Interviewee: Ken Garrison
Interviewer: Robina Mapstone
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MAPSTONE:

Okay. The date is August 10, and this is Bobbi Mapstone. I'm talking to Mr. Ken Garrison at Pacific Mutual Insurance Company in Newport Beach, California, and this is an interview for the Smithsonian Oral History Computer Project. [pause] All right, why don't we start by getting some general background on yourself, where you went to school, your major, and things--I don't quite recall when you joined Pacific Mutual, but let's fill a little background so we can bring you up to the beginning of your work with Pacific Mutual.

GARRISON:

Okay. I graduated from UCLA in January of 1952, and took what I thought was an opportunity at Pacific Mutual in what was called an administrative training program that the company was just starting out; and basically, that was a program of rotational assignment to familiarize bushy-tailed young men--and girls, by the way, eventually--out of school, trying to integrate them into a company that had a maturing management team. I didn't realize it then, but that had a significance in this computer picture. I'd been a finance major at UCLA, which was really pretty close to a general business major, so this kind of an assignment or this kind of a job was quite appropriate, fit with the kind of career path that I thought I wanted, leading to general management. As I say, we were on rotational assignments and this program was originally established to be a three-year program where you'd have an increasing amount of responsibility. And I was assigned along with--there were four of us on this program--I was assigned from department to department, and those assignments would range anywhere from six weeks to six months. In early '52, from that point on I was starting to get my feet wet, not just in one department but all over the company. We were trainees, though, and although we contributed as best, we could, we were really a burden to the company, in the sense that they weren't getting significant productive work out of us because we were really in a training mode. So in 1954, or in late 1953, I guess it was, when the company started to think about computer, there were two men who had been sent to New York City to go through a programmer training classroom, and they came back and persuaded top management that this was something we ought to get involved in, we ought to get interested in and try to find out if we had an application for a large-scale computer. As I say, this was late '53.

MAPSTONE:

Who were the two people?

GARRISON:

Well, one of them was Dick Dotts and the other was a fellow by the name of Norm Buckingham, who was a technician in our actuarial operation. As I say, they came back and were convinced enough that this had possibilities that the management approved a project whereby we would develop, as a company,

we would develop a general plan of how we might go about handling our record-keeping processes on a computer and measure against the cost of developing such a system and the hardware that it would take to operate and run that, measure against those two things the costs of doing those things the way we were doing them at that time and, primarily, clerical processes with some punched card support equipment. And the punched card equipment we had at that time were a general battery of collators and sorters and 402's. But we had a rather small calculating operation and we had a lot of clerical people. So I, along with these three other fellows, were introduced to the possibility of getting involved with computers. We didn't have, well, first of all, we didn't know what computers were. I can remember a meeting where this possibility of working in this thing, this project, was introduced, and it got a kind of blank stare, and we didn't show any enthusiasm for it. I think I asked, "Well, just what is a computer and what does it do?" It was equally as difficult for someone to answer that question at that point, and the question that I got back was, "Well, let me put it this way," he said. "Do you like to solve crosswords puzzles?" And I said, "No, not particularly. I'm not very good at it." Which kind of shortened that conversation, but it is indicative of the fact that, you know, the ignorant were meeting the more ignorant, I guess.

But anyway, two things commended us to this program, these fellows that were in training program. Number one, we did have a broad company exposure, which was a great benefit if you were trying to see how you could glue it all together a different way and run it on computers. So just that experience of having been all over the company was very helpful to this phase of, you know, feasibility. And the other thing that was of value was that we were available. We weren't tied down in any departments. We were on a training program and this was thought to be a better way for the company to get its money's worth out of us than even being on the training program, and they realized that it would help us in our development under any circumstance. And without meaning to sound self-serving, we were four guys who were mighty eager fellows and hard workers and had at least average intelligence, if not just a little bit brighter than some of the other alternatives. So, it was a pretty good mix. So, in 1953 these two men that had been to New York, Dick Doss and Norm Buckingham, taught four of us how to program a computer, how to program the UNIVAC I, there in the office at 523 West Sixth Street in Los Angeles.

MAPSTONE:

And all their exposure had been was the course that they had just taken. That right?

GARRISON:

Back in New York City, yes. In other words, they were six-week wonders sort of thing, and here they were back now teaching us how to program a computer. And obviously none, since we didn't even know what a computer was--we hadn't seen one, and weren't about to see one for...I didn't see a computer until a year later, in December of 1954, when we went to New York. But anyway, we were al pretty logical type thinkers and so learning how to program a computer came naturally and was a lot of fun. We began putting together out of that experience--I don't know, we probably spent a month or two learning how to program. As a matter of fact, we even wrote kind of a thesis problem that we sent back to New York and then they ran that on this computer that we had never seen before back there, and sent us the results. So maybe that was early remote job entry, I don't know.

MAPSTONE:

(laughter) Was this a UNIVAC course or an IBM course?

GARRISON:

UNIVAC.

MAPSTONE:

It was a UNIVAC.

GARRISON:

Programming for the UNIVAC C10 code.

MAPSTONE:

Well, you kind of got an early slant towards the UNIVAC in that sense.

GARRISON:

Yes, we did. Of course, the UNIVAC was felt to be the only practical commercial computer at that time.

MAPSTONE:

That's right. The 702...

GARRISON:

In other words, the 701 and the 702 and the 702 was not very encouraging because, in particular, because of its cathode ray memory and because there was no buffering of its i.o. We learned early that despite the fact that acoustical delay mercury memory in the UNIVAC I was pretty fragile that it was much more reliable than the 702 memory; and in terms of buffering an i.o. so that you could read writing and computer simultaneously, the 702 didn't have that. The first 705 didn't even have it. And it wasn't until the 705 II--and I think this is correct, if I recall--705 II was the first machine in the IBM line that could really read, write, and compute simultaneously. This was very significant to us because we were, as I say, we were shaping a plan--and this probable picks up the story right in the correct sequence--is we started to shape our plans for using a computer, and we came to an early conclusion that we had to put the entire company's operation on this in what was, what eventually came to be known as, a consolidation functions approach, where you have basically a single master record and from that did all of the file maintenance, the billing, the collection, the valuation--all of the procession, all of the service work--from that.

Now this was a significant thing in those days, the planning and approach like that, because to that point the only companies that were really either installing computers or planning to install computers were the big companies, both in our industry and other industries, that could justify or were willing to go ahead with the computer on the basis of one major application, such as the billing application or such as the payroll application, or in the case of a life insurance industry, the Metropolitan Life. They were going ahead in their actuarial department to do their valuation and their dividend calculation work. But the thing that we were churning with was this consolidation function theory, an approach whereby we would put all of the company records onto this master file and process it overnight. In other words, what then was a real jaw-dropper in that you would put all your records onto a computer and cycle that night all the activities that came in, requests that came in, during the day, and have the responses and processes completed the next morning so that they would go out. And in the interim, you would have--you know, during the day--you would have no supporting visual record that could be referenced. That was mind boggling at that time. You know. Nowadays--here we get into '65 to the present day--you think of teleprocessing as being a ways of accessing the electronic record on line. Well, that's really kind of going in a step where there was going to be no record to look at during the work day. That, of course, on the other hand, the only way we could support this from a cost benefit basis, was to get a hold of those processes and get them on the computer so that all of that clerical processing would and could be eliminated. The only way it could possibly make dollar sense was to completely reorient the office and get rid of all those visual records and all of the people who posted them and all the processing that went on to have those visual records up to date.

MAPSTONE:

That was sort of a bit of a psychological trauma at that point in time, to quote Watergate.

GARRISON:

[laughter] Yes, it was, and that was the classic period of, you know, fear that the computer would replace all mankind sort of thing. Our company, to kind of skip ahead here in the history of this by stating that although there was information that was continuously communicated to the Pacific Mutual home office staff about the research that we were doing with computers, we really made the decision to go computers in mid '54, you know, in the late summer of 1954. And the minute the company made that decision--whether, we didn't know at that time whether we were going to go UNIVAC or IBM even then--but we came to the conclusion that computers were for us. And the moment that that conclusion was reached, there was a very comprehensive job done of communicating this fact and its implication and the company's intentions as far as people were concerned. That was all pulled together and communicated in a series of three or four to five sessions involving all of our office staff. We were very concerned about the response and the reaction of people, and in effect made the commitment at that point that anybody that wanted to work for Pacific Mutual and would do the job, would have one, would have a job.

Now that might sound like some kind of ambivalence. I don't mean it to. That wasn't the case. We were with a type of company that had at that time, oh, probably a turnover rate of thirty-five to forty percent of our staff. Now. What was happening was that we had jobs at the lower end of the clerical range turning over more than once a year, so you had about twenty-five percent of you exposure and staff were

creating about forty percent of the turnover, and those were the positions that were the most vulnerable to replacement by automation. And so, you could say to any given company staff at one point in time that, you know, "We're going to achieve these savings and you that are here that want to stay and will do a job, you'll have a job." So, it wasn't talking out of both sides of the mouth at once.

Well, I've perhaps gotten ahead a little bit of my story or gone ahead of the story a little bit. As I said, we went through this training class, and we started blocking out approaches on how to do this consolidated functions. And we got a preliminary design as to how we would approach this on a consolidated functions basis, and did the crudest sort of analysis in terms of the logical processes and the relationships between files and how we would run transactions from one part of the system through to the end. The next step that we chose to take, though, because we weren't sure of all our transaction volume, for instance and no place did we have what you might call a master--what today we think of as--a master file. This information was sprinkled around in probably eight to ten major files around the company, and a lot of redundancy. And so, what we did was we went through then a process of determining where all the information was that would eventually come to make up our master files, what the transaction volumes were for each of the activities and each of the processes that we were going to bring under automation, and we also determined how many man hours per month were spent processing each transaction. That was kind of tricky at that time, because these major transactions were worked on in several departments, because people had to be around the records. And if you...For instance, a policy loan, which is a common service transaction in our business, would start out in the policy loan department and go over one place to pick up premium information, they'd go another department to pick up whether or not there was an existing policy loan on the case right now, they'd go somewhere else to pick up the dividend values. They'd bring it all together and send it to another department where they would calculate what the loan values were under the policy in relation to its cash value, and send all that back to the originating department where they'd put it all together and effect the agreement and mail it out. And we had to trace these service transactions through all the different departments so that we could associate how much in labor was related to that, in order to be able to tell or answer the question. If we take this, for instance, policy loan transaction--it's a part of this system--how much are we going to replace in terms of cost to service that transaction? And that's the way we did it. Transaction by transaction, in order to get some relationship between what costs would be displaced by this new system.

And going back to the background these four of us had, we were in a great position to do that. It was a great choice by those people who elected us because we not only knew where to look and where to work and where to get information, but we had all had the good sense and enough brains to have made a lot of friends as we had gone through on this rotational program. And we weren't looked upon as outsiders. We were just looked upon as people coming in to get a job done. And it worked out very nicely.

MAPSTONE:

Yes.

GARRISON:

Well, we brought all of these statistics together then on what it was costing to handle these functional transactions and came to a conclusion that if we could go to kind of a data-processing system that would do these things, that was both feasible and advisable. So, it was advisable from a cost standpoint. Because of the feasibility of doing it, we had the concerns were at that point a computer could process data without introducing so much error that you would, in effect, drive yourself right out of business because of the errors. By that I don't mean the software, which obviously came to be known as the real culprit, in that you couldn't write programs well enough to keep things under control. That eventually became the real problem. But back here in '53 and early '54, we were concerned about computers that could operate without error, both in terms of the main frame and in particular as far as the tape drag. Our concept was, of course, to put all of the data onto a master file, to read in a master file and to process both transactions against that master file and to write out the change in an updated master file. That was about a five percent activity in each cycle. And we had certain concerns about that. But we were equally concerned that on those master files on which there was no activity, would a computer be reliable enough to read information not change it, and write it out in the same form that it came in? This was a rather fundamental concern with us a life insurance company, because you're not dealing with your own assets here, you're dealing with somebody else's asset, you know, their life insurance policy.

We've always followed a business philosophy that we have an extra responsibility in comparison with some other types of company in that if you don't keep track of your inventory right it can be financially disastrous but the ones you really hurt are yourselves. In the life insurance business, your inventory is your record of life insurance policies. And if you foul that up some way, your procedures, your methodology, you're fouling up something that belongs to the policy owner or, at the time of settlement, you're often not even doing business that you have the contract with, you're dealing with the beneficiary. That may sound a little overly protective for us to say that, but we honestly have that concern and those of us, especially the management team that was dealing with this question of whether or not to go with computers really turned on those rather fundamental questions. Could we be sure? And we obviously reached the conclusion that we could be sure.

Another question in feasibility was, granted that you could do all this processing, you know, that was required during the week, if you went on a daily cycle could you in one night update the entire master file? In other words, do a night's work in a night, because you couldn't be without results any longer than--in other words, you had to have the results the next day because you were building all of your services and administration processes around this, and the period was from the normal close of your offices, 4:30 in the evening. You had to have results back by the morning at 8:30. This was, there was a real question as to whether or not this was feasible to do it a night's work in a night. We had to be... I remember our original estimates were that we could do this whole process in eight hours. Okay, so we figured that if we started in say at four o'clock, we ought to be finishing up around midnight, and for the normal emergencies that we would have we'd have, you know, a 100% margin. And that seemed reasonable. It seemed like a conservative approach to putting all of our eggs in this one basket. It really got sticky about...You know, these original estimates came, oh, around January 1955, and we started getting major sections of the programming finished in mid-'56 and the early fourth quarter of '56. And it wasn't going to be eight hours. It was going to be a twelve-hour computer process. So that meant, instead of having eight hours of margin, we were down

to four hours of margin, four to eight, let's say. Those were some really--forming days, because we were having to face up to the realities of things, and that meant that, you know, giving the software the benefit of the doubt of holding water, it really placed a greater demand for reliability in the hardware and there was a higher degree of reliance than we wanted to place, and we didn't have...

MAPSTONE:

You didn't have computer time.

GARRISON:

That's right. In other words, you just couldn't say, "Okay, everybody work overtime." That computer was, no matter working overtime, you had to do that night's work in a night. We were, you know, we were right into it by mid-'56, but we had to make, not a no-go decision, we had to make a go or a switch horses and go some other way decision about mid-'56. We worked it out and squirmed and so forth and finally came to the conclusion that we should, and then did go ahead. But we didn't have the margins we thought we would. Going back now, we made the decision to go with computers in mid-'54, brought in another twelve to fifteen people and had a programming class. This time we had the UNIVAC and Remington Rand people come out and teach that course. You know, we went first class this time. We started to build a cadre of a programming staff in mid-'54, and were into design and development by the fourth quarter of 1954. Our original objective was to begin our conversion in July of 1956. This was approximately in mid-year '54, so it was figured as a two-year project. We began our conversion to this computer system actually in February of 1957, which was eight months after our plan. The conversion itself, instead of being the whole company at once, we finally would up with a phase conversion that went through the third quarter of 1957.

So it was the end of '57 by the time the company was fully operational under what was then this new scheme in the life insurance business of consolidating functions approach to record-keeping, which I think as I mentioned to you in the previous conversation, was something that did not have very much popularity in those days. It seems a sledgehammer to swat at a gnat. Why would a company mass all of its records in order to just handle that five percent? In those days, back there in '54 and '55, the popular industry, in the insurance the popular belief was one of two things: you really ought to only justify a computer on the basis of a single function. As I mentioned before, or because of the fact that you were passing the entire record off in order to serve only five percent hit ratio, you were trying to get into something that wasn't really technologically feasible. You ought to wait until there was some way that computers could hold all of their information in what we know today as direct access and, you know, just process the transactions against records that have hits. There were drums at that time and people in there who eventually had direct access equipment that could hold our entire files. We didn't know how long it would be. But then there was the popular belief that, you know, why cross the technology? Why not just wait until that year arrives? And so, we were having a lot of fun getting out on the leading edge of things, you know. People were saying, "There's no way you're going to get there. You'll fall right on your face." And I suppose that kind of added to the challenge. But it was also a matter of concern that we might be heading for something where we were going to start our badly and in front of a lot of people.

Anyway, before direct access technology really became a today type of thing like it had with 2314 and on up today with the 3330's, some people might say that direct access technology for commercial purposes really hit with the 1301 or 1302. This I don't know. But anyway, it was at least ten or twelve years after that that you could really have direct access computer that could make, was feasible, and between 1954 and 1965 or '7, let's say, your entire insurance industry turned around and accepted the sequential procession of an entire master file with only a five percent hit rate as a practical approach to insurance data processing. So, I guess that our experience was when that we were able to, able to live to the day when we could say, "You know how, yeah, it can't be done and we did it, and see, everybody else kind of accepts it as the way to go under the circumstances, see." That's kind of the fun that we had, was being able to live through to a period where we could see others able to go ahead on the same path that we went.

MAPSTONE:

Well, actually when you fought through this very early period right until you got the computer in, you had no other model that you were able to go on. You had partially, but you were really pioneering a method of using computers.

GARRISON:

Very definitely, and there were other people that were developing experience with computers, and we were very sensitive to that obviously, and we certainly weren't arrogant about the approach we were taking. We had a lot of confidence and a lot of enthusiasm for it, but we certainly weren't arrogant about it and the evidence of that is we spent a lot of time paying attention to the experience of others that were using computers, no matter what way they were using them, and we were trying to learn from them and translate their experience in a way that, you know, would help us. But basically, we were off on a track both conceptually that was quite different from everyone else and interestingly enough, in the commercial computer world, we were geographically separated from where things were happening, because certainly the bulk of the life insurance industry, in terms of home offices is, you know, east of the Mississippi. So, we were certainly geographically separated from people and as it was eventually working out, from the standpoint of vender we were separated, too. So, it was very much of a o-it-alone sort of thing.

MAPSTONE:

During your feasibility phase of this—

GARRISON:

[?]

MAPSTONE:

What I was going to ask you is that while you were in this sort of feasibility area period, were you getting assistance from either IBM or UNIVAC, and or maybe outside consultants? Or was all your

quarreling and approach done from within?

GARRISON:

During the feasibility period and the advisability period, no, we were doing all of that internally. Not that we didn't talk with both UNIVAC and IBM people, and not that they weren't very interested in us. And I'll come back to that in a moment. It might be of interest to your program. But no, we were doing all of that ourselves. It wasn't until we had gone through all of this introspection and, you know, preliminary systems design and so forth that--it wasn't until we had made the decision to go with UNIVAC, as a matter of fact--that we had UNIVAC assistance. And they brought, oh, three people on board, two of whom were established computer systems engineers. One of them had been back at GE working on the famous GE payroll account in Louisville, and the other had worked on UNIVAC's Atomic Energy Commission up in Livermore, California. Both of them were experienced system, computer systems and programming people, but in terms of the fundamental things it was all basically Pacific Mutual doing business with itself on this.

MAPSTONE:

Yes. What were the names of those two guys who came in?

GARRISON:

One fellow was Morgan Huff, and he, after leaving our account, oh, just about the time we converted after the development job had been done, he then went into marketing for UNIVAC. And he, of course, after his experience with us was over, he became an insurance industry computer specialist. UNIVAC was trying to make a sale to Life and Casualty of Tennessee, down in Nashville, and they called on all their resources to make this sale and they called Morgan Huff in as an insurance expert, a guy who had been there. He went down there and evaluated all the things that were being proposed at Life and Casualty of Tennessee, and made several recommendations and, all in all, made such a professional appearance, so impressive, that Life and Casualty said, "How about coming in here and doing what you just got through saying that we ought to do?" And hired him in put him charge of their systems and data processing there, and he's vice president down there.

The other fellow, a fellow by the name of Glenn Halliday, who was more of a programming specialist and who is today still with UNIVAC in Salt Lake City in the research and development work for UNIVAC software. There's one more slant to that I probably should give, and then I made the point that, you know, this basic design was the one that we'd put together, and once we--once they were briefed and became involved, after they came on board and became involved with our project, saw what it was we were trying to do, they contributed a great deal, both because of their basic wisdom and then also, as a result of their experience with computers. So, we starting from the first of '56 when they came into this picture, no, the first of '55 they came into the picture, they did contribute a great deal and they were cornerstones in this whole activity. But up to that point I suppose there were somewhere in the world but, you know, computer system and computer consulting and software consulting, there wasn't any such thing. As a matter of fact, I'll never forget the first time I heard of a software package, something that

you could take off of a shelf and either install or make modifications to and use and thereby replace all of this development software. I don't think I could have been more skeptical. You know, having gone at something and seen all of the back-breaking, fact-finding, and requirements analysis design it had to go through to develop a system, you know, and recognizing all the tailoring that it had, that had to be done. The first time I ever heard of a software package it was inconceivable to me that that had a future. But that was (laugh) that was another place where I missed, because we've become aggressive package users.

Wherever we can find a place where it makes sense, we use packages today. But the first time I ever heard of the use of it, I didn't think they would ever make it.

So, I guess that's really kind of the picture of the '54, '55, '56 era. Again, there really wasn't any place to go to get the help which you needed. High self-sufficiency requirement. It got to the point where you taught all your programmers yourself, too, and especially the UNIVAC side. And whatever people knew about computer systems design and making requirements analysis, you had to build them yourself because the modern concepts we have about career development and the training of people and the necessity for doing it in order to have, you know, technological renewal so the people don't get stale and you don't keep having on a job fifteen years one year of experience over and over again--you know, we've come to recognize that there are a lot of things you've got to do in terms of training and renewing people--but at that time things were so uncomplicated in terms of what you had to teach a person that it was really a different era. I've said often, and I might have mentioned to you, it was like flying in an open cockpit with your goggles on, your scarf streaming back behind you, and it was a lot of fun and a lot of adventure, and you worked a lot of hours trying to see this thing through. It had such a great deal of conviction about it.

MAPSTONE:

Okay, so. This brings us pretty much about to when the computer was going to come in. But over there you've got an awful lot of people and you've got some training to do and you've got some shopping around to do.

GARRISON:

Yes.

MAPSTONE:

And attitudes which we could talk about somewhat, and maybe we could talk about that some more, how you went about this rather large problem.

GARRISON:

All right. I mentioned to you that as soon as we made our decision as a company to go with computers, we had these communication sessions which told people of our plans and, in effect, was had two purposes: number one, to indicate our direction, and also to give assurances. We wound up with, "We'll

tell you more as soon as we start getting organized and we'll keep you posted all along." We felt this was important in terms of the emotions that were involved, but we also recognized that we had to have the active support of our entire staff, because we had to do a lot of digging in terms of details into people's minds.

You know, especially in our business there are a lot of people and there were a lot of people especially in those days at job stations and there just wasn't any place in the world where we could find out procedures or desk notes or anything of what was going on. We had to pick the brains of those people. And so, we had some very important reasons why we had to carry our staff in terms of communication. We did this in several ways. We actually taught a minicomputer--not a mini computer, but a brief computer course to all of the people in the company. And that seems kind of now, because we had to teach them enough about how a computer operated so they could perceive what it was we were setting up to do. And they were fascinated by this, and we built this little course and told people, you know, explained to people the major functions of the computer and how it operated and how information was prepared prior to transactions prior to its entry there, how it got into the computer, the processes that occurred, and then how it either went out the tape-media output or out the high-speed printers and so forth. We, by giving them perhaps a dozen computer instructions, taught them how to write a computer sub-routine using, let's see, yes, data terms, data elements or data fields, in terms that they were familiar with. So, we got them involved that way. This was something like a six or eight-session training course for the instruction course that every employee came to.

MAPSTONE:

Oh, you were talking about sort of teaching everybody in the company your high-speed computer course.

GARRISON:

Yes. We had that. We carried on a series of--We began a program of, or a series of articles in our company magazine which paralleled what we were teaching in classes, and I don't remember but I think this was a sequence that followed after those classes had been held and again told them the same story again, to refresh them and to tell it in a different way. By that time, we were starting to be seen, I mean there was visibility of this project, because it was obvious to people that we were serious about this and that it was something that was really happening. There was kind of a feedback thing. They were seeing us and what we were doing and what we were talking about as we were out working with departments and the small clusters of people, and then series of articles in the *Pacific Mutual News*, and it just generated more understanding. And as people were working with us on study teams or systems development teams, they were becoming involved, too, because we were really dealing with problems in which they were very deeply involved in themselves. You know, how to calculate certain values and what are the rules for handling a collection or what are the rules for a change in mode on a life insurance policy, and how do you calculate a non-voucher benefit?

All these things really became sort of attached to the project because they were involved with helping in definition. This, combined with those of us one the development team, you know, consciously working with our people to remind them, the sensitivity that people had that what we were doing and for them to

carry themselves and their activities in such a way so that it reflected some professionalism, was kind of an on-going thing. What we didn't want to develop was a reputation for being kind of a part of a technological elite, which eventually has developed around computer people. This was especially true up through the late sixties. We were told to avoid that, and I don't think we conceded completely, but I think we did to a large measure. It was very much kind of a homey situation, and everybody was pulling together on it. So people began to feel comfortable with the expectation that there was going to be a computer, both because of the company's assurances and the types of communication they were getting and the way we were operating. And it turned out that, with few exceptions, almost everybody was either constructively contributing to what we were doing or were what you might say was passive: "Okay, if this will be, this will be." And we had very few within the situation that were people that became a roadblock to what we were trying to get accomplished within the company.

During that period, we needed everybody in the office that we had, because we not only had to keep the shop open, but we were also imposing additional requirements on people, not only in the definition of processes so we could get them over the computer methodology, but also as the conversion process itself, that is, the conversion of records process began to develop, well, that was an additional burden. And when you've taken a whole slice of the company and converting all the records that you have over to a new technology, that was a time when everyone was involved in it, and there was certainly no risk of anyone losing their job during that period. There never seemed to be enough people or enough time.

Now, as we came through '55 and '56 with that kind of an environment, a lot of work and a lot of involvement on behalf of the staff--and I might also mention that this being out in front translated into, transferred over to the whole company, and there were some problems that evolved out of that. People were smart. They knew when we were coming and knew that it was something new and different and other companies weren't exactly going that way. And of course, we were making hay out of that with our people, trying to impress them with the company. Then in '57 when we literally began the transition, and there were increasing pieces of the company began to come over to this automation process--you know, starting in February we started converting, oh, ten or fifteen percent of our files over each month, so that by fall or the first part of winter we had the whole hundred percent. And that takes eight or ten months to make that full conversion. There was--we not only had to keep the old going, but we had to get the new going. So there was an extensive period of training and modern things that were really new to everyone: how to deal with transaction processing or a new way of doing the work. And I look back at that period now, everybody was just so involved and so busy, and the computer people and the staff, that it was almost as if we had no time to be concerned with whatever potential impact this was going to have, whatever, you know, risks it might have had in terms of a job. And in '57, even though by year's end we were over, there was no period when we were about to cut down our staff. And it wasn't until really a year later that we started letting attrition take its toll, so that it was really about the end of 1958 before we met our staff reduction objectives.

Out of all the people that were affected by this changeover, 90% of those who were affected were people that were in this low clerical end that were, oh, they wanted to leave Pacific Mutual anyway. So away they went. I would say the other ten percent--and I'm talking here about ten or fifteen people, because this impacted only 120 job stations and then there were...There were ten or fifteen people that had to go to jobs that were different, and some were somewhere between just below or significantly below their prior job positions. And they were either un-retrainable, or perhaps somewhat indifferent because they

were maybe approaching retirement, so we had, yes, we had some cases where there were some difficult adjustments and the company worked hard to make that a graceful change, but regardless it wasn't. What it amounted to was that the people were, probably ten or fifteen people wound up doing jobs that had less responsibility and were less demanding than the ones they had, and they got paid at their old rate is what it amounts to.

On the other side of that ledger, though, out of this experience there were twenty-five or forty people that were identified, you know, just because the opportunity arose, they had the chance to excel, they were challenged, and they could be seen. They were probably two or three times as many, but you suddenly realized that you had a human resource that was greater than was being tapped, and they went on to bigger and better things. And there are some of those people that are in important jobs in here now.

MAPSTONE:

Plus, the fact that they were really on the ground floor of a growing industry and that would have gotten them to a good place right there.

GARRISON:

Yes.

MAPSTONE:

What were some of the other problems, if any other problems, that had to be overcome, apart from the people and the fact after you made the decision to put into a computer, and obviously we've talked somewhat about the problem of centralizing all this huge file, all this huge data. Were there any other kinds of problems that you had to overcome?

GARRISON:

Yes. There were a couple of problems. One had to do with our field organization. We had seventy-five agencies where we sell the service, life insurance, in field offices, and that time we also handled the all of the basic processing of payments from those field offices. And the fundamental record, in terms of what the payment status on a policy was, was out in the field at that time. And they had all of the information for servicing a policy right there in that field office in forty of the states. Those seventy-five offices were sprinkled around forty of the states. All right. One of the major changes in this system, because we could do it more effectively, was to transfer responsibility for the collection and processing of payments into the home office, and to change the field records to a purely acception basis whereby only if the case went overdue or went into a lapse according to home office records would they know the payment wasn't paid to date. And in moving that collection process into the home office, there were two things that arose out of that that were benefits to the company in the sense that, well, number one, that was a major savings opportunity in reducing the cost, and number two, we could get a hold of that money sooner and thereby earn money, Pacific Mutual's money, earlier than when it was sprinkled around all those field offices. We didn't have the leverage with it that we would have had in bringing it

in big chunks right into home office accounts.

The field offices took the position that they were having information taken away from them, and number two, we either reduced their staff levels, because they didn't have all this collection-processing, we reduced their staff levels because there just wasn't that work to do. In those offices what we could call management agencies, home office staff, or in the case of general agencies, where they're individual businessmen, we eliminated their collection expense allowances. In other words, we would pay them to collect and administer premiums collections in a few of them, so we took that over and we reduced and, in fact, eliminated those collection service payments to them. This meant that those field office staffs were smaller, and this affected their prestige with themselves. You know, if you don't have as big an office, you aren't running as big an operation as they want. Number two, they were using the financial muscle of having significant bank accounts out there in their hometowns to increase their prestige in the community, and we had taken that away from them. You know, even if it didn't mean anything in terms of earning money, if you're controlling a big account in a small town or in a town like...

MAPSTONE:

It's a power position!

GARRISON:

That's right. And we took that away from them. It turned out that it was quite an emotional thing for us to lower the size of their staff, bigger than we had expected, so while from the standpoint of dollars there was absolutely no question that it was the thing to do and it was a big opportunity area for Pacific Mutual. It was possible only with computers in our case. But we had a tough time with our field offices on that. So that was a major problem in connection with this changeover. The other major problem that we had was that, as a result of this conversion, we discovered that, you know, whereas a policy previously had seven or eight--was represented in seven or eight separate punch-card files, when we brought it all together there were some significant and sometimes staggering problems that couldn't be detected without having some process that would correlate them, like this new approach.

So, we found some staggering inconsistencies in our existing visual and punch card records and books, if
you will. And similarly, there was a lot of information that was being kept out in field offices that, because of their methods, produced inconsistencies between field office records which were maintained on a door system, and home office records, which were maintained on punch-card visual record system.

So, the things that this developed in terms of basic inconsistencies, complicated by the inevitable errors of conversion on the part of programming bug and logical bugs in bringing records together, caused one heck of a lot of pressure both in the home office processes purifying those records and a lot of problems between home office and field.

Suddenly things started to happen that were inconsistent with their field office records, and the reconciliation that was necessary was a staggering burden. It really took a full year for us to get everything processed at least once through every cycle that, you know, every billing, collection,

anniversary, commission, every kind of cycle that we had related with this, it took us a year to get out of that. Now those things happen with every system, and we now have a better appreciation for it, and two things: we now do a better job of anticipating things--I hope we do a better job of working on conversion areas!--and also have a better level of anticipation, or maybe it's just a higher tolerance for some of those problems. But again, there was a situation where there wasn't a lot of experience in dealing with bringing together all the records of a company, both in the home office and all the records of a company that were between home office and field. It could have been a real war story. It was difficult enough as it was, but it was a very difficult and trying time.

MAPSTONE:

One thought that just flashed though my mind--how did you come up with an acceptance test?

GARRISON:

Well, that's a good question, and very good question, and one of the things that we recognized very early was that we were not going to be able to have the classes parallel processes just simply because the way we were doing things was just completely out of line, completely different, from the way we were processing under the old system. There were obviously some significant lags that the old system had that the new system wouldn't have and when the month end was over, as an example, we could close the records for the month and do the summary calculation during the summary processes, and be in a position to know where we stood days before the old system could do the same thing.

So, what we eventually included was, in terms of running through parallels, that there was just no way. So, what we wound up doing, and this practice followed through in similar situations. We didn't realize that we were setting precedents then, but what we decided to do in most cases was to take an agency which might be a sample of 2 or 3 % of the business and to process it. We actually took one agency and isolated it in every way we could through our old clerical and punch card routine. And that was staggering. We lavished more care and resources on getting that agency isolated than I like to talk about, but we had to pull it out of the rest of the company for a few reasons, not only to isolate its records so that we could deal with it in the old system, we also had to do that in order to provide the transactions to run against the new computer system. And so, we ran one agency as if it were an entire company. Based upon that, we made the decisions to go ahead and keep cutting over. As we were cutting over, then, we were taking primarily the case counts, the collection control balances, and what we would call evaluation levels, that is, the life insurance that was in force in blocks of business and control on those. So, we were proceeding without, other than that sampling via that one agency, other than cash, record count, and life insurance in force, and that probably represents one or two in terms of volume, in terms of numbers, only one or two percent of the controllable items to the controllable processes that you can look at, but the other 97% of things was proceeding on the basis of a belief on that one agency sampling, you see, that things were all right.

We also recognized, though, that there were other things that were indirect controls which we depended upon, and we did this consciously. We knew, number one, that if things were getting badly out of shape, two things: our agents would begin to react to it and our policy owners themselves would react to it.

Agents would react to it, for instance, if anything was going on in the commission payments, and agents--an active agent gets commissions of one form or another on a life insurance policy all through the life of it. They're high in the first three years and then they drop down, but he's still getting some kind of payment. So, he's watching for these things, not only that they're there, number one, but also that they're also the right percentage and therefore the right amount. So that was an indirect control. The other thing is the bulk of our policies, those that are not paid up, we're billing people. We're billing people either once a year up to monthly, and so we've got regular billings that are going out to them, and also, once a year we send them a statement to let them know what their dividends ad their dividend balances are, the policy loan balances that have been in and the loan interest on them, and the cash value, occasionally cash value. So, if anything got seriously out of line, we reasoned that policy owners would start feeding it back to us.

MAPSTONE:

So that way you've got sort of a check and balance for it.

GARRISON:

Yes. We also followed gross things, like, what's the total amount of our collections in comparison with last years at this time? How about policy loan balances? And out of that process we could work, in terms of the big numbers, we could evaluate whether or not...You know, that have doubled in one month, then we'd know something was wrong in one way or another, with dividends or something like that.

MAPSTONE:

Where did you house the computer?

GARRISON:

Where did we house it?

MAPSTONE:

Yes.

GARRISON:

Well, that was an interesting thing, too, in that computers weren't modular and therefore we had some physical problems to deal with. The central computer, the UNIVAC I, just in physical size was about the size of this conference room we're in now, which is about nine be twelve or something like that.

Well, the CPU is about this big, and the Deltatron. And in order to get it into a room they had to literally clip all the wires and box, oh, about eight different pieces. And we had to tear out a side of the wall on the fourth floor down at Pacific Mutual. Somehow, they removed the face of the building in

order to lift it up with a crane through that window because it was too big for our elevators, and they lifted it up, brought it through the window, then dollied it down to the computer room and then they assembled it. You know, it took almost three and a half to four months to put the computer back together so that it would operate. Today they bring a computer in and two or three--sometimes two or three hours later, but you know within a couple of days they're starting to get machine time.

Well, this was two or three months. We got a lot of publicity around Southern California, and our people got a big kick out of it. That was a part of making them feel like they were a part of something important. They were all invited down to watch the computer come through the fourth floor.

MAPSTONE:

You had quite an experience. Since you were really the sort of pioneers in the insurance industry, did anything, did any new standards, come out of this, or new methods that became accepted generally, that is to say a standard in the industry?

GARRISON:

No, I don't...I don't think so. And as a matter of fact, I think we're kind of suffering in the backwash of that right now in that...However, basically everybody either went their own way or took a basic theme and developed their own variation on that theme in terms of computer systems. A lot of sharing of concepts and ideas, and it's a very open industry in that respect, but in terms of hard standards, both as to methodology and control and quality, I don't think I can think of a single instance. Now, in the late fifties and early sixties, the insurance departments began to recognize that they are dealing with a lot of companies, hundreds of life insurance companies going their own way with computers, the insurance departments and the National Association of Insurance Commissioners began setting down some broad guidelines or approaches for insurance companies to follow so that they could audit performance and liquidity and the assets of life insurance companies. But these are so broad they'd have to be defined as guidelines and not standards. And as a generalization, the insurance departments, for many reasons, have really not kept up with technological advances of the companies which they're responsible for reviewing and controlling.

And all of this reached a climax earlier this year, and because there is no real standard for insurance systems or insurance system control, because there isn't such a standard, why, it was suddenly discovered that the Equity Funding Company is accused of dealing in a rather selfish way and fraudulently, and it smoked out the fact that the insurance departments have not developed standards that could delay the costs of the industry and the insurance industry itself you take the companies and look at them individually. They have significant data-processing problems and significant data processing workloads, and they have a lot of data to handle. This is a very free enterprise-oriented type of industry, and not anxious to be in a position to build policies that are just exactly like somebody else's. Having been financially independent and able to support the development of computer systems, and being able to afford computers and therefore in general having an attitude that, since there isn't anything more enticing nd more inviting in terms of strategy for computers and computer systems, we'd better go our own way.

We have, each company. And while there's a lot of sharing of information, it is more in terms of concepts or ways of doing things and a better way of doing your own thing, so I don't identify any significant standards having developed out of all our activity. There have been software packages that have been developed that are industry-oriented, and in fact we're using one now. We customized and installed it finally last year that replaced this system, this basic system, that I was talking about our having developed in '55, '56, and '57, those years.

MAPSTONE:

Good heavens, you've still been using the same basic system?

GARRISON:

We didn't replace that until...

[End of Tape 1, Side 1]

[Start Tape 1, Side 2]

MAPSTONE:

This is side two of my interview with Mr. Garrison at the Pacific Mutual Insurance Company on August 10, 1973, in Newport Beach, California. Let's talk a little bit about the company. Well, did we talk about--well, sort of watching the idea and UNIVAC and then keeping your eye on who's doing what.

GARRISON:

Yes. Well, I think it was interesting during this period, and one that for somebody that was involved in it to reminiscence about it, I guess, and I've thought about it, and often times how interesting it was to see in our industry, the insurance industry, these companies, how they would build up a head of steam going for computers. You're going for computering. You could see them, looming up one by one, because we were already committed, well, whenever anybody would start warming up to a computer you could be sure that some of their management would start getting in touch with us an finding out what we were doing and how we went about it. And there was an industry break line about such and such a company is now worked up about computers. And there they were, you could see they were visible all over the country popping up one by one. It was interesting to see them wrestle with the same types of advisability questions as we were, or we had.

And another interesting part of it were just the inside stories that you would hear from the principles involved and the gossip that there was. Almost invariably in each one of these companies there was always a UNIVAC faction and an IBM faction. You could see the struggling and the power struggling that was going on in these companies, and they'd fall one way or the other and it wasn't unusual to see the faction that became out of favor, the loser, if you will, because this was such an interesting topic and one that called for so much commitment in order to come to understand what it was all about and getting involved with the decision-making in the company. You'd just know that these people would put their

recommendation and their reputation and their conviction around the line, and say, "We ought to go IBM" or "We ought to go UNIVAC". Then it would go the other way; the loser would...It was not unusual for them to leave the company. They'd go somewhere else. They'd go to another company, just because, you know, they'd fought the battle and lost couldn't live in an environment where they felt the company was going the wrong way in their view.

So, it was always fascinating and there was always melancholy connected with post-decision period because these people would drift out of this picture and drift back into somewhere else where there was either a fresh situation they could deal with one where they could go working with a company that had made what to them was the right decision. That period is past. It went past into late Fifties, you know, as more and more people got computers and I suppose to some extent you got more and more involved with your own problem and whether or not computers were good and so forth became academic. And also, because IBM came to dominate the industry. But that era passed, and as I mentioned nobody can be seen in this decision-making process and it's not a question of whether or not to get a computer or whether to go vendor or another, it's almost a question of what model to get, and that's not really very interesting, the result being in everybody being homogenized, as I mentioned. Lot's of fun.

MAPSTONE:

Yes, I think so. Now everything we talked about before was your self-sufficiency and the fact that you chose to...

GARRISON:

Well, early in our interview here we talked about some rather fundamental feelings that Pacific Mutual had about doing things right on behalf of the policy owners in terms of being sure that the computers really did work. That carried through to another dimension later on when we eventually installed a computer. We had the computer, we had purchased the computer, but we were having the UNIVAC do the maintenance and this was during 1956 when we were doing the programming and the de-bugging. We weren't doing any production, you know. So really, we didn't have record response for those. It was still being handled through a record-keeping system. But through this period, we started getting some experience in dealing with another vendor when we were only running at one, one and a half shifts a day during that testing period and five days a week as far as the computer being on, and if we found that if we wanted to run over the weekend or if we wanted to run twenty-four hours a day in order to accommodate our development effort, we found that we had to arrange it with UNIVAC engineers. And we were really dependent upon them.

By the way, the equipment of that era were tubes. You have to have on-site maintenance. You have to have people there, because when you went down, which was a heck of a lot more frequently than using today's equipment, you had to get right at it or else you were liable to be down for some time. It wasn't just a matter of pulling a board out and slapping another one in and sealing it to work. You had to go tube by tube and diode by diode, and the diagnostic procedures were really much more time-consuming and quite primitive. So, you had to have on-site maintenance, two or three men maintaining that computer, and you had to have them whenever you were running that computer, or else you just weren't in business. So, it was kind of getting to us. Oh, sometimes they'd hem and haw about whether or not

they could maintain the computer over the weekend, and they'd get on the phone and phone back to St. Paul, Minnesota, where the engineering headquarters was for the maintenance team, and they were trying to be cooperative, but it was just kind of a stick communications problem. And that was bothering us.

Another thing that we were recognizing was our dependency upon maintenance to keep our computer center going, and looking ahead to the time when we were going to have all these records being completely dependent upon a computer system, the thought of having an outside supplier for services, engineering services, in effect in control of our ability to do our own business kind of worried us. It didn't seem like we had control of our own destiny. So the determination of kind of a sticky process making arrangements whenever we wanted to do anything outside of the standard and the realization that, for instance, if the UNIVAC people ran into any union problems that we couldn't deal with directly, or if somebody threw out the picket around our building and the UNIVAC engineers working for UNIVAC wouldn't cross that picket line and as a result we couldn't process all these policies, we had one way of being processed, we finally moved to a conclusion that we ought to do our own maintenance. And it looked like we could do our own maintenance for at least a break-even. Of course, it troubled us to think of that because here we were in a business that... Without computers there's no high technology in a life insurance company. The highest technology you've got is an electric typewriter maybe, or something like that.

So here was something completely foreign to us that we were thinking about maintaining what at that time was the highest technology device in the world, maybe, a computer. But we made the decision to do that, and we sat down and we talked with Remington Rand about what we had in mind, and persuaded them or cajoled them into accepting that they ought to assist us in this. And they did, and they made it possible for us to talk with the engineering crew that was maintaining our computer there in order that we could make offers to those men without jeopardizing their place in the UNIVAC organization. In other words, we were given the privilege of pirating that maintenance crew, with the understanding that anybody who didn't want to UNIVAC would find another spot for them, which was no problem, and further--and I can't remember what the period was--if after some period of time around six months or a year, if any of these men became disenchanted with Pacific Mutual or the working environment at Pacific Mutual that Remington Rand would take them back and take them back without prejudice. This was the kind of a deal that we worked out with Rem Rand and talked with the whole crew and got them with the exception of the chief engineer, who was unwilling to come across. And in his absence, he stayed on while we went out and recruited a chief engineer away from another UNIVAC installation, one of the government installations in Washington, and thereby created our own engineering crew.

And further, purchased a spare parts inventory which was larger than any spare parts inventory UNIVAC would normally keep on site, simply because we couldn't get to their regional depots with as much ease as they themselves could. I can't remember now what we carried on the books of Pacific Mutual's assets, but it was all sorts of vacuum tubes and diodes and, you know, wrenches and screwdrivers and gosh only knows, but we took over maintenance by late 1956. And of course, UNIVAC I was replaced by UNIVAC II in '58, and that by the second UNIVAC II in 1963, so that we eventually had two UNIVAC II's during the UNIVAC era.

MAPSTONE:

Did Rem Rand train your people?

GARRISON:

What, to UNIVAC II?

MAPSTONE:

Yes.

GARRISON:

Yes. Yes, we sent some of our people back to Philadelphia for training and they came out here and instructed our people by means of a "UNIVAC Differences" course, as they called it. And I remember we brought third-generation equipment in for 1962, and before 1969. We had UNIVAC II's up through 1969, and we maintained them to the last day that they ran. And all that was a viable approach and it worked out to satisfy not only our what you might call business concerns, being in charge of our own destiny concerns that we had at the time, but it eventually got to be a much less expensive way to maintain it. So, it turned out to be a good business decision just from the standpoint of money, but is also got us over into the era where nobody would think of maintaining their own equipment, for two reasons. Number one, the equipment's more reliable and you can't afford to keep a staff renewed in terms of the technology today. It's a tough enough thing to keep people renewed on the system side. I think only IBM or only a major manufacture can afford to feed and house a maintenance crew, but we did it. And while we weren't the only UNIVAC user that maintained its own equipment, we were one of the few, and by the time we stopped, in 1969, we must have been the only one of a few in the whole country that was doing anything that unusual.

MAPSTONE:

Something that I'm not sure that we got back to or not. I asked you about the kinds of assistance you got from either IBM or UNIVAC when you were setting up the machine, and my original question being in the feasibility period, and you said not at that time but there was something else. And you said, "I'll get back to it." Did we cover whatever point it was you had?

GARRISON:

Well, what I was thinking of...I did mention that the UNIVAC people did come on board in early '55 and they made a great contribution to our program, and I also mentioned that there just wasn't anyone to go to at that point. And there's a corollary to that in that even the thought of an outsider coming in and really being able to contribute to your program maybe, for instance, designing your computer system, wouldn't seem possible at that point in the late Fifties. It seemed like you had such a dependence on understanding your own business in order to design and develop computer system, and there was almost a blind bias against outsiders being able to come in and help you.

A couple or three things happened after that changed and really made the software and software consulting business possible. Number one was something like the COBOL(?). You didn't have to know all the intricacies of a given computer's characteristics in order to write acceptable, if not in some cases superior, software to what you could do internally. The other thing is that we came to recognize that there were some rather basic and fundamental skills involved in systems analysis and design that weren't as industry-oriented as we thought, and as a matter of fact, the software companies taught the users a lesson that we deserved being taught, and that was that, you know, there are certain universal truths in the phases of projects, in standards, in the way you go about determining requirements of a computer system, that we weren't disciplined enough to recognize for what they were. So, the good systems and software consulting companies and people, you know, taught us a lot that we were unable or unwilling to see. And then finally, as more and more people got into the systems profession or the systems business or racket, whatever it is (laughter), in these outside firms, they just became exposed to enough situations where experiences were broader than those of us who were working within companies. There were enough people that developed out of these experiences or these companies that almost every one of them evolved an expertise of some sort, you know, insurance. Naturally all they needed was just to learn the nomenclature and they had a sensitivity to what goes on in insurance companies so they could deal with this in a language and a manner that we felt comfortable.

So, whereas from '55 to '65, speaking for myself, I wasn't interested in and almost scorned anyone from the outside that would have the audacity to think they could come in and, you know, be constructive and be able to help us move the ball down the field, I guess I've become, number one, a little more humble, and the other thing is that there are some darned good professionals out there now who have taught us a lot, and there are situations where I think we can do the job better. We're also open-minded enough and objective enough to recognize that there are many situations where outside assistance or outside complete responsibility for something is superior to doing it ourselves. That is a lot different from what it was from '55 to '65. The service industry that's built up around computers is something that was inconceivable and yet it's a fact of life today. There are many situations where they've bailed us out of problems and bailed us out of timetable situations that make it a delight that you've got that alternative in some situations.

MAPSTONE:

In back-looking, can you put your finger on around when this might have happened, or was it just such a very gentle evolving process that you really couldn't see it happening? This fulfilling the need for process.

GARRISON:

It was a gentle thing. That's a good way of putting it. It's one of those things that is upon you before you realize it. I don't know if this is true, but in terms of my own consciousness of what was happening and the realization that there were things going on outside our own world that we ought to pay attention to and should, the first of these was in the packaged software area, where in 1962 IBM began a program, a project, to develop a package of software that could be used by life insurance companies that did things the way that we had done it starting in 1954. They call that 62CFO. CFO stood for 62

Consolidated Functions Ordinary. That concept was exactly the one that we had developed and written and installed and had our business going on since 1957. In the year 1962 IBM started a project that...I don't know whether it was finished in '63 or '64, but they had a viable package of software that could do the same thing with customization that we had done for our company. When I first heard of that--I refer to this in terms of packages earlier in our conversation here back--that was inconceivable to me. But 62CFO, the facts are that with all of its weaknesses and problems, that was very significant, and it was a piece of software that companies could customize and run a life insurance company data processing shop. And we'd beat our brains out through three years to do that, and here they had done something. So, at first it was disbelief, and then all the companies were going to it and converted to it and it's been viable, especially for the medium and small-sized companies. So that then was gentle, as you said. In fact, it was kind of oozed into. And in terms of my recognition, anyway, of the arrival of the software services industry, I guess it came out of the early through '60 days, which would have been through '66 or '67, when I really became conscious of it. You know, many a computer with an operating system as distinct from sequential batch single string, there were people that were in that early. Out of just their presence and then environment having to deal with the ragged IBM beginning software and making it work in their own shops, there were being in that early trial and error period as an employee of IBM those people developed an understanding and skills that didn't have application significance. They had significance in terms of being able to make that computer do and operate itself the way it was supposed to.

Other companies, as they begun this great new era of working with the 360, regardless of what they knew about application software they needed that kind of help. And those IBM 360 operating system pioneers and the early users developed an expertise that was transferable to anybody that was starting with 360 computers, and was not only transferable, it was needed. The people were desperate for it, because things just didn't work without knowing job control and knowing the operating system and being able to unwind some problems that IBM hadn't yet unwound and to be able to get going before the...the BTF's and so forth. So those people had know-how, and they began selling their brains. Out of that began the software services industry as we know it today. This is just one man's opinion maybe, but as that basic technical know-how began to be supplemented by, you know, their going out and dealing with a little more application side and a little less on the black box side as they started off. You know, they grew out of that and became application-oriented. And that, coupled with the fact of this great surge of computer activity that came with the 360 from 1965 through 1970, let's say--the people just had more things going than the labor market could absorb, so the software services industry was capturing the best of them and sending them back. That kind of happened in an ooze way. Then all of a sudden you recognize one day that there were some people that knew more about that computer than you did. You knew enough about your applications, but they could at least carry that from an applications side. And that insurance know-how coupled with their superior technological know-how made you say, "Let's try it!" And you did, and it worked. So, I think it's that kind of experience, that kind of evolving environment that again takes us to a point where we take it for granted that you can just about get help outside anywhere and any time. That's a real plus. I don't think I...I know when I first started thinking about it, I never felt that it could be, but it was.

MAPSTONE:

In twenty-five years we've come a long way-

GARRISON:

Yes.

MAPSTONE:

--baby! (laughter) I just had one more little thought that I mentioned to you early, about the comments in the 1953 document. (pause) On the Second Industrial Revolution, we look at this as being part of it. And I guess that my question is, you know, did you feel that in the early fifties? Were you conscious that his was going to be, if not a second Industrial Revolution, certainly a major breakthrough in methods and technology?

GARRISON:

Yes, I think we felt it. I think we took pride in it and I think that maybe our egos were swelled by it at times, but I think what we accomplished by, let's say, 1955 to 1965, was a disappointment to us. It was a disappointment to us by the time we got out of 1965, because everything has taken longer than we'd thought, and we thought we would be to much higher levels of sophistication than we have been. I think that we expected to be, by 1965, where we may not be until 1980.

MAPSTONE:

Good Lord! You were really futurist people.

GARRISON:

I think that we thought the computer would be an important force. We took for granted that the computer would be an important force in service and administration, and we thought by 1965 that the computer would be providing important systems in the management of the company. But I don't think in our company--I think this is true in our industry. And in our industry, I think we're behind certain other industries, by the way, in terms of computer-assisted management, interacting management with the computer. That's for two reasons. Number one, we had probably the broadest base of administrative processes there is. It's interesting. You can take a life insurance company our size, and we have a thousand people in our home office clerical process. You can take the manufacturing companies, and to get a manufacturing company with an office staff of one thousand people takes a relatively much larger company than it does an insurance company. My point, the reason I mention that, is that that means we are an administrative intensive industry. So, we've had a relatively larger job of bringing these administrative processes under control than other industries. I don't think that we were necessarily any more optimistic than anyone else, but that facts are that it's taken us longer to get the paper mill under control. That, coupled with the fact that we mesmerized ourselves into believing that the technology could do more than it really could do, means that this comprehensive thinking of the computer-run

office or the computer-assisted office or computer-assisted management, we've run way behind that in the technology area.

The things that we wanted to do were conceivably possible under the old tech field or technologies, but I really think that it takes a kind of disc valves that we're talking about with the 3330 and the double density 3330 that, and there's going to be some then that-it's far off, I know--but when you got to that capacity in terms of direct access, you really have to have data base managers in order to handle the kind of management system that we're literally just now getting underway here. And it's 1973 and my first temptation is to say, "We're really going to start getting there in 1975," but I've learned enough that I mentioned that it will probably be 1980 before we really get to where we thought we were going to be, I think, by 1965.

MAPSTONE:

I think in one way or the other in the computer business it's not been a very good record in the predictions area. Either it's been totally under--you know, like six computers will take care of the world's needs, that kind of thing--to being way over, but usually under. I think that maybe today now that most of the very famous predictions have all been ridiculous. You know, they've been so far off base.

GARRISON:

Yes, right.

MAPSTONE:

Which sort of says that even though people were aware that the computer was the tool of the future, nobody at one given time could fully see into the globe, first of all, and really figure it out.

GARRISON:

I've often thought about this and wondered why that is, because I've always thought of the people that are working, you know, that do this sort of work, are very intelligent people. And I think that's true. But I think that somewhere in our general educations we, in spite of what we like to say about ourselves and think about ourselves--I'm making some sweeping generalizations--but we weren't taught the conservatism that comes from a professional education such as a doctor or a lawyer. They build conservatism into their...And their very life is conservatism in terms of reaching conclusions. In the systems area, where all these predictions have come, there aren't little scientists, either. And scientists are also very conservative, and in spite of using the systems approach and sort of a quasi-scientific approach to problem-solving, our education was not either professional or scientific in its orientation. And I therefore think that we've failed to develop that discipline, thinking everything through before we open our big mouths. That, coupled with the fact that in order to do a lot of the things that have been accomplished, just to get through what we did accomplish, regardless of the fact that it took longer than what we'd expected, the fact that a lot of our accomplishments are a tribute not to our brains but to our steadfastness, to our willingness to give up. You know, just beating our brains out so that you sort of

become tough rather than thoughtful. It makes you come out and made us produce careless and over-optimistic predictions of the future. And there might be one more ingredient, and that is that we have come to be a part of an industry that's dominated by IBM, and there are few better marketing organizations than IBM. They have often set the tone, not from scientifically or professionally arrived at look at the future, but a marketing look at the future, seeing what the sizzle is that has to be sold in order to get going. And all of this has combined to cause us to build a reputation for ourselves, and it's well-deserved, that all we ever talk about is how good it's going to be! (laughter)

MAPSTONE:

(laughter) That's good. Well, I must check the points that you feel we have missed, because I feel we've pretty much covered what I was hoping to cover.

GARRISON:

Right.

MAPSTONE:

And you're talked out?

GARRISON:

I'm satisfied with it.

MAPSTONE:

You're talked out. Okay.

[END OF INTERVIEW]