'm from near Green Bay, Wisconsin.

Frana: Oh, you are from Wisconsin.

Pelnar: Yes.

Frana: And had you been seeking a way to get back to Rochester too, or was this just the logical next step.

Pelnar: It was a logical next step. I had got to the point where I was a senior CE out in the field, with no where to expand or anything, or grow, so I was looking to become a programmer at one of the sites and Rochester was the ideal site for me to go to to be in what I wanted to be in.

Frana: Okay, so now you arrived then in what year?

Pelnar: 1972.

Frana: 1972. And you arrived in...?

Persons: '69.

Frana: '69. And your son did well? He flourished in the rural environment?

Persons: Yes, he has a Masters degree in Electrical Engineering. He worked for IBM for ten years including a joint IBM Mayo Clinic Project that IBM decided after a few years not to support anymore. He got so interested in it he decided to join the Mayo Clinic. So he's there now.

Frana: Electrocardiography or...?

Persons: No, he's basically digitalizing everything in the Mayo Clinic. That's been his last year and a half project.

Frana: Do you have other...? Your parents, were they in the computer business in any way?

Persons: No.

Pelnar: No.

Frana: Your father didn't work for ERA or something up in St. Paul?

Persons: No.

Pelnar: No.

Frana: Or Univac?

Pelnar: No, my dad was a farmer.

Persons: My dad was a sales manager for a dairy chain, Ted Carter's of Minnesota.

Frana: Well, that sort of leads me to an interesting question. Did they understand this career path that each of you took?

Pelnar: My dad died when I was seventeen, so he never got a chance.

Frana: And mom understood eventually?

Pelnar: Not really, no. I just told her I work with electronics and that was fine.

Frana: And your parents?

Persons: Well, I was in the Navy repairing radar, but I wanted to be a farmer.

Pelnar: And I didn't. [laughter]

Persons: Yes, well, because my dad's side was farmers and my mother's side were not. Well anyhow, I had all this electronics training and I decided I may as well be an electrical engineer. But it was as a second choice actually.

Frana: Okay. Did either of you have to take the DEPAT test? The famous aptitude test?

Pelnar: For programmers? I've taken it, but I don't know how I did on it or anything like that.

Persons: No. No. I never took it.

Frana: Was that after your...

Persons: No, I never took it.

Frana: Okay. Dick had mentioned this test and I've never seen it published anywhere but...

Pelnar: I took it before I was hired in Rochester here, I believe. We used to get it just when we came in, I believe.

Persons: I know when I was out recruiting we gave the DEPAT to everybody.

Frana: And was it a standardized test or was it specific to programming?

Persons: It was the IBM test.

Frana: It was the IBM test?

Pelnar: ... for programmers.

Persons: If you knew math pretty well you didn't have much trouble with it.

Frana: Okay. Well then, what operating systems did you arrive to work with when you got here at Rochester. Were you in operating systems Herb or...?

Pelnar: Yes. One other part, before I came here in the field I was also PSR (Program Support Rep) and I was trained on DOS at the time. And I did some work on System 3 because it was just coming out and I did some calls I took on that. So then, when I came to Rochester, I got hired to work on the project- it eventually got cancelled- but it was working, and it was distributed processing between a System 3 and a Series 7, I think, it was a ...System 7 I think it was at that time. And that just never made it, so then after that - I worked on that for about six months - and when that got cancelled I switched over and worked on the System 32 operating system.

Frana: It was cancelled rather than moved somewhere else?

Pelnar: Well, eventually I think something came out similar to that -developed either in Boca Raton or Atlanta - I can't remember which one, but there was something that came up, but it was not what we had as far as the same...

Frana: Was that IBM's first foray into distributive processing?

Pelnar: In the mid-range.

Frana: In the mid-range.

Pelnar: I would say it was. I don't know what was done in the 360 or 370 area. But that was the first foray at the mid-range.

Frana: Yes. Before we leave 360 Ben , did you know Fred Brooks? Did you sit at his knee and learn lessons about management?

Persons: No. No, I never met him.

Frana: Have either of you read his *Mythical Man-Month* book?

Pelnar: I read it.

Persons: Yes, a long time ago.

Frana: *Nine people can't make a baby in a month?* Did you experience that first-hand - the escalation of the numbers of programmers on a team, and an inability to get things accomplished?

Persons: I remember way back- I don't remember the ratio- but it was like three or four engineers to every programmer. When I was in Bethesda, Maryland, I was on the engineering side and there were hardly any programming types. It was all engineering - a huge office of engineers. And yet as you went down the road further, pretty soon it was one to one. And then pretty soon programmers outnumbered engineers, two to one and more than two to one.

Pelnar: And then eventually engineers were the programmers almost.

Persons: Right. Yes. I can remember because of my own experience from switching from engineering to programming. I had a bunch of engineers in the conference room, and I had the audacity to say, 'Hey, come over and spend a year or two in programming.' I thought I had just asked everybody to disown their mother.

[laughter]

Frana: Now, I transcribed a couple of tapes with some early Control Data programmers that worked out on the West Coast... a couple of months ago. And they complained in the late sixties/ early seventies, about the inability of the engineers- the hardware people, to understand

the problems of the software side, and why it was taking so long to get the software written for the hardware that was already developed. Is that...does that end then when the engineers become programmers to a certain extent?

Pelnar: No. You always have the series of events, that you get the people that build a piece of hardware and microcode and then probably some programming microcode on top of that, and then the operating system. And each needs to be in place to be able to build the next layer. So it's hard to build a system all at one time.

Frana: Okay, so you are waiting, you're waiting, you're waiting... And then, I suppose, it could change on you too as you are developing...

Pelnar: Definitely it changes! [laughter] But the problem that you run in to is the fact that you can do your design, you can write your code, but you can't test. And the only system that I really could really say that we had a good handle on that was on System 32.

Frana: System 32.

Pelnar: Right. Where the software and engineering was almost going side by side.

Persons: The 34 to the 36, I don't think were anything revolutionary.

Pelnar: No.

Persons: And so a lot of software, I assumed that worked on 34, the transition to 36 wasn't as significant as it would have been in some other systems.

Pelnar: True. And even the software. I wrote a lot of code on System 32, that if you look at System 36, it still is there yet.

Persons: Is that right?

Frana: Really? From 32 to 36?

Pelnar: Yes. Yes.

Frana: I was hoping the one of the two of you, or both of you, would tackle this question, because I asked Dick about the sort of the genealogy; the lineage of these systems, and how much was retained in each one. And his description was that System 38 was definitely brand new from the bottom up.

Pelnar: True. That's true, true.

Persons: Absolutely, absolutely.

Frana: But he thought that Systems 32, 34, 36 were a part of a linear development from System 3.

Pelnar: And that's quite true. For example, each of the OCL (Object Constraint Language) commands on System 32 was picked up from System 3. That's one of the areas I worked in. And I actually took an actual command that was on System 3, which was written in Assembler. And I rewrote them in PLS and modified them to run on 32. They wouldn't just move over automatically. But I did take the design and everything else. Except we had one more command we added that wasn't on System 3 on 32, which was the include command and that sort of gave you, you could write programs of function within the OCL then, with the project. So there was a logical transition from System 3 to System 32, to 34, and 36. It was basically the same instruction set, underlying that.

Frana: And why did System 38 have to be entirely rewritten?

Pelnar: Two reasons. One was the fact that we ran out of steam in the instruction set because we go up to 64K, and then we had to use different registers. And we were outdated, so we had to come up with a new way of solving that problem. Database was the only thing.

Persons: Database. Yes.

Pelnar: Relational databases, the 38 had also.

Persons: To 3M that was a real milestone because they were looking at Hewlett Packard versus IBM. When the 36 was committed as not having a database support, they said we are not staying with you. And they went to Hewlett Packard. But the 38 had that.

Frana: And that information on relational databases came from what, IBM San Jose?

Pelnar: San Jose, but this was a database that was unique to Rochester. It was one of those deals that we can do it better than anybody else – not necessarily that we did.

Frana: Is that a Rochester kind of attitude towards ...

Pelnar: Rochester has a lot of pride in what they can do, let's put it that way.

Frana: Okay, so who was the System 38 marketed to then? If 3M was the one that cancelled the contract? Or did they ever come around?

Pelnar: Okay, 36 was the one that didn't have the database. 38 had the database. And so actually, the 36 was sort of mid-range customers at the lower end. And then the 38 was the mid-range customers middle to upper end. It was supposed to be theoretically a larger system.

Persons: But it was a different time frame too. Do you... the 38 wasn't out in the marketplace at all until what, when 19...?

Pelnar: '80.

Persons: '80 or '81?

Pelnar: '80, it was. '79 was when we first announced it for, and then we withdrew that and came out with late '80.

Persons: Late '80...

Pelnar: April or May '80 or June '80, somewhere in that time frame.

Persons: The 36, when did that come out?

Pelnar: About close to the same time frame. Those two were in the field, as a matter of fact, before the AS 400 came out, those were the two current systems of those two lines.

Frana: Those were in simultaneous deployment out in the field?

Pelnar: Yes. And I'm not sure, but somewhere in that time frame, and I can't remember for sure anymore, because I left, let's see I left... I worked as a programmer on System 32 doing the OCL and all the job control and all that stuff. And then I worked on the System 38 as an architect. And to begin with, I started on just the general architecture of the I/O and worked on that until we got to the point where we sort of split the design between what later became, what was called the MI interface, the machine interface. And some people were below it, which we called then the vertical microcode or microcode, and above it which we called the programming.

Frana: Okay.

Pelnar: I worked in that group, and then after the split I worked on the design of the I/O in other areas above the MI (machine interface).

Frana: And if we were to compare stuff, like roughly the lines of code- I've heard that System 38 was roughly about a million lines of code, was that significantly more than, I mean how much larger operating system are we talking about for 38 versus 36?

Pelnar: I would say at least four or five times larger, I would say.

Frana: Four or five times larger.

Persons: I would guess at least maybe four to six or seven times larger.

Pelnar: It could be even more than that yet.

Frana: And to compare that with System 360?

Pelnar: Let's say DOS on 360, which is the lower end system, we were able to ...it was much smaller. Let's put it that way. And it was a different type of system also. System 38 you could run two hundred users. On DOS you could run foreground, two background jobs, and that was it. So it's hard to compare two systems like that.

Frana: Okay. I just wanted to get some sort of rough idea of...people talk about System 360 as being such a huge project. But 38 is even...

Pelnar: It's much larger I believe.

Frana: Or at least, maybe in order of magnitude, larger.

Pelnar: Than DOS. I don't know how to compare it to OS (Operating System) because I really didn't work on OS Systems.

Frana: Now, so what was it like to manage these kinds of projects; the development efforts here? I mean, just keeping track of this must have been really difficult. Did you start implementing, you know, software engineering techniques, structural programming techniques...?

Persons: We had a software system that Information Systems provided with the management control of all the stuff same as Poughkeepsie, a different system that basically controlled all of your code while you were writing it until you are ready to integrate the system. There were a couple of different versions of it over the years.

Pelnar: I worked with about three different versions of it.

Frana: What was this called, this system?

Pelnar: I can't remember...

Persons: I am sitting here trying to remember it, and I don't know anymore.

Frana: But it sort of governed the regular orderly process of ...

Persons: Absolutely. You had to follow the procedures of updating code, if this was a new module, a replacement module, and et cetera.

Pelnar: And unless any code that went in had to go through on System 38 called 'change control system'.

Persons: Yes.

Pelnar: Which you had to have a CC in order to integrate, or a PTR or something, and everything had to have reasons and all that.

Frana: There was a review process?

Pelnar: There was a weekly meeting which was the review process in which all team leaders would attend. And then everybody that wanted to get a CC approved would go to that meeting and basically everybody would get a copy of the CC beforehand or all the CC's. Sometimes you would have a stack that high, and then you would review it, and took your position based on your component- whether there was a problem or not. Or if the writer of it didn't recognize the impact somewhere, you'd get that resolved.

Frana: Okay. My sister-in-law is a programmer up at IBM Rochester, and when they were going through the whole Y2K business there were times where the system was frozen and nothing could be added or deleted. Is that part of the standard practice?

Pelnar: Yes. As a matter of fact, I had a lot to do with it. When you are developing a release, initially everything is pretty much open. You still have everything that went in is as DCR's (Design Change Requests). You control everything that goes in. And then, as you get further along in the development cycle, you start shutting down certain changes. For example, any of the changes to the macros and includes that are used by other products, probably a couple three months before you finish coding, you lock those and say okay, you can't make any changes anymore.

Frana: Because those products depend on ...

Pelnar: depend upon a stable interface. So you try to start stabilizing the system. And I came up with the procedure for locking those parts. And then I was the person, the system administrator on the AS400; I was the person that decided whether to release something for a change. It wasn't locked to the point that you couldn't do anything, but it was locked to the point that you tried to maintain a stable interface. And so if you wanted to make a change, the person that wanted to make a change would have to get approval from all the effected people, other sites and everything. Then, if they could get that, then I'd let the change go through.

Frana: Now, as a consumer of operating systems, is Release 2 really any better than Release 1? Dick Hedger said something about this too. Release 2 tends to be of equal quality as Release 1, as you're working out bugs, but then the systems improve dramatically after Release 2. Is that...?

Persons: Is that functionally or...?

Frana: Well, yes, I think functionally is how he was thinking about it.

[soda pop break]

Pelnar: My feeling is that in Release 1 of an operating system, you may not have full function then. Plus, it probably doesn't have all the bugs out of it either. I mean you've tested it, and you've tested it, and you've tested it, but still you don't really get them all until the user really uses it in ways you hadn't intended, or thought it would be. But anyhow, Release 2, or the second release of the system, you tend to get all the rest of the function in. And so you are busy

adding in function, you are again testing, but you still don't have all the bugs out. It's really Release 3 when, I think, you really start seeing stability get into the system. Not saying that any one is bad, but from a system point of view, I think really it is Release 3 before you get to that point.

Frana: Right.

Pelnar: The reason for it - Release 2 - is just the fact that you are adding a lot of function at that point, I think.

Frana: Something I wanted to ask you, follow up on with you Ben, you'd said you did some recruiting on college campuses?

Persons: Yes.

Pelnar: Yes.

Frana: Sounds like everyone had to take their turn with that.

Persons: Yes, right.

Pelnar: Yes.

Frana: You also did some?

Pelnar: Yes.

Frana: What kinds of people were you looking for in your recruiting and when did you start seeing lots of computer science majors coming down the pipe? People with experience that you could use? Or did that ever happen? The current complaint is that the graduates of the University of Minnesota don't have the skills to work at a place like IBM. Has that always been a?

Pelnar: Yes, different types. For example, because I came from the Upper Peninsula of Michigan - I lived there for a while - I recruited both at Michigan Tech and Northern Michigan. And I knew when I went to Michigan Tech I got the people that had the skills that we needed because that's the type of training you got probably up in the area. When I went to Northern Michigan, they train people as application programmers. Then, I had to look at what were there, how sharp were they? Not necessarily what were their skills, because it was a different type of people, type of training that they received. And then, I did one trip to the University of Idaho, in Moscow, Idaho. And again, they seemed to be more the application type. But those are the three universities that I interviewed at.

Frana: But you targeted those schools for the skills that their students had?

Pelnar: The two in Michigan I went to because I knew the schools. I had been a CE fixing their machines. I knew the people and I figured that I could walk in, talk to people, and knew them. And they were all training computer science people.

Frana: And what types...where did you go?

Persons: Well, I actually had a totally different motive. I was trying to rate the quality of their programs. So I recruited at the University of Minnesota, Texas, California, Florida, Michigan, New York, and Vanderbilt. Vanderbilt surprised me. I expected some beautiful, large school, and it is kind of old, stately- not really all that big. But anyway, my motivation in addition to getting good people, was to get personally familiar with the programs and try to rate the universities in talking to them and look at the curriculum a little bit and see what kind of faculty and students they have there.

Frana: So you learned by experience?

Persons: Yes, you learned some of the difference in schools, as well as the people there, and the students there and the attitude of the faculty.

Frana: When do you start seeing computer science majors that you were recruiting? Early 70's?

Pelnar: I didn't get into recruiting until probably '76 or '77, I would say. I was interviewing primarily computer science majors, but I was interviewing other people that didn't have computer science degrees. Some that had some computer science courses, yes.

Persons: Yes, I didn't see a lot of what I thought were good courses in their curriculum. They were teaching about compilers, until the mid-seventies. For recruiting I would look for a person who was doing well in math. That was important.

Frana: And what about... my brother also works up at IBM Rochester. He does electromagnetics and he is very young; he is twenty-seven now. He said that he didn't realize when he got there how much writing he'd have to do and how little technical writing skill he had. He had a very difficult first year because he actually had to write out the results of his lab work, and he said that that was a very common experience of new graduates. Was that also true in the seventies when you were recruiting- that people have the technical skills but don't have the writing ability, or vice-versa?

Persons: I think it varied a lot with the individual.

Pelnar: And the school.

Persons: Yes. For some programmers, you could see clearly the subject was foreign to them. Some individuals, from some schools, caught on quickly, but some didn't. Some never caught on.

Pelnar: Yes. And the people from the schools that produced some of the better people, did also produce people that did not like to document what they did.

Persons: Yes, I remember that. [laughter] And if you happen to, there's a good way to get summer students in who are brilliant, I mean they were really sharp, you didn't bring them in. I remember a summer here, one guy who wrote twelve thousand lines of code, with zero documentation! Not one notation on a line of code.

Frana: Not even a description of what he was planning to do?

Persons: We ended up chucking it because no one could maintain it and nobody could understand it- it was a shame. But you couldn't convince him. He was a Watson scholar.

Frana: Apparently that hasn't changed so much. Dick Hedger does consulting work a couple of days a week up in the Twin Cities for some of these companies that are teetering on the edge of bankruptcy, these e-business firms that have popped up, these web-based firms- and he says that the same mistakes are being replicated over and over again in these firms where they don't take the time to document the programs they write. They end up getting very messy and unmaintainable, and he can almost see that some are doomed to failure because they haven't done the proper documentation, planned things out.

Persons: People that are good at writing code sometimes don't want to bother documenting it.

Pelnar: I'm one of those. [laughter]

Frana: You're not a flow charter and a planner?

Pelnar: No, I'm not. I sit down at the computer, and I write the program, and I write the code, and at the end of that time I'm done with the program. Yes, but I've written a lot of code recently, and you won't find a single line of comment in any of my code. [laughter]

Persons: Yes, we used to call it making programmers indispensable.

Pelnar: There you go. Well this is for myself, so no one is supposed to see it except for me.

Frana: Well, there is some truth to that I am told- that programmers tend to leave out explanations so that it does guarantee them some security. Is that just sort of a...

Pelnar: No, I didn't do it for that reason. I understand the code. I don't know why I should write a comment. [laughter] And I wrote probably thirty or forty programs when I was working in litigation to do document production. And again, there wasn't a line of comment in any of it and somebody else had to take it over, so I went through each program and conducted classes so people could pick it up and comment it the way they wanted to.

Frana: Now are there styles of programming? We're starting an electronic journal on the History of Software, and one of the comments that was made is that we need to include articles on

programming styles. You can look at peoples code and almost tell whom it was that wrote this code.

Pelnar: I looked at a lot of code when I was system administrator because in order to approve changes and stuff like that, I did look at code and try to understand, but it was- you could just about tell who wrote the code by the style of it. And some programmers like to use block comments and give you pretty good comments, others like to use line comments. And some people write very very complex code, other people try to make it real straightforward.

Frana: Break it down and simplify it?

Pelnar: Yes.

Frana: Okay.

Persons: During the evolution of a programming system, people move on, and somebody else picks up that code. That can create huge problems potentially if the new programmer can't understand the documentation or there is insufficient documentation. When you are trying to make a change to put an additional function in and you've got to open up some code, it can become a problem. Then you introduce errors and bugs, and suddenly you have code that was running and won't run anymore.

Pelnar: And that was pretty much what you inherited when you took over programming on the System 38, because there was no documentation hardly, and so after Release 2, I think it was, we had, actually we had to go back and document everything and that was a major effort as far as resources and personnel.

Persons: Yes, that was a S/38 problem. It was supposed to come out in 1979, but it was delayed because of performance and functioning problems.

Pelnar: Yes, I agree.

Persons: If you want a view of management, see Carl Gebhardt. He managed the System 3, the 32, the 34, and the 38. All of those were his to sell to the corporation. So if you want a view of that side you really should talk to him. I'd rank him equal to Glenn Henry to talk to in terms of a different perspective.

Pelnar: You would get just a management perspective from Carl, whereas you'd get a more technical perspective from Glenn Henry.

Frana: Carl Gebhardt.

Frana: Now were there unrealistic dates that were set as deadlines?

Persons: Well, I think it was a huge project. They were doing things with very new concepts- new to any computer software system.

Franz: The ISO 9000 Certification, was that a big pressure- getting that? Was that the first time.

Persons: It wasn't for me at the time. Later on...

Pelner: Yes, there's a lot of work involved in getting it. Because -it wasn't too much for me because in the job I had, I had everything documented already. I had all the guidelines- all the things. And it's a different way of documenting it. I had to make a few changes to the preface more than anything else. But for a lot of people, a lot of areas, it meant documenting procedures that weren't documented at all.

Franz: Okay. And this is something the government gives, the ISO 9000?

Pelner: Okay, nobody has to follow ISO 9000. A company decides whether or not to follow based upon whether their business is going to be hurt or improved by it.

Franz: This is a government standard then?

Pelner: It's a standard yes. I don't know if it's government, it's a world standard.

Persons: A world standard.

Franz: A world standard.

Persons: It really isn't a US standard. I think it was forced more by Europe originally to get control away from the US, which was dominating the standards, and they wanted to make it a world standard. And so if you wanted to compete in the world market, in Europe, you had to join meeting the standards.

Pelner: You had to follow it.

Franz: Yes, I hear it mentioned- the standard, mentioned in the same breath with the Malcolm Baldrige Award all the time. Is there a relationship at all?

Pelner: No.

Persons: No.

Franz: Did it help to have one...

Persons: Absolutely nothing to do with it.

Pelner: No.

Persons: It had to do more with the political thing, that US heavily IBM, and US general, IBM in particular, was controlling all these standards and setting the direction in all this stuff. And there

were other companies in Europe that were kind of follow the leader, and it was creating, they were always going to be behind IBM and behind the US. My view anyway.

Frana: How does one go about winning a Malcolm Baldrige Award?

[Laughter]

Frana: Or was it a surprise to you guys too?

Persons: You give your answer, I'll give my answer...

Pelnar: No. I think it's a lot a matter of salesmanship of the site that's trying to get it. I mean, first, you've got to sign up for it, get your people involved in it, as well as get Malcolm Baldrige people involved in it. And then, being able to present the information, know what to present, and to be able to get the ideas across.

Persons: I agree with the last part of what he just said. Know what to present and get your ideas across. And I think a good example of one that should never have got it is Cadillac got the Malcolm Baldrige Award. And it's the lowest quality product in the market place in the high-end automobile line.

Frana: Who awards this? Is there a Baldrige Institute?

Pelnar: There are representatives, but I don't know what they represent. I presume it's an institute, but I'm not sure.

Persons: But also I agree with what Herb said too, it is how well you write what you write. I wrote one and a half chapters. The book was put together by a number of different people. The ability to write something well, what you just said earlier, is important. What I wrote was written poorly. It was accurate, but when Fran reworked what I wrote, it flowed much better.

Frana: So presentation is very important.

Pelnar: Absolutely important. Yes.

Persons: And he did an outstanding job.

Frana: I wanted to follow up on something else you'd said earlier Ben, about the independence of the spirit of the programmer- and you know, you mentioning he didn't document a line of this code- he had written twelve thousand lines all summer, but it was useless to you. You know IBM has this- it's sort of wrapped in this illusion built around it that it's a monolithic creature where, everyone wears a blue suit. Not anymore, but that they used to and you know, it's highly systematized, and it works like a machine. And apparently that was something that you said out of respect for IBM at one time. And sort of- it has become a more chaotic process- but that seems dynamic and different. How much individualism was tolerated in IBM culture among programmers and was it different than other businesses, the amount of tolerance?

Pelnar: This is the area that I've worked a lot in because I was one of the people, that "formist", try to get people to conform, because I wrote a lot of guidelines, like for programming. For PLS language, I wrote the guidelines that are used today for it. As well as for C and for C++. And the idea was you shouldn't have to train the programmer in the language and also all the idiosyncrasies of how to use the language. So what you'd try to do is you'd try to set up a way of doing things. It limits the persons ability to think freely, but it standardizes it such that when you switch code its easier to understand it and to be able to use it. So when, what I tried to do, and this was done late in the cycle- earlier the guidelines were not as rigid, they were sort of word of mouth, they weren't documented as well, or they didn't even exist in some cases- but you tried to standardize a lot of things.

Frana: What's your perspective on this Ben, as a recruiter? Could you tell who would conform enough and who would...

Persons: In your recruiting you mean? No.

Frana: No.

Persons: No. I couldn't. You might, if they dressed, at that time, kind of weird, you might wrongly conclude...but you are probably wrong. No, I didn't.

Frana: Now the programmers attracted to IBM, you know, there are all these books out there now about programmers who sleep in their cubicles and now they are billionaires. And programmers who have all sorts of weird habits, and it is almost seen as an advantage to be a programmer who eats nothing but grilled cheese sandwiches and dresses strangely and, you know, rarely bathes. [laughter] Does programming attract that kind of person or does programming create that kind of person- or is there no relationship between the programmer and a particular subculture, a counterculture?

Pelnar: I think that programming sort of does attract that type of person. I don't know if it causes that person to be that way, but I think the two, sort of, not strongly, I mean- but I think there is some relationship because with programming you can get into a point- and I do myself- is if I am working on a project, and I am doing something, I don't know what time it is, I don't know what day it is. I could go, I used to go for thirty-six hours, and never stop. And when I worked on System 32, I had the strangest hours- I worked from two in the morning until six in the morning, I'd go home have breakfast, I'd work all day, and then I'd go home and sleep and go back in at two in the morning, because I could get machine time for testing at two in the morning. Or sometimes I'd work right through because I was working on something. I'd go home for lunch, but that was about it. But it tends to be that way. You forget everything when you are programming.

Frana: You lose sense of time.

Persons: Kind of like you are working on a puzzle, or a crossword, and you get involved, and hate to stop working on it.

Pelnar: It takes an hour to get back into it.

Persons: You've got to get back into it. And you know it takes a while to get your train of thought back to where you were in the design or logic of the function.

Pelnar: Even today, after forty years, after thirty-five years of doing stuff like this, I still get involved and I still can start working on something at 9 o'clock at night and it's 8 o'clock the next morning and you realize that you haven't slept at all. [laughter]

Persons: It also allows people that would be quite introverted to really be successful because you usually can define interfaces pretty well and you can go off by yourself. Whereas, in a lot of jobs, you know, you've got to work as a team. Of course, you still are a member of a team.

Pelnar: In this you still have to yet also.

Persons: It allows a lot more of people that like to work by themselves including at home.

Frana: Now has that changed over time? Do you see more nine to five programmers?

Pelnar: Yes. I would say that what we are talking about, this type of programmer that forgets about time, is very young usually. It is maybe one out of every twenty, one out of every thirty. I don't think it's that high.

Persons: I think the nine-to-five employee attitude is a reaction to the corporate management's attitude to employees. I worked in Saudi Arabia for IBM from 1952 to 1954. When I came back from there I met with Tom Watson, Chairman of the Board of IBM. He took me to lunch. Mr. Phillips and I visited with him in his office after lunch. Mr. Phillips was president of IBM. Imagine that happening today.

Pelnar: Yes. I met with Tom Watson.

Frana: Watson Sr. or Jr.?

Persons: Sr.

Pelnar: I met with Jr. I didn't meet with Sr.

Frana: You are talking Sr.?

Persons: Yes.

Pelnar: Yes.

Persons: But would you even consider that happening today?

Pelnar: You wouldn't meet with Lou Gerstner today I don't think.

[laughter]

Frana: Yes. These young programmers, who - I'm gathering they were single? They would spend long hours in the lab. Some young and married, I suppose, too. But I've heard that- there's this rumor that they used to bring the young IBM employees together with the Mayo Clinic nurses back in the sixties and seventies for mixers?

Persons: I never heard that.

Pelnar: I never heard that.

Frana: Okay, maybe that's just a story...

Persons: If it is I have never heard the story.

Pelnar: Yes, I haven't either.

Frana: Maybe this was before either of you...

Pelnar: I used to come here to Rochester starting in '63. Because Rochester was, as a CE, it was one of the training centers. So I would have known pretty much what was going on.

Persons: I never heard this story.

Pelnar: No, I'd never heard it either.

Frana: See I'd heard...

Pelnar: Although, there was a lot of mixing going on, but I don't think it was ever company sponsored.

[laughter]

Frana: Yes, someone told me, oh, a couple of years ago, that this was by design, that it was to get some of these employees to settle down, make them family men, you know lower case f, upper case F- you know, IBM Family.

Persons: I think that's one of those things...I don't know, I can't believe I never heard it.

Frana: It's a story then. A couple of other questions. Feel free to jump in if there are other things that we must talk about here. But what effect did unbundling have on your work, if any?

Pelnar: At the time of unbundling I was a PSR out in the field. And what it meant is that where I used to go in and work with a customer to solve a problem, I still went in, but the customer knew

that I would come to a certain point in the process, and I'd say this is your problem, you have to take it from here. And that was the extent of what unbundling meant to me at the time. It later became, meant a lot more, but at the time that is what it meant.

Frana: And this was just a legal charge that you were told you can't go any further.

Pelnar: Basically, it says that you no longer give your services away in certain areas because that is not included in the price of the product anymore.

Frana: Okay. And for you Ben?

Persons: I am just trying to think of things that I remember...that were...I don't know which view to take it. One was, I remember starting here ... I remember that other companies were going to start making compilers, and we started hearing that their compilers were faster than ours. And then you got into the comparison of the function- and what was a function missing in their compiler versus our compiler. Then we had to provide them interfaces and we had to provide them early in the development cycle.

Frana: Did the distinction seem artificial to you that you could really divide the hardware and software businesses? Did you ever wonder about whether this was a good idea?

Pelnar: I didn't think it was good- from a sales point of view, or from service point of view. I thought it was a bad idea, because you no longer have to do the kinds of things that you were doing before. But that was just a very narrow perspective. And on reflection, I think it was a good idea really. And not until later on, that's all I knew about it. But once it got to Rochester and got to some of the areas- we got into object code only- and when we got into that area, now it meant that we started protecting our intellectual property better.

Frana: By object code you mean object-oriented?

Pelnar: No. By object code only, this means that you only ship a software product to a customer in object code form. You never ship anything in source code. It has two advantages: one it protects your resources because you don't see what it is. The fact that it makes the installation and the use of it much simpler. And you get a much better perception on the part of the customer about what the product is.

Frana: And that's an effect of unbundling?

Pelnar: The unbundling itself it may not have effected, but we used to ship a lot of source code, before unbundling and before OCO.

Frana: Because there was no concern at that point?

Pelnar: No, everything was all open and there wasn't competition. There wasn't anything really. And so it didn't make any difference. But then after you started getting competition, you had to protect your resources, and the OCO is the final result of handling that.

Frana: The other question I have is what is MDQ- this Market Driven Quality thing? This is probably a good question to ask you, because it sounds like that probably emerged fairly late. Is that like a TQM type of approach to MDQ?

Pelnar: I have no idea what TQM is? MDQ – yes, market driven quality, but I think- I remember the words, I remember that part of it, and I think and this was a result of trying to bring in customers during the pre-announcement phase of a product and getting feedback early. And what we were doing was disclosing the product and then getting their feedback and then trying to get some of that feedback back into the product before it got announced.

Frana: Okay. Is it sort of an attempt to eliminate layers of bureaucracy between the sales sides of things, or is it a way, to sort of, channel comments quickly back? Because I know there's quite a distance between you and ...

Pelnar: The customer.

Frana: The user. Yes, right.

Pelnar: It did two things. It isolated- it got all the between people out of the way and their interpretations of what those requests were, so we got direct feedback. And the other was that it made the customers feel like they were participating. And we got as much from the reverse effect as we did from the feedback that we got, because nine times out of ten we couldn't really get changes into that initial release of the product other than small things.

Frana: Right. So, oh, okay, oh this reminds me of the Hawthorne Effect. Did you ever...?

Pelnar: I haven't...

Frana: The idea that if you listen to the customers they feel better better even if you can't address their concerns. That's part of this?

Pelnar: It's part of it. Yes.

Frana: I mean, obviously, not the only thing.

Pelnar: No, it wasn't because- what it did- also it is they would be able to test some of their stuff on the systems early, and things like that too, and it gave us early bug removal and a lot of other things.

Frana: So it was a useful thing?

Pelnar: Very useful, yes.

Frana: And this doesn't exist in this form anymore?

Pelnar: I think it's still in use.

Frana: Is it a different acronym, or is still MDQ or...

Pelnar: I don't know what it is called now. It's just customer feedback, I think, and customer sessions and stuff like that. Where -what it did- what really amazed me when I came to Rochester to work as a programmer is, after having been a PSR in the field- was that the programmer sitting in the cube had no idea what the customer was doing with that piece of code. And we could never really get the idea of how is it used, what is it needed- the programmer is thinking about what can he create, not necessarily is it the best thing?

Frana: So there's this disconnect and MDQ is a way that...

Pelnar: And that was probably one of those first deals where the programmer actually had to listen to the end user and it gave a different perspective. And what they are doing now is almost every one of the team leaders has to meet customers and things like that, and it's a piece of education that they didn't have before.

Frana: And did certain people consider it a distraction? Were there people that were, that really found it uncomfortable to be receiving that kind of feedback?

Pelnar: The people that didn't want it- yes. And probably the people that needed it the most...

Frana: right- were the ones that resisted the most.

Pelnar: Yes. But it was part of the job, they had to meet with the customers. And they were getting attention, so it wasn't completely, there wasn't - it wasn't put in a bad way or anything to people or anything- but it meant that they were getting another challenge.

Frana: Do you remember MDQ- market driven quality? Was that something...

Persons: Very little.

Frana: Yes.

Persons: I remember the term. That's about it.

Pelnar: It was sort of the forerunner to where we were bringing customers in and actually having them- early disclosure the products and stuff like that.

Persons: Okay. No, that just, that term just doesn't...

Frana: Did that require more sophisticated customers then, as well for them to really give you the kind of feedback you wanted?

Pelnar: No, we wanted a wide variety.

Frana: Okay.

Pelnar: We always had got the feedback from the largest ones because they are very vocal and they will tell us what they want. It's the mid-range and the small number machines, even single machines; we were able to get some feedback that way I think.

Frana: So they didn't necessarily have to be technically trained- really sophisticated...?

Pelnar: It helped, but it wasn't, that wasn't...

Frana: that wasn't necessarily the intention.

Pelnar: Yes.

Frana: Okay. Well I guess I wanted to ask you if you had any- I saw Watts Humphrey- CBI had a conference out in Palo Alto, California, and Watts Humphrey was speaking. He has a couple of personal mottos that he lives by, and one of them is: 'If you don't know where you are going, any road will do.' And, 'If you don't know where you are, a map won't help.'

[laughter]

Frana: Do you have- have you guys developed personal mottos over the course of your careers?

Pelnar: Not really, no.

Persons: I was going to say I can't think of any.

Pelnar: No, I know, I can't think of any either.

Persons: I know Watts Humphrey. I worked with him night after night after night for years- for over a year and a half- two years. He's a nice guy. Very different kind. Very energetic and a guy that liked to work down with the people at the working level. Is he still alive?

Frana: Oh yes. He works at SEI – Software Engineering Institute - at Carnegie Mellon, I think, is where he is.

Persons: He was one of those key guys that...

Frana: He was on System 370 when you were...

Persons: How old is he now?

Frana: Oh, I think he's late sixties- sixty-eight maybe.

Persons: I thought he was as old as me, but I thought he'd be older than me- I don't know- maybe he isn't.

Frana: He's still very dynamic and very well spoken; he is a very good speaker.

Persons: I've not seen him in years. I'm sure he would not remember me, but...

Frana: I still think he is as busy as he ever was. Did you ever meet Watts?

Pelnar: No.

Frana: You didn't know Watts?

Pelnar: No I didn't.

Frana: He was working on 370 when you were...?

Persons: 360.

Frana: He was working on 360...

Persons: It was called 360.

Pelnar: Yes.

Frana: This is my final question. Overall, what was it like to live and work in Rochester in this environment? It's not the Silicon Valley, it's not the East Coast, where things are supposed to happen- and yet a lot of the people I've talked to say that IBM employees who come here are reluctant ever to leave. And those who leave for places like Boca Raton, which you would think would be paradise, are often...

Pelnar: returned.

Frana: returning. Yes. What- you know, why is that? What is it about Rochester, other than it's very beautiful?

Persons: I gave you two very specific comments. Because when I moved out here, I worked with Ollie and all these guys. Supposedly we went with research and the comment was, 'What in the hell are you going to the...' - what did they call it? - 'the prairie lands of Minnesota?'

Pelnar: The cornfields ...

Persons: I'll tell you two stories. However, first when I decided to move back to Minnesota, New York friends wondered why anyone would want to move to the Prairie Lands of Minnesota. The first event occurred in 1971, when IBM brought eleven people from New York Research. None of them wanted to come. It was for a one-year assignment. But at the end of the year nobody

wanted to go back. In the case of one, his wife said, 'If you go back we are going to stay in Minnesota, me and the kids.' And they didn't. None of them went back.

Frana: And the recent?

Persons: In 1955, I went from Minnesota to Boston. I worked at Lincoln Lab MITRE for almost a year. People were totally disinterested in you. While there, we lived in Bedford, Massachusetts, in a 'side by side' duplex. The woman next door had a baby and my wife baked a hot dish and a pie and brought them over to them. The husband would take neither the hot dish nor the pie. Out East, there wasn't a Midwest openness, friendliness. And it was really obvious when I moved to New York, especially on days when I worked in New York City in the Time Life building.

Frana: And for you [Herb], you are not a native Minnesotan, but you are from nearby.

Pelnar: But I still grew up in the same cultural viewpoint.

Frana: The Mid western culture.

Pelnar: Yes. But another reason for Rochester being well-liked - I'll try to touch the technical end- was that here in Rochester you can work on a product- up until [System] 38- you can work on a product, you can walk down a hall, and everybody that worked on it pretty much lives in that hallway, or in that building at least. And you knew everybody. And if you wanted to do something you just walk over and you talk. And it gave you a sense of being part of a team, contributing. I think management was very much pushing that type of philosophy too. And you got things done and you felt good about it. And when you feel good about what you are doing, you liked to stay where you are at then. It was a good place for really good schools- Rochester had, and still has. My son was having trouble in school and he came here and he was two hundred percent improved. I felt good about the schools, I felt good about the town- I like the town, and I liked the job. So it was everything that you really wanted to feel good about life.

Frana: And this was good for business, for development?

Pelnar: Yes.

Frana: So what I hear is, the communication was always very good?

Pelnar: Yes.

Frana: And sort of the neighborliness of people? Anything to be said for lack of distractions- that you can't go to a major league sporting event without driving up the road an hour or two or were there minimum distractions around here- was that also...?

Pelnar: I didn't know that those distractions existed. [laughter] I grew up near Green Bay and the only thing we had were the Green Bay Packers, four games a year and that was the major distraction.

Persons: We have a cabin in Alexandria. We go in to town and get ice cream sundaes and then watch the ball game for the evening. And a ball game is a ball game, you know. In New York, it was a major effort to go to a ball game.

Pelnar: Yeah, watch the Yankees play...

Persons: After a long drive you park near Shea Stadium near the airport. Then you would have to pay the local kids there to protect your car, and you better because if you didn't you would have four flat tires when you came out. I don't miss that at all. Out there, we had to drive up to the Catskills to Lake George, are you familiar with that?

Frana: Sure, the resort area.

Persons: Here I can own a cabin. We went back there to visit some friends in Kingston some years ago, and we'd said we'd go up to Lake George with them while we were there and rent a cabin. There are zero cabins to rent today. All that is privatized. You can't rent anything on Lake George anymore. The only thing you can rent are these big, old hotels that are there. But there's no lake property for rent on the entire Lake George.

Frana: Has Rochester changed any in the last twenty to twenty-five years?

Pelnar: Oh, it's changed. I don't know that it's changed from the perspective of friendliness of the people or anything. It's still quite a bit- it's become more diversified and a little bit more sophisticated- and you lose some of that hometown [feel] to some extent.

Frana: Right. And IBM Rochester- has that changed?

Pelnar: Definitely. Oh yes.

Persons: Oh, absolutely.

Pelnar: Yes, that has changed a lot. Yes. It's- IBM always was a maternalistic company- and in the last ten years it has completely switched. It is not anymore.

Frana: That's what my brother says too. That the retirement policies have changed dramatically.

Pelnar: Everything. The respect for employees is not the same.

Persons: Yes.

Frana: And can you pinpoint when that began to change?

Pelnar: Lou Gerstner.

Persons: When Gerstner took over.

Pelnar: Lou Gerstner.

Persons: That changed from night to day. Day to night.

Pelnar: Yes.

Persons: When Gerstner took over everything changed. What you did yesterday or today is not important, only what you do tomorrow.

Frana: Sounds like some remorse?

Pelnar: Well, yes. And it could almost be pointed to a single instance ...

Persons: Absolutely...

Pelnar: ...what happened.

Persons: Yes.

Pelnar: When Gerstner came in he had personnel reductions, and about three of them took place. And each one of these was evaluating people and letting go of the people that were lowest performers. And then, that still didn't get all the people he needed. And then they went one more, where they just cut out departments. It didn't make any difference how well you performed, you were gone. And that's when it changed- right there. As long as the lowest performers were going, I don't think it ever bothered people. But it's when higher performance left- then nobody had security anymore.

Frana: Before I shut these off, what are you guys up to today? What are you doing now?

Pelnar: Well, right now I am retired. I am not working at all, except I do a lot of programming on my pc. I just developed a complete music system where I've got five thousand songs on my pc in mp3 format and all the software to be able to be a disc jockey and play the songs. Plus, I set it up so I've got FM transmitter, real low power FM transmitter, and I just play my computer and listen to my radios in the house and be able to do that. Plus, I've been working on some other programming. I do some woodworking- I have a full woodworking shop also.

Frana: I'm beginning to wonder why I bought all of those stereo components now that it seems like it's irrelevant to have a CD player. I think maybe we'll all just have computers sitting in the corner.

Pelnar: That's all you need.

Persons: Yes.

Frana: Yes. And Ben, what are you up to?

Persons: Well, I retired in '87- but I went back to work the next day until '94. Since then, I've basically been supporting five kids homes- you know repairing five older homes. And doing some fishing, although I haven't even been fishing once this year because of my ankle.

Frana: Have you been helping out Ben's kids- wood working?

Pelnar: No. Oh, I did on something...

Persons: Yes. Yes.

Pelnar: Yes. I did some woodworking on something.

Persons: Yes, he made us a nice bird hanger, which you would have seen if you came here a few months ago. I took it down for the summer because we put suet in it, and we don't feed them suet in the summer.

Pelnar: Then I did some cabinets for one of his- for his daughter also.

Frana: Is this a hobby you've had for a long time?

Pelnar: Oh, since the last forty years.

Frana: Oh, okay.

Persons: Oh, the cabinet thing- we have pullout things for storing records, which are now half-full of tapes and videos.

[laughter]

Pelnar: Yes. And then I like to do a lot of bowling.

Frana: You like to bowl?

Pelnar: I bowl three times a week.

Frana: You know, that's something Minnesota- you know- I'm from Iowa, that's my home state- and I didn't think there was a lot of difference between the two states. I know a lot of Minnesotans disagree. [laughter] The cultures tend to be very similar. But bowling- people are bowling-mad up here. And really, it demonstrates a sense of community and spirit that most places don't have anymore. You know, bowling leagues and so forth, really sort of demonstrate a spirit of community that you really don't see a lot of other places where there is no bowling anymore.

Pelnar: What we have is called the Southeast Minnesota Senior Tour. And I'm president of that. And what we do is we set up a bowling tournament every Friday in a different town. And during the summer, we work with all the bowling proprietors to set up dates and everything. And then

during the winter, we get all these tournaments. And then at the end of the year, the person that has the most bowling points- it's just like professionals- except we are amateurs. That's a lot of fun and I've been working that, and I've written all the programs for keeping track of scoring and stuff like that for that too. So it's been fun doing that.

Frana: So what's your high?

Pelnar: A couple of weeks ago I had a 709 series. And a week ago yesterday, I had a 699 series. So each year, as I get older, it seems my average is going up a few pins all the time.

Persons: But as you said, he's also good in woodcrafts. Boy, he does beautiful, gorgeous work- absolutely. I wish I had the talent. I don't have the talent or the tools. If I had the tools, I don't have the talent.

Pelnar: I did have the tools. I have plenty of tools. I've got a twenty-six-by-sixty foot building that's a woodworking shop.

Frana: Oh, good heavens! Good heavens. Well, I think we'll leave it at that. Thanks. Thanks very much!