



## **Oral History of Daniel (Dan) Quernemoen**

Interviewed by:  
Craig Addison

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**Craig Addison:** What did you do before Fluoroware; can you talk about your early involvement in the industry?

**Dan Quernemoen:** I've been in plastic molding since 1950 which is kind of ancient history. I think the third company I worked for had gotten into molding products for the semiconductor industry, which were wafer carriers, things like that. That's how we got exposed to the industry. I was personally appointed to go investigate that marketplace and see if it was something we should get serious about.

**Addison:** What was the name of that company?

**Quernemoen:** The name of that company was Thermotech Industries. It was a Booker & Wallestad division of Thermotech. Thermotech is still in business today, but they are in the custom molding business whereas Fluoroware was a spin off from them back in 1966. There had been some products developed at this Booker & Wallestad division. So when Fluoroware became a spin off it obviously took those products and went to another site and started molding them and marketing. Those products in the Booker & Wallestad division started to generate some revenue and profits and it was a different kind of molding so it needed to have a home of its own so to speak, so that spun out and became a separate company. Vic Wallestad was the founder of that.

**Addison:** Before we get too far ahead, going back, you said you were asked to check out this new industry, the semiconductor industry. What did you find? Did you think it has great growth potential?

**Quernemoen:** Yes, it was an industry that certainly seemed in its infancy, but the thing that we weren't aware and it took a while to realize...we started out making carriers for wafers that were three quarters of an inch to one inch in diameter and we soon found that those diameters were going to increase and of course as they increased it meant a whole new series of products for the industry. At first we thought, this is the industry and it's only capable of wafers in that diameter range, three quarter of an inch to one inch. Then sometime after that IBM came out with the two and a quarter inch, or two and an eighth inch diameter, and that was an IBM standard, it was not an industry standard. The rest of the industry went up to 2-inch. Then you think, well this must be the size now that the microelectronics industry has settled on, but it didn't stop there. And as we learned more about the industry we learned more and more products to develop...once the wafers were completed in the processing they were cut up into die and they had to have die plates and that got to be a whole series of products. Plus the chemical side of it. Our specialty was molding Teflon products so we soon learned to develop a lot of Teflon tanks and beakers and other handling devices besides the wafer carriers.

**Addison:** Were these products specifically for the semiconductor industry, or could they be applied to other industries?

**Quernemoen:** The semiconductor industry that we discovered was a niche marketplace and we were a small company and pretty satisfied that we could work within the confines of that niche. But like I've said many times, the niche grew into a notch and it's still growing, because we found many more applications within the industry that we could develop products for and of course as wafers have gotten larger and technology has certainly got a lot tighter, it has given us a lot more opportunities to develop more and more products as well. And of course automation has been another big step in the direction of developing

products and continues to expand. But as we've grown we have found that there are a lot of borderline marketplaces we could get into. We developed, and I'm getting way ahead of the story, but back in the late 70s we developed a line of molded Teflon fittings and valve components and things like that which has been a very significant part of our business.

**Addison:** Going back to when you started to look into the industry, did you talk to any device makers? Where did you collect your intelligence on this new industry?

**Quernemoen:** The first one, and this was what kind of got us started...a guy from Delco Radio, which is a division of General Motors, had some Teflon carriers machined out of blocks of Teflon and they were very expensive and they were kind of fuzzy. And they had talked to DuPont and asked wasn't there somebody who could mold something like that and DuPont had given them our name. So this guy came to Booker & Wallestad and talked about the needs that they had and suggested that Fairchild, TI, Motorola and several others were working on similar processes to what they were working on. So we got some ideas and some designs and kind of hit the road and traveled around the country and went to these companies. It was quite an adventure. There were no names, so you'd go into a lobby at TI and say "I want to talk to somebody that's working with processing wafers", and the receptionist looks at you like, what are you from Mars or something. So you had to kind of be a detective. I remember going into RCA one time in upstate New York or some place, and I didn't have any names. But people at lunch time, they'd be going out the doors and going to lunch. So I just cleaned the magazines off the table and set up the products like a Tupperware show and it wasn't long before engineers gathered around and wanted to know what those products were for and I explained in my very limited knowledge what they were for. They [soon] had me in a conference room with six or eight engineers gathered around and really wanted to talk serious about this stuff and so I did that at more than one place. And after that, it got to be show and tell and got to be quite an adventure.

**Addison:** When you set up the table with the products, were you actually on the RCA property?

**Quernemoen:** I was right on the property. The first time I did that at RCA I was in the lobby of the device manufacturing [building]. I had learned that much...wherever these companies were manufacturing the microelectronics devices they would be interested in looking at these products. And of course out of that came a lot of idea gathering. And of course by then people were calling back to the factory and talking to our engineers from time to time. It kind of got to be a pretty big information gathering process because we were plastic molding people, we were not chemical engineers or processing people. So we had to get as quick an education on the industry as we possibly could because you have to know in advance. If somebody is going to go to 2-inch diameter wafers, or 3-inch diameter wafers you need to know that at least three or four months in advance because we have to design tools that are the molds that shape the products that are used in the industry. So it's not hindsight that they come to us, it's before the changes are made that they come to us and talk of their needs.

**Addison:** Were there any other device makers where you did the so-called Tupperware approach?

**Quernemoen:** I did that in a few companies, but also we began to learn about the trade shows. I think the first one of those I participated in was IEEE in New York City. I didn't know anything about trade shows either. All I did was rented a table, laid the products out and had some brochures. I was amazed. I had

people from 12 different countries along with the interested people from the marketplace. IEEE was not the best...you know, 90 percent of the people would come by and look at the products and say, what are these things used for. So you learn real quick you are not in the right place, but we had to learn about trade shows too until finally SEMI started up and that opened the marketplace up tremendously for us.

**Addison:** During this period when you were visiting these device makers, was that as Fluoroware or the previous company?

**Quernemoen:** That was as Fluoroware because now we had done the spin off [from] Booker & Wallestad, and we were getting good exposure to the marketplace because we were really focused on that business.

**Addison:** And when you had the call from Delco, where was that?

**Quernemoen:** That was Booker & Wallestad. That was kind of the little acorn that opened us up to the marketplace. I think he spent the whole day at our company and I think there were three or four of us around listening to his story and asking questions and trying to understand this microelectronics marketplace that he was talking about.

**Addison:** So Delco was making wafers at the time?

**Quernemoen:** Yeah, they were...I think what they were making was a component of the car radios. These are big old clumsy things and they came out with a very small in the dash car radio, and it seems to me that they had gotten a pretty good corner on the solid state circuitry for those.

**Addison:** Do you remember the name of the Delco guy?

**Quernemoen:** It was Earl Fowler. We kept in touch for years and years. He's gone now. He's passed on.

**Addison:** Did he go and work for other device makers, do you know?

**Quernemoen:** No, he stayed with Delco up until he retired.

**Addison:** When you actually formed Fluoroware, where did you get the funding?

**Quernemoen:** Actually, Thermotech had done an IPO, back in 1964 and the two partners, Booker & Wallestad, had a significant portion of the stock which provided a lot of the funding for Fluoroware.

**Addison:** So it was 100 percent owned by Booker & Wallestad?

**Quernemoen:** It was until the spin off. Then it was 100 percent owned by Vic Wallestad because he provided the funding for the continuation of the business.

**Addison:** How did you come up with the name Fluoroware?

**Quernemoen:** Our specialty was the fluorocarbon materials and the products that we were making were, in the early days, referred to as labware kinds of products. So we used the “fluoro” for the material and the “ware” for the type of products.

**Addison:** How did the company grow, was it as instant success or were there struggles in the beginning?

**Quernemoen:** No, it was instant success. It grew very quickly and we had difficulties along the way, only because sometimes not being able to build tools quickly enough. And then it takes a considerable amount of time to design a tool and then build it and get it proven so that it's producing satisfactory products. And then the other thing was, the Teflon we were molding was produced by DuPont. They were the only supplier and I had trouble convincing them that this is a viable growing marketplace and they'd keep running out of material on us. It was extremely frustrating. I would go to the DuPont office in Wilmington, Delaware several times a year and do kind of a road show and explain...I'd even hire engineers and take them along with me because I didn't have all the technical terminology, and show them in all these process steps they go through to manufacture semiconductors where the Teflon products are needed. There was no substitute material; it took a few years for DuPont to realize, yeah, this was a marketplace. We'd always tell them, come on, partner in with us. We need somebody that can supply and take care of our needs. And the market became worldwide very quickly and we had them along with us to trade shows and they'd see the interest in our products and all of the attention and discussions that would go on for new products and so it finally grew on them. But DuPont's a big bureaucracy and it takes a while to get the message all the way to the top. And finally...when we went to DuPont the CEO at the time would actually sit down and give us half an hour of their time and listen to our story.

**Addison:** What was your role at Fluoroware when the company started?

**Quernemoen:** There's a story in between there that is not necessary...because I had left to start my own business and actually that was acquired by Fluoroware back in 1969 or 67. My role there then was vice president of sales and marketing.

**Addison:** So when Fluoroware first began you had left?

**Quernemoen:** This got to be a little political. I became the general manager of Booker & Wallestad when the Fluoroware product line was spun out of there. They actually had a beginning, a year or so when I wasn't directly involved. I left Booker & Wallestad and started my own company then I was approached by Vic Wallestad. He wanted to buy my company and set up a sales and marketing post in the West Coast because from Minnesota you were doing everything from long distance and a lot of traveling and things like that. And I had gained quite a bit of knowledge about the industry and was willing to move my family. Actually when I started the business I started it in Phoenix, Arizona, so I was already moved West. So when they acquired my company I moved to the [San Francisco] Bay area which at that time was the heart of all semiconductor activities. We set up a facility there and did a lot of research and development and design work but then the first downturn in the industry hit in 1970 and it was decided that we'd pull back and try and reduce the size of the company and not get too extended. So we closed down the California division and I moved back to Minnesota. Back in those days the downturns were a lot simpler and the turnarounds came a lot more quickly than they do now.

**Addison:** What was the name of the company you started?

**Quernemoen:** We called it Q&W Plastics. Actually I had a partner in that thing. We had both been in plastic molding for about 15 years.

**Addison:** Were you selling the same kind of products?

**Quernemoen:** No, our marketplace was more the hearing aid business. We started doing a little subcontract molding for Fluoroware...I had a lot of contacts and knew a lot of people, but it still takes a while to develop your own credibility as a business and I always kept an ear out for what the semiconductor industry was doing and it just seemed like it was better for our business to be acquired by Fluoroware and get back into that again because that's where I had spent quite a bit of time previous to starting my own business.

**Addison:** When you left the semiconductor business to do the hearing aid market, did you feel like you were missing out on a growth industry?

**Quernemoen:** The semiconductor industry was such an exciting business there was never a dull moment. Yeah, I missed some of that. I just felt that I wanted to get back to that again because of that new technology...it was unlimited what you could think of, the dreams you could have and the plans you could make. It was just a better step to go back to that again.

**Addison:** How many years were you away from the semiconductor industry?

**Quernemoen:** Oh, about a year. It was short lived.

**Addison:** After Vic Wallestad acquired your company and you were back at Fluoroware, you progressed up the ladder and eventually became the president.

**Quernemoen:** Yes, I eventually became the general manager of the company. Vic Wallestad had Parkinson's disease and by 1979 he was having a lot of difficulties so that's when he asked if I would assume the role of president of the company so I accepted that position. I think we had 125 employees and were roughly \$10 million in sales at the time.

**Addison:** Talking about Fluoroware before it became Entegris, what are some highlights you recall from that period?

**Quernemoen:** Oh, just a continuing excitement in the industry of the technology. We grew very rapidly and as a company with \$10 million in sales we'd set a goal of becoming \$100 million in sales by 1990 or something like that, which we blew through very rapidly. The exciting thing was that we became very global and began with a joint venture business in Japan to produce product over there and pretty soon we started a facility in Germany. Those were very exciting times because we had to learn to be global and sometimes we would have disagreements amongst ourselves because some of the marketing people complained we had Chaska myopia, you know, if it wasn't invented or developed in Chaska [Fluoroware's headquarters] it wasn't any good. But we had brilliant people in Japan and Germany who would work on

developing products and send back product ideas and things like that. We went from just producing product to producing complete handling systems that had to interface with automated equipment. It just got to be, from my early days of taking the 15, 20 products that I had in a briefcase around and doing show and tell, to developing some, I don't know, 12,000 to 15,000 products that we have now and more probably since we've done recent acquisitions. Trade shows were great times for introducing new products into the marketplace and watching the interest of the customers as they'd come by and look at these new products that we'd developed.

The other thing was the interface of automation, the interest in the equipment manufacturers. We'd always try and work as closely as we could with them because the cassette was what made the equipment work and the equipment interface was what made the success... the useful, the necessary product to carry the wafers, to help feed the wafers automatically through the process system. So there were many, many good times. But every so often we'd have a downturn and we'd have to dig our heels in and start cutting corners. The biggest and the most emotional part of that whole thing was if we'd cut back, we'd have to be laying off people. With Fluoroware it was always run in such a manner that the employees were part of a big family and that's how we were so successful because people who worked for Fluoroware really were part of the whole company. It wasn't just an 8 or a 10 hour a day job. It was good people who were interested in the success of the company. Of course there were bonuses and compensation that paid them well for the work that they did. In the community where we are I think we have a good reputation as [having] a good work ethic and treating our employees well.

**Addison:** Talking about the international operations, were there any Japanese or German competitors?

There were Japanese competitors. We had some competition in this country [the U.S.] in the early days but there were two different types of Teflon. We specialized in the injection molded part. There was another formula of Teflon that...it was like a powder and it was compressed into blocks and put in an oven and baked so that it was sintered. And then they would machine products from that and the automated machine companies...they could machine these products fairly fast and not have to invest in the cost of a mold. A mold for a carrier can run anywhere from \$150,000 to half a million dollars and then it takes a lot of time to develop...whereas if you set up a program with a machining operation you are starting out with parts right off the bat. So we had that for competition but this material, once it was machined, it was like you were machining away an outer skin that prevented chemicals from being absorbed into the molecular construction of the carrier. Whereas in the molding process a skin would form on the outside of the product and it would prevent the chemicals from being absorbed in and as the industry got more and more critical about cleanliness and chemical cross over and things like that, we were able to prove over and over again that the molded products we provided the industry were much cleaner and stayed cleaner much longer. And so that took care of competition here. But then the Japanese companies, they would come in and undersell us. But we could prove that our molding technology, the quality of the product molded, the dimensional stability, the consistency of the product [were superior], and the variety of the products we had to offer the industry kind of kept us up on the leading edge of sales and marketing.

The Chinese are working on trying to duplicate our product as well. But we try to keep well in advance of what the needs are so our customers are not out looking for competitive products. But at the same time one stop shopping is still the big selling feature. A purchasing agent can come to us and say, "We need

5,000 of those and one hundred of these, and 25,000 of those", and we have those products available. Whereas if they go to a competitor, we use the terminology cherry picking, the competitor figures out which are our highest volume products and then make a competitive product to that. But when the purchasing agent has to fill a request he has to go to one company and buy 5,000 of those and he goes to another company and buys 10,000 of something else. You know, it takes time and they're always trying to shorten the number of companies that they have to do business with as well.

**Addison:** Did Fluoroware ever do an IPO?

**Quernemoen:** Fluoroware never did an IPO. When we did an IPO it was after the merger took place between Fluoroware and Empak, and that became Entegris. That was kind of the plan in the works anyway. Empak was a spin off out of Fluoroware back in the early 80s I believe. The deal back in the late 90s was to put the two companies together because in this country they had become one of our biggest competitors.

**Addison:** When you say spin off, do you mean people left Fluoroware to start Empak?

**Quernemoen:** Well, it was a friendly spin off because there were a lot of high volume packaging type products that Fluoroware had developed...those are high volume and high speed molding so as that grew that needed to be separated out. The wafer growers, when they ship wafers, they need to ship them in some kind of cassette that's compatible with automated equipment, or interfaces with the process carriers and so it seemed logical that we would make those. But then when you'd get orders for half a million or a million of these products and somebody like Monsanto or Wacker in Germany, need these products and you need the equipment for molding Teflon products you start pushing out lead times and, you know, you're not using your equipment efficiently and not managing the business properly. So that spin off, and I believe that was in 1980 if I remember right...it was all the packaging products that went with Empak. But then somewhere along the line Empak decided they knew how to mold Teflon as well and decided to become a competitor.

**Addison:** Did Fluoroware fund the Empak spin off

**Quernemoen:** Not really. I think some of the funding had to come from the outside. There had been an earlier spin off to Fluoroware that became FSI. That took place I believe in 1972. But that was all equipment...there again we had started to develop something that was not compatible with the molding of Teflon and so you are trying to use your facility and your people to do too many things when you need to be more of a specialist in the original products that we had started.

**Addison:** Do you know the people who were behind the Empak spin off?

**Quernemoen:** Wayne Bongard was the guy that took the spin off and went with it with the Empak products.

**Addison:** Who took the FSI spin off?



**Quernemoen:** That was Joel Elftman. He was involved in the early beginning days of the formation of Fluoroware.

**Addison:** So with FSI and Empak, there were no financial connections with Fluoroware?

**Quernemoen:** Yes, they were independent companies. FSI was all equipment, so there were no ties or licensing arrangements. The only thing was that FSI was Fluoroware Systems Inc. when it started out but there was an agreement that within two years the name would be changed so that it wouldn't cause confusion with the customers. That product line was primarily rinsers and dryers. They were centrifuge type of equipment and that product line was just separated from Fluoroware and completely moved off of our facility and into another facility. Joel Elftman had been involved in the patents originally and it was stuff that he specialized in working with when he was at Fluoroware. Actually, he purchased the business from Fluoroware. The same thing with Empak, Wayne Bongard purchased the business from Fluoroware. I think it was sold for book value plus something. I don't remember all the details of that.

**Addison:** Was Vic Wallestad still in the picture when FSI and Empak spun out?

**Quernemoen:** He was involved because the FSI deal took place I believe in 1972 and in 1980, when the deal with Empak [took place], that was probably one of the last things he was intimately involved in.

**Addison:** Now let's talk about the merger with Empak. How did that come about?

**Quernemoen:** As I said, they had started to produce competitive products and actually had become a pretty strong force in competition. And it just seemed that, you know, after many years in the business it starts to dawn on you that the marketplace is only so big and if a company wants to grow you've got to have all marketplace that you can get. And to take that marketplace and split it up between two companies...purchasing people love this because they can take a price for a product from us and then go to our competition and say, "We can get it from Fluoroware for so much a part", and then they get a concession, then they go back to Fluoroware and say, "Well, we can get it from Empak for this much, how much are you willing to go?" So the price erosion is terrible and pretty soon nobody is making money out of things. So we decided, well, if we put the two companies together the two companies can grow plus it's taking all of the packaging back which we had separated out. But that had grown significantly and while Fluoroware was starting to diversify, Empak has started to diversify as well. So putting the two companies together builds a much broader base for going to the semiconductor industry as a marketplace, but also into some of the neighboring marketplaces as well.

Not only were physical products being provided to the industry but also services like the packaging products that wafer growers and shippers needed. Those were kept in a warehouse nearby so they would have two or three hour delivery. They could go to a warehouse and draw from something that was stocked. Then there got to be some cleaning operations set up so those products could be recycled and reused again. It got to be a whole host of things that started to make it like an opportunity. And then looking at doing an IPO, it's a lot more favorable to do an IPO with a \$250 million a year business than it is with a \$100 million a year business. The other thing that got to be a real hassle was patents. Each of the companies had patents on their products. And pretty soon you get into patent infringement suits and

you know, the attorneys make more money out of all that than you do selling the products sometimes. And so there was another good reason why we saw a need to put the two companies together.

**Addison:** Who approached whom regarding that merger?

**Quernemoen:** It was Fluoroware that approached Empak. It started with very little interest, then it seemed to grow. Then we had a real tragedy. Bongard had a massive heart attack and passed away. He had indicated to his CEO that he wanted to get this done, but he had conditions on how he wanted it done. So then the mission was carried out by his CEO. Bongard's CEO brought that to us and said, "We can do the deal but here's the way it's got to be done." After a certain amount of negotiation it did come together.

**Addison:** Do you recall how long it was from the first time you approached them to when the deal was done?

**Quernemoen:** It was closer to two years. You've got upper level management...it's easier to make the products fit, its harder to make the people fit, and make sure everybody comes out of there with what they consider a fair shake but you don't always get that done right either.

**Addison:** So Empak was a private company at that time?

**Quernemoen:** Yes it was private.

**Addison:** And Wayne Bongard was the chairman?

**Quernemoen:** Bongard was the sole owner. The CEO was Del Jensen.

**Addison:** That must have been pretty complicating if Wayne Bongard passed away, and he was the sole owner.

**Quernemoen:** Oh, it was horrendous.

**Addison:** Did some of his family get the company?

**Quernemoen:** No. It's in an estate. And they have significant ownership in Entegris.

**Addison:** After the merger, what role did Del Jensen play in Entegris?

**Quernemoen:** He was on the board. They had a facility, a very successful and fairly new facility in Colorado Springs. They also had a large facility in Malaysia that was fairly new. He continued to oversee them. When the merger was in process, he told Bongard for the last two or three years he had wanted to retire and Bongard just convinced him to keep on working, [saying] we have to build this business some more. After that was all done, he retired a couple of years later after the merger was complete.

**Addison:** Was Wayne Bongard young? Do you think stress contributed to his heart attack?

**Quernemoen:** He was very young, only 57 years old I believe. It was a family thing.

**Addison:** You had known him for quite a while?

**Quernemoen:** In fact many, many years ago at Booker & Wallestad when I was production manager there, I had hired him as a press operator. So I knew him well, I had known him for probably 35 years when he passed away. It was a tremendous tragedy.

**Addison:** Do you recall what year he passed away?

**Quernemoen:** It would be 1998 I believe.

**Addison:** After the merger, how did the name Entegris come about?

**Quernemoen:** One of the things that we hold very high in our company and with our people and amongst executives is to be people of integrity which makes a company of integrity, we wanted to use that somehow as a name, and the name we had originally picked out we found was used by a \$2 billion a year French company. We didn't want to get in their way so we had to modify the name a little bit and change it to Entegris. And Entegris is a Greek work that means success, or something like that. I can't remember. I was not directly involved in a lot of the detailed stuff that went on back when that happened. Of course, the merger became a very laborious process, putting all this stuff together and right on the heels of that we did the IPO. We had a lot of outside consultants and people that worked on that.

**Addison:** What year did the merger take place?

**Quernemoen:** I think it was 99, and we did the IPO in the year 2000.

**Addison:** Would you characterize the IPO as a success?

**Quernemoen:** Absolutely. I would call that an extremely big hurdle and very successful.

**Addison:** How much money did you raise?

**Quernemoen:** I think it was \$150 million, if I remember right. We weren't real happy with the price because I think it was \$11 a share and we had hoped for \$18. One of the things we were really careful about was making sure that what we did was going to be longstanding because the company is now 36 years old and historically we have never had a year where the company has lost money. It's been a profitable company for every single year since it was formed. Fluoroware, in its infancy, was always profitable, and continues that track record. I've always maintained that be sure you make enough money through the good times, and don't spend the money so you've got enough to carry you through the bad times.

**Addison:** After the merger and IPO, what was your role?

**Quernemoen:** I was chairman and CEO up until seven years ago. When I turned 65 I stepped down as CEO and retained the title of chairman. And I was chairman of the board for five years after that. So I kind of became pretty much retired when I turned 70, which would be 2001.

**Addison:** Talking about SEMI and the trade shows. How did you first become involved in SEMI and getting on the board of directors?

**Quernemoen:** SEMI had a meeting, I think it was 1970, where there were about 250 people from various companies in the industry that got together and Phil Gregory was probably one of the instigators and talked about this specialized trade show that was aimed and focused on the semiconductor, not the whole of microelectronics. As I mentioned earlier the IEEE, Nepcon and those [shows] were so diversified that 90 percent of the people who came to the show would look at your products and say, "What's this stuff used for?" I was at the meeting when this idea was proposed, and talking about membership and funding it and all that. For what I could see, man we couldn't wait to get on board with something like that. So our first tradeshow was absolutely a booming success, and continued on. And somewhere, after a few years, I was invited to join the board, which I did.

**Addison:** Who actually talked to you about joining the board?

**Quernemoen:** Bill Reed. We became very close friends. We had a lot of good golf games together but also a lot of good discussions about SEMI as an organization and where it was going.

**Addison:** Going back to that first meeting, was that the one held at Rickey's in Palo Alto?

**Quernemoen:** Yes, I believe that was where the first meeting was.

**Addison:** Do you remember any specifics from that meeting, any particular stories, what people said, what was the mood?

**Quernemoen:** No, that's too far back for me to remember too many details. I think the main thing was the idea of focusing on the industry...that the equipment manufacturers and the suppliers to the device manufacturers would join together and just put on a show for the bigger companies to be able to participate in, so that people could come and look at the products and talk to the people that developed the products. It wouldn't be diversified with all of the mish mash that goes on at those bigger shows. The concept of that whole thing was really, we thought, a good idea. We felt that way about it at the very beginning and it wasn't any afterthought. It was a good idea and it's grown tremendously since.

**Addison:** Was it made clear that the meeting was to establish a new trade organization?

**Quernemoen:** Well, to see what the interest would be in a trade show. I can't remember that it was called a trade organization. Some of the details were kind of fuzzy. Would Fluoroware as a company join with these other companies in support of the trade show? How extensively the trade association part was discussed I don't remember. Having gone to trade shows for a few years and experiencing all of the varied attendance, I felt it was a very worthwhile idea to get on board.

**Addison:** Did things move pretty quickly after that meeting; how long after did the first show take place?

**Quernemoen:** It was a matter of months. It took a while to get everybody, or get the majority of people on board as far as supporting the thing. Sometimes I think when people go to something like that they are a little skeptical, they think, "Yeah right, when is this going to happen?" But these guys are really serious and I don't know how much support they got from the local California people. Now I'm back in Minnesota and I've been to this meeting, the reports you get are that the committee is working on establishing a date and I think we had an opportunity to respond to which dates would be more favorable, and would California be the best place which was obvious to everybody when it was the heart of the semiconductor industry in those days. I don't remember how many months it took before it was decided that this is the day, and how long it's going to be, the location. A lot of legwork was done in California. We were so remote from the heart of the industry we were communicated with by mail and like I said we bought into it right away. When it came time to show up at the San Mateo Fairgrounds we were there with products and a display.

**Addison:** Do you remember any highlights from the first show, anything that surprised you?

**Quernemoen:** I think we were all pleasantly surprised by the turnout and the interest that we saw. It grew rapidly year after year. I don't remember any highlights other than that it was pretty well accepted by the industry and the California show became, and still is, in my mind the premier show for the semiconductor industry in spite of the fact that a lot of industry has moved out of California. Everybody wants to come to California and everybody saves their best new technology exposure till they get to California to introduce it.

**Addison:** One last question: Do you remember as a director of SEMI any discussion of SEMI going global?

**Quernemoen:** One of the first meetings I was in that was talked about, going global and how could we do it. There were many proposals on the table. The main thing to start out going global was to get a show going in Japan because there again, with 20/20 vision, that Japanese marketplace was taking off like crazy and there was an organization in Japan, SEAJ, the Semiconductor Equipment Association of Japan, and there was a little saber rattling going on there in that they were talking about starting a trade show, which would be a Japanese only trade show. Bill Reed did an outstanding job of communicating with the Japanese and convincing them that with the experience that we had as a trade association, we are ready, willing and prepared to put on a show in Japan and open it up to the Japanese. I think it took a while. There were a couple of Japanese guys that he [Bill Reed] had gotten to know that were very helpful in convincing the presidents and CEOs of Japanese companies that this was in the best interests of everyone on a worldwide basis. I remember very distinctly...because the show in Japan started off as, wow, there's nobody coming to this show and maybe the Japanese had sent a few spies out. But it seemed like the last day of the show, I remember registration lines out the door and down the street from the convention center. It seems like there was reluctance until somebody gave the word and said, "Hey this show is OK", then they came in droves. It seems to me that the show was pretty successful after that. Then a year or two later we did a show in Zurich.

END OF INTERVIEW