

Charles G. Phaneuf Oral History

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Note to Readers

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DESIGN ORAL HISTORY PROJECT

PHANEUF, CHARLES H.

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EDSEL B. FORD DESIGN HISTORY CENTER

**Henry Ford Museum &
Greenfield Village**

This is Dave Crippen of the Edsel Ford Design History Center of Henry Ford Museum & Greenfield Village, and today we're speaking with Charles F. Phaneuf. Mr. Phaneuf is currently Design Manager of Large Car Exterior, Studio A, of the North American design center of the Ford Motor Company. This is Tuesday, December 3, 1985. Mr. Phaneuf has had a long career with Ford Motor Company and also earlier on with Kaiser Frazer and Packard Motor Car, and we are asking him to tell us about his career in automotive design.

A I could say that my career was inspired by my father working in the industry in the automotive business. He worked for Chrysler Corporation. At that time, he was a master mechanic of Dodge truck. Approximately at the age of seven or eight, my father had to go into the plant late at night for a model setup. The parts that they were working on at the time were setting up the body line. The vehicle was simply a body, and they had it in the fixture ready to weld. They called the boss in, and the boss was, of course, my father. At that period of time, rather than leave me alone at night, he would take me into the plant with him. It was quite an experience.

I would see these large pieces of metal being assembled into a body for a truck. The one that I recall the most vivid to me was that they were just putting a new body together, and they were going to put the windshield in. As we walked up to the body line, the men were very proud and said, "Mr. Phaneuf, we've got this all set. We're ready to install the windshield." One fellow walked up with the windshield, and, at that time, they were putting windshields in very similar to what they do

today. They have a large rubber molding around it, and the rubber molding had a rope on it, and they would hold this up to the sheet metal body -- the DLO, which we we call the DLO of the body -- and man would get in the inside. They would hold the windshield on the outside against the body. The guy in the inside would pull this string or the rope around it, and it would be installed in the sheet metal.

Q What does D-L-O stand for?

A Daylight opening. But I remember that as a man walked up and put the windshield up against the body, it fell right through the opening. The opening was too large, and I remember my father being very disgusted about the windshield falling on the steel plate and breaking into a million pieces.

But that type of thing, I think, inspired me to get into the automotive business. He used to take me into the drafting room, and, at that time, they were drafting on boards. They didn't use paper. They would take a twenty foot board painted black. And they would draw on the board. They would lay out the entire vehicle on the board.

Q With white chalk?

A With pencil, chalk, what have you, but it was all drawn on a blackboard, and that's why they called it a blackboard at the time.

Q That really wasn't a standard blackboard, it was simply a board painted black?

A It was a board painted black about twenty feet long where they could lay out the body, the fenders, the roof, the rear quarter panels.

Q No one has ever quite explained that to me. That's interesting. I always assumed they used a huge schoolroom type blackboard that they would chalk on.

A No. To sketch it out, they would, but when it came down to fine lining it, which they did -- to draw it up dimensionally.

Q Why was that used so long? It seems awfully cumbersome and expensive to paint lumber black?

A I really don't know why they weren't using vellum at that time. Perhaps, it wasn't even developed at that time. It may not have been.

Q How about plain roll paper?

A There was a lot of paper around, but not being used for that purpose. I guess the board was dimensionally stable, and paper would shrink.

Then upon being dragged in and out of the plant and through the engineering department, my dad took me through the Chrysler design and color.

Q What year was this?

A That must have been about 1932-35. It must have been in that period there.

Q You were born in 1926?

A Correct. So it must have been in that period.

Q What was the setup of the Chrysler design and color?

A They were in Highland Park at the time that I recall.

Q Did they have a fairly well-developed design department?

A If I recall, it was a room about 40 x 60 that I saw, and I was very much impressed.

Q Big drafting tables?

A And renderings and the wall and sketches. They called it their Art and Color Department. Because, really, the designers were the chassis engineers at that time. There wasn't such a thing as a designer.

Q At that point they had Briggs, too?

A Yeah. Briggs....

Q Did the actual design beyond the engineering?

A Yeah. They would build the tools, and build the fixtures, and build the bodies.

Q Who would do that?

A Briggs.

Q And under John Tjaarda did they not have a fairly aggressive design department?

A I think they came later.

Q Oh, was that later?

A I'm not really sure.

Q '32, yeah. Could be that Briggs became more active in the design area about the mid-'Thirties?

A Being so young at the time, I really don't recall. But I knew there were very few designers. No one had automotive designers. They were mostly chassis people. They did the chassis. Very similar to when Gordon Buehrig got into the business. He was a chassis engineer, and, at that time, if they had to build a car, he would build it. So he became the designer. So I would say that that really was the inspiration for me, clumsy as it is. So my goal, really, was to become an automotive designer.

The war broke out, and I joined the Army Air Force and spent a little time in that. When I got out in 1946, of the Air Force, I had a choice of going to college or go to art school. At that time we went down to Wayne, went up to Michigan, and the only thing that they taught

at that time was strictly fine arts. There wasn't such a thing as automotive design. So I was told by the counselors the best thing for you to do is go to art school. And I did.

After a short period in art school, which was really only about two and a half years, before then I did have training at Cass Tech. And Cass Tech, in my opinion, was worth four years of art school. It was that good of an art school. Of course, it was commercial art. And we were taught basic design, but nothing in automotive design. But after the end of the war, the only thing that was available in Detroit at the time was Meinzinger's Art School.

Q Where was that?

A That's down on Woodward Avenue. It was right next to the church that Henry Ford was buried, and I don't remember the corner that it was. Because I remember watching the funeral of Mr. Ford out the window of the art school.

Q Was that the name of the founder?

A No, he was a commercial artist. In fact, he ran the Bird's Eye Art Studio.

Q Meinzinger?

A Right. And somehow he started up this art school. I don't know the history.

Q Was it fairly successful? Did he have a lot of students?

A Yes, it did. In fact, there were a lot of G.I. students in there. The automotive companies, at that time, used to roam the art schools looking for talent, and they would wine and dine us and try to get us out of school and established in a job, which they did. They did recruit us.

Q Previous to this, you had one whole academic year at the University of Denver?

A Right. But that was during the period when we were being trained as Air Force cadets out in Denver. I'm glad you brought that up. It does get a little confusing.

Q You were a cadet in the Army Air Force?

A Right. At that time we were concerned. You could become a designer right on the board, and that's really what the companies needed at that particular time.

Q Which means the beginning level and also the very beginning of design?

A Yes, at that time it was. Before that period, most automotive companies -- Chrysler, Ford -- hired George Walker. There were three or four other well-known designers out in the field that the companies bought their designs from. They would ask them for twenty sketches of bodies or twenty sketches of roofs and what have you. And this is probably as big an expansion period during that time for all the automotive companies were hiring talent right out of the schools.

Q There was a post-war boom, and talent was desperately needed?

A Yes. That's why they dragged us out of school. There's one question that I put to one of the guys: "Do we really need a degree?" And he said, "No, you don't. What you have is adequate."

Q You showed him your portfolio?

A Right. They looked through our portfolios. But that cost me a lot of money throughout; I would say to the tune of about four hundred thousand dollars. I believe a degree is that valuable to a young man today.

Q To the personnel administrators?

A Right. I think that it's....

Q You were at Meinzinger's for a year? You absorbed a lot of technique and training. Who recruited you? Was this person from an automotive company?

A Yes. It was a guy from Chrysler, and I don't recall his name.

Q This was in '47?

A Right. About '47.

Q Kaiser Frazer was going strong, and, hopefully, it was going to be a concern with staying power?

A Right. When I was hired in at Kaiser we got three men. There was Cliff Voss, who is retired now; Duncan McCrea, who worked at Ford Motor Company; and a fellow by the name of Gordon Turssey. The boss was Herb Weissinger, who was an old Chrysler designer.

Q He had come from Chrysler or Kaiser Frazer?

A He had come over from Chrysler and Kaiser Frazer. He was in the art and color department that I had visited years earlier.

Q Did you remind him of it when you were hired?

A No, I did not. But he was a terrific guy. He also taught me a hell of a lot in one year's time. He was really good. He was a very giving person. In fact, I became his illustrator, so I was that good, and he was that good to let me. He was a marvelous draftsman. He had command of form inline that was unbelievable. In fact, he also did commercial work on the side. In fact, most of the brochures were done by the automotive designers themselves.

Q The sales brochures or the promotion brochures?

A Promotion. It was quite a thing.

Q Is Mr. Weissinger still alive?

A No, he's passed away.

Q What sort of work did they have you doing when you first hired in?

A The first assignment at that time I believe was the '47/'48. The year was '47. The project, at the time, was an all-new body for the Kaiser, and that was the body that was developed with the sweetheart windshield. A very clean design. That entire project started out at zero, and it was completed within a year.

Q What kind of speedup did you have? Just sort of running in fast motion?

A No. It was just the way things were done in those days, really. We built a model, and they built it. In fact, I think there were three proposals for the new body.

Q Was it to be a new body for the entire line of the Kaiser and the Frazer?

A Yes. They only had one body.

Q They were really just basic?

A There was only one, yes. But they had a different grille.

Q Where was the plant? Where did you work?

A Willow Run. It was the old bomber plant, and it was right off the expressway. They had built a new engineering building just about the end of the war, and we took over that building. I remember it was very close to the expressway. I believe it's still there.

The fellow that ran it, as I remember, was a Mr. Cadwalleder.

Q He ran which function at Kaiser Frazer?

A He was the director of Kaiser Frazer design. We had two studios. There was a Kaiser studio and a Frazer studio, of course, and we both launched off one body.

Q Buzz Grisinger, was he with you then?

A He was hired in while I was there. In fact, Buzz did the Kaiser mini car at the time -- the Henry J.

Q That was his baby?

A That was his baby. He also worked on the larger bodied Kaiser, but that was his project after we had finished the -- that became the '51 Kaiser.

Q How was Kaiser doing at this point?

A They were going balls out. They sold everything that they could build at that time.

Q They were really going strong?

A Yes. It was a very strong company.

Q This is in '47/'48?

A Right.

Q How was the design department? Did you say Mr. Weissinger was a good man to work for and with?

A He was the best in my opinion. No, Grisinger. Weissinger was in the other studio. He took over Johnny Chicka's job, which was the Kaiser studio. He was also a designer from Chrysler. He was a body man. Most of the people at that time were body people.

Q That's interesting that the tradition of styling or design hadn't really struggled to cut themselves loose from the body engineering?

A Right. You can't, really.

Q It's really an integral process?

A Right. One has the aesthetic sense, the other one has the mechanical discipline to make it work right.

Q Usually with an engineering background?

A Right. Because we have to work hand in hand with them. They build 'em, which a lot of designers forget.

Q That would be to make a model, and from that you can go on and make the finished product?

A Yes.

Q How was the atmosphere at Kaiser-Frazer? You said the supervision was benign...?

A Mr. Cadwallader was the director. Buzz Grisenger was the design manager. Herb Weissinger and Buzz Grisinger were the managers at the studios at the time. One other name, Damon Woods, who was finally hired by Ford Motor Company some years later. But Damon had an accident out on I-94 some years ago that took his life. But Damon Woods was a layout man at the time out at Kaiser Frazer. In fact, I have a paper, if I can find the darned thing, that gives the entire studio. If I can dig it out of my archives, I'll give you a copy of it, because that would be fun to have.

Q Did you say Duncan McCrea was there also?

A Yes, Duncan McCrea.

Q That was quite a lineup?

A Yeah. There were only really a very few automotive designers at that time.

Q Did G.M. have the most?

A G.M. had most of them. In fact, I think they only had about two to a studio at the time. At Kaiser Frazer we had three to a studio.

Q Whence came this extravagance? People just felt it was something to do?

A Actually, at Ford we used to produce twenty-six models. And that's a helluva far cry from what we do today, and we have more engineers today, we have better facilities today, but it just doesn't seem as though we can get the proper help today.

Q They had a pretty good group there at Kaiser Frazer?

A Yes, it was. It was a very good group.

Q Did the Darrin influence come in before you left Kaiser Frazer?

A Darrin was in there periodically working on a model that was in competition with our model.

Q The '50 or '51?

A Right. The true story to that design problem was that Buzz Grisinger really and truly, I would say, developed the new body. Darrin, at that time, was in and out. Real flaky.

Q Sort of a consultant?

A Right. The only thing that he sold old man Kaiser on is that sweatheart on the windshield and on the backlight.

Q Those were his trademarks?

A That was his only mark that he put on that vehicle, as I recall it.

Q They didn't call it the Darrin until a couple of years later did they?

A The Darrin?

Q Yeah.

A It was just like a fabric designer to put their name on a vehicle. It was very similar to that.

Q So his input was minor?

A Right. In fact, he was thrown out of there at that time.

Q He came later, though, didn't he, at the end of his association with Kaiser?

A I think that was the end. He tried to get back.

Q '50 and '51?

A Right. Because, evidently, he was being paid X number of cents for each previous model that had been built.

Q Had he had an input before the '50?

A That was his body, the one that's a slab-sided vehicle on the '50. That was his body, as I understand it. And he also tried to bring out the Darrin sports car at the time with the sliding front door.

Q What happened to that?

A I don't recall. I think it died.

Q Had you left by then?

A Yeah, I had left by then.

Q Who was running the company? Was Edgar Kaiser running the company, at that time, or was it Henry himself?

A It was Henry.

Q He was still the dynamo?

A Yes.

Q What about the Jeep? Was the Jeep being developed?

A No. That had already been developed, but we had nothing to do with that type of vehicle. The last project that I worked on during that

period was we did the -- on the old body we did the convertible. If you'll remember, it had the B pillar of glass. You've got an A pillar, the center pillar of a vehicle is what we call the B pillar where the doors lock and hinge for the rear door. That was a four-door convertible. Instead of a pillar, we put in a large piece of glass there in the frame, but that was quite innovative at the time. The last project that we worked on was to make a five-door version of the '51 body that would be sold through Sears & Roebuck. It was called the Allstate. Do you recall that?

Q Yes, I do. That was just a copy?

A It was the same body, only we cut the roof up, put in structure for the five doors. The entire backlight went up similar to what our five-door vehicle had.

Q A hatchback?

A It was a hatchback. I would say one of the first.

Q It wasn't the Travelall, was it?

A No, I think it was Allstate. Maybe it became Travelall after I left.

Q After you left, they have modified it?

A But it never hit the market that I recall.

Q It never got out?

A It never got out that I know of.

Q What happened? Did you ever find out?

A No, I don't recall, really. I think Sears Roebuck just dropped it or Henry did, one of the two.

Q Was it like Kaiser to get this Sears tie-in? What was the marketing idea behind that?

A We needed sales at that time. Sales were dropping.

Q The postwar boom, and people were getting a little more selection? More competition, of course, and they were coming up with a choice that was a little less limited? Some rather obvious and awkward facelifts, although Kaiser Frazer was probably the only real new postwar car?

A Yes, it was.

Q That's why it was so popular the first two or three years after the war. They got a bit stodgy? They seemed to have lost their imagination or their zest or verve?

A What I believed happened was that shortly before I left, they brought in a guy by the name of -- I think it was Lindberg, and he was one of the plant managers at one of Mr. Kaiser's cement factories, so he knew absolutely nothing about [the automotive industry].

Q Mr. Lindberg was brought in from one of the Kaiser industries on the West Coast?

A Right. I guess under his direction, finally the company went under.

Q Do you have any idea how or what happened?

A The quality of the product, really.

Q It just went downhill?

A It just went downhill. Primarily, I guess, they blamed it on all the non-automotive people that -- once they got the plant running and got it going very well, then they started to replace the automotive people that they had hired in Detroit and replaced them with people out of his various industries. It became very plush. They came in, and everything went to the devil. And they lost it. That's the way they lost it.

Q Mr. Frazer left before the 'Fifties came on, did he not?

A I don't recall.

Q Joe Frazer had been an old-line car man from before World War II?

A He had something to do with the Jeep. That was under a military contract. When Kaiser's son got into it....

Q Edgar Kaiser?

A Right.

Q The old man stopped having any direct interest, and it just went down the drain?

A Yeah. Not traveling in those circles, I could only see from my perspective.

Q Why did you leave? You saw the handwriting on the wall? You got a better offer?

A No, no. In fact, I loved it. I was approached by John Reinhart.

Q Where was he?

A John, at the time, evidently was just starting out at Packard, and I surmise this. I'm not positive of it. But he was the chief designer at Packard, and he needed people like everyone in the industry needed people. General Motors needed people, Chrysler needed people, so it was very lucrative at that time. You would stop in and have a little bit of lunch, and people would approach you for a job in the industry. It was quite an exciting time for a young man to be in the business. John made a very nice offer that I simply couldn't refuse.

So I went to Packard, and the department consisted of John Reinhart, Ed McCauley....

Q This is Alvin McCauley's son?

A Yes. In fact, "Charlie's Crab," (Troy, Michigan) has got all of Alvin McCauley's library and dining room woodwork in their restaurant.

Q Really? From his office or his home?

A No, from his mansion out on the Boulevard in Grosse Pointe. But McCauley was the chief designer or director. John was the executive designer, and there was one man there, a fellow by the name of Howard Yeager.

Q What were his duties?

A He was the only designer there, and we worked in the engineering complex on Concord Avenue. Across the hall was the engineering department. Adjacent to our studio, which was about 14 by 20 feet, was the Ultramatic group that developed the Ultramatic transmission.

Q Was that a first for the industry, or one of the early ones?

A I think Chrysler was out first, but the one that Packard was developing at the time was a little bit different. All I recall is that we would go down the basement, and they had a large shaft that they used line this large hole with two by fours, and then they would spin the converters until they self-destructed. It was amazing to me because it would chew up these two by fours into toothpicks when they exploded. They were spinning the converters, which was a large doughnut-shaped object that is in your transmission.

Q Ultramatic was a trade name for the Packard automatic transmission?

A I believe so at the time. Our task at that time was to come up with a new body. The postwar body that they had done at Packard after the 120 that turned into the bathtub, if you remember the bathtub design.

Q What year was that?

A That would have to be in '41. And then the next body was the body that John and I developed, which was the 1951 body that we developed. It had to be in '48.

Q That would be when you first got there?

A Right.

Q So Reinhart was looking for help?

A Right. We hired one other designer. His name was Bob Jones. We hired him away from Ford Motor Company. So there were two designers and one director, John, at that time.

Q You had a pretty good studio?

A Packard really only had this small design studio where we did 3/8th drawings. There wasn't even a place to make a full-size drawing. Again, Packard was behind the industry, and they were still using blackboards out in the shop that they would resurface. You would draw on the blackboard and go from there and give the engineering people the information that they needed to design the parts. Our clay studio was located on the fourth floor as a part of the wood shop. As a matter of fact, it was probably a room thirty by thirty. The model was developed from a quarter-size model, and then it went to a 3/8th size model.

Q What composition were models in those days?

A They were armatures that were made out of wood. Before John's time, the drawings were given to the wood pattern makers, and they would go directly from the drawing to wood models.

Q What would be the scale, 3/8th or a quarter?

A They would go to full size at that time.

Q They'd make full-size models?

A We introduced the quarter-size models and the 3/8th size models to nail down the design before we took it further.

Q So that eliminated the necessity for the full-size mockup?

A That's right. In fact....

Q You mean you and John Reinhart finishing out that process?

A At Packard we did. Before that, they didn't know anything about that type of designing.

Q How did that come about? Did you sit down and say, "Look, this is ridiculous, why make a huge...?"

A It was already done in the industry, you see, but Packard wasn't using it.

Q So you used it?

A So we introduced it to Packard. Clay models were, I guess, first instituted at General Motors and then....

Q Clay was used beginning in the 'Thirties?

A And Chrysler, at that time, was using what they called plasticine. It was a green type of clay that would not harden, and you really wouldn't get a good surface on it. The clay that we use today has been developed from our needs to the clay mixer, really, and we got a hard surface material that is completely foreign to what it started out to be.

Q More malleable?

A Yes. And you can rework it and heat it. But it was an all-new process to Packard Motor Car to actually teach the pattern makers to become clay modelers, and that was a lot of fun at the time.

Q Were they amenable to this?

A Oh, yes. Because the man could read a print, and he could give 'em a drawing, and they could cut a few templates and start to block in the model. So that's the way it started within Packard.

Q So they wanted you to do a whole new body? Come up with a whole new body for the first postwar all-new car?

A New Packard, which we did. At that time Briggs took over the design from our quarter-size model, built the full-size model in their design department.

Q What would their full-size model be made out of?

A It was made of clay, too. I really don't recall the name of the fellow that was at Briggs Manufacturing. But the full-size model was developed there. John and I would do that liaison work between the two. We furnished them with our 3/8th model, and our drawings, and they did the final clay model. From there dies were developed and so on and so forth.

Q Where would the body engineers be in this process.

A The body engineers were still across the hall from our design studio on the fourth floor.

Q But they kept in touch with everything you were doing?

A Right.

Q They had developed the package initially?

A Right. It was our package, our drawing. If I remember right, the chief body engineer was named Fred MacArthur. The chief chassis man was a real rough character -- George Grimm. He must have weighed three hundred pounds.

Q Intimidating?

A Right. One of the things that was interesting at Packard when we developed the new body and finally got it into production, which was quite innovative for its time, it had the largest diecast grille in the industry, and it went from fender to fender, and it, I think, was the only one in the industry at the time. I recall us getting some diecast award or Diecast Institute award.

Q From the metalworking society?

A Yeah, one of those societies. Johnny Reinhart developed the new cormorant, which was the hood ornament. If you remember it looked like a bird ornament. It was actually supposed to be a cormorant, which is a bird.

Q So Reinhart developed the hood ornament?

A And it was so successful. It was very similar to today's vogueish thing where the kids go around stealing all the hood ornaments. It was marvelous because if we would have sold as many cars as we sold hood ornaments, they'd still be in business today.

Q Can you describe the cormorant? Was it in flight?

A Any brochure will show that it was a bird with its wings raised thirty degrees back in the air. It was quite a lovely thing for its time.

Q Did you have it cast? Who manufactured the cormorant?

A It was some vendor. But he could hardly keep up with the production.

Q Was John Reinhart proud of that?

A Yes, he was quite proud. I believe that was the first vehicle that hit the market in the United States that the driver could see both front

fenders. The hood and the fenders were at one level, and we thought at the time it was quite low, which it was in comparison to the previous models. But that was one of the great design features of the vehicle.

Q You had a marvelous grille and a marvelous hood ornament. In those days, that was the car's badge?

A Oh, yes. Packard was, I believe at that time, still the number one vehicle. Cadillac hadn't taken it over yet.

Q '48 and '49?

A Right.

Q How were the interiors? Did anybody on your staff have to do with the interiors?

A We did the interior and exterior. They were always done that way at that particular time. The fabrics, we picked out; the instrument panel, Johnny and I did; the exterior, we did in adjunct. The instrument panel was adequate for its day. The interior was quite plush on the Patrician, which was the top of the line.

Q Did you hire any women in those days to be fabric and color consultants?

A No, there weren't any women.

Q Simply a man's world?

A It was pretty much a man's world. The fabrics -- Briggs had a large stock of them, and we picked it out.

Q Paints were pretty much the same way?

A Paints were the same. Ed McCauley, that's really his greatest contribution was color. He would love bronze cars.

Q He did?

A Right. So we always had a bronze color. If you recall Ed McCauley, he always kept a -- I call it a super car, really. Ed always made a two-door coupe out of any Packard and gave it an extreme long rear deck. If I recall, about a seventy-two or eighty inch hood. They were just cartoons, really. Of course, he had them all built at Briggs. And in our model shop, he was always reworking his own vehicle. That was really the only thing he had to do.

Q Grisinger didn't come over? He stayed with Kaiser Frazer and went on to Ford?

A Right. He went to Ford after that. In fact, that's an interesting switch, because I was in on that, also.

Q What happened?

A It's probably jumping too far forward. When I was at Continental Mark II in '56, Reinhart and myself were given the task by Harley Copp to come up with some names of designers that could contribute to the project. At that time, Buzz Grisinger was terminated at Kaiser because Kaiser went to the dickens. And Buzz had opened up a design studio with -- I don't recall the other guy's name -- but, anyway, we submitted Buzz' name as a possible consultant on the Continental Mark II, and, by God, he was hired to do it, and that got us contact to get into Ford Motor Company. I don't know if Buzz will agree with that, but that's really the way it happened.

Q So you were there for three years. It must have been enjoyable at Packard in '48?

A Right.

Q Was there an indication that they were in trouble toward the end of your tenure there?

A No. In fact, when I left Packard Motor Car Company, they were going strong, and they were the only solvent automotive company in the United States. They didn't owe anyone a nickel.

Q What went wrong looking back? Was it that the design got too huge and garish?

A They just let it go too long, in my opinion.

Q Without fixing it?

A Right. And Nance got in there. They facelifted the body, in fact. I think they facelifted it only once.

Q The '50?

A Right, the '50 body.

Q The one that you'd worked on?

A Right. They put a new front end on it. They did very little to the rest of the new vehicle, as I recall. I think it was Mr. Nance when we were they?

Q John J. Nance?

A Right. He came out of the appliance industry.

Q Really?

A Yeah.

Q You mean heavy appliances?

A Heavy appliances. It was either G.E. or Westinghouse. This is what I recall. I may be completely wrong.

Q He was looked upon as a...?

A Financial genius. But he went over there, and, I guess, he tore up the lines. Packard had two lines at the time.

Q What lines were they?

A The assembly lines. There were only two assembly lines, and that started at Grand Boulevard and ended up on whatever the name of the street is. It's about a mile long -- not even a mile. It wasn't a mile.

Q Going North and South? Grand Boulevard runs East and West.

A East and West, so it was running North, and it ran up to Concord. No, Concord wasn't the street. There was another street there. But, evidently, he tore up the lines three or four times, and you just can't do that?

Q Physically? Tried to rearrange them for more efficient production?

A Right. I don't know what the hell he had in mind, but the company just went right down the drain. It was a damned shame.

Q A powerful, good company.

A Right.

Q But their products did become, along with the rest of the industry, rather dated, and grotesque, and obscenely large?

A Yes.

Q I remember those last Packards, they were monsters.

A Yes.

Q So horribly decorated?

A Yes. That was taken over by Dick Teague. Dick Teague went in there.

Q Bill Schmidt was involved?

A And Bill Schmidt, right.

Q Did you work with either of those gentlemen?

A I worked for Dick for about two days, and I left. Dick was all right. Schmidt came in after.

Q You liked Dick Teague?

A Dick Teague was all right.

Q A nice guy?

A Yeah.

Q His heart was in the right place?

A Yeah. I left very shortly after Dick came in, because Johnny Reinhart had already been romanced by Ford Motor Company to start off on another project.

Q Who approached you at Ford?

A John Reinhart.

Q He'd gotten over at Ford, and he needed help?

A It was my understanding, and I don't know if this is true, either. John was hired by Harley Copp.

Q They were recruiting for the new Mark II that was being put together?

A Which was really, at that time -- Mark II wasn't the only project. I have this in my diary. But the Special Projects -- originally the thought was to diversify Ford Motor Company.

Q To non-automotive lines?

A Right. And this was to branch out. Even at that time they recognized that the company should be in other things rather than automotive. This is the reason that John was hired in, and John, from his past experience with me, invited me over to join the group. That's the way it was explained to me that we were not only to do automotive, but to investigate other businesses for Ford Motor Company. This particular group was to diversify the company.

Q That's why it was called special products?

A Right. Which sort of turned around and became one.

Q Where were you housed in those days?

A We finally ended up out in the old Ford Trade School right out cornered by Michigan and East of Southfield. It was right out in the middle of the old Ford farm.

Q Which is now the Ford World Headquarters?

A Correct. And the Washer and Dryer buildings, which are very close to the center of Fairlane.

Now, when one of the projects that came up was Continental Mark II, and the whole object of the Continental Mark II -- it was simply Continental in those days; we came up with the Mark II later -- was to gain back what Lincoln had originally, because Cadillac had the market now that Packard had dropped out of business. It took twenty-five years for Cadillac to put Packard to death, and we figured that it was going to take twenty-five years for Lincoln to put Cadillac to death. You could almost see the cycle, really. And it's happening today.

Q It was also William Clay Ford had joined the company?

A Right.

Q And I suspect that his brothers were looking for something for him to specialize in?

A Harley Copp was the chief engineer, or really the director, of this entire project.

Q He was a body engineer, wasn't he?

A Right. Sitting down one evening over at the Dearborn Inn, he went on with the dissertation that our main purpose or charge at that time was

to be the instructors for William Clay Ford to familiarize him with the automotive business.

Q Who had not had the engineering training and not been in the business as the other two brothers had?

A Right. I think it was the very next day after I was hired in in '52 that Harley Copp brought Bill Ford into the building and introduced himself. A terrific guy; he really is. A very nice person.

Q This is at the old Ford Trade School on Michigan Avenue?

A Right.

Q Your feeling for Mr. Ford was one of instant rapport?

A Yes, I believe it was. Harley was such a smooth talker, anyway. It didn't matter who he introduced, you felt very comfortable with. But Bill was young. We were all young at the time.

Q And enthusiastic?

A And enthusiastic. And Bill admitted he didn't know a damned thing. He didn't know a rear quarter panel from a shovel! And he would ask. We would use terms, and he'd say, "What the hell are you guys talking about?" Then we'd have to sit down and explain what we were talking about. But it was a lot of fun.

Q Mr. Phaneuf, you were with the Continental exterior styling section for almost two years, and you have offered to give us a thumbnail sketch of how the division got started, and, specifically, the breaking in and the educating of William Clay Ford, at that time a young vice-president on the staff, and this was to be his maiden flight, in a sense, with the company?

A The first reference to it was one evening as we were sitting down

for dinner, Harley Copp said, "You know what you guys are really here for?"

Q Was it about 1953?

A Someplace in that area. We thought it was to create new products for the Ford Motor Company.

Q You were in the special products area?

A Which is the special products division, and Harley says, "Yeah, that's part of it, but also we're here to break William Clay into the automotive business. He'll be asking you a lot of questions, and give him straight answers." And it was quite an experience, because Bill's office was right next to the gym that we were in. We were out in the Ford corn field in the Trade School.

Q Just behind the World Headquarters?

A Yes. It was in the middle of that area. Bill was very interested in automobiles at that time. That was a lot of fun because he would stop at my desk and ask, "What the hell are you really doing?"

Q He was candid about his lack of knowledge?

A Right. We'd say, "Well, we're going to change this rear quarter panel, or rocker, or cowl panel, or windshield header." He'd say, "Now, wait a minute, what the hell is that?" So with each day that passed, Bill would come in and go through the studio and see what the heck we were really doing. Johnny Reinhart and Harley Copp had a tremendous rapport with Bill. [Copp later became] the tormentor of Ford Motor Company.

Q But, at that time, he had a marvelous rapport?

A Yeah, right.

Q He depended on Harley for a lot of mechanical/technical knowledge that he lacked?

A Harley was the chief engineer. In fact, the whole division rotated around Harley Copp.

Q The Continental Division?

A Right. Very strong man. At that time, I found him extremely likable. So was Bill, and so was John. It was really a pleasure to work in that area.

Q By tormentor, you mean that he has since been involved in adversarial litigation?

A Right. It's too bad. You saw the relationship grow throughout the year with the short period that we were there, and I think it was just a case of Harley Copp getting too close to Bill Ford. Just a bit too close. I can remember one morning Bill Ford came in around ten o'clock, and Harley jokingly said, "What the hell, can't you get here at eight o'clock in the morning?" And I don't think that went over too well with Bill. Like all love relationships or friend relationships, I think that sometimes you just go too far because you think you're too close, but I really believe that Harley just went too far. And he would say other things like that.

Q He would presume on their relationship?

A Right.

Q William Clay had some reason to feel sensitive on this score. I think others had pointed out to him that he was often not very punctual?

A Be that as it may. I won't comment. It was a very nice relationship. Bill stayed interested in the automobiles until the very demise of Continental.

Q What was your function in that group?

A Exterior designer.

Q And John Reinhart was the...?

A John Reinhart was the exec [designer]. I don't recall what we called him. The chief stylist, in those days. Bob Thomas was there. Ray Schmidt. Fred Beamish was the interior designer. The basic design for the Continental Mark II was a combination of Fred's design and my design. I think Fred really should get more credit than I did.

Q How did that come about?

A In designing the Mark II, first of all, Bill, and Johnny, and Harley decided on a competition.

Q Give us some details.

A Bill wanted other inputs into the Continental Mark II design.

Q Other than what you and Fred and John had come up with?

A In selling it to the company, that they wanted to cover....

Q Had that been the standard procedure for a new product -- a competition? They had done it with the '49 Ford.

A Like Walker and company was hired from the outside.

Q To compete with [Bob] Gregorie's design?

A Right. Names were put in to Bill and Harley as competent designers that could contribute to the Continental Mark II program. There were six. Walker was given a whack at it.

Q He was still there?

A He was over at the main design. It wasn't North American [design]; it was just Ford Motor Company. Then Buzz Grisinger, who was in business with another fellow at the time.

Q Outside the company?

A Outside the company. He had started his own business. I think it was Grisinger and Miller. There was another fellow out in Wisconsin. But, anyway, we devised a grid or a perspective that the vehicles would be illustrated on. It was a side view, a front view, a three-quarter front, and a three-quarter rear, and, I think, a rear view as well as a front view. We worked quite awhile on getting that together. Then these grids were passed out with a page of assumptions what the car should be. Then these designers went off, and they were given a time period to complete their designs and bring 'em in. We had quite a huge show right there in the gymnasium, which was our studio at the time. I don't really recall the date. Gordon Buehrig was there at that time.

Q Was he on site at that time?

A Gordon was working as the body engineer, if I remember correctly. Gordon was always a body engineer. He wasn't any fantastic designer. He claims to have designed everything! I love the guy.

Q He was very unhappy because of the fact that he was relegated to body engineering on the Continental because he felt he had something to contribute?

A Yeah, and he figured us young whippersnappers were going to do him in.

Q We were talking about your experiences at the soon-to-be Continental Division.

A Right.

Q By the way, I think we ought to ask you just when was it decided that it would be called the Mark II?

A I was looking through my notes trying to pick that up, really -- I

really was -- and the only thing that I can recall, I recall drawing the numerals II.

Q The Roman numerals?

A Right. And attaching it to a spear that came off of the ornament, and that was going to be on the side of the body. But I can't really pin it down. I could go back through my notes and, perhaps, get some dates. In fact, the notes I have today had dates on them. It was well after the hood ornament was done.

Q The one with the knight's head and the...?

A Right. The knight's head and the cross and the -- oh, yeah, we were going to talk about the crest. That was one of the jobs that Harley came in with. It was in the period that we finalized the body, and we were beginning the ornament on the thing, and we were kicking around hood ornament, or no hood ornament, or a new ornament. It was either Johnny or Harley who gave me the dissertation that the Ford Motor Company wanted a new Lincoln crest, because the old crest had a Christian cross on it, and that the ethnic groups, such as the Jewish people, would not buy the Lincoln with that Christian cross on there, so we had to come up with a new design. Bob Thomas, as I recall, did one over a weekend. It was very similar to what is there. I did the final one, but it no longer ended up with the little knight's head in the center of the North, East, South segments of the ornament. There were three lions on the crest.

I was sent to the library by Johnny to get a book on heraldry, so that we wouldn't come up with a bar sinister. At that time, I didn't know what the hell that was.

Q That means a bastard part of the line.

A Right. After Bob Thomas' initial overall design of that crest, and it really was his, the initial one, and I was rendering it up on my desk, and Bill Ford came up behind me and said, "What the hell are you guys doing?" So I showed him what we were doing, and Johnny Reinhart came up behind Bill. Bill was saying, "What's it all mean?" And Johnny says, "You see the three lions?" And Bill says, "Yeah." And Johnny said, "That's the three Ford brothers." And Bill looked over and saw the berries, and he says, "What are the berries for?" And Johnny says, "They're the berries!" I'll never forget that!

Q I can see why William Clay liked Reinhart.

A That's all the explanation he needed.

Q So it stayed?

A So it stayed. Well, it didn't really stay, because they left. The lions got out of it, and we opened up the crest and made a hood ornament out of it, which is in the spirit of the Mercedes ornament. But I don't know if anybody else got that type of explanation. I remember that, at first, Bill didn't want a hood ornament at all. We hadn't established what the crest would be yet. I do recall sketching a number of things for a hood ornament or an ornament for the vehicle. When we came up with the cardinal points of the compass -- North, East, South and West -- and then putting the rectangular ring around it, which was similar to Bob Thomas' sketch of it. I recall he did it in one weekend. We refined it, took the roundels out, and the lions out, and I made a shop drawing. If I remember correctly, Johnny Krushschile was one of the modelers. He got a hunk of aluminum and Dural, and we transferred it onto the Dural and immediately started cutting it out. There was only one wood model made

of it before that that Johnny had made. It was so delicate because the frame was only about a tenth of inch thick, as I remember. Probably two tenths of an inch thick. But it was so thin we couldn't hold it together any other way, so Johnny said, "I'll make it out of metal." We were delighted. He worked about a week on it. Filed that out of Dural, polished it, and then when Bill saw it, he fell in love with it.

Q Can you describe in audio terms its shape and form?

A It had the cardinal points of the compass on it -- North, East, South and West. The boxes or the inner frame are only there to make it distinctive. We felt as though it was distinctive. We wanted the same mystique as a Mercedes and to create our own marque, which I believe we did accomplish.

Q Yes, you did.

A It was a unique ornament, and in that particular era it was made out of what they call an investment casting. It was a process in doing it. To get the most detail on a material that wasn't too ductile -- that would bend. At that time, we didn't have spring ornaments. They were out there, and it was quite a lethal thing to have out there. We didn't realize it, of course. Anybody that would get hit and raked over the hood with that thing would have been....

Q Disemboweled?

A Right. But we didn't think of those things in those days. We had no idea.

Q You never thought of your car being involved in a crash?

A That's right.

Q It was unspeakable?

A That's right. We took the same ornament and put it in the rear deck with the words: "Continental." The lettering for the Continental was done by the young lad from Art Center who was working as a modeler with us. His name was Charlie Russell.

Q Was he working on a summer internship?

A At that time, we hired them permanently, and I think we hired right out of art school. In fact, it was probably the first batch coming out of any type of automotive school.

Q Really?

A Right.

Q An early Art Center School [graduate]?

A I don't even know if they were in full swing or not. But I believe he came from that area. It happened quite a few years later.

Q What happened to him?

A As I recall, he worked for Sundberg and Ferrar, an industrial design firm out on Telegraph.

Q Known as the heavy laborers of the design business?

A Right. And I understood he ran their wood shop out there. He was quite a talented person.

Q You were talking about the block lettering?

A The block lettering. I think Johnny Reinhart did that.

Q Around the rear wheel housing?

A Around the rear wheel housing was the block script. You were saying the Continental script on the side.

Q That was done by Reinhart?

A I think that was done by Johnny Reinhart, if I remember correctly.

Q And you did the ornament?

A Right. What other great things can we say about that [era]?

Q Back to William Clay Ford, he was a most enthusiastic and knowledgeable pupil?

A Yes.

Q Probably a perfect in that respect. He was willing to listen to the veterans, he didn't want to pretend that he knew everything, and he really needed help, obviously, from everybody?

A Right.

Q And he was a nice guy to boot, so it was a perfect combination. It must have been fun to work for him?

A It was. As Harley Copp said when he first made this statement that we were to tutor Bill, he said, "You'll never get another chance like this in the world," and he was right. To work with such a nice person. Unassuming guy. Really a terrific guy. Not because he was the boss, but he really was.

Q You're talking about William Clay Ford?

A Right.

Q What kind of a person was Harley Copp? Tell us about him. He seems to be some sort of a mystery figure.

Harley, at that time, was a graduate of the Ford Trade School. Evidently, he was, from what I recall or what little he said about his background, I don't think he came from a wealthy family. He was a real pusher, and not a bad pusher in my mind, but just a very enthusiastic young engineer who was quite knowledgeable and wasn't afraid to let anybody know that he was. I liked him, and I still like the guy, no matter what he did.

Q You must admit, I suspect, that no one likes a "traitor." But what he said, had to be said, did it not, in terms of the Pinto?

A I'm sure Harley told the truth. I don't think that he fabricated anything that wasn't true, but some things are better unsaid, I'm afraid. You know too much, people might.... Who really cares, except the government?

Q In this case, the family was suing the company for an unfortunate death, but that really isn't germane to what we're talking about. The Continental Division, it was fun to work there? John Reinhart was fun to work with, Bill Ford, Harley Copp? It was kind of a companionable, gung-ho group?

A It was. We could have taken over all of Ford Motor Company at that time. We thought we were that good.

Q A latter day generation of Whiz Kids?

A Yeah, right. The Continental established, in my opinion, the prestige car back to Ford Motor Company, which they did not have. They had lost to Cadillac. The only thing bad about the entire operation is that Bill hired Doug McClure.

Q On his own?

A I believe he did. I think he went to school with Doug McClure.

Q At Yale?

A I believe that -- you'd better check that out, because this is only my assumption, and I think I got that from Harley.

Q Who was Doug McClure?

A He was supposed to be our PR man. Do you remember the baloney that they put out that to buy a Continental -- as they started to ballyhoo the

Continental as we finished it -- do you remember that you have to have a pedigree to buy it? It would only be sold to certain elite people in the particular town and so on and so forth?

Q I'd forgotten that.

A Real snobbery.

Q Was that part of the advertisements at the time?

A It was part of the preaching that Doug McClure was doing, and he was giving speeches all around the country.

Q What a kiss of death for a new automobile!

A Yeah. I thought it was just terrible.

Q Plus, they put a ten thousand dollar price tag on it?

A Yeah, which was a lot of money in those days. Today, you pay ten thousand dollars for an Escort. Little did we know.

Q How long did that go on?

A It went on for quite some time. It was right at the introduction of the vehicle. In fact, it was standing for a long time. I couldn't believe that Bill would allow this to go on.

Q He's very democratic?

A Right. So I don't know if it was my ears that were hearing it, but that was the most shocking thing I ever heard in my whole life.

Q This was at the presentation or introduction?

A The introduction.

Q I don't think that went on very long.

A That's good. I'm glad nobody remembers.

Q Somebody must have grabbed a hold of McClure and said, "Forget that?"

A Right.

Q Did he stay on in PR at Ford?

A I don't recall when he left, because I think he stayed on all the way through the time that we moved in the new building down on Oakwood -- the Continental Mark II building -- which is now body and assembly building. The entire thing was built to produce the Continental. Test track behind it; Bill had a beautiful office right next to Johnny's office. We had a nice balcony around our studio, working on the next generation. We're going to do the Mark III, and then we're going to do a four door. But that was really a nice [setup].

Q It seemed the last adventurous time at Ford. The Edsel wasn't much fun. It was probably a failure at the beginning. Certainly the Mustang a decade later was fun. It was never quite an episode like the Continental where you had a grandson coming up with a whole new division. Not a whole new concept, but an elaboration of a concept, where he can establish product and make something new out of it?

A And the challenge was to put the prestige of that particular vehicle....

Q Back in the line?

A And, by God, we did it. Really, we did. And all the other Lincolns thereafter and Continentals thereafter have been nurtured from that particular design.

Q How was it mechanically? That wasn't your end of the business, but do you remember? Were there some goofs?

A Not that I recall.

Q Was it fairly sound, mechanically?

A Right. It was awfully heavy. That was one of the complaints. I guess Harley overdesigned it, being too cautious, or Gordon Buehrig overdesigned it, being too cautious.

Q Somebody made it too heavy.

A And we still have rust problems with that.

A There weren't any mechanical things that I was aware of. Of course, I [worked] in a very cloistered area, really.

Q It was beautifully styled. It was crisp and clean. I think one of the classic styles of that era.

A For its day, it was a classic, unique-looking vehicle. I feel as though we achieved our task. To revert back to the contest for the original design, it didn't just so happen that our design won the contest. It was voted upon by several people in the company. They came in, and they had a secret ballot.

Q It was in the styling showroom?

A It was in the gymnasium, which was our studio.

Q Up in the old Trade School?

A Right, in the Trade School area. We did win our own design contest. I'm sure other people felt it was something else, but, as I recall, it wasn't even close. And I think that Bill is democratic enough -- Harley certainly was -- that if another design would have been chosen, we would have worked it up, but it wasn't. Ours was definitely chosen.

Q And rightly so. Who else contributed design proposals in that era?

A As I recall, there were five, and I would have to look it up.

Q You mean the divisions were given a crack at it?

A I don't recall if Walker or if it was Walker's studio that did it.

I don't believe that Joe Oros or Elwood Engel sent one over. But one other contributor, Johnny Reinhart would have all the names, but, I think, we had Brooks Stevens. He was either in Milwaukee or Chicago.

Q Milwaukee. He's still there.

A Grisinger and his partner, whoever he was, that was a definite group.

Q They were independents by this time?

A They had their own design business at that time. He wasn't working for Ford Motor Company at that time.

Q But your design was a clear-cut winner?

A Yes. Our design, our group, on our own grids. There should be some photographic evidence of that entire show, because it was all photographed. It would be really interesting to see.

Q When was it held? About mid-'53?

A It would have to be very early '53. I'd have to look it up in my notes. At that time, I did have a diary.

Q Do you still have it?

A I still have it. All I have to do is find it. And Harley Copp was the one that suggested that I start a diary.

Q A journal?

A Right. And he was right. There were days that I didn't put anything in it, but we were just so darned busy working twelve and sixteen hours a day. It was incredible.

Q Did you have a deadline at this point, like mid-'54?

A I don't recall. It's one of those muddled areas where we were just balls out, with no rhyme or reason at the time, and they must have told

us at the time, but when you're working that hard, your memory is fuzzier than ever, because you really don't have time to even sit down and think.

Q Were there any compromises in the design that you were unhappy with, or did it pretty much come out as you and Beamish and Reinhart wanted it?

A Not really. I thought the wheelbase was a little bit long, but the interior package was fairly good.

Q Who worked on that?

A Once we finished the exterior, we went right in with the interior. We did the instrument panel, the seats, the trim, the design. It was just part of the process. To sell the vehicle to the rest of Ford Motor Company management, we built a, what I believe was, the first inside/outside buck. Are you familiar with the inside/outside buck?

Q No.

A I believe it was one of the first, and I may be wrong. Maybe Charlie Stobar can correct me. We laid up the fiberglass exterior of the vehicle, and then we designed the interior parts, and the interior of the vehicle, cast those, and put them together. Had the doors hinge so you could get into the vehicle, so that it felt like an engineering prototype, only it was out of fiberglass sitting on a chassis.

Q This was the early use of fiberglass?

A Yes, it was.

Q It had just come into general usage in '53?

A I think other industries were using it.

Q But not in the automobile industry?

A Not too much, right.

Q What was its advantage over plaster?

A It's lighter.

Q More attuned to curves and planes?

A No, not really. It was just lighter, and it simulated somewhat the sheet metal part.

Q You could bend it?

A Oh, yeah, you can bend it a bit. You could never lay it up thin enough to make sheet metal out of it, but it was closer to the finished product.

Q Certainly plaster was very uncomfortable to work with?

A Oh, it was hell. Of course, it was built over a frame. The wood underneath it was probably as heavy as the plaster.

Q When you say inside/outside buck, this was -- in other words, instead of making two bucks, you made one buck?

A Yeah, we made one buck so that it served the interior buck also, because you could put the instrument panel in it, the seats in it, the upholstery in it. You could put in side glass. It wasn't operable, but at least it was there. So it simulated an engineering prototype that would have come probably a year and half or two years later.

Q That was an innovation?

A We thought it was at the time.

Q What had they done before?

A Usually they made the interior buck separate. It was on a roll-up, and they never could put the two together until engineering started to get sheet metal. Then when they got sheet metal, then you could see what your interior looked like. You put the instrument panel in the body and

started to build up the interior that way. But they were always done in bucks which fits the drawing so it'll fit the vehicle, only it came much later.

Q Has this dual or inner and outer buck principle been maintained in the industry?

A Yes, we still do it.

Q You still do it the other way?

A Oh, yes.

Q Separately?

A Yes. When the model is finalized, then often they'll make an interior/exterior buck. But with the company cutting down, you're getting less and less of that. We simply don't have the manpower to do it any more, so that, perhaps, it will be going out the window again. It's a matter of economics. It's a little more expensive to do it, but it's much more effective.

Q Very striking, too?

A Yes.

Q On the whole, the Continental experience was an exciting one for you?

A Absolutely.

Q It was your first big assignment with the company?

A Yes.

Q You had been working with the Special Products Division, and then you went along with the Continental Division?

A Special Products turned into the Continental Division. In fact, when we designed the Continental Mark II, we were still in Special

Products, because that thing stayed right there.

Q And, of course, the Special Products Division, after the Continental moved into its own area, became the group for the Edsel at that time?

A Say that again, Dave.

Q It seemed to me that after the Continental assumed its own identity, that the Special Products Division then brought forth the Edsel.

A No, no. We didn't do the Edsel.

Q I know you didn't do it, but they used that title on the pre-Edsel work.

A They did?

Q Yeah. Because I worked with them briefly in the Special Products Division in the summer of 1956, and they used that name, and we were in the old Trade School. They moved in when you vacated.

A Is that right?

Q When you went down to your new quarters...?

A Roy Brown?

Q Roy Brown, yes.

A Roy Brown went out to the...?

Q To the Trade School.

A You're kidding?

Q Right. I was there in the mid-summer of 1956, and you guys had moved into your plush, new building, and the E Car Division, as they called it also, internally, became the Special Products Division, and they eventually brought forth the Edsel.

A Jeez, I didn't realize that. I thought it was done over here in

our new design building.

Q The design of it was, but the administrative end -- Dick Krafve, and Emmet Judge, and....

A I didn't know that.

Q Yeah, we were all over in the old place. We just moved in when you guys moved out.

A I'll be darned. I was so busy that I didn't know.

Q You were already down in Allen Park in that plush, new building.

A We were as happy as bugs in a rug.

Q What happened? The bubble burst, eventually? What was the problem? Not enough public acceptance? Was there a problem there?

A At that time, I believe it was public acceptance, really.

Q It just didn't materialize in any numbers?

A In any great numbers.

Q Not enough pedigrees?

A No, not enough pedigrees to go around.

Q And not enough dollar bills?

A Right. It was at that time, as I remember reading through my notes, I was working on a four-door version of the Continental Mark II.

Q It was that far along?

A Right.

Q Did you have an engineering package ready, or where you doing just the concept?

A I think we were just doing the concept. I don't think we had an engineering package per se. I was doing my own package as the development.

Q As you said you were increasingly doing in that era?

A Right.

Q You were beginning to break away from the engineering...?

A We'd do the whole. We do get a package from engineering, and then we negotiate.

Q You were getting more power?

A Right. I do recall Johnny Reinhart stopping the project because we ran out of money.

Q Was that it? Just like that?

A About that time, either Johnny, or Harley, or Bill, or whoever it was had presented to Ford Division our retractable hardtop. I believe we sold them the rights or the patents to it, and then we went over with the project to the new Ford building and put it on a '57 Ford, if I remember correctly.

Q The first year?

A The first year. So we had to be there in '55 or '56.

Q You were still there in the Summer of '56 when I came in.

A Right. So Continental Division stayed together for another year. What was touted was that Bill went to Mama, and Mama coughed up the dough.

Q Mrs. Eleanor Ford?

A Right.

Q For another year of...?

A The continuation of the Continental Division.

Q Henry II and Ernie Breech were adamant against it? They decided it wasn't going to go?

A That's right. I think we were torpedoed.

Q I think you were.

A Politics.

Q I guess it was all based on that ten thousand dollar figure.

Someone had convinced Breech. Is it your recollection that someone had convinced Breech that nobody would buy a car at that price?

A Right. I guess with Doug [McClure] selling them with that type of attitude, I'm sure that was our demise! I really can't believe it. I think that's what did us in.

Q Old school ties will do it to you every time?

A Right, every time.

Q It was very sad, obviously. All of you, I'm sure, were deeply disappointed when you found out?

A Oh, Lord, yes. We had to swallow our pride and move on. At least, they took us in over at the design establishment.

Q They welcomed back the prodigal sons?

A They didn't welcome us back.

Q The atmosphere was...?

A A black mark. And it gets, really....

Q Why, because it failed? It didn't fail.

A It didn't fail, but we were another regime coming in. We weren't too well liked.

Q So that meant that you, and Reinhart and Copp...?

A And Bob Thomas. Copp went to engineering.

Q He could do that. And so did Buehrig?

A And Buehrig did, too.

Q But you guys were pariahs?

A Oh, yeah, right. And I think they held that over my head for years and years.

Q You mean in terms of...?

A Promotions.

Q And assignments?

A Right.

Q It was disastrous for Reinhart. He really...?

A Oh, yeah. I wish Bill would have watched over us a little bit better, but he's completely oblivious, because we really did take a whipping.

Q He was deeply disappointed?

A Yeah.

Q And I think disheartened by the whole thing?

A Yeah, he lost all interest.

Q All he could say was, "Gee, fellows, I'm sorry. I wish it could have gone?"

A Right. But the thing is we really got whipped for being part of that team.

Q It took years to live that down?

A Right. It's not lived down yet. We've still got that type of thing going on. It's too bad.

Q But you persevered. Reinhart went on to U.S. Steel?

A Yes. He was fortunate. I also think Bill helped him.

Q I think you're right.

A I think he did. I think Johnny will even admit that himself. But the rest of us had to fend for ourselves. It was rough.

Q How about Beamish?

A Yeah. Beamish was fired by Bob McGuire. McGuire, at that time....

Q The head of Ford studio?

A He had the Lincoln studio then.

Q Oh, he was head of the Lincoln studio?

A I believe so.

Q He didn't like Beamish, or he didn't think he was necessary?

A Evidently Beamish and McGuire worked at General Motors in their younger days, and there was a slight cutback I remember somehow, and I don't remember what year it was. But Beamish got fired, and Beamish ended up over at Chrysler, so he was there for the rest of his tenure in the business.

Q Is he retired now?

A Yeah, he's retired now. But he really got jacked around. It was bad. That was very embarrassing.

Q But you persevered, and obviously went on to many other assignments? What was your first '56 assignment? How did come about and how did it go?

A The first assignment I was assigned to Frank Hershey.

Q Another interesting character?

A Yeah. He came from General Motors. Somehow he got into Ford Motor Company.

Q He was head of the Ford studio?

A I think he was. Then somehow I got put over with Bill Boyer and Joe Oros. Now, wait a minute, I'll have to go back before that.

Q You've listed the Pre-production Studio?

A Right. I was in the Pre-production Studio. I was still at Corporate Projects Studio. That's right. The Corporate Projects Studio, as I remember, I recall us doing a new Falcon.

Q The very first one?

A The very first one. The one that looks like a little Ocarina. . It's very round. In fact, it's very apropos to today's vehicles.

Q Who was doing that?

A Bill Boyer and I did that in the very studio at the end of the building that was once the truck studio.

Q This is in the new Design Center?

A Yeah, that was the new Design Center at the time. They had, evidently, just moved in, and we had moved in under duress.

Q That lovely Continental studio building became the Edsel Division for a time.

A I don't remember them taking over. They did take over the old building?

Q Yeah.

A They knocked our balcony, and they divided everything up. They ruined that studio. Just terrible. It would have been a showplace for Ford Motor Company, and it would have kept Lincoln's image. We were doing all the right things. We just couldn't get anyone else in the company to agree with them.

Q The public didn't respond properly, either?

A No, Bill and I did the Falcon, but I'm trying to recall what the hell we did there. There was some other vehicle that wasn't selling

worth a damn, but McGuire, at the time, was the exec designer of that studio working for Joe Oros at that time.

Q Who was head of Ford...?

A He was head of the Ford studio. And I remember McGuire saying that the sketch that I had done that had the parallel lines on the side, and his comment to me at the time was, "What the hell you doing, putting a railroad track on the side of a vehicle? We'll never do that," and that's the design that they bought.

Q In the competition, that came out first?

A Right. He said, "We'll never do that." By, God, we did! That was the design of the vehicle. That was a lot of fun.

Q You were there for a number of years. What other projects do you recall from that Pre-production Studio?

A As I recall, this is where Stu Frey -- we switched over, and, at that time, they had hired Buzz Grisinger from the outside from his own design business. He came back in through the auspices of Bill Ford, being a contributor to the Continental Mark II. He got a foothold in there. Bordinat liked him. He came in under George Walker.

Stu Frey, at that time, was a layout man. I think he came over from Continental Mark II with us, too.

Q Don Frey's...?

A Brother, who is now VP at Ford Motor Company.

Q What does he do?

A He's our vice-president in charge of North American engineering. He's got it all. Stu Frey, Buzz Grisinger, and Al Mueller and I were in there, and we did the feasibility charts, which we're in the process of doing the same thing today in the business.

Q That was a very early application of that?

A Of that. We had, I think we called it, Bay 139. We had the entire wall from floor to ceiling covered with charts of interchangeability charts of one body floor pan going into the Ford, Mercury and Lincoln line. This is the same thing that we do today, sharing components. But that was the early on effort of making the company familiar with it. I do recall that. Of course, Stu went on to greater things. So did everybody else. I got stuck right at the bottom.

Q Honest Charlie Phaneuf stayed working when he's best suited...?

A I don't know if I'm honest or not, but I got stuck there. Well, I guess, water seeks its own level, right?

Q You're not a politician?

A Yeah, obviously.

Q Was that a good group?

A Actually, I haven't worked with a bad group in Ford Motor Company. I've worked for some bad people, but not a bad group.

Q What was your metier, your strong point? What were you doing in terms of technical problems?

A Sketching new design ideas, doing full-size renderings, converting the full-size rendering into a full-size model. Pretty much what we do today. It hasn't changed. We still go through the same process. From the design off of paper into a three-dimensional model, this is all under our control up until it's finished. And from there we scan it or draw it up. In those days, they took all points, and drew it up, and released it to engineering, then engineering does their feasibility on the vehicle. Any changes, they come back. We work with them. And that's the way the car is born or a vehicle is born.

Q You're getting recognition. You've become a head stylist in late 1961.

A All those names are just name changes, Dave.

Q They're just window dressing?

A They're window dressing, really.

Q But you got a little more money, perhaps?

A Oh, yeah, I can say that.

Q Salary grade?

A Yes. Probably went up with the cost of living.

Q They were great for passing around titles that had a nice ring to it?

A Right. The only thing I meant was at that time I had six designers working for me. Today we have the same position, and I've got two designers working for me. They cut us way back.

Q What about the Walker exit? You were there at the time.

A That was embarrassing.

Q What happened?

A From the story that we get at our level, Walker was trying to -- evidently he could see the writing on the wall. Gene Bordinat was in very tight with the Ford family.

Q Including Henry Ford II?

A Right. And Walker wanted to put one of his men in there -- Joe Oros or Elwood Engel, one or the other.

Q One of them would be his hand-picked successor?

A Right. And there was this political thing going on between Gene Bordinat.... It was childish.

Q Between Bordinat and who?

A Gene Bordinat and Joe Oros and Elwood Engel. You would see them do these very childish things. These are our leaders and you could see them doing these childish things trying to ruin the other guys model. It was just like a bunch of children. You wouldn't believe it. One guy trying to drop the door on going into the elevator to the showroom. You know, obvious things that you wouldn't believe that grown people can go through things like that.

Q You wanted to add something to the last chapter.

A Yeah. The last chapter that we were dealing with was the project coordinator for Pre-production Studio. That was headed by Buzz Grisinger, I believe, and Stu Frey, who is now one of our VP's today.

Q Stewart Frey?

A Right.

Q The younger brother of Donald Frey?

A Donald Frey, correct. Stu and I had worked at Continental Mark II. If I remember right, he was an engineer on the board there as well as an engineer on the board when he worked in the project studio with Buzz Grisinger. In fact, I believe, that Stu was touting at that time the uniside.

Q What was that?

A The uniside is what we use today where the T-Bird and the Taurus and Sable where the body openings are all stamped in one large piece of steel welded to the outside of a floor pan and could control door openings and fit.

Q Was that rather advanced for its time?

A It took Stu all the time from I'd say about 1961 to 1984 to get it into production. So we can credit him with all of that.

Q That seems to take us up your assembling the design managership of the something called the Interior Design Office in 1967. What was that?

A Interior Design, that was an advanced studio.

Q Whose idea was it?

A It had been set up. In fact, most of the studios at the time had pre-production studios. The Ford Studio had a pre-production studio, the Mercury Studio had a pre-production studio with the Lincoln Studio -- I think they were combined. But that's where the designers could more or less feel a little freer than you could in the production studio by doing advanced concepts, and we did a number of them. We were doing self-skinning urethane seats at that time.

Q What does that mean?

A It means like this vinyl chair or any seat could be molded, and rather than have it covered with the material and sewn afterwards, as they pour it into the mold, it forms a skin of varying thicknesses which could be controlled, and we get a finished product out of mold that is soft. The foam underneath was a two-stage pouring where you could pour the skin and then pour the foam inside of the skin. So we had several seats built that way. It's done today on tractor seats, inexpensive furniture, a number of things -- that type of concept. But we were trying to bring it into the automotive area, and we were just a little ahead of our time. But, nevertheless, it takes that type of thinking to ever get a product nearer to [fruition].

Q So you were able to work on futuristic products without production budget restraint?

A Correct.

Q Any other products that come to mind from the time?

A We had reams of instrument panels and various shows.

Q New configurations?

A New configurations, center stacks, radio cockpit controls that were completely encased by the driver. At that time, we even built probably the first station wagon with a carousel seat in the rear as a station wagon arrangement with a TV set for a monitor out of the rear window and a screen in the instrument panel. We were playing with digital readouts and liquid crystal displays, and here we are twenty years later.

Q Why did it take so long?

A I believe we were just a little faster than the industry. Our thinking was much further ahead.

Q Why is the industry so conservative? Twenty years to get digital readouts?

A Let's say the space program had it. What we were doing, we were dreaming out in the future, and all designers have these dreams, and we projected ourselves a little bit further than what the present technology is.

Q You were truly avant garde thinkers?

A Designers are doing that today. We just pushed the state of the art beyond itself.

Q Mr. Phaneuf, it would be very helpful to students of automotive design if you give us a detailed look at your work with the Ford Mustang in the early 'Sixties -- the concept, the development, and the final realization of that very successful design project when you were with the

Ford and Corporate Projects studios. Could you detail your experiences in that incredible project, as it turned out. It probably didn't seem so at the time, but, in retrospect, it's quite a story.

A At the time, there were several cars being bantered about. They were being produced by the advanced areas of the studios and other studios contributing to this project. They wanted another vehicle created off the Falcon chassis, so using the Falcon hardware, and the Falcon at that time was falling off in sales -- they had two or three presentations -- various candidates for this new vehicle. In each show they would shoot them right out of the water. They'd come back in with negative results. I don't recall what the project was, but Joe Oros came in and gave us a show date which was about ten days off. If I remember correctly, we were doing studies. We were doing paper studies, and we were doing full-size layouts for a sportier car using the Falcon running gear, and I had the entire walls of the studios covered with full-size drawings.

Q Joe Oros was...?

A He was the exec of the studio at the time.

Q The Ford Studio?

A Right there was the production studio and the advanced studio. I was the manager in the advanced studio. We were given the go-ahead to start the model, and it took us ten days, because Joe wasn't getting what he wanted or they weren't ringing anybody's bell.

Q What sort of realizations would these be?

A They had three or four models -- three or four shows -- well before this particular Mustang was shown.

Q And he hadn't liked any of them?

A No, he had not liked any of them. They were various concepts. Some were good; some were bad. By the time we got into it, we had a very short period of time to do it. We picked one design, and we started the model on a Friday, we worked through Saturday, and ten days later we had a completed model with the -- had dinoced, at that time. I think it was paint, really. We had painted the model white. The early photographs depict this.

Q Was that deliberate?

A It was deliberate on my part because of the fact that we didn't have time, really, to develop the surfaces of the model as fine as we always do, and if we did have any rough areas, light doesn't show bad surfaces; dark colors show bad surfaces. They had blue ones, silver ones, and it was so startling to come out with a model in white, that I think that shocked them and got everybody's attention.

Q Who was at the show?

A If I remember correctly, Iacocca, and whether or not it was a strict vote, I really don't recall.

Q He was in and out?

A Right, he was in and out all the time. But we went back in with the bellwether, and most of the time your first shot at a design is your best. The more you work on it or the more people get into it for you, the more....

Q Somebody ruins it?

A Right. So the model went immediately from the advanced studio into the production studio after that first show, and it was developed by Gale

Halderman. He did the feasibility on the model, and he gets 90 percent of the credit, and he got promoted.

Q You guys were left behind?

A Yeah. But that's the way the cookie crumbles.

Q What's the difference between doing a working model and the feasibility model?

A The working model or design model, as we call it, may not have all the feasibility like maybe the sheet metal is in too far where it goes through some particular structure or the bumper doesn't have enough clearance to the sheet metal.

Q So all Halderman was doing was finishing it off in engineering terms?

A Right.

Q He had nothing to do with the basic design?

A No. But, nevertheless, where you get the credit is when the thing goes up into a working model.

Q They say, "Who's that? The last guy to work on it?"

A That was Halderman. And Gale is my boss today.

Q Nice guy, and I'm sure he deserved all the credit he got, because I think he was the first to say that guys who really did the work behind the lines never got the credit.

A They do. In my particular case, they did not -- with that particular case.

Q You're always mentioned in the stories and books they do?

A But they always wonder who in the hell is that guy? Joe Oros did it or else Iacocca did it. Somebody always did it.

Q Even Don Frey?

A Right.

Q Iacocca still reveres his title as "The Father of the Mustang."

A Right.

Q Halderman has been given credit in certain periodicals?

A Yes.

Q And you guys, you just get a mention in the history, and they don't realize that you did all the creative work?

A Yeah. Each particular phase, it's true, could be dropped in each one of those phases.

Q Who else in your immediate group was on that?

A George Shumaker.

Q Who else?

A George is still at Ford Motor Company. George heads up our graphics group upstairs. George was put on a shelf, also. Max Krueger was the layout man or the engineer in the studio at the time. At that time we had six designers, and I'll be darned if I can recall the rest of them. They were key personnel.

George really came up with the concept of the front end, the high mouth....

Q You'd cribbed that from somewhere, hadn't you? Someone said you had.

A Well, really, the whole design itself was -- if you look at the thing -- perhaps I'm the only one who sees it, but it's really a little Mark II in profile because it is a long hood and short body, and it's really what I was striving for.

Q That was the inspiration?

A Right, having worked on the Continental Mark II, you steal a little bit of that, and the car was extremely successful. And I think people like it today simply because of its proportions.

Q Those '64's were in great demand?

A Right. It was an interesting project -- very inspiring.

Q Once the feasibility model was made, what happened to it then?

A The feasibility model is -- really what happens to a model is that the design is done in three dimension, which is clay, then we release the surface off of it, and at that particular time we would cut templates all the way through the model. Today we use a computer, and we can draw it up from points. When you release the surface to engineering, engineering will take any other holes out of it that we had in the surface. In other words, make the model feasibility so it could be made out of metal, drawn in a die, welded, put together, and that is the release of the model right there. When all that work is done....

Q Where is that done? What shop is that done in?

A Body engineering does that work today. In our time -- at that particular time -- we had the surface layout group. There was a part of engineering that worked in our building right there, so they were closer to the model. When they wanted templates or surfaces explained to them, they were right in the building, and they came into the studio, and we would solve our problems together. So we do that today, only it's computerized.

Q Much faster?

A Right.

Q Once the go-ahead was given, then the manufacturing end took over?

A Yeah. That's the kickoff.

Q It debuted at the New York World's Fair?

A Probably was. I really don't recall.

Q The Summer of '64?

A We had so much ballyhoo over it that we never got into that end of the business. We were busy working.

Q You were on to the next project?

A Right.

Q Long gone?

A It was just another project.

Q Were you surprised at its success, looking back?

A Yes, because really at that time....

Q It was a Falcon, basically?

A Right.

Q But a little more decoration; a little more thought?

A That's why they produced it so rapidly. They had all the running gear. They knew it was going to be a good vehicle.

Q Was there an early thought of having front wheel drive?

A Not in that day. We had front wheel drive around 1964. Ford had built one here in the company. Engineering had done that. It was within our own company, and I remember seeing it. In fact, when I was in the Corporate Projects Studios, I did a '61 Bird when I had the Bird studio. We did a front wheel drive model, and that was the first one that had been done in Ford Motor Company, and it was strictly a spinoff from a prototype that we had seen around Ford Motor Company. And we heard G.M.

was working on one. Engineering was very negative on the front wheel drive.

Q Why was that? It took them years to get into it. What was wrong with it?

A I really don't know. That's a good one you can ask Stu Frey. He'll probably give you a good answer. Because, you know, Gordon Buehrig was a great advocate of that. In fact, he wanted it in the Continental Mark II front wheel drive.

Q What happened? The engineers vetoed it?

A And it was just another case of we don't have the hardware. And it's true. There's a helluva lot of development in a running gear, and you just don't bring it out tomorrow.

Q They had no real experience? They weren't even sure if it would work properly?

A The Cord was a front wheel drive.

Q So Gordon [Buehrig] wanted to make the Mark II a front wheel drive?

A Right. That's in sitting around the table. I don't know if anybody ever took him seriously or not.

Q You're head stylist in the Ford Corporate Projects Studio. You moved over to a design manager in the same year. What other projects stick in your mind from that period?

A After I did the '64-'65 Mustang, the next project that I recall is doing a '64 Bird, because that was done well before. It was '62 or '63 that we did the Mustang, so it would have been two years before, so that must have been '62 that we did the '64 Bird.

Q Was this a radical change?

A Yes, it was a radical change. The first Bird that Bill Boyer and I worked on was the '61 Bird, and that was the one with big, round tail-lights. The '64 Bird was the one that we did the rectangular lights on. They went wall to wall, and I put sequential lights in it. Do you remember that?

Q Was that yours?

A That was Gil Spear's design, and I swiped it, and I told him I was going to take it and put it on the Bird.

Q What did he say?

A He said, "Great," and we did, and then they put it on the Cougar, too.

Q I drove a rented Cougar that year, and I thought they were great.

A So I remember doing the '64 Bird, which was a new body from the '61.

Q Was it deemed that the market called for a new rethinking of the Thunderbird at the time?

A From the very round '61?

Q Yeah.

A To the more crisp '64?

Q Yeah, right.

A I felt that it should be crisper, and we made it that way, and we beat out our competition. Then we did a new front end off of that one because the original one was a very heavy front end, if you'll recall. Just a lot of bumper. Our next project was to get weight out of the front end because it was too damned heavy.

Q How did you do that?

A We put a lot of sheet metal below the bumper and had a thinner bumper. I think we saved four hundred pounds on that -- four hundred pounds from the original design.

Q You substituted sheet metal for...?

A For heavy bumpers.

Q Just as strong and just as flexible?

A Right. It didn't give quite the protection, but it was lighter.

From there, we went into the Corporate Projects DeLaRossa's design office at that time, and that was in '66 to '67.

Q DeLaRossa? Did he run it?

A DeLaRossa was the chief designer then. It was getting out of Halderman's group over to DeLaRossa's group. The first project there, at that time, was the Ford Torino. This is where we put the first full soft facia. You know our facias today, in other words, our gop panels, the panel that holds the grille and the headlamps that is somewhat flexible. Some of it is made out of scrim fiberglass. It's a compound -- a hardened compound -- but very similar to what's on a Corvette today, where if you smash the front end, the whole facia goes soft. There are various parts on our cars now that -- parts that back up our bumpers.

Q Plastic?

A Yes. We were working with -- there are so many chemical companies. I don't know if it was DuPont or....

Q Dow?

A Whatever. But, there again, it was similar material that we were using back in the interior studio for interior parts, and we brought it up and used it on the exterior of the car.

Q G.E. has come up with something called Lexan recently.

A It's that type of material where it's indestructible. It will bend out of shape without breaking. They're all trade names just for the same product.

Q Flexible, breathable vinyl?

A Yeah. That's probably correct. There wasn't anything else absolutely memorable about that.

Q You're working in advanced studios now. What kind of a leader is DeLaRossa? Is he inventive and creative?

A DeLaRossa was a very creative guy. A damned good designer himself. I don't know a nice word for it. DeLaRossa had the political savvy.

Q He knew how to oil the machinery?

A Right. He know how to oil the machinery, which I was probably so awed by.

Q You never really got around to...?

A No. I wasn't smart enough to catch on. DeLaRossa has done all right. He created a lot of good stuff; not much bad stuff that I recall. He was absentee management. Is that a nice way to put it?

Q That's a good way to put it.

We have you where you take over the design manager of the Interior Design Office. Was that a new setup?

A No. That was a production studio.

Q Production studio for the interiors?

A Yes.

Q But still in Ford Division?

A Still in Ford Division. In fact, in that one we did the Panther instrument panel, which it has to this very day.

Q The Panther was a code name for...?

A For the Ford.

Q Which one?

A The present Ford that you have on the road today is called -- within the company, it's called the Panther -- the Crown Victoria.

Q So the basic -- the Crown Victoria -- the large...?

A The large car is still in production today.

Q And you guys designed the Panther interior?

A Yes. We did the instrument panel, and the instrument panel was done by a designer named Doug Miller -- the cluster; the instrumentation. We changed colors and woodgraining. The whole thing is exactly the same.

Q What year did he do that?

A That had to be -- the car came out in '70 or '71?

A '70.

A So that had to be done in 1968 or '69.

Q What was there about that design that's made it so durable; the simplicity and the utility?

A It was, perhaps, ahead of its time when we did it, and it's been a lasting design. The cluster and speedometer hasn't changed. Maybe a few colors have changed. The appliques are the same. The woodgraining has changed, and it's turned colors.

Q When you say appliques, what do you mean?

A The appliques are the glove box door. The part between the A/C registers that come out of a panel on either side of the instrument cluster? That's really about the only thing that I recall on it -- doing seats and door handles.

Q Who was your exec there?

A At that time it was Al Mueller.

Q Where is Doug Miller now?

A Doug Miller is retired. He retired two years ago. He's got a place out at [U.S.] 23 and -- it's out by Brighton, Michigan. He's got a place out there.

Q Does he drive a Crown Victoria so he can see his handiwork?

A No. In fact, he's driving a General Motors product. His dad was a comptroller for G.M. Believe it or not, he can get a car cheaper than we can buy it off our A Plan, so that's why he's driving a General Motors car.

Q Do you ever see him?

A Oh, yeah. We go out to dinner about once a month.

Q Did you enjoy interior design work?

A It's more buttons and bows. It's very demanding. It is fun. In fact, I find all phases of design fun. But you've got so many components to clear inside engineering that car.

Q Feasibility might come up with that?

A Yes. And it really is, and everybody is very zealous in their space, like the air conditioning people. They want X numbers of inches and....

Q For the louvers and their...?

A Right, and their ducting. The electrical component people want so much space for their relays, and the radio people want so many square inches for theirs, and the instrument panel has to be strong, and it has to be installed with one guy in a vehicle. There are multiple problems.

Q What infighting you must have had?

A Right.

Q It's like the cereal manufacturers fighting for shelf space in the supermarket. Everybody's intriguing to keep their space.

A Something that you look at and you don't realize the amount of work that goes into it, and yet you live with it every day.

Q You mentioned demanding. Beyond that, was it demanding, because you had to fit so much into such a small space?

A And keep your design. It's very difficult.

Q Otherwise, it would become diffuse and unrecognizable.

A That's true.

Q But it was, basically, buttons and knobs?

A Buttons and bows and knobs, yeah.

Q So you really didn't mind getting out of that for -- you were there four years?

A That's right.

Q You moved back into advanced design. That sounds like it might be exciting -- in late 1971? How did that come about?

A They were probably trying to get rid of me, and they didn't know what to do with me! In that office, if I remember correctly, we did the Fairmont.

Q I want to hear about the Fairmont. That's one of the success stories of the decade. How did it come about? Whose concept was it?

A I'm trying to recall.

Q Did someone say, "Hey, we've got to come up with a compact or a...?"

A That's when we were starting into smaller vehicles. At that time,

it was simply a project. Very little fanfare, as I recall. I think that was under Zokas. It's coming back.

Q Bob Zokas?

A Yes, I think it was under Bob Zokas. Bob is still there today. It was a very tight package, as I recall. The car was tight.

Q It was due for a '76/'77...?

A Introduction. It was Jim Arnold and myself. That's before Jim made exec, and we were doing two models. We did two models, and the model I did won. Jim lost, and Jim made exec!

Q You're kidding!

A No, that's true.

Q And you'd won the competition?

A Right. It became the Fairmont.

Q Was that the Fox platform?

A Yeah, the Fox platform.

Q Where was that developed?

A I don't really recall, but I think the Mustang was developed off the Fox.

Q It became a workhorse platform for years?

A It was a workhorse, and it later became a T-Bird. That's in the latter part of Bordinat's reign. But it was really kicked off by our Fairmont and Zephyr. So that wasn't a real exciting time.

Q It wasn't an exciting vehicle from a design standpoint. It was very utilitarian.

A Right. I guess it's really the last of the boxy cars that we did, but it was quite smart.

Q It sure was, and it still is.

A They took it and made an LTD out of it -- a Ford LTD. They put new sheet metal on the front.

Q Used the same body, same platform?

A Right. And it worked out real well with the soft front end. I thought they did a hell of a job on it.

Q That was your basic design?

A Right.

Q You win a design competition, and the other guy gets promoted?

A I wondered myself.

Q Is Arnold something of a politician also?

A No. Jim is very low key, a Southern gentleman. Maybe I scream too much and I get people mad at me or something, but Jim never really says anything. He really never did anything, but they made him an exec, and maybe that's what it takes. You don't do anything....

Q You just don't make waves?

A Right. That's a terrible thing. If Jim ever heard that, he'd feel bad. He's a nice guy. He started off with me in the company. Joe Oros tried to fire Jim Arnold -- and Jim was working for me at the time -- because he was so low key.

Jim, at the time, was having somewhat of a hard time sketching and coming up with ideas. The guy was talented and mechanically proficient, so I had him draw up the 1964 landau bar that went on the roof of the T-Bird. I said, "Jim, I want a nice, tight shop drawing that's absolutely impeccable." He spent, God, a whole week drawing this landau bar. And Joe started in on me the next week, "What are going to do with

Arnold?" I said, "Come over and take a look at the drawing. You don't think this guy's got talent?" He went over and looked at the drawing. Joe couldn't find a mistake in it. In fact, I don't think Joe really knew what his last name was, but it was so beautifully done. I said, "Will you get off my back now?"

Q You knew it would catch Oros' admiration?

A Right.

Q And that was the end of it?

A And that was the end of it. He didn't bother me any more, and he really didn't bother Jim any more. He never did like Jim.

Q Who did he like?

A I don't know. He liked himself.

Q The Fairmont was, in spite of the fact that at the time it seemed like just another car, it saved the company in the late 'Seventies?

A It did, yeah.

Q They were going down the tube, and here comes along this boxy, utilitarian, but very classy-looking vehicle, and suddenly they're back in -- they got enough to tide them over until they could get something really different?

A Yes. It seems as though whenever Ford Motor Company takes, say, a more or less proven undercarriage and puts a body on top of it, they get something, but when they start off all new, they seem to falter and fall on their face. Maybe there's not enough R & D to begin with.

Q They don't do that many platforms?

A No.

Q How many platforms can you remember -- basic platforms -- in your career? Can you name them?

A I really can't.

Q You mentioned the Panther.

A The Panther, Fox, Falcon. Bird was unique. Continental Mark II was unique. The Fox ran all the way through to '70, and that carried the Mercury, all the Fords, the T-Bird, and that's why that T-Bird was so ugly because of that platform. Of course, that was Gene [Bordinat], too. Now those cars that were that boxy, Gene did the T-Bird, and he did the Lincoln, which was a huge success, but that boxy son of a gun, and the rest of the cars, those are really Gene Bordinat's cars. He is really the cardboard box man. And that long front overhang. Do you notice, all his cars have got a long front overhang? The front end hangs over the front wheels, and it looks like they're going to fall over, in my opinion. And I'd say that's all the platforms I can remember.

Q They didn't come out with new platforms for the 'Eighties?

A Taurus is the newest, but the platform is still going on with the -- let's see, the Mustangs are still on a Fox platform. It's still a Fox. And the Cougar is still a Fox. No, the Cougar is the Bird. The Bird is a modified Fox.

Q The Taurus/Sable, being the newest of the...?

A The Taurus/Sable is the newest.

Q And they'll use that for another how many years?

A That'll be on everything. That'll be on your new Lincolns, the FN-9, the EN-25. That'll go for another ten years.

Q I suppose R & D costs so much that can't we just squeeze something out of this?

A That's the trend today, really. In fact, we more or less said we're not going to buy all-new running gear anymore. You're going to

start to build on what we have. And with automation, really, that's where it's going to go. With all the automated fixtures for the floor plans, it's so expensive to change them for flexibility within the fixtures if they had them, and their automation and with this new uniside, which is really Stu Frey. There can't be a hell of a lot of deviation.

Q And they would have to change all the equipment?

A Right. So the inner structure will stay the same. We'll keep designing new shells for them. But, basically, it'll be the same damned rat race.

Q Was this a conscious decision?

A I think it is, simply because of the money that they put in their automation. They have to stick to this type of thing. That's why our flexibility to build variations of models is diminishing because of automation.

Q It's all the bottom line?

A Right.

Q You've gotten out of interiors. For a couple of years you were involved in the Ford and the T-Bird advanced vehicles; intermediate and compact. Anything exciting in those years from '73 to '76 that stick out in your mind in moving around, or was it just a reshuffling of the old?

A It was just a reshuffling of the old areas. The Fairmont was the greatest thing that came out of there. In '76, I was put in the truck studio.

Q How did that come about?

A Another shift of personnel.

Q You had not worked in trucks before, had you?

A No, I'd never worked in trucks before.

Q And the trucks no longer were the Siberia of the thing?

A The company still considers it Siberia. In fact, I'd say most of the company looks down on the truck area, really. They're the biggest money makers that Ford Motor Company has got, but there isn't any glamour to it.

Q Workaday stuff?

A Right. So Jack Telnack or Gene Bordinat or whoever is in charge never comes back in the truck studio. I found it a delightful place to work because of the fact....

Q You never had these people hanging over your shoulder?

A Right.

Q What was it like? What was the reason you were reshuffled for various reasons, and suddenly what sort of work were you doing in the truck and tractor design office?

A At that time we did have truck and tractor together. The first project going in there was a whole new body.

Q What year?

A That was our '80 truck, which is the one with the slant headlamps in it.

Q Finally getting into some exciting configurations?

A Right. At that time, the truck studio was managed by absentee management. The exec designer was usually a guy that was going to retire, so they push us old retirees in that place. And for a design manager, it's delightful because he's really his own exec.

Q Who was that person at that time? Was Najjar involved?

A Najjar was the first one that I went to work for there. John was about to retire. Jim Sipple was the exec at that time, but John was the director at the time. Sipple left, Johnny left after a year, and then Spencer came in.

Q Oh, really? What did Ken Spencer do?

A Very little! Because he was getting ready to retire. They were easing him out. So I spent nine years in there designing all the....

Q With nobody looking over your shoulder, and you were doing all the designing?

A Right.

Q What stands out as some of the exciting projects you were working on that came to fruition?

A We put a new front end on the CL-9000, which is the cab over.

Q It's still on the market?

A Oh, yeah. We did the new body for the F series truck, and a new Bronco I, and then we did the Ranger, and then we did the Bronco II.

Q When they always do the II's, they always downsize it. Were you displeased at the way they really sort of trashed the Bronco I, which was a good, solid design.

A Oh, it is, but the vehicle was big, and at that time we were so impressed by the gas guzzler routine that we needed a small truck, and we knew Chevy was coming out with their S-10. And Appalongo, at that time, elected to go to a smaller truck, and that's the way the Ranger was born. That was simply the Chevy, really -- the S-10 Fighter. And the Bronco II was a very inexpensive spinoff from that vehicle. You look at it. We're making over five thousand bucks on every Bronco II, which, at that time,

was the same profit margin as we were making on the Lincoln. Just made money hand over fist.

Q Because there was no...?

A There is very little tooling. You get your front doors, a new roof, and a new quarter-panel, and you've got a vehicle, and a short, little floor pan, so we made money like crazy on that model.

Q John remembers working on the early Ranger. Did you work with him on that, too?

A He wasn't there that long. John is a hell of a good exec. He could organize.

Q And he delegates?

A And he delegates.

Q He doesn't ride herd on...?

A Johnny's got so much goddamned money, and all he was doing was watching us and getting himself set to go out. I don't mind that.

Q He'd paid his dues?

A You're damned right he paid his dues. But he would come out and ask fifty questions, then I'd answer him, and then he'd go back, and we wouldn't see him for a couple of weeks. But I loved John.

But he could drive the engineering department just absolutely wild. He'd keep asking for comparisons to Chevy S-10 to a Chevy 600 and give us all sorts of goddamned no-good projects that wouldn't really matter.

Q But you guys persevered. The trucks were saving the company.

A Well, they sure as hell did save them. And then, also, the Aerostar, which was pushed on us.

Q Tell us about that. I've heard conflicting stories.

A The story is that the Aerostar was done by Kopka and Kopka's group.

Q How long ago?

A Let's see, we brought the thing out last year, so we worked on it two years earlier.

Q What about its antecedent? Is that the old story of the Mini Max?

A Oh, yeah. We could go back further to Gil Spear on that one.

Q Why don't you.

A Ford Motor Company started looking at little mini vehicles and mini station wagons when Gil Spear was in charge of advanced fifteen/twenty years ago. There were several vehicles built throughout the last fifteen years, one of which was called a Mini Max, and it was a Spear vehicle. If you could compare the two, Chrysler came out with practically that vehicle.

Q How did that happen?

A DeLaRossa took it.

Q DeLaRossa did it again. Took it with him [to Chrysler].

A And Hal Sperlich. The thing was planned. Ford Motor Company -- that's ten years ago -- and it is practically identical with their package. Sperlich took the package with him.

Q He was part of the development team?

A Yeah. He knew it from top to bottom. He had it all. This all leads up to the Aerostar. The Aerostar was also a spinoff of the Mini Max, only we wanted a garageable type of van. Our present van wouldn't go in a garage because it was too tall. This was done by Kopka's group. Mark Kelly is the designer that designed the vehicle. That's probably a

guy you should talk to. He's got a different outlook on Ford Motor Company. It's a little jaded, but it would be good to talk to him -- Mark Kelly. He's a younger man, and yet he's got another point of view. He did the vehicle design-wise. Engineering-wise, the vehicle was supposed to be ninety-nine percent complete -- feasibility -- when it was turned over to the truck studio to develop. This is an advanced group, similar to what the Mustang -- when I was at Ford advanced, the Mustang -- went from that studio. Mark did it and sent it over to me. At that time, Mark Kelly, who worked for Kopka, which is our advanced group in the Design Center today. The vehicle was supposed to have been ninety-nine percent engineered.

Q What was wrong with it?

A Nothing was engineered. When it came into our group, it was supposed to be ninety-nine percent feasible. It seems as though engineering just really didn't pay it a hell of a lot of attention. They gave it a lot of lip service, but they never really engineered it until it got into our production studio. They're supposed to do preliminary engineering studies.

Q Could you develop that Mr. Phaneuf? I'm fascinated by the development of the Mini Max, then the hiatus, and then the quick run-through of the Aerostar. Mark Kelly?

A Mark Kelly was the designer on that project.

Q What level was he then?

A He was the design manager in the advanced studio.

Q Who was the [design head] that was running the studio?

A That's Kopka's group, and I really don't remember who Mark's boss was. It might have been Zokas. But regardless of all of that, as we

received the vehicle, engineering did a complete turnabout and said the vehicle wasn't feasible. So every damned surface on that whole vehicle we did completely over again to clear to this particular point, that particular point, what have you, even its method of assembly.

Q How did this come about?

A It was just bullshit. It really was. They sold the vehicle that wasn't feasible, and we just worked our tail off to get that thing and to hold the design together. And I think we did a fairly good job on it.

Q Was there an earlier vignale prototype?

A Not that I know of. The real pretty one that you saw at the [Grand Prix] show was done after. And that's what the vehicle really should have looked like.

Q So that was an elaboration of Kelly's design?

A Yes. And I don't know if Mark did that one or not, but it was done in the advanced studio.

Q If they'd only brought that out?

A Yeah. It was a gorgeous-looking vehicle.

Q Why didn't they?

A By the time that we made Mark's vehicle feasible or suitable for engineering to accept....

Q What kind of a process went into making it feasible?

A What happens is that the metal stamping people will come in and say, "You have to put a three sweep through this body side."

Q What's a three sweep?

A It's a constant curve that raises.... If you drew a straight line, it would be an arc that deflects about 3/8 of an inch from two points.

In order to stamp vehicles, each panel has to have some over-crown, and where you put the over-crown on the vehicle is very important to what the surfaces look like. What we try to do is to work with the metal stamping people to preserve the design so that you don't have pillows in the vehicle. You've seen cars that look like pillows. The front fender looks like a pillow, and the door looks like -- and a lot of people don't see that, but we do, and they don't know why they don't like the thing, but those are the reasons.

Q Subliminal?

A Right. So you have to work with the engineers and put the sweeps in the correct places so that you retain the highlights, and you retain the integrity of the design. So we have to do every lousy surface on that. The instrument panel had to be done over again, the interior all had to be developed -- which wasn't developed -- and there was a cursory attempt in the advanced studio to do the interior, which was somewhat of a concept, but nothing like what would have to be done. So the instrument panel had to be done. We did the instrument panel and the entire exterior surfaces. The only thing that remained was the wheel openings that we didn't touch. Somebody did the very good job study, and we didn't have to change the wheel openings. Typical first change to the surfaces.

Q Obviously, this is nobody's secret?

A No, it was nobody's secret, but the thing that we disliked about it was to be sold down the river because we only have only so much manpower to do a project, and....

Q To fit this in must have been an incredible chore?

A Yeah, it was incredible. It took a hell of a lot of extraordinary effort on everyone's part in the studio to get the vehicle out on time -- to hold our timing -- with all the baloney that we had to....

Q Why did they do it?

A To me, it's a ploy by engineering. They didn't have the people. They were losing people.

Q They were cutting back?

A They gave bullshit feasibility to management. In other words, they told people....

Q To underline a point?

A To get the vehicle out of their hands -- get it out of their shop -- get it into the next shop.

Q They'd say, "You guys take it. You built it?"

A Right. So where one engineering group that accepts a vehicle as being feasible as it transfers to the next group. They take the negative attitude and say, "What those guys said was bullshit. We're not going to build the damned thing," and that's precisely what happened.

Q So you really had to remake the whole thing?

A Right. Start from scratch, because you go through the whole process.

Q You're proud of what came out of it, except you wished you were a little more daring?

A Yes.

Q It looks a bit stilted from what it could have been?

A What Mark had done also was that little whale's eye side window that everybody thinks is a little CD that doesn't work, only they're

trying to make it work, was a much nicer little hatch of design, and it was a little more unique. I thought that was a pretty handsome vehicle as he did it, and then it did suffer a little bit becoming feasible. It wasn't as sharp and voluptuous as Mark had it to begin with because of engineering restraints.

Q What about the decision not to go to front wheel drive, which has been so successful in the Chrysler minivan?

A Ford's theory, at the time, or, at least, it's what was expounded to us, that rear wheel drive is much better pulling a vehicle.

Q Towing?

A Right.

Q They're still talking about that [in their advertising], but are they beginning to reconsider that they want front-wheel drive? Are they bringing out an Aerostar with front-wheel drive?

A I don't know. That happened after I left, I guess, because I doubt if they'd do that. What power pack are they going to use?

Q I don't know.

A Unless they've got something they're going to pull out of something else.

Q The marketing theory was that towing was the prime requisite to the audience they had researched. But there is an even larger audience out there that views it, not to pull a trailer, but to use as a complete family unit.

A Yeah.

Q I think that's where they missed the boat. They didn't look too closely at the [vast] audience that the Chrysler vehicle reaches.

A There's two different factors here, not being a wizard at planning...

Q Or a prophet?

A Or a prophet. I like that better. I think Chrysler only had front-wheel drive that year.

Q I see. You're right. They did.

A In our case, I don't think we had the unit -- a front-wheel drive -- that would fit in there. See, these are the constraints. We are constrained. We have our engines and our drivelines, and that's really what holds us up, and that's where we need the R & D work. We should have a whole line of engines. The engine lab over there spent billions of dollars.

Q On what?

A Rear wheel engines.

Q They've fired all the engineers?

A Right. In fact, I was reading in some periodical the other day that Continental Aircraft Engine Company hired Ford Motor Company's vice-president of engineering of the Engine Division. But, hell, if he was in charge of research.... I don't know how many are left.

Q In fifteen years they're going to rely on [thin reserves].

A Yeah. So we're not going to progress too far.

Q But you spent an exciting time there?

A Yes. There was a heck of a lot of fun. I really enjoyed it.

Q You were your own boss?

A Yes. And, again, it was a little disappointing leaving that truck studio. They finally recognized the fact that we had the interior and

exterior studios, which truck always kept within itself. In the other car studios within the design centers, they had two managers -- one in exterior and one in interior. The exterior manager for the last eight years that I spent in the truck studio, I was both. So when we swapped people again, they made an exterior and an interior manager in there, and they made a design director. They still don't have an exec.

Q They were beginning to realize it was the bread and butter division?

A Eight years? Bullshit! They gave us the kaputz again. Well, obviously, I was hoping to make exec. And after eight years of working very hard....

Q What was the problem?

A Obviously, I didn't get along with the management.

Q A personality problem?

A I don't know. Jack used to work for me, so I guess he figures, "That son of a bitch."

Q What does this mean that you switched to large car exteriors?

A It just means that they wanted to put an exec in there, so they moved people around.

Q Who came in?

A They made John Aiken the director, which is the same level as [Gail] Halderman. A design director is supposed to, at least, have one exec underneath him, and then a manager under him. So he has two managers -- interior and exterior -- under him in the truck studio. And it just makes balls of money on all our new stuff.

Q I hear Aiken is tough to work for?

A I hear the same thing. I can't say personally.

Q So you moved over to large car exteriors?

A Right. And now we're working on the 1990 Crown Victoria and Mercury Marquis replacements. It's called the EN-48. They really don't know whether or not they're going to phase out the present LTD and Mercury Marquis in '90 or not. It depends on....

Q On sales?

A Can you imagine that old honker out there?

Q Still selling?

A Yeah.

Q It tells you something?

A Yeah.

Q That apparently that the segment from forty to seventy still likes traditional big cars. I guess if I were going out looking for a safe, relatively economical vehicle -- a car that wasn't an econo box -- I'd probably buy one, too.

A That is your best buy. It is.

Q And it's the safest?

A Yes.

Q The best engineered?

A And it still has a body and a frame. The ride is better. The unitized vehicle has still got the harshness. You can't get rid of it.

Q If they're sensible, they'll keep it, even though it flies in the face of all the theories of evolutionary design.

A Something about rear-wheel drive, is that you notice a lot of police cars and if you notice a lot of them are Fords, a lot of them are

Chevrolets, and a lot of them are Chrysler rear-wheel drives that they're taking up in Kenosha, Wisconsin. Now the reason that they're doing that is that chase cars jump curbs. You cannot jump curbs with front-wheel drive automobiles. When you jump the curb, you buy yourself a new automobile. So there's the place for that big old honker V-8 and rear-wheel drive.

Q A lot of pursuit cars made are....

A Rear-wheel drive. And the police departments that have gone to the front-wheel drive Chryslers and mini cars have their problems. When they jump a curb, they buy a new car.

Q That throws the whole car completely out of whack?

A It destroys it. You tear up a little bit of running gear when you run over curbs, but they can be repaired with a rear-wheel drive. You can straighten things out.

Q If you have transaxle, you can't replace it?

A You just buy yourself a new one.

Q So Chrysler has got a big market in police cars. Ford's got a big stake in fleet sales to police departments.

A And the big station wagon.

Q People still want big station wagons?

A Right.

Q In spite of the Taurus and the Sable station wagon, which are stunning, people want more room.

A That's a 106/109 inch wheelbase. The wagon gets 114.

Q By now they've probably got it amortized.

A And the reason why they can run them so well is that Panther was pooled up for poor plants. They won't tell you that.

Q Over the years, what has been your observation? Have you ever sat down and thought what the heck kind of business is this? It's exciting, and it's frustrating, and it's creative, and it steals from itself, and it's cannibalistic, but, all in all, it was a pretty exciting career?

A I guess the only way I can put it, Dave, it's like being in love with a whore.

Q Would you have done something different if you were to do it over again?

A Yes, I would have done things differently.

Q What would they have been?

A Knowing what I know now and knowing what -- you're right.

Q It would all be the same?

A It would all be the same.

Q Basically, you haven't tried to be the political animal that some of your colleagues have?

A That's perhaps because I was too stupid or too much of an egotist. I just really always enjoyed design, and it's true.

Q It's exciting?

A Yes.

Q You're doing something that very few people in the world are doing?

A Right.

Q An elite group.

A It's very exciting to work with the finest creative people around. I never found a dull moment in my whole career.

Q Exciting battles with engineers and marketing?

A And it's really not bad. It's just working out the problems together, and, I guess, I say that, and I don't really mean it. It's

just working together and working to a solution. It's not that they're wrong and I'm right or anything like that. I never felt that way. They have a hell of a lot to give, and I've got a hell of a lot to learn. In fact, the older I get, the more I realize I know less and less. I think we all feel that way.

Q You're sixty years old this year?

A Right.

Q And you don't have to retire, you can go on for another five years?

A The company is making it uncomfortable for you to stay, though.

Q Do they after sixty?

A Yeah. In other words, you're not promotable, and I really feel as though I should have been promoted. Everybody probably feels that way. But I think it's sort of age discrimination. You can't blame them. They don't want to promote you; they'd rather bring in somebody younger and get you out of there.

Q Or put you on the shelf?

A Right. They really would like you to go away. I will go away at sixty-five. No, at sixty-two.

Q It's sixty-two now?

A I'll go at sixty-two. I think they'll make everybody miserable.

Q There's several of your age bracket?

A They feel pretty much the same.

Q Looking back on your career, tell us about the IDA award that you got for designing the Ford Mustang.

A Johnny Najjar is the guy that applied for that through the....

Q What was the IDA?

A Industrial Designers of America. It's a recognized society similar to the ASE, and they give out cookies every once in a while, and various designers around the country vote on the best design of the year.

Q You were one of the...?

A Recipients of the medal.

Q Who else won?

A I've got it on my desk. Gene Bordinat, Joe Oros, Johnny Najjar, Johnny Foster, and the guy that got killed out in Ann Arbor [Damon Woods].

Q Was Halderman involved?

A Yes, Halderman. It came out of his production studio -- Ford studio.

Q And, of course, yourself?

A True, right.

Q You got separate medals?

A Yes, they gave us separate medals. Everybody got a medal.

Q That's sort of touching all bases?

A Right. They got as many guys as they have medals.

Q That must have been satisfying, momentarily?

A Yeah, it was satisfying, but it was also disappointing to see so many people around there that really didn't belong there. And what I felt bad about was I always claimed that the modeler that modeled it was the head modeler and should have been in on it too. His name was Wally Amerosi, who is a retired modeler. They didn't want to him on there because he was a modeler. Joe Oros didn't think too much of modelers at the time.

Q Modelers are another group of unsung heros?

A Absolutely.

Q Without them, there wouldn't be any three-dimensional realization of what others intended.

A That's true. Of course, years ago we didn't really have modelers either in the business. We took a wood patternmaker, and you drew up a particular design, and you gave it to a wood patternmaker. We are the ones that started modeling.

Q Where?

A We started it out at Kaiser Frazer. I'll trace it back. It was started before that, and I think the first place clay was used was at Studebakers. I think it was pre-war. Let's see, I can go even further. It goes under Briggs. They were using clay at Briggs.

Q Back in the 'Thirties?

A Yeah.

Q I guess the head of G.M. design -- Harley Earl -- brought clay modeling from California.

A Harley Earl? It could have been.

Q He supposedly brought a technique that used common clay, and then the body builders slapped it on a wooden body buck. There were problems because the early clay wasn't effective, and it didn't have a waxy base, so the stuff kept crumbling and drying out. So you guys really began to use a clay as a design tool?

A Right. We had to train the patternmakers into clay modelers, because they were the only ones who could read a drawing.

Q That's a natural evolution of their skill?

A Of their skill, because if they could carve it out of wood, they sure as hell could carve it out of clay. And that's really the way they started it at first.

Q That's interesting. So it was much easier to have patternmakers make it out of clay? Was it just a natural use of 3/8th models if they just wanted something quick? It would be large enough to show the dimensions?

A A typical example would be Packard Motor Car Company had a design studio. I'd say it was twenty some feet, and it was probably nine feet wide. It was up on the third floor, and we worked in 1/10th and 3/8th scale models there, because of the fact that we didn't have modelers. We did it ourselves. And we could work on it. Then when we got a modeling room that was out in the wood shop, when we finally recognized the need for that, where we could put one car in the studio. We worked on 3/8th models as study models and then went right into the full size. So it was a quick way of getting a picture of what we wanted, accepting that, and then going on.

Q That was the very early days -- 'Forties and 'Fifties?

A Yes.

Q When you got to Ford, what were they doing?

A Ford was still clay modeling on wooden slats. They used to build up a complete buck. They dropped the section of the vehicle three to five inches from the outside of the projected surface, and then they would put clay on those slats. That was really something.

Q That would be with a lath?

A A lattice. It was like lattice, only it was 3/4 by 3/4 slats, and

they were nailed on in the form of the vehicle, which you would have already drawn full size.

Q What about the templates?

A All we had was angles, and that worked off a surface plate that we had laid down on the floor, and then you would just simply cut a section off your drawing. You drew up the sections, and traced them off for the modelers who'd cut out a piece of template board that was that accurate if you had to have it accurate. They'd cut it out of masonite or plywood and set it in the model.

Q In a career that spans very close to forty years, has the automotive design field changed radically in those forty years, or is it basically that you're still doing much the same type of work? Is the design principle still the same?

A Design principle is still the same. The way we're getting there is changing. The ultimate goals are the same is to get an exciting new product and to solve problems -- either created by ourselves or created by the government -- I mean package-wise, the size of the vehicle, running gear, whatever. It's basically problem-solving or packaging. I think the desire is there. The method of getting there of projecting your thoughts to others will not change. The designer still must sketch, present the ideas to management in model form. He has to sell his idea with the sketch. He has to sell the idea to such an extent that we will make a clay model or three-dimensional model out of the design. That is changing drastically. Now with the tubes that we have and the equipment that we have -- the digitizing of models where we can take equipment, go up to the model, and have the entire surface taken off the model by the

digitizer, that can go immediately into a mill and mill another exterior model. I think that designing will be done on the tubes.

Q You're talking about the computer-aided design?

A Computer-aided design. I think that's coming rapidly. It's in its infancy right now, and I think we're having somewhat of a time with it right now.

Q Why is that?

A They dislike it because they don't understand it.

Q Is that part of it that they don't understand it? It does have its limitations?

A It does. Right now we only have one view that you can work on that's either side view, rear view or you can articulate the thing and make it rotate. You can do a number of things like that. Most of the problems with the equipment that we have now is that there isn't any perspective to it, so the front end and rear end in a three-quarter front view are both the same size -- they're on the same plane. But we have a few people that can put it into perspective. They understand that the picture plane is here, and the points that they've taken are back in this box that gives you a perspective. That's part of the problem. And, I think, the designer of the future will be using the tube much more often.

Q What's your personal opinion? Do you find it useful?

A Right now they're training the younger people on the tubes. We have engineers that are trained on the tube. In my opinion, I think, that is wrong because they don't have the design background that is needed to put the lines in the proper places and know what surfaces they are going to do. They put them together very crudely.

Q Supposing you finalize a design or part of a design on a computer screen, how do you lock it in? How does it transfer to a finished product?

A The way we do it now is that the machine will store the information. The computer stores the information. It also goes through a printer, and all you have to do is say "print out," and it will make the full-size drawing for you, or tenth size drawing, or a 3/8th size drawing. You can do any size drawing you want.

Q It's versatile?

A It's versatile as hell. It's quick. Once the information is in it, it's like anything else, you have spoon feed the information in there. And not being trained on the tube, I really don't know. In fact, that's one of my complaints. People that work for me, they're working on the tube, and I really don't know if they're snowing me or not! Does it really take three hours to do that? Now if I were trained on the tube, and if I did it in fifteen minutes, then I'd want him to do it in fifteen minutes.

Q It's the wave of the future?

A I think so.

Q Do you think everybody in design management are committed to it?

A You'd better be committed to it, because they're sure spending a hell of a lot of money on it.

Q I guess everybody has now got a desktop monitor?

A No. The group right now that's getting computers are the engineering group. In fact, we used to have them. It's layout people for our preliminary engineers. They're the only ones getting it.

Q They're waiting for more technology to be able to use it as a complete design tool?

A With the money that we're putting in it, the tubes that we have now are obsolete. It's just like anything in electronics. In order to do a job properly, you should have the four views on the tube at one time so that when you change a line in side view, you can see what it does on plan view, and front view and rear view. Our machines are not capable of that yet. There are machines on the market that will do that.

Q There is the scanning machine, but are they horribly expensive?

A I really don't know, but I know that we don't have them.

Q The nightmare for the planner of this area is that the moment you buy and get it installed, they're obsolete? Somebody will come along with a much better product?

A There's more bits of information in it. To develop a line, the machine is only capable of doing very mechanical things. Like you ask for a sweep, it can calculate $3/8$ th of an inch within sixty inches, and it will calculate this line out perfectly. But I want to say that it has a thousand bits of information into it, and I want to feed ten thousand bits of information into it, or the tube isn't capable of doing that. It's only divided in so many squares. It's like your TV tube, that's all it is. The bits of information to make a beautiful line or a spiral, I can get the machine to run out of enough little bits of information where it can't do it, and that's what we're doing, we're overloading the tube.

Q And yet they're committed?

A They're committed to what they have. I think they're just going to have to constantly update all their equipment as quickly as they can.

Q I suppose they will watch which equipment is adaptable to the present system and try and utilize that?

A That's what we're doing now. We've got the Lundy tubes that, in my opinion in watching it operate, it seems as though everybody is operating out of one computer, and that computer gets up to here every once in a while, and you sit around and wait for your information. You can't get in the door. You can't get access to it because there are too many people into the computer asking for, perhaps, the same thing or trying to go down the same corridor that you're trying to get to to get to your drawing in a particular file. But they are marvelous.

Q I've got the impression in talking to a couple of designers, things are getting more and more complex. The technology is expanding rapidly. The Cad-Cams -- the computer-aided manufacturing -- how does that work? Is that transmitting what you see on the tube to a robot-operated model?

A I don't know that much. I really don't.

Q That's become trendy in the automobile business?

A Yeah. You've got robots running your machinery that's running the other machinery to produce the product. That's the ultimate, really. But as far as our work goes, it's strictly taking points off a three-dimensional model, putting them on paper so that they can be designed. The draw angles have to be figured out, the welding flanges have to be figured out, and all the parts put together, and it can all be done on the tube. But the finessing of detail that must be done which the old surface people would do, is not being done by the operators because they are not trained in looking at lines. So the biggest thing that is hurting Ford Motor Company now is that the computer drawings that we send

out as dies to be made are not finessed or checked. We used to check them. Somehow they're getting out of the company. When I go out to vendors and look at some models that are in terrible shape, and it's simply because there isn't enough information on the drawing, or the information is so vaguely put on the drawing from the computer because the operator did not use more bits of information to develop his lines and he leaves it to the vendor to figure out. That isn't the way things are done.

Q Certainly you would have the chance to more streamline your design on the tube?

A No, not necessarily. You can't draw on a tube. In other words, it's like a pen. In other words, I can sit down and draw a line on a piece of paper. I haven't seen any equipment around there that we can do that with. That information has to be fed into it. What we do is we still make a full-size drawing of the design. We take that same design, which is a full-size drawing of the car, and we develop our plan view section, our front view, our rear view, and we send that board downstairs to the group that runs our scanner, and they have a scanner that scans those lines.

Q Electronically?

A Electronically. So it picks up all these lines, puts it into the computer, then it draws the drawing part. So, all that work used to be done manually. Well, this process takes about twice as long to do as a man could do it manually.

Q Then what is the attraction?

A The attraction is that it's new equipment, and it's a new technology. And it is better. Once it's up there, I can change it, or I

could have changed it with a band, but I can get a drawing out of the machine let's say within a half of day, and I really couldn't get a guy to draw that in that time. So you lose on some; you gain on the other. But to get there you have to use the old-fashioned method. Once it's on the tube, you could sweeten the line, change the line, do what you want.

Q What about new graduates in design? What kind of design techniques are available?

A The same as we were taught. The techniques are, maybe, a little bit different, but none of them come in with computer savvy, because they don't know what type of a program we have. General Motors does one thing; we use another type. American Motors, if they have a system, will probably use another type.

Q Are you still using Burroughs?

A Computers?

Q Yes.

A The only things that I see around there is a couple of Apples on engineers' desks. They're using them for engineering. One of the other ones are the Lundy tubes.

Q Did you say the Lundy tubes are almost obsolete?

A I think they are. I think they're slow with the information coming back. You can't get the four views on it.

Q Looking into the century, Ford has got a studio called 2000X. What can you say, in general terms, about what their plans are for that complex, or is it just a public relations ploy?

A I think, hopefully, that all design studios would be like 2000X studio. I think right now it's a public relations thing. Here, again,

it's just the designer pushing the system further than what he knows it can go. And, I think, we have to do that to make the system do that. Years ago when they talked about designing on a tube, somebody didn't push it far enough, or they weren't talking to the designers.

Q Will the human element be reduced in the 21st century design studio? Will there be more reliance on electronics?

A I believe it will take less people to do it, because, I think, that you'll be able to mill right from the information on the tube. In other words, you can have a model in one room, and it will be cutting that model while you're adjusting the lines. I think it will be marvelous.

Q Exactly what is milling, and what is scoring?

A Milling is actually taking away material and making a form. And it's five axis mill. It means that it will be getting five different positions: horizontal, vertical, upside down, and sideways. Right now we only have a two axis mill. It will mill around a corner, and then you have to start on the other side and mill off. This new one should be able to go down, under, and up.

Scoring is something where you draw a line, and you make a line deep scoring the line in the glass.

Q It's not part of the clay modeling process?

A No. It comes out like that, but, if you look at the model, it looks like scored lines in it, because actually what it's doing is cutting segments for every hundred millimeters, and it makes a checker-board because you've got 'em vertically and horizontally.

Q In terms of what Ford has done and in terms of what G.M. has done, is it fair to say that Ford has taken sort of a leapfrog over General

Motors and sort of dared them to get away from the econo boxes on wheels?

A I think General Motors, looking back, is a very formidable opponent. If we think we have it over them now design-wise, we really don't. We don't have the capacity to produce the number of cars that General Motors does. And I think they really don't give a damn.

Q Once they're committed to a design, they have to stick with it until the new change in administration, and then they'll probably go down and round?

A It doesn't matter what they put out, Dave, they'll still sell it. And next year will be better and better. Their cars -- you know it, and I know it, and people say they'll never buy another Cadillac again, but the guy is going to buy a Cadillac again, or he may buy a Lincoln for awhile, but he'll be back his Cadillac, because they're not going to sit on their duff over there. What they're doing over there, they're putting more overhang on those vehicles. They're going to make 'em look longer, and they'll look a little bit better.

Q But another cycle is starting?

A Right. And how aerodynamic can you go, Dave?

Q True. I don't know how far on down in a wedge shape....

A How many silver bullets?

Q The Japanese with their new sporty cars have really gone down to the wedge, closer to the ultimate. They're moving. In the convertible, they're moving back into the teardrop shape?

A If you actually look at it, and I kid the fellows about it, we're actually going back to the old Chrysler fins because these wedges and the

towel racks on the back of the vehicle, which are supposed to be spoilers, if you look at it from a side view, they look like the old Chrysler fins. It looks as though we're turning full circle.

Q The current cars -- the '87's -- are merely facelifts?

A That's right.

Q When is the first big change coming in the next five years?

A As far as the Ford goes, it'll be a '90. We're bringing out new products. We've got a new product coming out in --well, a facelift in '88. We'll have an FM-9 in '88, which is new, but it really isn't new. You're right there. So I would say '90 is your next....

Q Threshold?

A Yeah. It'll be our next....

Q In general terms, what is being planned? This will be heard, probably, in 1990. What sort of configurations are they thinking of? Longer, lower, rounder?

A What we're planning in our studio right now is proportions. Still with the aerodynamics, but what we're playing with is a short width, long deck, and medium greenhouse. So there really is a short, normal greenhouse and a longer decklid. In fact, we're playing with one with a 53 inch overhang, which is back to the 'Sixties.

Q Why the overhang? Why the longer deck? Who cares?

A Well, people do. It's to be a family sedan. You want lots of luggage space. Today we have absolutely no luggage space. You take a Mark, and you put in a pack of cigarettes, and that's all you get in there. You can't even get your golf clubs in there.

Q I've seen the Thunderbirds. You can barely get a small suitcase in there.

A Right. You can't even get a bag of groceries in there.

Q So, they're coming back to what people want more is luggage space, more grocery space?

A That's what we're going to do, and I think the cars will remain aerodynamic.

Q They aren't going to lose that. That's just too good.

A I don't think we'll lose it, no. I think it will be modified a lot, and it has to be. I think you'll see a few of the old cliches coming back where you do see the corner of the fenders, only it will be in a new aerodynamic way. Right now you can sit there, and you can't see your front end. All you're driving around is a windshield. Now that's wrong, too. We go overboard every once in awhile. But I think we're on the right track. I think the designers have got a hell of an opportunity. With design, really, you're starting over every project that you have. The world is your oyster. It really is.

Because we're the people that set the trends. We're the ones with creative minds. This is endless. It will go on until hell freezes over. You can say, well, we put the ultimate design -- the silver bullet is here -- but it really isn't. Some clever little devil will come along and change that silver bullet, and we'll start all over again.

Q I wanted to ask you, are we moving away from the driver making the decisions electronically, or are we moving into an area where more and more decisions are made by onboard computers? Do you see that in your area?

A We hear that, but we don't see it in our areas, no. It's well beyond us. The closest thing that we've come to that is Johnny Reinhart,

at one time, trying to sell me this little computer chip that I brought into the company that some Japanese outfit made up, and all it is a little sonar thing when you back up and getting within two feet of the car behind you, it beeps. I gave it to Mabley.

Q Who's that?

A Mabley is the V.P. of truck. That's a hell of a good thing for a truck. And he kind of pooh-poohed it and laughed it off, and it was a hell of a good idea. Everybody that drives a damned truck can't see out of the vehicle. It was a hell of a nice feature.

Q He didn't buy it?

A No, he didn't buy it. I love Mabley, and he was a good guy, but, you know, it's a nickel and dime piece of equipment.

Q It would be basic?

A Yeah. Even with a car. So we went around with things like that. I think they're great.

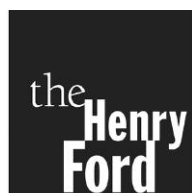
Q But you can't get them to sit down and say this is what we should look at and adopt?

A No. All we can do is keep designing it in. In other words -- and that's something very hard to design, at least in electronics in the car. All it is is a feature.

Q You've had a lot of fun and a fascinating career.

A Thanks, Dave.

Q Thank you very much, Mr. Phaneuf.



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