



Transcript for

AUTOMOTIVE DESIGN ORAL HISTORY PROJECT

INTERVIEW WITH JOHN “JACK” J. TELNACK, 1984 and 1985

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The Automotive Design Oral History Project, Accession 91.1.1673, consists of over 120 interviews with designers and engineers conducted by David Crippen of The Henry Ford during the 1980s. For more information, please contact staff at the Benson Ford Research Center (research.center@thehenryford.org).

Staff of the Benson Ford Research Center
August 2021

**AUTOMOTIVE DESIGN
ORAL HISTORY PROJECT**

JOHN (Jack) J. TELNACK

**1984
&
1985**

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 Field in another of our design history series interviews with seminal industrial designers, and today we're at the Ford Motor Company Design Center in Dearborn, Michigan. This is August 23, 1984, and we're speaking with Jack Telnack, who is the Chief Design Executive at the Ford Motor Company. We've asked Mr. Telnack to tell his story in his own chronology.

A I was born in Detroit in 1937, and, obviously, coming from this town had to have some type of automotive influence, which in my case helped to be very dominant. I remember as a young boy in the pre-war years -- 1940-1941 -- spending a considerable amount of time at the old Ford Rotunda right here in Dearborn. My father used to take me there, not only to see the movies in the beautiful theater that used to be in that building, but to see the new model lineups which were always on display. I remember, even back then, that I fell in love for the first time when I was about five years old with the 1941 Continental Convertible. I've never forgotten that car. My father had a '41 Ford, two-door, maroon. [I'll] never forget that, either. I'd always loved it, but I kind of hoped he could afford the Continental. [We] didn't quite make it that way. It had a strong bearing on me. I seemed to be developing an appreciation for design, even at that early age. I just had an appreciation that went on at the Rotunda and the other auto shows that were in town in that era. I recall being extremely disappointed during WW II when they closed the Rotunda. I didn't live far from there, right on the borderline of Dearborn and Detroit, and I could ride out to the Rotunda on my bicycle. I was so enthusiastic about that place. I

would ride out there in the summertime during the war, and I'd walk in the front door. At that point, the Ford Motor Company had converted the whole Ford Rotunda to offices with people doing war work, and they still maintained the globe in the center of the building with the open air [space] -- that was prior to them putting the geodesic dome over the center of the Rotunda -- and I can still remember walking in as a little boy. I was probably seven or eight walking around the entire Rotunda thinking that I would go from one office to another sure that there would be a display of cars in there someplace, but it wasn't there. Then I remember after the war, around 1953, when they reopened the Rotunda and brought the displays there.

Q The Fiftieth Anniversary.

A That's right. I was absolutely delighted. I can remember going for rides around the Rotunda again, back before the war, on what they had called the Roads of the World. They had different sections of road going around the Rotunda, and they would take you for rides around [on them]. They had Belgium block roads, and stone roads from Northern England and all sorts of different road surfaces in there, and I was impressed with it. I can remember the Ford buses that they had with blue glass in the greenhouse -- in the roof -- [where] you could look through, and they were extremely modern in those days. That had an influence on me. I can see this. I could just feel the design. Also, in those days, the Rouge manufacturing facility was a real showplace, and Henry Ford I kept the whole Rouge plant as a showpiece. I can remember driving by there where the grass was beautifully manicured. He had glass-enclosed powerhouses that you could go up and see steam engines, because he really had a feel for steam engines, and I remember seeing that. I can remember even the

diesel locomotives that he had switching the railroad cars in the yard at the Rouge plant were the most modern diesel locomotives I'd ever seen anyplace. I was interested in all modes of transportation, but I was really impressed with those. If I'm not mistaken, they were painted blue and white also back in the those days.

All of those design elements that I was viewing as a young kid must have had real impact on me because I just became aware of it. I was totally immersed in it right down to the Ford freighters. I can remember my Dad [when] we were driving around there and crossing the Rouge River. I can remember the Rouge River bridge being opened and stopping the car, and he would take us kids out and stand us there so that we could wave to the crew on the freighter as it would go underneath or through the open bridge. What all this meant is, I was so indoctrinated with not just design, but Ford design and that oval even back then. I, by the way, was born in the Ford Hospital. I think I came out with an oval stamped on my chest. I don't like to tell this to many people, but I'd probably find it very difficult to draw a Chevrolet, if I tried, after all that kind of an experience. I never thought of it this way before, but, I think that had a lot of influence on the way I felt about design and then about the company. And I look upon myself as being a pretty gung ho Ford person, and a lot of that early conditioning had something to do with it.

I was so impressed with the '41 Continental that I always wanted one, and when I turned sixteen and became of age to buy a car, I couldn't find one. Even if I found one, I couldn't afford a '41 Continental then, even though the car would have been about ten years old. But I did locate a '41 Mercury convertible, and I proceeded to pick up a pair of acetelyne torches and chopped and channeled the car. The real driving

force behind that was to get it to look like a '41 Continental, and it was getting pretty close to it because I did take six inches. I'd channeled the body over the frame six inches and chopped the roof and went to the three-quarter type of convertible roof that the Continental had back then. Obviously, there was something inside me making me want to move in that direction, and I really did. I completed that car in time to drive it out to California.

My folks wanted me to become an engineer or an accountant or to get into some normal type of profession, and they thought I was kind of strange saying, no, I didn't want that. I really wanted to design cars, and when I was about sixteen or seventeen in high school, I visited the design center here at Ford, and I visited the design center at G.M., also. In those days, they called it styling. I talked to the designers both here and G.M. and was able to discuss what designers really did. I think that's when I got a real clarification on what the profession was all about and knew then that I really wanted to get into it. My folks, again, were very concerned about that because they thought I should get into something with a little more stability than just this arty/designy game. One of the most influential people at G.M. that I talked to was Homer LaGassey who later on became a designer here at Ford and is now instructing down at the Center for Creative Studies. He was very enthusiastic and gave me the kind of encouragement I needed in those early formative years to really make an effort to get into the profession.

Q He's been a catalyst to several design centers over the years.

A Oh, he really has, and he's just one of those special people that can give the kind of encouragement that young people need and guidance and direction and will tell them if they're really not suited for the

business. He can feel it. He can feel whether or not they have gasoline in their blood. At Ford, I talked to a designer by the name of Alex Tremulis who was also extremely influential in my career. And, after reviewing my few little sketches that I had [done] when I was in high school with him and sharing my thoughts and ideals with Alex, he pretty much guided me and advised me to attend the Art Center in California, because in those days that was the only school that offered good automotive design courses. In those days it was right in L.A., but since then, the campus has moved to Pasadena. Interestingly enough, I went through the Art Center and completed the course [work], received my degree and was hired by the Ford Motor Company at the Art Center.

I came back, and started working for Alex when I got back here. It was just happenstance, but I was put into Alex's studio. I arrived on the doorstep here with portfolio under arm saying, "Okay, Alex, I did what you told me to, now what am I supposed to do?" He said, "Well, come on in and work, and here is what we're on," and got me involved with the projects. That's when I really got into it, and, I have to say, it was one of the most thrilling days of my life to be able to walk into this building and sit down at a designer board and really become involved in the design process. It was just overwhelming. It was definitely one of the high points in my life.

Q At [this] time was Alex involved with the advanced design studio?

A That was after. He moved around quite a bit in the different areas in here. At this point, he was in the Ford preproduction studio....

Q Involved in training young designers like yourself?

A I believe he had just completed that assignment when he started this preproduction studio, and I was working for him in that. I don't

think he ever stopped training young designers, to tell you the truth, and he was just the kind of guy that offered an incredible amount of encouragement to young designers and just kept us fired up, which is what we really needed and still do today. But, he was just a great driving force behind all of us young designers, and all the young designers really respected him and appreciated what he did for us. I still do. I still see Alex every so often out in California or whenever he's in town. So he was, very definitely, a very strong force in my life and gave me a lot of encouragement, and it, obviously, paid off. It was just great being around him. He was one of those infectious personalities that had a million stories to tell about the automobile design work that he'd been involved in -- everything from the Duesenberg days to the Tucker days -- because Alex was very instrumental in designing the Tucker. It was just so great to be around people like that in those early years that it made it -- I just thought I had one of the most exciting jobs in the world, and I still think I do.

So, from then on, as I moved through the corporation -- through different studios here -- by the way, I joined the Ford Motor Company in 1958 upon graduation from the Art Center in California.

Q What was the atmosphere in the preproduction studio in those days when you first came?

A It was a very exciting time, and it was at a time when styling was king. We had a feeling there that we could do anything. The whole company -- the whole country had that kind of mood. In the 'Fifties, after the war period and all, the country felt very strong. We were very enthusiastic, and there was a lot of energy in this country, and, I think it was somewhat expressed in the designs that we were doing. This

feeling of we're just unstoppable. We can achieve anything we want to set out to achieve, and, at that time, Ford was really one of the leaders in innovative design. My gosh, we were working on sheet metal convertibles that folded into the trunks. We were just loaded with new ideas and new innovations. Anything was possible. If fins were possible, everybody was trying to do the biggest fin in the world. My son looks at these old cars today and says, "Dad, why would anybody try to make a car look like a rocket?" and I had to stop and think about that for awhile.

Q It was the rocket age.

A It seemed to make a lot of sense in those days. It was the rocket age, and those were the shapes. Those were the trendy shapes. It had absolutely nothing to do with function. However, if you talk to Alex Tremulis, he'd tell you that we would have increased the stability of the car.... There is a bit of truth walking around on that one.

But, I was doing the kind of design that I wasn't trained to do in school. When I attended the Art Center, we were trained more in the functional school of design, and the type of designing we were doing back then was very contrary to the type of training we had in school, in all fairness.

Q Could I ask you to describe -- since I understand you've kept your contact with the Art Center -- the curriculum and the ambiance for young design students at the Art Center in those days?

A Okay. Let me take a try at that. We had a variety of instructors at the Art Center, and they had all had experience in Detroit. Some felt that Detroit design was a bit bizarre, and it was almost as if they had left here and gone back to a retreat in California where things were pure and clean and simple. I suppose they were back in the 'Fifties compared

to California today. Today, it's a totally different culture out there, but they retreated to their ivory towers a bit. Some of them did. And we had some very pure thinkers, and it was very healthy, and I'm glad that I was exposed to those types of instructors at the Art Center

We were trained in clean, functional, form-follows-function type design. That wasn't necessarily a salable type approach in Detroit in those days, and it wasn't for many years. It's just starting to be now. The interesting aspect of that is that just in the past several years here in Detroit I've had the opportunity to really utilize the kind of training that I got in the Art Center back in the mid-'Fifties. But it was, again, a very valuable experience for me to have lived and [been] schooled in that kind of an environment at the Art Center because we shared a lot of ideas with other product designers and graphics designers. I still think today that California is one of the great centers of design and design influence; not only for the nation, but for the world. It really is, and it was back then also. And, I couldn't think of a better place for a young student to study -- to be surrounded by all of the newness and the trend-setting design feeling that you would experience in California. That had a very strong influence on me and a very lasting impact on me. But coming out of that kind of an environment to Detroit was extremely difficult for a number of designers because they got back here, and they were a bit disillusioned before coming back. Once they got back here, they realized that -- in the mid-'Fifties -- Detroit really wasn't the place where they could practice the kind of design training that they had, and we had a great turnover of young designers back in the those days.

Q You did?

A Oh, very definitely, and there weren't many places to go. If you wanted to design cars, Detroit was it, so many would just leave the automotive business, even though they loved cars, and would go back out to the Coast and get into product design or graphics or whatever else [that was available]. Some of them were very successful at it. Fortunately, having been from this area, I was able to tough it out weather-wise, climate-wise, and design-wise. When I compare myself to other young designers in those days, I had the ability to withstand the Detroit fin stage and this exaggerated design period of time that we went through. It lasted for quite some time. But, I was able to withstand it. I'm a very optimistic type person, and I'm always thinking that one of these days I'll get a chance to really express myself and, hopefully, get some cleaner, more functional designs on the road. So, I think I had more staying power than some of the other young designers in those days, and, being the optimist that I am, that's why I really stayed on and fought through that maze.

Q As I recall, [compared to] the degree of the sort of thing that General Motors were doing, Ford went relatively mild. It was mostly Chrysler doing the big, curved fins [with G.M. following suit].

A There's a lot of truth to that, and we were very surprised here to see the Chevrolet which came out with those enormous, horizontal fins? That gave us the license to go ahead with the '60 Ford, which had a horizontal fin -- not quite as pronounced as that. That car was inspired by a show car that we had done here in that preproduction studio that Alex Tremulis was in, and the car was called the Quick Silver, and that led the way and really set the design for the 1960 Ford, which was one of the cleanest and one of the best-looking Fords that I had ever done in this

company to that point in time. However, the car was so clean, [but] it really wasn't that successful a design. But, in those days, we had the ability to change the designs every year. My God, we went from totally different sheet metal sets from '59 to '60, and then [in] '61, we had a whole new car again. We were just changing every year. But, we had the money. We had the sales buying to go out there and do it, and it was much cheaper to retool a car back in those days. We're not thinking in those terms any more today. Then we had the ability to change. If you made a mistake one year, okay, you could rectify it the next year and fight your way through that year, sales-wise.

We don't have those opportunities now. We have to hit a design, and the design has to have much more staying power. It just has to last because we can't afford a change. Tooling is so incredibly expensive these days. We have to make the right decision today, and that's having a very strong influence on our designs. So, I think that's one of the forces that's causing us to do much more rational type design -- much more meaningful design today. It's not just designing to someone's whim. In those days, we said, if management came in to review a car and, if the top guy had the wrong orange juice for breakfast, he could either make or break a design regardless of what you said. And, in those days when we were selling designs, we were talking about chrome by the pound -- almost by the ton -- on the car. You never heard any functional reasons for any of this ornamentation that was on the car. Frankly, I think we had the right name on the building then -- "Styling." It really was styling. It had very little to do with functional design, in all fairness. The people were very, very clever -- the engineers and designers. People in the company were extremely clever to make it happen, and that's why we

were successful in the second world war. This country has a great resource in its people and the ability that those people have to respond to any situation, whether it be a war effort or a change in the marketplace. We could change quickly, we could make it happen. Nothing was impossible. I'm not saying things are impossible today, but we certainly have a different outlook today. We're just taking a different approach. Much more conservative....

Q Cautious?

A Much more cautious, yes. Our culture is that way today. Gasoline isn't 25¢ a gallon any more like it used to be, and it's just a totally different outlook on life. Our culture is really changing. You could say we're becoming much more European. That's why our designs are -- as some people say -- becoming much more European. I like to think we have a more international look today, not just a European look.

Q Did you have anything to do with the model you mentioned -- the retractable hardtop?

A No, I didn't.

Q It was more before you got there?

A Right. We had a really sharp engineer here -- Ray Smith was his name -- that I understand worked out all the mechanicals on that, and it was just phenomenal. He was a brilliant engineer, and I don't know what happened -- I know Ray retired. I don't know where he is now, but he really worked that out, and then he worked out the T-Bird top that folded into the deck. I believe he was responsible for the two-way tailgate. He was a very special engineer. We had a number of people like Ray that enabled us to get these kinds of designs on the road and quickly. That's the incredible part about it. But, on the other hand, there was another

issue that wasn't walking around in those days that we have now, and that's the big push for quality, durability. Nobody thought in those terms. We wanted it. Don't misunderstand me, we all wanted it. We were aware of it, and, especially as designers, we were aware of quality. But the most important element then was change -- almost change for change sake, but change to be out there and be different, to have something new in the marketplace. Hell, we didn't have time to fix the quality. In those days, we were doing a change every year called the new design of the year. Who has time to perfect the quality? Just get it out!

And, it was razzmatazz, it was showbiz, it was quick impact, that design we were doing, but it satisfied the market, because that's the way the market was. And it wasn't only in automobiles, it was clothing, and fashion, and architecture -- everything we did. In the whole attitude of the nation, the designs suited that era very well. I don't think they necessarily led it, they were a result of that era -- or a spinoff of the era. A lot of people say, "Oh, we had a strong influence on overall design." I don't think so. I think it works hand in hand. I can't say we influenced the design of toasters or refrigerators. It was just all going along the same lines in those days.

Q Industrial design was a very exciting era in terms of design [creativity].

A Oh, no question about it. There were people like Raymond Loewy, who was one of the big names in industrial design, and had a strong influence on it. As a matter of fact, he had a strong influence on me, too. I think the '53 Studebaker was one of the most significant cars of its time. It was an extremely clean car. I was in love with that car from day one. It was done just prior to my entering the Art Center. I

remember a roommate of mine had one, and I later bought it from him and really took care of that car. I wish I would have kept it. [Loewy] was a very clean, a very pure designer in those days. The car wasn't a commercial success. That doesn't mean it isn't good design, because it depends on how you equate good design, but it's still a lasting design -- a very good design. It looks good on the road today.

Q You are in the late 'Fifties and working with Alex [and others] on the pre-production design area. What was the first model that you feel you had any impact on in terms of [its] design?

A My first contributions to any of the cars would have been on the '61 Ford -- the full-size Ford. There wasn't much impact, I have to tell you. I was involved in doing grille textures and moldings and wheel covers. I was strictly exterior in those days, and I can't say I'm all that proud of it, but it was still a thrill just to see a grille texture on a car in those days. There was a lot of opportunity, because we had grille textures not only on the front, we had them on the rear of the car in those days. So, you had a lot of opportunities to get your ideas on the car. A lot of those cars looked like a collection of ideas from a lot of different designers, too, in all fairness. But, nevertheless, they worked, they did the trick, and they were....

Q Successful?

A Yes. They were very successful in terms of sales. The first, and probably the most exciting project I was on back then -- this moves on into the early 'Sixties -- would have been the Mustang. I was involved with the first Mustang program. I remember when Joe Oros was running the Ford studio, he assembled a group of us from the different Ford areas: pre-production, car and truck areas -- I don't remember exactly how many

-- maybe he had a half a dozen of us designers come together, and we took a very industrial design approach to this. I think Joe Oros had just attended a management seminar where he had picked up a lot of new techniques in organizing people and designing and getting more group thinking into the design process. I can remember sitting down in the initial stages of the Mustang program with Joe and his team of designers that he'd assembled, and we worked out the image strategies for the car. I remember Joe writing [down] all of these thoughts on what we wanted the car to be image-wise, and what we didn't want it to be. [We] talked about the different design elements of the car and the way it should be before putting pencil to paper and really start the sketching of the car. It was a very thorough analysis of the design problem, and we established the design intent.

Q Was this Oros' approach?

A This was Oros' approach. He did this on the Mustang. They were also doing a car -- a Mustang proposal -- in the advanced studio under Elwood Engle in those days. There may have been one going in the Lincoln-Mercury studio under Gene Bordinat. I wouldn't swear to it, but I think there was. It was the first time I was involved in a very thorough design analysis trying to establish the image of the car -- establishing the image objectives -- and it worked. It really worked, because our studio had the winning car. In those days, we had studios in competition with each other here in the building, and we had the winning car. It worked, and we held together as a group, and it was a very exciting program to be on. I still have in my portfolio the first sketch that was done of the Mustang fastback which we brought out the second year of the Mustang, and it was based on the sketch that I had done. I

was very proud of that, so I felt that I had some real input on the original Mustang program, and, naturally, I had one as soon as the car was produced -- a Mustang convertible. It was a great car. I could have sold it many times when I first had it, because they were really in demand then, too.

Q Who else was involved in that team?

A Charlie Pfaniff was in there, Gale Halderman, a fellow by the name of Jim Powers, who is a designer out in California now and has been in business for himself for quite a few years. I can't remember all the other people that were in there, but it was a pretty good team of people that Joe put together.

Q Lots of camaraderie?

A Yes. Very definitely. When you get on to an exciting program like that, it really is. It was an all-new approach, and it just proved that old point again, that whenever Ford takes its own step, and, as we say today, "does its own thing," we're successful. We weren't following anybody on that car. It was our design. I know everybody takes credit for the design, including Lee Iacocca, but there really were a lot of people involved in it. I've just felt that this building made a great contribution by working out that kind of design. Because it took G.M. a long time to catch up to the Mustang with the Camaro. They never could get that Camaro right until recently. So, we were really out front. We really had the jump on everybody with that kind of a car and the approach we took to the design of the car.

Q An incredible success story.

A Oh, yeah. So, that was a thrill to be involved in that. After that, I was in the Lincoln-Mercury area for a few years.

Q Was this a normal lateral transfer?

A Oh, yeah. Because I started out as a trainee, and I was in the Ford area for about five years and then transferred to Lincoln-Mercury as part of the development program that they had me on here, and I worked for Buzz Grisinger in the Lincoln-Mercury area, and it was really a different experience to work for Buzz. However, he and Joe Oros had a lot in common in that they would do -- it seemed thousands of proposals for these cars that we did in those days. I guess we had unlimited funding and many, many models. The building was about -- people-wise -- twice the size of what it is today. We really had a lot of people, and we could crank out models left and right. When we'd go out in the courtyard for a show on a new Ford, my gosh, we'd have a dozen clay models out there. We just don't operate that way today. There's no need to because we sort out a lot of the design issues before actually getting into the clay model stage. It's a much more efficient way of doing business.

But, Buzz Grisinger was the kind of designer that was really into detail on cars. Buzz could look at a line on a car and say, "Adjust that a 16th here," and he's talking about a car that's fifteen feet long and adjusting a 16th. My, God, how can he see that 16th? The crazy part about it is that guy was right! He really saw a flaw in a line. I've never seen anybody with as much line sensitivity as Buzz. I might not always agree with him on every line, but, the fact of the matter was, he could see it. He really had an eye for detail. Probably more of an eye for detail than any other designer that I've ever worked for or with.

I was involved in a number of different programs there. The large car program with all of our full-size Lincolns and Mercurys. We didn't have the proliferation of lines that we have today, but we just had one

big Mercury or one big Lincoln. But, did a lot of good cars, and one of the most significant cars and one of the boxiest cars we've ever done was the '65 Mercury. I remember having a '65 Mercury convertible back then. It was just a beautiful car, because the car made a real statement. It was trying to be a big, luxury car, but there's a lot of credit due to Buzz. The car had a lot of grace and elegance to it. It was one of the nicest cars we'd ever done. If I had to put a collection of cars together, I'd just have to include one of those. It kind of epitomized Detroit design, but good Detroit design. I know it was big, it was boxy, it was Detroit. It was not some aerodynamic, functional-looking thing, but it made a statement, and it carried off the statement completely. It was a good car the more I think about it. I haven't thought of that car for a long time.

Q How was Grisinger as a person to work for?

A He was a real taskmaster, and he would press the designers. If you worked out a design, Buzz was the kind of guy that would walk up and say, "Why did you do it that way?" He really wanted to find out if you believed in what you were doing, and I've always felt that I had my day in court with him. I could always explain why I did something. That didn't mean he had to buy off on it, but, at least, I would be able to explain it. I thought that was a pretty good side of Buzz that I really liked. I was able to discuss design with him, and he was very good at that; it was always a pleasure to discuss design with him. I'm not saying we always agreed. If we all agreed, we wouldn't need all these designers around here. But, it was good working for him on that. But, he got the maximum out of the people. He made you think, and that was important. Much more so than we did in the Ford studio. In the Ford

studio, there was a lot less of in-depth thinking, with the exception of the Mustang program. But we were designing different types of cars, and I was in the Ford studio earlier when we were changing every year, and, okay, you might say fins are in this year, and I don't know what's in next year. The changes were very dramatic and radical changes every year. This was in, that was in, something else was in. There was no natural progression, and there was no real evolution of design back then like we're seeing more of today. It was much more of a chop-and-change atmosphere that we were working in then.

After the Lincoln-Mercury studio, I was given a golden opportunity: I was sent to Ford of Australia to start up a [design] studio for Ford. That was just a great opportunity, because I was 29 years old. I remember Bob McGuire going down to Australia because Bob McGuire was in charge of all our international design then, and Australia came under him. We were doing cars in McGuire's studio for Ford of Canada, and the Canadian car designs were then being done in Australia. Then Australia came of age, and they realized with the competition they were getting from G.M. down there -- G.M. had their own design center in Australia. Ford recognized the fact that they needed to have more local influence and more design unique in Australia, so they decided to set up a studio. Bob McGuire went down to find out what they really needed, and I knew he was down there. I wasn't working for him at the time, but I remember, as soon as he got back, I was called into his office. Before I walked through the door, I knew he was going to ask me to go to Australia. I can't tell you why, I just had that gut feeling that I'm on my way to Australia for some reason. And I walked in, and he said, "Hey, how would

you like to go to Australia?" And I said, "Do you want me to leave right now?" I was single in those days and ready to travel.

Q What was McGuire's status in those days?

A He was at the same level as Joe Oros and Buzz Grisinger. They were called chief designers in those days. He was in charge of the international studio at that time.

Q I'd like you to expand on the Australian experience.

A Sure. I was 29 years old going down there, and I can't tell you how excited I was when I was asked if I wanted to go. And, I was serious; I would have left that afternoon if McGuire had said, "Get on the plane." You hear many Americans say, "I've always wanted to go to Australia." I was the same way. I remember having a book on koala bears as a little kid. Maybe that got me turned on over it. But, I remember the direction that Bob McGuire gave me when I sat in his office. After we established that I would go, just before leaving, I stopped by to see him again. I said, "Bob, what exactly would you like me to do when I get to Australia?" I'll never forget his words. He said, "Just go there and do something!" I said, "My God, that's pretty wide open. Do you want a studio?" He said, "I don't know. Find out what they need and see what you can do. They need some kind of design help down there, and we don't know where this thing will go. It's up to you. See what you can do. Good luck. Good bye!"

Q The market was expanding?

A It was expanding. Oh, definitely. Australia was just coming into its own, and Ford was having a rough time. We only had 15/16% of the market down there. G.M. was king. G.M. had 35/40% of the market.

Q With the Holden division?

A Yes. So, I went down, and the fellow that was running the company was a guy by the name of Wally Booth. And working for him was his assistant. Wally Booth was the managing director, and his assistant managing director was a fellow by the name of Bill Bourke who came up to interview me, by the way, and had to say "Yea" or "Nay" before they allowed me to go down. So, [when] I got down there, I reported directly to Bill Bourke. Bill Bourke had a lot of experience around the Ford Motor Company. He came up through sales and marketing. Before coming here, he was with Studebaker, and his brother was a Studebaker designer by the name of Bob Bourke who worked with Raymond Loewy. So, Bill had a lot of experience working with designers back when he was at Studebaker. His father was an architect, and Bill fancied himself a bit of a designer, but he was a product-oriented guy. I didn't know any of this about him until I got there and started working for him, but I reported directly to him. Gene Bordinat, who was running our whole design group in those days, wanted to make sure that I reported right to someone like Bourke rather than reporting to any other area of the company, since we're starting that new design center. They'd never had one before.

So, I went down there, and he gave me an office about sixty miles out of Melbourne in a town called Geelong, which was where they had the first Ford plant. It started in 1925, I think it was. By the way, the first Ford plant was kind of interesting down there because I'll never forget driving into Geelong, and here's a big Ford oval on top of the building that looked exactly like our saw-tooth roof buildings here in Dearborn. I understand the reason was when Henry Ford built these plants around the world, he used the same blueprints that he built the plants with here in Detroit, and that roof structure was designed to carry the

same snow load that the one in Dearborn has. They never get snow down there, but it was the same look. I felt right at home as soon as I drove into this little town of Geelong. I drove through all this countryside from Melbourne all the way down the Geelong road, seeing all these sheep on the way down. All of a sudden, I get into the town of Geelong, and I thought, "My God, here I am, I'm home again," and we kind of joked about it. We said, "Henry Ford always built plants in the worst climates in the world." Melbourne was the coldest climate in Australia. It was in the Southern part, and it was a great climate compared to this, but it was not the garden spot of Australia. They said the theory was, "People stayed at work. They weren't off fishing all the time." So, it was a little more incentive for people to come into work when you put it in a climate like that. It also had excellent port facilities and a lot of other issues going for it that really established them there. But, I noticed some of our other plants in Australia, in Sydney and way out in Perth on the West Coast, were the same design with the saw-tooth [roof].

Q A basic [Albert] Kahn design that Ford [used]?

A That's right. So, my job, when I finally got down there then and got settled in, was really fun because they made a big hoopla about "Ford designer arrives in Melbourne and is going to do Australian cars for Australians." The PR people played it to the hilt, which was really unfortunate because they also published a phony salary for me. I don't know what my real salary was in those days, but they probably quadrupled it and put that in the paper just to make it look like I was a big operator. It worked out to be a rough negative because I was out shopping for a place to live -- an apartment or a house -- and, all of sudden, I noticed the rents were going up all over the place. People said, "Oh, we

saw your picture in the paper, and you're the guy that makes all that money." So I went back to Bourke and said, "Hey, thanks a lot for nothing. You really did me a favor!"

It worked out very well, and it was a great opportunity because I was able to start a whole new design center. They gave me some space in the engineering building in Geelong. Started out with a room -- I'm not exaggerating -- about the size of this office, and people stared at me and wondered what I was going to do for them, but I managed to organize some people down there.

We got students out of the Ford Trade School. They had, and they probably still have, the Trade School down there. So, we got some of their best students and trained them to be clay modelers, and I recruited designers. I got a few from General Motors. They just happened to answer my ad to the paper. I don't think the people at G.M. were too pleased about that, but it was open warfare at that point. I managed to get some design help and modeling help from Ford U.S. to come down and help us get started, and they helped me train some of these people.

I can remember the first program we were involved in was the face-lift program on the Australian Falcon which was a derivative of the U.S. Falcon. Here I'm a 29 year old guy, and I can remember Bill Bourke saying, "Are you sure you can do this car?" And, I said, "Look, you give me the equipment, and you'll have the car. You give me the deadline, and we'll do it." And, he said, "Okay." Then they had Harold Jones, who was head of our Asian Pacific area based in Dearborn -- come down. I remember him sitting me down in my office down there and really questioning me to make sure that I could really handle it. He said, "There's a lot riding on us. We've never designed a car here before, and

we're going to design it and manufacture it. Are you sure you can handle this car?" I said, "Yes, sir. Just get me the equipment, give me a bridge, and I got the people here, and I'll get some support people from Dearborn to do it." And, he said, "Okay, we'll get the stuff for you." So, he said, "You call Gene Bordinat and see if he can help you on getting your equipment quickly, because it would take too long to build the equipment." Fortunately, I called Gene, and it was right at the time we were putting a whole new wing on the Design Center, so we had a couple of new modeling bridges already arrived in the crates ready to go into the new building

So, I called Gene Bordinat from Australia, and I told him about the new Falcon program -- the facelift we're getting into. I said, "I can really pull it off, sir, if you can just somehow find a bridge." And, I didn't know they had them here. He said, "Say no more, I'll have one on the plane for you within two days." And, sure enough, Bordinat had that bridge -- this is a big piece of equipment -- loaded on a plane, and they flew that baby down to Australia, and we got started on that project, and it's been going ever since. And, now they have their own bridges down there. But, at least, this got us kicked off in a big hurry.

We worked out all our timing schedules, and met all the deadlines, and did the first facelift, which happened to be a very successful car. It was so successful that it was just a facelift. It was a front and rear roof change on a Falcon, and we introduced it at the same time that Holden came out with a totally new sheet metal car, and we were sweating it a bit. But, I've got to tell you, it was very successful. I think we got more impact out of that facelift than they did out of their all-new change. And, we were really starting to roll then [when] Bill Bourke

became managing director down there, and I no longer reported to him. I reported to an engineer by the name of Jack Prendergast, and we had just started our product development structure in the organization then, which was what we had in Europe. Now we have it here in the U.S. So we were right on the leading edge of that new type of organization. It worked out very well.

I remember, in those days, Bill Bourke and I would go to dealer meetings -- he'd got me very involved as a designer -- and he would really drag me around the country, saying, "Look, we really have our own designer here in Australia," because we were trying to run a whole new thing and were saying, "These are cars for Australians now. It has an all-Australian team!" I remember going around to dealer meetings, and Bill Bourke telling the dealers, "We've got 16% of the market, and in two years/three years time, we're going to have 20% of the market." And, I could hear some of product planners of the company saying, "Man, what is this guy smoking? Who is he kidding? We can't do that." But, that guy had everybody so psyched up down there. Today we're just wiping out Holden down there, we really are, but that was the start of it.

We had the kind of enthusiasm in the company down there that was just absolutely infectious, and, again, it was that attitude of "We can do anything." And the cars really did work. The engineers did a superb job on really getting the cars right. We used to have, before we got it down there, some real quality problems. The cars were just American cars that are Canadian cars, but we would build in Australia, and they'd fall to bits, but we really worked out all those issues then.

Q The old K.D. concept?

A That right. So, they started building well-engineered cars down there, and it paid off. We made our contribution with better-designed cars, and it was a combination, so, it did work.

Q Obviously, the Falcon facelift touched a nerve somewhere in Australia.

A It was at the time that the Mustang was probably one of the most popular cars in the world, even though we weren't selling them there. You could get a Mustang in Australia -- fully-imported type vehicle. They're very rare. But it had a great reputation, and we used some of the Mustang design elements on the Falcon. We used a Mustang mouth-type grille and worked it into the car. I can remember, by doing that, the product planners drew up all of our plans for the car and the image of the car, and they appropriated X number of dollars for a new hood, new front quarters, new rear quarters. I remember going in and saying, "Hey, save your money. I don't want new front fenders. I don't want it." This was a complete role reversal. A designer never says he doesn't want money to do something. But, I can remember talking to them saying, "Save it. I'm going to put such a dramatic grille on this car that I'll use a carryover hood and a carryover bumper, and nobody's going to know the difference. You're going to get a very strong front-end change." And, I said, "Give me that money, and let me put the money into the roof. I'll get a new rear roof and C pillar and rear quarter areas, and I'll get a lot of impact back there, but forget spending money on it just because your typewriter says you have to spend money on the front to get a change. But, believe it, I'm going to give you a change in the front end with a grille."

And, we did, and it was really a dramatic change. I put -- if you stretch your imagination -- a Mustang front end on the car. The advertising theme they used when we introduced that car was something like, "There's more Mustang in Falcon this year." They had horses in the background. Subliminal advertising with horses running across the back end, but it was really a Falcon. People got the association, and that Mustang was so popular worldwide, whether it was Europe or U.S. or Asia or Australia, even though there weren't many on the road down there. God, [just] a handful. People knew the car, and it was a terrific ruboff that we got from Mustang. This is one aspect of the Mustang that nobody's ever thought much about, but that car helped sell other cars in our company, even in Australia. I'm glad you asked that question because I'd forgotten why we did that, but that was it. That was what really influenced it.

They billed it in the press, too. When I first got to Australia, "Jack Telnack worked on the Mustang project. Now you're going to get more of that flavor in these cars down here." Even if I'm talking about a four-door sedan, but it clicked, it worked, and it was a good car. Mechanically, it was an excellent car. It wasn't just looks that did it, it had to be the total car, and we had the total package on it. So, it really connected. It really clicked.

Q The Telnack/Bourke team did very well, obviously, for that time?

A Yeah, I really think so. He was a very enthusiastic guy. The dealers loved him. They really did. He delivered on a promise. He told me he was going to give them the product, and he gave that to them, and it worked. Even today -- I ran into an Australian dealer here at the

Grand Prix this summer, and Bourke's name came up again, but it was real interesting.

Q They still remember?

A Oh, yeah, yeah. So, we had a number of products. Then we did an all-new re-skin for the Falcon in Australia, but that was when Bunkie Knudsen came in, and he was running the Ford Motor Company. I remember designing the car in Australia, but we had to come back to [Dearborn]. I brought all the prints back with me and recreated the car in [Dearborn] because it was all new sheet metal, and we had to get local approval. So, rather than building a model there and shipping it back to [Dearborn], and I don't know now why we didn't do it this way. Maybe we didn't think -- in terms of shipping a clay model -- it would have been too long a process to cast it and ship it. But, anyway, we came back and recreated the model here. I remember going through an approval session with Bunkie Knudsen and Gene Bordinat and all of the top officials of the company here in [Dearborn].

Bunkie was an interesting guy because he was reviewing the car, and he would ask a couple of the designers here what they thought. They were the Dearborn designers who were trying to help me on this project. They had a proposal on one side, and I had ours on the other side. I was, obviously, more familiar with the Australian market than the guys here in Dearborn were. I really had a theory on that. I felt designing a car for Australia required the designer be there and understand the environment, understand the market, understand the mood of the people and their buying habits, and their likes and dislikes. I felt you couldn't do that in Dearborn. That was the main reason we established the studio down there. [It would] be like having an architect do a home for Australia

but living in Detroit and never setting foot in Australia. So, I set myself up as a design authority for Ford on Ford of Australia, which, I felt, it should have been.

So, when we were reviewing the model back here with Bunkie Knudsen, I remember him going around the car and asking a couple of the Dearborn designers what they thought, and, naturally, they preferred their side of the model. And here I was, and I'd never met Bunkie Knudsen before, and he said, "Okay, Jack, what do you think of this car?" I thought what have I got to lose? I might as well tell what I think, and I did. I told him why I designed it the way we had, why we put these lines on it, and why we did this, and what Holden was doing and what our G-2 told us Holden was doing in the future.

Q He was [familiar] with Holden?

A Yeah, he knew, anyway. He should have because he was fresh [from G.M.], and he listened. I thought this is it. Either they're going to send me back to Australia forever or whatever. And I was really surprised and delighted to hear Bunkie say, "That's it. Okay, Jack, we're doing this side. You got it." And, that was it! That was historic. The guy made a decision, and -- bang! -- were it. God, that's really thrilling to have a guy walk in and listen to me! I was probably about 30 years old at the time, and it was a hell of an accomplishment to be able to do a car like that. And I had a very small design staff. My God, I only had about three designers that were working with me down there on it. I had brought two of them back to recreate the car with me here in Dearborn -- Brian Rossi and Alan Jackson. We were really excited about that to be able to get our design that we did in Australia approved here in Dearborn and then take it back down, and then we could honestly

tell the story in Australia that this is a car designed by Australians for Australians. And, it was really good, and then the car was successful.

Q Was that a new generation of Falcon?

A All-new generation of Falcon -- all-new sheet metal on it, and, yeah, we had some pretty hot cars going then. We were really on a roll.

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This is Dave Crippen, and this is the second interview with Jack Teinack, Chief Design Executive at Ford Motor Company, and this is October 1, 1984.

We were talking about the exciting times you were having at Ford of Australia and the success you'd had with the redesigned Falcon. Could we continue, chronologically, from that point?

A Okay. We had a number of really challenging projects going in Australia. We were a very small operation compared to Ford U.S. or Ford of Europe, but the demands upon the designer were still there. It was a time when we had enough room to really move and have some impact on the marketplace down there, which we took full advantage of. I think our competitors were [caught] a bit off guard at the time, and we moved into corners that they weren't occupying with these designs. But, it was a total team, I have to emphasize. It wasn't just the designs that we were doing. We had a terrific sales and marketing team, we had a great manufacturing team, good product planning team, a good overall product development team, and had a lot of right people in place at the time. That's important to keep in mind, because it was not just the design. You need a good design, but you need other good areas of the company to make it sell. We happened to have that combination down there in those days. They still have a pretty great combination down there.

Q You'd had quite a bit of competition from G.M.'s Holden at that point?

A Oh, we really did. When I first went down to Australia, we had about 16 percent of the market, and Holden was running close to 40 [percent], if I'm not mistaken. And, I can remember Bill Bourke telling the dealers that we were going for 20 percent of the market. And, a few

of the company people standing in the background when Bill was talking to the dealers kind of chuckled to themselves not believing that that was ever possible and an actual fact. He meant it, and he just bred that into the people that were reporting to him, and we went after it. There was nothing we couldn't do. Really, that was the attitude that we had. But, we really were building good, sound products. We overcame a reputation that we had, and we're back on the road to success, and it's just been working that way ever since, and the products have been getting better every year. We did a lot of right things.

After Australia, I came back here to the U.S.

Q Did they give you a reason?

A I was just reassigned back here. I think one of the biggest mistakes that I made was telling people back here how great the assignment was in Australia. Before I knew it, Duncan McCrea, God bless him -- since we last talked, he passed away -- had my job down there. Frankly, I was ready to come back, and Gene Bordinat thought I should come back at that time. I think it was good for my career. So, I came back, and I was in the Ford studio as an executive designer. I was on the Bird programs, and the Pinto programs, and a number of other ones. [I was] here for about three years. At that point, they transferred me to Ford of Europe where I took over the Chief Designer spot in Ford U.K.

Q Before you get to that interesting assignment, what about the Pinto? What sort of input did you have on that?

A In actual fact, it was pretty well designed by the time I got into the program, so I was just wrapping it up and [added] a few details. Actually, I spent most of my time on the wagon version of the Pinto.

Q What did you think of the Pinto, not by hindsight, but at that time?

A It sold well. If you can judge the car based on sales, it did extremely well saleswise in the marketplace. It was a good car design-wise. It really was a good car.

Q Was it compromised as some people have alleged?

A If it was, I didn't know about it. It certainly wasn't compromised designwise.

Q It was the engineering?

A If there were engineering compromises that have been alluded to, that was another issue, and I wasn't involved in that aspect of it. But, designwise, I can't say it was compromised. It was a very good package, good size car. I think the design was ahead of its time. A very new little car. The car made a lot of sense. It had a lot of staying power, and, I'm sure that, if it wouldn't have been for the gas tank issue, the car would have had even more life to it. It really was a good answer to the problem at the time, and it was a good solution to the design problem. After that, we did the first Mustang with soft urethane bumpers. That was a '71 or '72 Mustang.

Q Was that in response to a government edict?

A Yeah, for damageability. At that time, we were just starting to shift into these large bumpers that protuded beyond the body sides. If I'm not mistaken, we were the first ones in the industry to have the urethane bumper. I wouldn't swear to that, but I think we were. Yes, we had one of the first urethane bumpers in the industry, and the whole project was spearheaded by an engineer by the name of George Muller. He retired a few years ago. George was probably one of the most inventive

and creative engineers I've ever met in the business, and he was, for the most part, in advanced engineering sections, and he really worked with us. It was one of those programs that didn't get a lot of attention because on the Mustang we were working with existing sheet metal and just putting a new bumper system on it, so it didn't get a lot of attention. Because of that, we were able to really reach out and try something different on it. It was one of the best solutions ever for a fully-integrated bumper into the sheet metal. I have to give George a heck of a lot of credit for it, because he spearhead the whole program and worked very closely with us, and it was just an absolute delight to work with a guy like George to bring a project like that to its completion.

So, I was involved in a number of projects like that for those three years here in Dearborn when Gene [Bordinat] told me that they'd decided to send me to Europe and take over the responsibilities of the Chief Designer for Ford U.K. reporting to Joe Oros. Joe Oros was the V.P. of design for Ford of Europe at that time and running the studio in England and in Cologne, Germany. I had worked for Joe before, and I felt this is a great opportunity when they asked me if I'd like to go to Europe, and I felt I couldn't turn it down, plus we liked to travel and see new places. I feel it's good for a designer to freshen up and become involved in new areas and new projects.

Q You'd worked for Joe on the Mustang?

A Yes. Actually, I worked for Joe for about five or six years back here when I first started.

Q In the Ford studio?

A In the Ford studio, yes.

Q You had a good relationship?

A Oh, yeah, yeah. It worked out very well. And, apparently, they must have had in mind that I would replace Joe [eventually], and I would be his understudy at the time. They, of course, didn't tell me.

Q [When was this?]

A This would have been early 'Seventies. It was '73 when I went over to England.

Q Joe [Oros] was approaching retirement?

A He was getting pretty close to it then, because he retired about a year and a half later.

The first project that I became involved in as Chief Designer of Ford of England was the Fiesta. They had just launched the Fiesta program in Europe, it seemed like, the day I stepped off the plane. I didn't know this. I wasn't really paying that much attention to what they were doing in Europe at the time, being very involved here in the U.S. But that's where we really started rolling on that car in Europe. Our studio in England was in competition with the Cologne design studio and Dearborn and our Ghia [Italian] operation. We had four different cars going for that project, and Gene wanted to put a lot of emphasis on the project, and that was one of the best ways to do it at the time. We really carried the ball on that program. I'll never forget on the final day when that car was approved, it was in Cologne, Germany. We flew our model from England to Germany, and they flew in the U.S. model and the model from Italy and had all four models on display in the design center in Cologne.

Henry Ford walked in with Lee Iacocca and the whole top team from the U.S, including Gene Bordinat. Of course, Bill Bourke was running Ford of Europe at the time, and he was there. And, they actually had a

vote on the cars. They had all the cars lined up, and they took a poll, and each of the members of the committee had one vote, including Henry Ford. Our car from Ford U.K. won the contest, and my engineers and designers and modelers were just so elated when that car won. We were requested by Bill Bourke to take the winning model from the studio to downtown Cologne, where that afternoon the company was having a luncheon for the top executives in Europe, and it was the official announcement of the Fiesta program. They made the decision to go with the whole program, and that was building the new plant in Spain -- the whole shot. It was really....

Q In Valencia?

A In Valencia. It was an 800 million dollar investment. It was the biggest program of its kind in those days, because it was a new green field site in Spain. Nobody was building cars in Spain. It was Ford stepping out in front doing something unique. We were all invited to the luncheon -- all the top guys in the company -- where they made the announcement. Henry was there, and Iacocca was there, and Bourke. Bourke asked if we could get the clay model to the hotel that afternoon. There were no prior plans made to do this, and I think my modelers were so elated at the time, they would have put that car on their backs and walked it to downtown Cologne just to get it in there. Anyway, somehow they got it in there. I remember they were taking doors off their hinges at the hotel just to get the car through it. It was really an exciting time.

They must have had 300/400 people at the luncheon in a very large dining room, obviously, and the car was just sitting there draped. At the precise moment while Henry Ford was talking about the car, and he

said, "Now, I want all you gentlemen to see the car that we're talking about for this new program that we're embarking on, and here is the car that we just approved this morning." And, bingo, we pulled the covers off the car in front of these people, and everybody stood up and burst out into a big round of applause. I've got to tell you, that was a hell of a feeling to be there and be part of that kind of a thing. It had never been done before in the history of the Ford Motor Company, as far as I know. So, here was the smallest car we'd ever done, and yet it was one of the most rewarding projects I'd ever been involved in. From that point on, we really got into the development of the car.

There were a number of reasons that we embarked on the Fiesta program in Europe, but it was done primarily because the Ford Motor Company did not have an entry in the B class segment. The industry in Europe, generally, segments cars into A, B, C, D, E, and A being the smallest, B being the next step up. The Fiesta was a 97 inch wheelbase car -- someplace around there. It was definitely under a hundred inches. We had no entry in there. But there were a number of other manufacturers in Europe that were building this size car. The Renault 5, the Fiat 127, for example, were well into that, and they had established that market. But we felt it was important for the Ford Motor Company to get in that market, both in Europe and, we thought, in the U.S. and around the world because it would bring people into our dealerships who had never come into our dealerships before in Europe because we just didn't have a car this size that would attract them. Now, whether or not they bought the car, of course, was important, but at least they were in the dealerships, and they had an opportunity to look at some of our other entries, such as the Escort and the Taunus and the Cortina in those days.

Q Which were selling well.

A They were selling very well, but we did need more traffic, and we were losing customers at the low end. We thought this is a nice place to bring first-time buyers in and also to get them into the Ford fold. We knew that it would make a lot of sense if we built the plant in Spain. A lot of people questioned whether or not we would get the quality in the car that we had in Germany. We assured the quality by, first, actually building the car in Germany. We had production facilities in Germany, and we ensured the same quality in Spain by taking our German manufacturing management team out of the plant, once it was rolling for a few months in Germany, and transferring those people to Spain to train the Spanish workers to build the exact same car. And, I've got to tell you that the goal was zero difference between the two cars whether it was built in Germany or Spain, and we achieved that very early on in the program. I mean, there was just no difference between the cars. We had German quality in Spain with Spanish workers and a German management team. It worked out extremely well.

We also, later on, started building the car in the U.K.. And, again, because of the very simple and basic design of the car, we were able to achieve the same kind of quality no matter where we assembled that car. But, the market was very definitely there, and we proved that once the car was introduced. And, even today, we're building the same basic body that's been facelifted. Just this year, as a matter of fact, the car got a new front end and new taillights and bumpers. But, the same basic shell is there, which is a real tribute to the people that worked on the program: the packaging people, the engineering people, the drive-line people, because, essentially, they still have a very good

package, no question about it.

Q You're talking about which?

A Just the Fiesta.

Q What you are talking about today is using the same platform?

A No. I'm saying that even the facelifted version of it today, which was a very mild facelift. We're still building the same car. Let's see, we introduced that car in '77.

Q You're still having the same product mix?

A Oh, yeah. It's still there, the same basic car. It's had a bit of a freshening up, but the basics are all there that were put in place back then. That is still in the B class segment and doing very well, I might add, in that market with a lot of new entries now, because everybody's in. Peugeot's in, and Fiat's back in with a new entry in that segment. So, I think, the car worked extremely well, and we were delighted that we took that kind of step to build the car. As a matter of fact, just a couple of years ago, G.M. followed us, and now they're in the B class segment, and they decided to build a plant in Spain to build their car also, so we felt we did something right again, and here they go following us. And, again, it was really a step that we took on our own, and we weren't following anyone at all. It was uniquely a Ford idea.

Q Who had the basic idea about Valencia?

A That's a good question! It must have come out of our European management team somehow, because they were so close to the scene. I know Jim Capalongo was sent over from the U.S. to head up the program as a project manager and controlled the entire program. Just oversaw the entire program -- everything from setting up the production site, through design, engineering, testing, marketing. He had the entire program. It

was just a great experience for him, too.

Q I've heard it said that Henry Ford called the Fiesta one of his favorite automobiles.

A That wouldn't surprise me. Henry was very involved in the launch of the program and making the final decision to go ahead with that, because, as I mentioned earlier, it was the largest investment to date that the company had ever put into an all-new car program. And, it was done at a time when we needed the money for new programs in the U.S., they had in Europe, and the company decided to give Europe a nod, and that was the best place to invest at that point. I think it was one of those really good decisions that seemed to work out well for everybody.

Q What was it about the car that attracted so many people?

A In that category, it had the cleanest lines of any of the B class cars over there. It looked new, it looked fresh, it was a crisp sort of design. It had an excellent interior package -- the best interior package of any of the small cars. We put it through the ultimate test when we had Gordon MacKenzie, who was, at that point in time, our vice-president of sales and marketing in Ford of Europe, and he's maybe the largest gentleman in management in the Ford Motor Company. The ultimate test of interior package was having Gordon sitting in the back seat of that car and be comfortable. I remember driving him around the test track in the back seat of that car. The car handled extremely well even with all that weight in the back seat and size. He sat there comfortably. He could stretch out as much as you could in a car like that, but he had his knees in the normal position, his head was upright, he wasn't touching the headliner, and, so, the car really had a great package. There's no question about that. It was the right size, had the right

power train, it handled well, it had a good pickup and performance, and it looked good. It looked liked the newest kid on the block, and our theme on that car was -- because we were the last to come in with a B class car aside from G.M -- "Last in, Best Dressed." We had to be the best. That's all there was to it.

Lou Veraldi was the chief engineer on the program, and Lou would just leave no stone unturned. I can remember being in what we called his woodshed meetings in Cologne where all the top management -- I'm talking about V.P.'s -- would stand around the prototypes of that car and just flyspeck every last detail. I have never seen so much thoroughness go into a car in my life, but there was just no detail that wasn't gone over about ten times each. I'm talking about the fit and finish of a molding or a seal around a vent window and the way it opened and operated and closed and whether or not it sealed properly and how did it look? I've just never seen that before. I think that's why it paid off. We just went over every detail with a finetooth comb. I remember we market researched that car all over the world: in the U.S. and all over Europe. And, in the one of the final rounds of research, we were very concerned about the front end. We weren't getting the front-end ratings that we really wanted. I remember in one round of research -- it was the last round -- and it was held in Hamburg. We had a comparative car there, and it was the Volkswagen Polo, which was their new entry into the B class segment, also.

Q Did that ever get to the U.S.?

A No. They never sold the Polo here. No, it was smaller than the Golf. When we sold the Fiesta here -- this is a side issue -- people assumed that the Fiesta was a car like the Golf, but the Golf was

actually a C class car. That's the next size up. That would compete with our Escort, but in this country, small cars are all the same to big-car buyers. Now that they're seeing more small cars, [they] are a little more discriminating.

But, we were in the market research in Hamburg, and it was just a faceoff between the Polo and our car, because the Polo was the new kid on the block, and that was the hottest car going at the time. We were beating the Polo in all aspects except the front end. I remember Bill Bourke and Jack MacDougal, who was his assistant at the time, saying, "Well, if we have to rip up the sheet metal of the front end, even at this late date, we'll do it to move the research needle, but you got to make some impact. You got to find out why they don't like our front end better than the Polo. They like everything else better, but why don't they like the front end?"

And, I'll never forget this day, it was the end of the day -- the first day of market research there. One of our English designers was at the clinic, and he spoke German, and there was a German female respondent with her clipboard marking down her likes and dislikes about the car. She was looking at the front end, and she didn't know that this English designer was with the Ford Motor Company. He was just standing next to her, and she just turned to him and started speaking in German, and she said, "Why would anybody paint the grille on this car dark gray? Don't they know that all grills on a car like this should be painted black?" So, he started speaking in German. He said, "Well, why? What's black got to do with it?" She said, "Well, look at the Polo here, it's black, and look at the Golf, it's black, and look at a number of other cars, they're all black grills." We had it painted gray because we had a

louvered grill, and we wanted the louvered grille to show up more, so, if it was black, it would just all fade into the background. I was just getting ready to leave for the airport to go back to London, and so I had one of the guys there that evening take a can of black spray paint -- Krylon, flat black. I said, "For God's sake, mask off that grille and spray it black, and let's see if we start turning the results of this clinic around." We were ready to rip up the sheet metal. What do you think, Dave, it did a complete flipflop and turnaround. It was just simply a matter of the color on the grille of that car, and, all of sudden, our front end starting getting better marks than the Polo!

I should have mentioned that, in this clinic, we tried something different. Both cars were badged V.W. We wanted to eliminate brand bias. We didn't want them to see the Ford oval on this in Germany, because they would have voted for V.W. So, we just badged them both V.W. to get more of a contest of shape to eliminate the brand bias. So people didn't know what they were looking at, just the design. It really moved the needle, and we came back, and, my God, Bill Bourke and Jack MacDougal were just absolutely delighted. They said, "Hey, we don't have to rip up the sheet metal, just change the color!" And, these are the kinds of things that you can really pick up in a clinic. Now, that was a stroke of luck. I mean, [our] English designer just happened to be standing there and just happened to overhear what this lady said to him. If it would have been me, I wouldn't have understood her because she was speaking German, and I didn't understand German. And we made that kind of a change in the car, and it really was one of those last, little details that helped it work.

Q That's fascinating, but, may I ask you [a leading] question?

A Sure.

Q Why didn't you think of that independently?

A That's a good question. We thought we were being really clever by going to this gray color, because it allowed you to read the louvered grill section that we had in the grill texture. They didn't care about reading it, they just wanted black. Black is what you're supposed to have on it, because that's the B class car.

Q Gray did nothing for them?

A Right, and they didn't want to know about it. So, just don't do it, and that's where you have to stop being a designer and start paying attention a bit in the marketplace, and it just turned the trick. And, you can't argue. It has nothing to do with logic.

Q You took off right after that?

A We really did, and this one comment saved the day and just make it much more acceptable in the marketplace. It was a very easy change. I mean, it was a no-brainer once we got the information. It was just one of those flukes that you can sometimes pick out of a clinic.

Q What did that do to the louver arrangement?

A We didn't change the design at all. We just kept the louvers. We didn't change that at all. They weren't as readily identifiable louvers -- as noticeable on the car.

Q Weren't quite as highlighted?

A Yeah, but it didn't hurt it. It certainly didn't hurt it at all.

Q I've been fascinated by this topic. When I was with Ford, briefly, some years ago, Dave Wallace's then fairly novel technique of using university researchers to do market research, was pretty much blasted by the the non-success of the Edsel -- at least, externally. Obviously, market

research has not died in the automobile industry. It, obviously, is a part of the life blood of making decisions. Since you were just coming into the company in the 'Fifties, can you give us a capsule history of the place of market research in both product planning and design? What part it plays.

A It would be really difficult for me to comment on market research at a point in time when I first joined the company, because I was on the boards, and I just wasn't involved with this through the late 'Fifties or early 'Sixties, and I didn't really get involved in it until the late 'Sixties, and really involved when I started in Australia and then came back. That is when I got very involved with them in Europe, and I've been involved with them ever since. We have continued to use market research, but, in recent years, we've begun to use market research more as a tool as it's more input into the total process, but it is not the ultimate input. We can't just take what the researchers tell us and act upon it the way they tell us because, generally speaking, they're giving us a critique on our cars in today's environment. I may have a car that I'll be introducing in three years in research, and I can't expect the respondents in the research to project themselves far enough into the future to give me, let's say, a 1987 answer on an '87 car that I'm researching in 1984. It's a very, very difficult process that they have to go through.

Q But it's part of the process?

A It's definitely part of the process. Yeah, no question about that. Just this past week, I was in our third annual international design seminar, and we had a market research expert speak to us as one of our outside speakers who was trying a different approach to market research. He

has developed what they call a "perceptual mapping process" which puts the respondents in certain categories. I found it to be a very fascinating technique that he uses, and this may have another approach starting to walk around here if we can keep in touch with him. I've been accused of not liking our research people or not liking what they do, and my real concern is I just don't feel that we've gone far enough or perfected or developed the techniques to where they're really useful at this point in time. I hate to criticize a process if I don't have a recommendation to make. I don't want to say, "Hey, you're doing it the wrong way," if I can't tell you what the right way is. And, I can't tell them. I'm not in that end of the business, and I just haven't found it. But we can get some very useful market research information if we're doing near-term research. If I'm bringing out a car, say, six months from now or maybe a year from now, I might get some really valuable information in market research because it's so close to it. But, to get it three years ahead of time is very, very difficult.

Q How did the Taurus research out?

A Quite well. But, again, you'll find a variance in different parts of the country. The West Coast really seemed to be on the leading edge, and [that is] not too surprising. They seemed to understand all our new cars, and they buy them that way, also. They really do. The Midwest, just a bit of reluctance there. They're not willing to reach or take that initial step. If you have a new design, they don't necessarily want to be the new kid on the block type of people in the Midwest. So we do get some variation across the country. But, again, all pretty much predictable. But the Taurus is getting better and better every day, and we're getting closer to -- we're a year away from intro now, so, it's

getting very close.

Q Exciting?

A It really is. Oh, yeah. We're going to make a statement. People will notice that car on the road. No question about it. We think we're not reaching far enough all the time as designers. We think we really want to make a new, fresh statement, and we'll get that in market research clinics. People say, "Everything I see here is the same, old thing." They're not saying that with the Taurus. They can't say that. They really can't. We've been around the car for a few years, so it's not that new to us, but it's still unique, and it will be unique when that car is introduced in the marketplace. People are going to say, "Yeah, that's a different kind of a car." No question about that.

Q You had the same enthusiasm for the Fiesta, and that was a great success.

A Yeah, but in a different kind of way. It was a different buyer. It was a small-car buyer, a very functionally-oriented buyer, and we did, like I said, most of the research in Europe, and they were more driver-oriented. It's a more practical car. That was a totally different market segment, so it's hard to compare the two. But, there was an excitement there, but it was a different kind of excitement, if you will. But, yeah, a very, very positive reaction to it.

Q And, it's been your bread and butter car ever since.

A Oh, yeah.

Q That's unusual.

A There's an interesting common thread walking between the two cars -- the Fiesta and Taurus -- and that is that Lou Veraldi was the chief engineer on the program, and Al Guthrie was his right-hand man in engi-

neering. Lou is the chief engineer on the Taurus program also, and Al Guthrie happens to be his right-hand engineer on this also. We have some of the same personalities walking around on this car that we had in Europe. They're all back here, and it's quite a team. And they are just as thorough on this Taurus as they were on the Fiesta. This is a bigger program, but the thoroughness is there, and I feel like it's a repeat performance. The engineering on this car has just been phenomenal. They've had sheet metal prototypes running around on Taurus that were nine months ahead of any prototype program we've had in the history of the company, and these guys knew, -- Lou knew -- that he just had to get real world sheet metal out there and started to develop the test programs ahead of time so that the engineers would have enough time to do their development work, and that's what's happening on this Taurus line again. We've got it. The problems that they have to resolve now are almost fun problems to work with. They got all the tough ones out of the way early on in the program, which sets it up for being the right kind of a car.

Q I hope [that later] we can go into that in some detail. I'd like to hark back to the success of the Fiesta and what kind of a role that played for you in your career?

A It helped establish my credentials over in Europe, and I had a lot of exposure to top management on it. That was probably one of the biggest benefits of a foreign assignment, especially a European assignment.

Q Obviously, someone at that time thought you were good [executive] material.

A Yeah, fortunately they did, and Joe Oros retired.

Q 1973?

A It was about '74, and that's when I took over Ford of Europe. I became the V.P. of Design for Ford of Europe, and just at that point, we were embarking on some other fairly major programs. We did a major facelift on the European Granada, which was the full-size car, the largest car we built in Europe. It was almost an all-new car. It wasn't just a facelift. And, that was the first car we had done in Europe with a slant-back, front end. Up until that point, we'd always done very vertical, very high-hood, front-end designs which Mr. Ford really liked and so did our management. And, I can remember showing this Granada to Mr. Ford when he first came to Europe, and we had a show for him in our Grafton Street office in downtown London. Sometimes he'd come up in the studio, and sometimes he'd stay in London, and we had a big, garage showroom.

Q 1975?

A Yeah, it would have been '75. And, I can remember having a show for him down there, and Mr. Ford looked at the car. And, it definitely had a very mild slant-back front end on it, but compared to....

Q What do you mean by a slant-back front end?

A It's a vertical grill in the car. It slanted back a little bit. Not as much as we're doing on Mustang and a lot of cars today, but, in those days, it was quite a dramatic departure from the very vertical front end that we were doing.

Q Back to the early 'Thirties in design?

A A slight bit of that, but a lower front end. It had a little bit of slant. I remember Mr. Ford reviewing the cars, saying -- he was very up front about it. He didn't hide his comments from anybody. He didn't have to. He just said, "Hey, that's really different, Jack. I'm not so

sure. I'm going to have to get used to that a little." I said, "Let us work on it, Mr. Ford, and we'll keep trying." I remember he came back to town a few months later, and we had the car set up again. We'd made some modifications to the front end, just refined it more. We had three or four cars sitting around the display that did have slant-back front ends like Citroen and other popular European makes to set the pace and let Mr. Ford know, because he was flying back and forth from the U.S. to London and not really getting a full shake or viewing of all the competition over there.

We had this showroom organized so that he could see it and get a pretty good feel for what our competition was doing, and then he saw that our slant-back, front end on the European Granada was very, very mild, really. I can remember him just standing there and staring at it. I thought, "Oh boy, what's he going to say this time?" And, he just turned around and looked me straight in the eye and said, "Hey, I got to tell you, I really like it! That's a nice automobile, a nice car." And we put the right kind of a grill texture in that would really work with the slant-back. Again, we were working with this louver theme with the grill texture which we wanted to work into a Ford theme that we could use on all of our Fords, because, over there, cars seem to have a common identity to the front end. There's some common workout or graphics on the front end that tied the whole line together, which we don't do in this country as much. But he said, "Hey, I didn't care for it that much before, but I really do like it now." And, we felt very good about that to know that we had something new, and he accepted it, and it was an extremely successful car. It really was -- the full-size Granada.

Q Are they still making it?

A Yeah, oh, yeah.

Q The Granada platform has been a workhorse?

A Oh, it's been an outstanding car, and it had four-wheel, independent suspension, nice power train. Yeah, a really nice car. Extremely successful, so we had it at the top end, we had it at the bottom end of the market, we were really developing good products. And, then we did a facelift on the Taunus and Cortina back in those days. Pretty major facelifts, too, to pull them more in line with our new line of making very clean cars.

What we'd really done in Europe, starting with the Fiesta, was to develop these clean cars. Now, prior to my arriving there, we were using a lot of American design elements on the car. And, by that, I mean we were hanging a lot of chrome moldings -- superfluous ornamentation -- on the cars, and it just wasn't right. It, obviously, didn't connect in the European market. There was just no place for it over there, but it was a matter of having people with American tastes doing and approving the cars, and it wasn't right. The message that we got through was, hey, we have to develop these cars for European tastes. They don't care about us. They don't need us. We need them. And, once we crossed that bridge, we were much more successful.

Q Along that line, why was it that Ford of Europe couldn't be independent? Obviously, they have a different environment. Why did you have to tack on these Dearborn concepts?

A I don't think there was any reason that we couldn't be independent. I think our thinking just wasn't adjusted that way, and we just hadn't thought about it. Our U.S. management was very involved and always thought the U.S. look was the look that the world should like. But the

more we had U.S. management living in Europe and trying to understand the marketplace and the buyers, the more we came to the realization that, hey, we have to design these cars for the people on location. People like Bob Lutz were there at the time and who were really fighting to get more of that European look. Now you can look back, and it makes eminent sense to think that you should design to suit the environment, but, at the time, it just didn't. Business was always done that way prior to this, and we were fairly successful, and after the war, it was a successful formula to use, but they had gone off in more of their own European direction, and we had to just ensure that we were meeting those objectives.

That's the way it finally worked out, and U.S. management, again, was open-minded enough to let us do it. It's a real credit to them that they allowed us to do it, because they were driving to the airport in big Lincolns here and getting off and just staying there for a couple of days and not really understanding -- being driven to the hotel and not really driving a car then. They didn't really have that much of a feel. But you have to give U.S. management credit for allowing us to come through with our ideas and expressing our opinions over there.

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This is Dave Crippen of the Edsel Ford Design History Center at the Henry Ford Museum & Greenfield Village, and we are today conducting the second design history oral interview with John J. (Jack) Teinack, who is Chief Design Executive, North American Operations at Ford Motor Company. It's May 8 [1985]. In our last interview we had finished up the description of your career [efforts] at Ford of Europe. I want to ask you about your relationship with Joe Oros, who was then head of design of Ford of Europe and the system of logistical control that he instituted while he was there which eased the commuting process between Ford of England and Ford of Europe.

A Ford of Europe, organizationally, was set up just prior to Joe Oros arriving on the scene and taking over the V.P. of design. When I started there with Joe, we were in the process of still working out a number of the technical problems of having the design studio in Merkenich, which is a suburb of Cologne, Germany, and the studio in Dunton, England. By that point, Ford Motor Company had already commonized its product. We were building one product for both England and the Continent. Prior to that, we were doing products for both sides. So we had some unique design issues. We had to contend with having studios in both areas, and we would still have design competitions between England and Germany to develop a car line. When I arrived, we were just embarking on the Fiesta program, so we actually had input, not only from our studios in Dunton, England, and Merkenich, Germany, but also from Turin, Italy, and the U.S. Part of our responsibility there was to coordinate all of this design input into our shows there and then work out the design critiques based on the products that we were getting from all these different areas, which was really a good way to do it. We probably

had more design input from more varied places for the smallest car of the company they had ever turned out or on any large car or any other project I'd ever been involved with.

It worked very well. We did seem to be able to work out the logistics. We were flying models back and forth between England and Germany and bringing them in from the U.S. for shows. In retrospect, it seems like it was a bit of a nightmare to coordinate all of that design input from so many different areas and still come up with the right kind of a product, but it did work. The car -- the Fiesta -- that was actually settled on at that time was the design from the Dunton studio in England. We got design approval, and I'll never forget that day. It was one of the most exciting days in my life as a designer because when the design committee came over from the U.S., which included Henry Ford II, they met at the Merkenich studio, and we had three design proposals on the turntables that they would be reviewing. This was for the final approval of the design of the Fiesta car. At the time I was working for Joe Oros in our Dunton studio, and they selected our design -- our theme.

Bill Bourke was running Ford of Europe at that time. This was on a morning when we had the meeting, and they had scheduled a luncheon that afternoon for all of the people of Ford of Europe of management level that would be involved in this program: sales people, marketing people, product planners, engineers, designers. They must have assembled about four to five hundred people for a lunch that day at the Intercontinental Hotel in downtown Cologne. People were so enthusiastic about the design that was selected that Bill Bourke said after the meeting was finished in the morning, "Take that model to the hotel in downtown Cologne for a lunch." We didn't have much time. We only had about an hour and a half

to get that clay model into the hotel so he could unveil it in front of all of these people that would be involved in the program, because they were there that day to tell Ford of Europe management -- four or five hundred people -- that we are serious about the Fiesta program, this is it, today's the day we're embarking. Mr. Ford and the design committee made the decision to go ahead with the program, which was really a massive program. This included building plants in Spain -- the whole shot. It was really the largest undertaking we'd ever had. In those days, it was an eight hundred million dollar program, which is a heck of a lot of money these days, but in those days, it was astronomical. It was a very exciting day, and I asked my modelers and designers if they could get that model to the hotel in downtown Cologne. I think those guys would have carried it on their backs to get it down there, they were so enthusiastic about it.

Mr. Ford and Mr. Iacocca and Mr. Bourke spoke at the luncheon to kick it off, and then at the prescribed moment they said, "Now, gentlemen, we want to show you the model that was just selected this morning in the design studio," and we unveiled the clay model in front of all those people at the hotel. And everyone stood up and broke into a round of applause, and it was one of the most exciting meetings that I've every been to. It was, in effect, a pep rally. [This was] the Fall of '73, but I'm not going to swear to that.

Q The Fiesta was destined to fill a gap that you have in the...?

A Yes. The main reason for doing the car was -- it's a B class car, which is, generally, the smallest mass-produced car in Europe, and we had nothing in that segment at all. The company felt that we would bring a

lot more traffic into our dealerships if we had a car in the B class segment. We were the only manufacturer in Europe that didn't have a B class car at the time. It worked like a charm. It really did bring people into our dealerships. And since we were the only manufacturer that didn't have a B class car, Bill Bourke's theme on the car was "last in, best dressed." He wanted absolutely the best product, no holds barred, no excuses. And we went through a considerable amount of market research on that car in developing that car -- the most intensive market research that I've ever been involved with in my career with the company. Even though it was the smallest car, only available in one model, I think we did more research on that than any other car I can ever remember. And, obviously, it paid off because we got it right down to the last detail.

I think one other interesting point is Lou Veraldi was in charge of engineering on that car, and now Lou Veraldi is here in charge of engineering on the Taurus and Sable product line, and he's putting the same kind of emphasis on detail that he did on the Fiesta, which, I think, is a real tribute to him, because he was just leaving absolutely no stone unturned. His [new] car will be one hundred percent spot on. And that's the way the Fiesta was. We used to have woodshed meetings over there where everybody would come in and roll up their sleeves, and he'd get the top guys from each area -- the vice-president of engineering, design, sales, marketing, manufacturing, and we would stand around that car on a weekly basis -- prototype models -- and go through them with a fine-toothed comb. Everything had to be spot on. When the car came out, it was spot on.

We were a bit concerned because we launched the car in Germany, and then in about four to six months followed with the opening of our new plant in Spain where we were building it, and everyone said, "My gosh, you will never get German quality in Spain!" But we did, and the car was designed so that it was fool-proof. You couldn't put it together the wrong way. Everything was designed to go together properly. It had the right kind of quality. And we sent a German team of manufacturing people that launched the car in Germany down to Spain to launch the car there with the Spanish work force. There was absolutely no way anyone could ever tell the difference between one built in Germany and one built in Spain. The quality was absolutely spot on. There were no differences at all. That was great for Spain, because that was the first time they'd really embarked on a large program like that and did it successfully.

Q That plant was in?

A In Valencia.

Q [It was] fitting. The name had a Latin ring to it?

A It did, but that was interesting because we really wanted the car to have a German image, and the marketing and sales people were coming up with all kinds of Germanic names for the car, and then, finally....

Q Do you remember any of them?

A No, I don't.

Q It was code named the Bobcat.

A It was code named the Bobcat, and that name was actually sticking for awhile. Finally, the word came from the U.S. that the company -- U.S. management -- decided on Fiesta, and we all thought, "My gosh, that doesn't sound very Germanic and how will the Europeans really take to that?" We finally sat back and relaxed a little bit because we said to

ourselves, "Hey, this product is so good, it will make the name." And Fiesta, obviously, is not a bad name, but we wanted something more Germanic. And, in actual fact, it came out that way. The product was so good, the name worked, and we had absolutely no problems with it.

And, by the way, we talked to G.M. before we used that name, because they were using the name Fiesta on an Oldsmobile, and we had to get their okay to use that name.

Q They finally agreed to release it?

A They did, right. That was before we firmed on it, and they allowed us to use it, which was an interesting thing. But it was an exciting program. I'll never forget that day when we were at the hotel unveiling the car. I had my whole modeling crew that worked on the car in Germany putting the final touches on the car. They came from England to Germany to get it all in shape. We were so excited. While we were having the management kickoff luncheon, I had my whole modeling crew and the designers that were involved in the program in an adjoining room, and they had a champagne lunch in celebration of it, and we were so excited about it. It was really good.

Q It went very well?

A Oh, yes, yes. It's done extremely well, and it did just exactly what we wanted it to do. It gave us a presence in Spain, because we couldn't sell cars there without a very heavy tariff on them. But by building cars there and exporting them, we could import other cars, and it really opened up a lot of new markets for us. And it's doing very well today. It's had its first major facelift this year. It's really holding its own in the B class market. And it's a good product. It proves that if you get the product right, you can sell. Just think of the

customer and get the product right.

Q How is the Granada going at this...?

A At that time?

Q Yes. Had it just been introduced?

A No. The Granada was kind of just easing along. We did a major facelift on the Granada shortly after that. My timing may be a little bit off, but it was a facelift that really turned the Granada around. And it's still carrying on very well today, but we're just getting to the point where we're changing that now.

Q The Scorpio?

A The Scorpio, right.

Q Here you are in the mid-'Seventies, and Joe Oros has gone back to Dearborn, and you're elected Vice-president of Design for Ford of Europe?

A That's right, yes.

Q Do you remember, you came back fairly soon after that? Do you remember anything beyond the Granada facelift and the Fiesta that sticks in your mind from that period on?

A Yes. We did a major facelift on the Taunus and Cortina, which were, essentially, the same car and gave them more of a Germanic look, if you will. I guess that's where it was at the time. But the cars were identical, except for names, and then those cars were replaced with the Sierra that we're selling in Europe now.

Q So did you have some input into the Sierra?

A No, I didn't. I had some input into the Escort that's on the road there today in the very, very early stages just before I left Europe. That was actually the last project that I was involved on at all -- but a

number of other facelift programs.

Q You enjoyed your stay at Ford at Europe?

A Oh, absolutely. Those were really exciting years. It's hard to circle a year and say this one was more exciting than the last because I've thoroughly enjoyed being in Australia, too. The European job was a lot larger, but, boy, it was exciting. We had some really exciting projects that worked out very well.

And we went through some tough times over there. The industry was really down while we were there. The whole industry was in bad shape, but we always managed to just keep a little bit in the black, which was tough to do in those days, but it worked.

Q You and Bill Bourke seemed to sort of have parallel careers. You both moved from Australia to Europe, and then from Europe to Dearborn.

A Yes, that's right.

Q He ran NAAO at that point?

A That's right. He preceded me by a year or so, both in Europe and in the U.S. There's no question about it, he did a good job in both places -- in Australia and in Europe, because we really went through some very difficult times while we were there. But, as I said, kept us in the black. Did everything conceivable a man could do, but he kept us in the black over there.

Q You're back in Dearborn in 1976, and you have this marvelous title: Director of International Special Vehicles and Advanced Concept Design Office. What did that entail?

A The title sounded like it entailed all sorts of things, and, I guess, it did, but the primary project that I was involved in as soon as I got back was the '79 Mustang program.

We were just starting into the Mustang program, and a lot of people felt that there was a lot of European influence in the Mustang, and they're probably not too off on it. I think there was, but I think I came back with a lot of different ideas.

Q A fresh approach?

A Yes, really a fresh approach -- a different approach. I like to think [it was a] good approach. It must be good, the car is still number seven in sales throughout the U.S. That's really the '79 with some minor facelifts on it, so it's holding its own out there, which, I think, just goes to show you that if a car is done right, it will have some longevity to it. It's really holding in there.

Q This is the first evidence of a new European look in the Ford domestic product?

A It really was, and it seemed extremely European at the time to most people around here, I'm sure, including Gene Bordinat, because we had other models going in the building that were in competition with that car, and some of them -- well, the next preferred model was very, very American. It was what we would refer to as a "filling out the cube model." A very boxy sort of a model. I just thank God we didn't go that way, because I don't think that one would have lived as long. We would have been into some fairly major sheet metal rip ups on that car.... But the car that we did had a lot of support from management, and, fortunately, made it through market research and just squeaked ahead of this very traditional American Mustang that was being proposed at the time. And I mean squeaked ahead.

Q It was that close?

A It was very close.

Q In terms of general acceptance?

A Yes. In terms of general acceptance, overall image. But, fortunately, it worked, and we were able to pull it off. But it was amazing to hear how many people thought that car looked European. Today, I don't think anyone would look at a Mustang and say it's European. We introduced the car in '79, and this is '85, and today it's normal design. I like to think normal good design, but you don't hear anybody refer to the Mustang as European any more.

Q Was that [with] the egg crate grill?

A Yes, it was the egg crate grill.

Q That was startling.

A It was an all soft urethane front end. I think it was one of the first, and, if I'm not mistaken, it was the first slant-back front end we did on a car here in the U.S. I did another slant-back front end on the European Escort -- what did we call it? I want to say SBO. I'm not sure of the exact name of the car.

Q It was a beefed-up Escort?

A Yes. And everybody was nervous and jerky about this slant-back front end because we'd always done vertical front ends on our cars. It was a mild slant-back. So we did it over in Europe, so I had some experience under my belt on that and with urethane front ends, and that's why we proposed it on the Mustang. I can remember while we were developing the Mustang here, product planners were going through the car and trying to cost it, which is their job, and they tried aluminum bumpers on the car. We actually built them out of aluminum, and it really looked sick. It just lost everything. Finally, we won out because of the weight save with the urethane front end, and the cost was a little bit

over aluminum. There was just no comparison between the aluminum bumper front end and this total shape that we got with the urethane front end. We really had some significant impact on automotive design with that car, because a lot of people followed after that with these urethane integrated bumpers. I mean, others have been doing urethane. We did urethane bumpers on the previous Mustang, but we did the whole front and the whole front of the cab with the soft egg crate grill and [got] that total integrated look that we had on that car. So, I think, it was a bit of a milestone, and it's still selling well.

Q [Are] you pushing design, at least at Ford, toward the wedge at this point?

A Yes. But we never really got a lot of wedge. But we started to get wedge in that car, and I remember the designers working on that car and reviewing sketches with them and saying, "Hey, wait a minute. Your small sketches are great, but when you get into full-size drawings, you're losing all this life. Now, let's analyze it. What are you giving away?" And they were giving away a little bit of the wedge that they had. For example, the roof just didn't start at the windshield and fall off like we've always done in this country. In their sketches, the roof had a little bit of wedge to it. Now, we weren't wedge in the belt lines, but we had some in the -- and they'd get into full-size tapes, and they would go back to this normal way of doing business here, sloping the roof off. And I said, "You just lost a lot of the spark and enthusiasm of this car. Where is it? Where's the emotion? Look at it, you're losing that wedge." They kind of looked at me, saying, "Is he really serious? Does he really want us to get that sketch in it?" I said, "Yeah, I do, I really do." When I first came back to Dearborn, people

seemed to be afraid to express themselves. It was more of a top-down management style that was being used at the time.

I wanted the designers to tell me how they really felt about design, and I wanted them to feel comfortable disagreeing with me, which they wouldn't do, and it took about six months to really get them to say, "Hey, Jack, we don't think that's good," or "We don't think your idea is good, we think this is better." And once they started coming around that way -- had a few started, but a lot of them were very skeptical. Once they knew that I was receptive, that I really wanted to hear what they had to say -- whether or not I agreed with them -- was another point. But I really wanted them to tell me what they thought, good or bad. Once they knew that and really came around, the designs started to improve, and they were coming up with these new ideas. They weren't afraid to express themselves. And that Mustang is a direct result of it, because I said, "You guys are putting this stuff in sketches. You must think that way. Why aren't you really carrying through on it? Why aren't you doing it in full size? Why aren't we getting it in a clay model? What do we have to do?" They asked me, "Are you serious. Is this guy really serious? Does he really want that kind of step? Does he really want to break out of the boxy mold?" I said, "Yeah, I really do." I had to convince them. "I want plan view in the front end. Don't just fill out this cube."

I think that was a significant breakthrough for us in this building that these guys started to speak up a little more and tell us what they really wanted to do, because the talent was there, and we used it.

Q So, in a sense, you brought a breath of fresh air in from Europe?

A Some of that. I like to think I did.

Q A new enthusiasm?

A I like to think I did, Dave. Yes, because I was pretty damned serious about it. "Let's try something different." And it connected. It worked. And it really kicked G.M., and then they came out with a pretty hot Camaro and Firebird a couple/three years after that.

Q You moved them ahead a couple years?

A Yes, I believe so. Their cars were looking pretty sick. They did a terrific job when they brought out the Camaro and Firebird.

Q Odd that they had the lead in downsizing, yet they chose to remain with the boxy look.

A I don't consider the Camaro and Firebirds boxy.

Q But I mean their bread and butter line.

A Oh, bread and better, yeah.

Q So, you pushed them into moving their design concepts ahead a couple of years?

A Yes, I think so. And we're getting a lot of that reaction now with Taurus and Sable since they've been out and showed.

Q In any event, the Mustang is a mini sensation in the industry and is selling well.

A It had the staying power, and that was important. That was one of the objectives that we laid out for ourselves in the initial design stages. We knew that we would be entering this trend curve. If you visualize a bell-shaped curve, we knew we would be entering the trend curve in this country on the upside. That car would have been very acceptable in Europe. So we knew there was some risk involved, but it was a calculated risk. We knew that it may have a bit of a warm-up period with some people, but it would have longevity, and that's impor-

tant, because the Japanese competition in that segment were changing about every two or three years. Toyota had about three models to this one Mustang model, and yet the Mustang is still hanging in there and doing very well, and that was a real credit to these designers.

So we predicted that the car would have more longevity if we took the step, and it was a well worked-out design. You can't just be different for difference sake. It has to be different but good. So the formula worked on that car. It's working today on Thunderbird, and we think it will on the Sable. They're taking pretty bold steps, too.

Q On that egg crate grill, how did you come up with that? What were your precedents?

A We wanted to use some of the design elements that Mustang had over the years. We selected different design elements, like a heavy C pillar or a fastback or a hatchback. And one of the design elements that was in the Mustang from day one was an egg crate grill texture. The first one had a very flat, almost mesh, but it was an egg crate effect. We knew to get the aerodynamic effect -- and, by this way, this was the first time we really started about aero on a car, and we wanted to suggest aero with the car, which it did. But, anyway, that grill evolved. So it was more of an evolutionary approach to the front end done in a totally new manner with new materials. That's what really inspired the egg crate grill texture. We thought it was a good association to have with the Mustang because there were very few other design elements on the car that looked like previous Mustangs. But we felt we could work with some of those design elements and still maintain a Mustang look to it.

Q At this point, downsizing is no longer a dirty word, and it has been pretty much accepted in the upper councils of Ford Motor Company.

And you worked on the Escort before you left Europe -- had some input into it. How did that come about as a domestic adaptation? Do you remember some of the details and some of the discussions on the Escort?

A Initially, we tried to develop a world car -- one Escort for both sides of the pond. We did a considerable amount of market research, both in the U.S. and Europe on the Escort.

Can I back up and tell you one story that I forgot when I talked to market research? Just to show you how thoroughly we market research the Fiesta, probably about six months before introduction, we had a final round of research in Hamburg, Germany, and we took these very highly-detailed models. They were as close to the real production car as we could get to Hamburg, and the car we were facing off with was the Volkswagen, not the Rabbit, it was the next size down -- the B class car because the Rabbit's a C class car. In this country, everybody thought the Rabbit and the Fiesta were the same size car. They really weren't. They were distinctly different sizes. It didn't matter. But Volkswagen has one smaller than the Rabbit. The other one was the Polo.

Q Which never got to this country?

A Never got to the States, no. We were facing off with the Polo, and with the Fiat 127 and the Renault 105, but it was mainly between the Polo and Fiesta in Germany. We had the cars side by side, and we did not badge the cars. We had no identification on the cars because we wanted to eliminate brand bias with the respondents. And the cars were coming out very closely, except on the front end, the Polo was beating us on the front end. This is during the first day of market research. The cars were highly detailed -- the interiors, and exteriors, the instrument panels. We had almost believable, the closest thing we could get to a

real cluster in the interior with the chaplets on the speedometer, and all were highly detailed. Everything looked very real. We had to do this because it was the last round of research, and we wanted to be best in class in every detail. So we turned the interior around. We were getting good ratings on the interiors, good ratings on the exterior, side view, rear view. We weren't getting good ratings on the grill, and we had this louvered grill in the car, and it was at the point where we were really willing -- and the manufacturing people were willing to tear up that front end at the last minute, six months prior to intro, and redo it if it took that to make that car a winner in the front, and we wanted to be a winner in every aspect of that car.

One of my designers, Graham Symonds, who was a big English designer who spoke German, was standing around the research, and a German lady respondent was filling out her form on the car, and she was walking around the front end of the car, and she didn't know Graham. The respondents didn't know who was with the company, and we didn't even tell what company it was. And she talking to Graham Simons in German. Fortunately, he spoke German, so he understood her. She said, "That front end, there's something wrong with that front end." So he came back in German, "Well, what is it?" She said, "The grill." It was a dark gray. She said, "In Germany it must be black." He said, "Really! Why?" "Because grills are black, they're not dark gray." So Graham ran over to me afterwards, he says, "Hey, just for the hell of it, we've got black crylon spray paint right there. Why don't we, before the group comes in this evening, spray the grill black and see what happens!"

In trying to change the front, we sprayed that grill black. I had to catch a plane back to London. Dave Rees was with me, because Dave

Rees was our interior designer at the time, and Graham -- we all jumped on the plane, and we had spray cans in our hands, and we had to catch that flight back. We had a meeting the next day. And the marks went right up! So the survey went on for two or three days, whatever it was, and the front end just came alive because we just simply went from -- honest to God -- a gray texture to a black texture, and, by the time we got the results, we were best in class on every detail on that car, including the grill.

I came back, and I remember we were having lunch with Bill Bourke, and Jack MacDougal, who was head of manufacturing at the time over there, and I said, "Hey, we got it. We don't have to rip up the front end." They broke out in a round of applause, because they were honestly willing to change the sheet metal on that front end to get better marks. It was simply a color that popped up in the research. And, to me, that was a fluke, but that's where research really paid off. We would have gone into a major change on that car at the eleventh hour if it wasn't for a little detail like that. So much for research, but it worked. But we were discussing the Escort and Escort around the country before....

Q Yes. Were you able to come up with results that you thought were significant on the Escort?

A We were getting good marks, but as the research worked out, the American car did slightly better in America, and the European car did slightly better in Europe. I don't think the results were really that substantial. I don't think that it was significant enough to say that it warranted two different cars. However, in all fairness, maybe the attitude wasn't in the company at the time to do one car. And although the cars are exactly the same dimensions, there's very little commonalty

between the two cars. There's about three or four pieces that's common between the cars. Everything else is different. But, deep down inside, I still feel that they could have done the same car -- same design -- even though we were building [one] in this country and building [another] in Europe. But it would have caused considerable rip-ups in our manufacturing processes, because they were doing one-piece body sides in Europe, and we were set up to do multi-piece body sides here.

Design-wise, I know I can say this and be very straight forward about it as an American designer, [but] I think the European design was a better design. I think it would have been equally successful in this country. One of the major differences between the two was the Europeans did have a wedge shape to their car. They had some wedge shape. They had a climbing belt, and, at that time, Gene Bordinat, who was running the North American Design Center, didn't believe in the wedge. It was as simple as that. We had a difference of opinion. He was the boss, so he won out -- simple. We had many long discussions on that, and I remember Gene coming in the studio one day saying, "If that belt climbs as much as a sixteenth of an inch to the rear of that car, the guy that put it on is fired, he's out, finished, finito!"

Q And yet he had approved the Mustang design?

A Yes, but the Mustang belt didn't have a wedge. We had a little wedge in the roof, which everybody's uncomfortable with, but that was our first step. But he said, "The belt will be level." And he had his own rationale for that. He felt that in production, the rear ends are built high, and the car has automatic wedge anyway, which, I didn't agree with. I still don't. We're going to the wedge now.

I always liked the European Escort better because it did have that

wedge. And today, while facelifting the Escort, I still find that a problem dealing with a straight belt, because the whole industry has gone wedge now.

Q Can you move it?

A No. It's a major rip-up now. You'd be up for new doors and quarter panels. It's really an all major -- inner panels. It's big bucks.

Q It wasn't quite the car you had hoped it would be?

A No. And we had one here that was really a great car. It did have some wedge, and it was better looking than the European cars. We had the talent here to do it. It was just that we did have some different philosophies that we were dealing with at the time. And, really, I can't complain about the American Escort. It sold extremely well. There's no question about that. I just feel we would have been a little updated if we had the wedge, and it would have had more longevity to it if we did. I just feel the European car is a better-looking car overall. It really is.

And every time I drive one around, people want to know what it is. They run out in the streets and look at it. It's that different. But that's the way the business goes. It's still a very successful car. But all I'm saying is that it could have been one car. I know deep down inside it could have been. And even if we have different manufacturing processes, it didn't matter. We could have made one design. But the culture....

Q Hadn't moved that far?

A It really didn't move. And there were many other issues, I'm sure, that were walking around in the background on that car, and people con-

vinced themselves that they had to have unique cars here and unique cars in Europe. In the meantime, Volkswagen is selling the same car all around the the world, the Japanese are selling the same cars all around the world, but we couldn't. It's frustrating, but we could live with it. Now we would have the same amount of investment, because we had to invest in tools and all, but we could have saved some on design and engineering if it had been one car.

Q Did you have any support for your view in Dearborn?

A Oh, a lot of people felt that way around here in a lot of different areas of the company, but the total corporation just wasn't on that wave length. It wasn't ready for it. You don't move a corporation that way. Obviously, it wasn't a problem. The car sold well. Their Escort sold well. Ours is selling very well. What we did worked very well. I'm talking from a pure design standpoint -- European car versus American car -- I think their's is a better-looking car. It holds together better than ours.

Q You would have narrowed the gap if you'd been allowed to go ahead with that?

A Yes, oh, yes.

Q Doing the European in America?

A Oh, yes. And it's interesting because Iacocca was here at the time, and I can remember Lee looking at the one car that we think we would have done even better than the European car, and it very definitely had a wedge to it. He asked me about the car, "What do you think of this car?" I said, "That is it. That's the car I would really do." I was honest about it. I was honest with Bordinat. I told Bordinat the same thing, "I would do the car with more wedge." But, we just weren't

thinking in those terms in those years. It was an open discussion. There wasn't anything bad about it.

Q If it had come down to a decision, that you and Mr. Iacocca would have been on one side, [would] Mr. Bordinat and Mr. Ford have been on the other in terms of that particular car?

A Yes, but it never really got to that. Because then we have to play as a team. Everyone had a chance to express themselves, and this is the way it came out. And, my God, the car worked! It sold very well. Can't argue with success.

Q You went to more exciting things, at this point.

A Oh, yes.

Q You've made a decision to go ahead on a very radical course. Could you give some of the detail on that?

A Yes. Our first thrust was the '79 Mustang. That was our first attempt at aero, and that's when we really started talking about aero design and the aero look in this country. Then Escort was kind of an interim car. Obviously, a very successful car, but it worked. Not an overly-exciting car, but a damned good car. There were a lot of face-lifts and a lot of other cars that we got into, in the meantime, especially our full-size cars -- the full-size Ford, and Mercury, and the Lincoln Town Car -- very traditional cars.

But then we made a big design breakthrough on the '83 T-Bird and Cougar, and that's when we really went all the way for aero and wedge and got all the design elements that were turn-on design elements. And it's interesting because those cars were being developed before the industry really got hit. We got hit with the oil crisis, and we were in a down-sizing process, and we got into that and trying to take weight out of the

car, and we achieved a lot of those objectives. But design-wise, we probably had a more significant impact on the industry with the T-Bird than any other car that we'd done in quite some time.

We had to set a real discipline in the studios to design the car, in that we got much softer with the shapes, and the shapes even looked softer than the sheet metal shapes in clay, and it would have been very easy to normalize that clay model by rolling it into the showroom, which is what we always do. We call it refining. What we're really doing in many cases is normalizing and going back to where we are today with the design. But we really disciplined ourselves into living with the shapes on that Thunderbird, it was a tough discipline to live with, and there were a lot of very uncomfortable people around this building. I think we had a split house with our designers here, some saying, "You've gone too far." Usually, you'll never hear a designer say that. Design-wise, we'd crossed through that barrier, and we'd gone too far with softness and aero on the car.

Q What about the product planners? How did you bring them around?

A We had a damned good team of product planners. Ken Kohrs was running that area of planning. He was just a super guy to work with on the project. I think we worked extremely well with him. It was one of the first times that design and product planning worked that well together. It was the matter of the right people at the right time at the right place, and Ken was the right kind of a planner. He's running product development for Ford of Europe now. He's a V.P. abroad.

We had weight and cost objectives that we met, and we actually beat our cost objectives on that car. We came in over a hundred dollars under objective on the car, which is really good. And a lot of that had

to do with these new urethane bumpers that we worked on at Ford.

Again, we felt that we were entering that trend curve on the upside design-wise, and there would be some resistance to the car, initially, in the marketplace because the design was so revolutionary, but we felt it was worth it to go through that phase. And, boy, here we go again, it's paying out. The car caught on immediately in California, and we predicted that. They are receptive to new design. It's got to be good, too, not just new and different. It has to be new and different good. We really followed through on our form follows function theory, and I added other F to it, and that's flair. You've got to have excitement. You've got to have emotion in these cars. Some people thought the cars looked European. I don't think anybody says it's European today. It's just accepted design today. That's not bad to say it's European. I'd rather say it's European than Japanese. But the car connected in California. It's doing extremely well. For the last few months, it's been the number one domestic seller in California, and that's not bad. I believe that the sun rises in the West and moves Eastward, trend-wise. So if it makes it in California, it'll make it across the nation. But it made it in California, it made it on the East Coast. The middle of the country was a little skeptical about it, I think, in the early stages.

Q They're coming around?

A Dealers were very nervous about the car. However, they accepted the Cougar, nationwide. Cougar was accepted because of the formal roof on the Cougar. So we really felt we had our bases covered by doing both the Cougar and Bird. We're going after different market segments. There was a recognizable difference between the cars. There's a lot of dif-

ferential between these cars. That was part of our design objective. So I felt pretty comfortable and safe in reaching this way on the Bird and moving in the direction we did on the Cougar. We had the bases covered.

Q Was there a conscious tradeoff on the formal roof of the Cougar? Did you say, "Well, we'll catch one segment of the market with this very...?"

A Absolutely, yes.

Q And did that satisfy some of the split within your ranks?

A It did. It relaxed a lot of people right within our ranks and with our management ranks, in all fairness, because they knew we had both bases [covered].

Q It turned out to be a good decision?

A I'll tell you, yes. Then G.M. turned out with a lot of look-alike cars. We really had differential, and yet we've got an incredible amount of commonalty between the two cars, but they make two different statements, and that's what we wanted to do. It was a very cost-effective way to work out a program. And rather than just changing grills and taillights and bumpers, change the basic silhouette with the roof. It's no big deal. You put the money in a roof and a quarter panel rather than put it in all these other areas where we used to put it to get differential and never quite get it. We got differential! Now, from what we've seen of G.M., they're starting to move in that direction, too, with this kind of differential.

Q What about that story that is credited to Don Petersen that shortly after you got back from Europe, he gathered you and your people together and said, "We've got to strike out a new direction?"

A Yes, that was true. I can remember him coming, and that was right

when we were into the Thunderbird program. Don Petersen did come in, and he asked the question, he said, "Hey, are you...?" Because we were doing some very traditional Thunderbirds. He just asked me point blank, and this was before he was appointed President of North America. And I didn't know that he would be the president, but I had that feeling, because all of sudden he was paying us visits over here, and you feel something is happening.

But I've always tried to be honest with our management and just tell them what I think, whether they like it or not. It doesn't matter. If they ask me a question, I'll tell them what I think. And he asked, "What do you think of the cars you're doing? Are you excited about them? Are these the kind of cars you want to drive?" I looked him right square in the eye and said, "No, sir, these are not the cars I want." "What do you think a Thunderbird should look like?" I said, "I'd like to have the opportunity to show you." He said, "Maybe you will." Shortly after that, he was appointed president, and he made it clear, "Yes, I want to see what you and the designers think is a good car." And, boy, we really struck up the band then and said, "Okay, we're going to show you," and that's when the car was developed.

The car was actually developed, however, as a Mark. The first model was a Mark, and John Aiken worked on it. It was done immediately around the time we were introducing the previous Mark -- the Mark VI -- which was a very boxy Mark. We were starting to break out of that mold, and I gave John direction, "Try a Mark." This is in the early stages of Mark development. I said, "Try one that really breaks away from the traditional Mark that we have on the road today. What else can you do? Where would you go? What kind of Mark would you really like to drive?"

They did a Mark, and we went into market research -- T-Bird market research -- with some of the early models that we had. I remember the research was held here on a Saturday afternoon in our showroom. The respondents were not excited about any of the T-Birds that were shown. This is before we did the one that Petersen [wanted].

I got Marty Goldfarb, who was the commentator or the narrator in the research guide. I said, "Hey, Marty, nobody is turned on by these cars. I've got a Mark down in the studio." It was a fiberglass model that we just did and put on the shelf. It was very early on in the program. I said, "How would you like it if I took the Mark emblems off that car and parked it in a three-quarter, front view so they can't see the tire on the rear, and just have these respondents look at that car and tell us what they think of that kind of a car?" He said, "Hey, great idea. Do it." So we did. We rolled in this car -- a fiberglass model all covered up -- placed it so they could not see the tire, at least, while they were sitting in their chair looking. Now, once they got up and walked around the car, they saw the tire. But, anyway, just from a three-quarter, front view and a side view. Marty asked them, "Hey, what do you think of that car?" And everybody said, "Hey, now that's a new car! That would be a Thunderbird."

Then we said, "Okay, let's interpret that design as a Thunderbird," because the wheelbase was a little bit longer than the Bird, and a few other things were different. And that's when we got rolling on it and developed the Bird. So it was actually based on that first Mark proposal, but that turned them on. That turned on the respondents. That was really breaking with tradition, breaking with the mold, and getting a car that got these people excited.

Then we actually did the Bird version of that car and went into research with it, it started really connecting in the research, and that's when we knew that we were on to something very definitely.

Q Apparently, a great deal of credence is put into this type of feedback? How does it work? Do you get a series of auditors picked at random, or do you set up a show-and-tell kind of situation?

A Yes. We deal with an outside agency to bring in the respondents, and they screen them to make sure that we get the right buyer profile. Then we show them several models, depending on what the program is. In this case, we probably had three or four models that we review with the respondents to determine which ones were the best and most suited for the market, along with competitive cars that are also in the research.

Q You hold them in the courtyard [of the Design Center]?

A Sometime we do here, but most of the time we hold them out of town off-site because we don't want them to know it's a Ford product. So we'll go around the country, usually in California or the South or the East, depending on what we're trying to find out. The answers are very similar around the country. You get a little movement out in California. But we use that input, and it figures into -- somebody put a number on it once. They said that market research accounts for about twenty-two percent of the decision. I don't know where they get twenty-two percent.

We listen to research. We really do. We are a customer-driven company -- customer-oriented. We want to really know what they think. Now, it isn't easy. I've been known to criticize our market research people, which I really don't want to do, because I can't offer a better way to do research. I think research is essential. I'm not sure we're using the right systems, but it's a tough call. I don't have a better

system, and I hate to criticize a system if I don't have a better way of doing it or a suggestion on how they can improve it. I don't know what else to tell them to do on it.

Q The mold is frozen?

A Yes, it is.

Q You might try something like the [Survey Research Center of the] Institute for Social Research in Ann Arbor. They might come up with a different scheme of...?

A We have other people that we have talked to in market research that have had good ideas, and they look at the market differently, but we're pretty well set with the research we have. And we're working much more closely with our research people now. We're not fighting each other. We're really coming up with common problems, and common solutions, and first off, agreeing on the problem and then going for solutions. It's more of a team effort now. We're not there yet. We're still not, but we're a lot better than most people are in that business. So, we're learning.

The introduction of the '83 Thunderbird was, in my opinion, the major turning point, design-wise, in the history of the Ford Motor Company. We really changed and told the world, graphically, that we'd changed our design philosophy, and that we really do subscribe to the form follows function philosophy of design and made that statement very clear with the introduction of the '83 Thunderbird. A number of people, initially, were uncomfortable with the car, as we were in-house -- as the designers were, as management was -- but we all grew to like the car and live with the design. The design matured very nicely in-house prior to introduction, and we predicted that some phenomenon would happen in the

marketplace, and it did. That was, probably, the most rewarding part of that entire design project, Dave, and that we did see it come to fruition. We stayed with it. We knew we were on to a new design wave -- a new design trend -- and we had the conviction to go ahead and move ahead with that design and stay with it. And that was, probably, the most rewarding part of it.

Now that the car has established itself in the marketplace -- it has had a minor facelift, which improved it -- and our sales indicate very clearly that the car seems to be -- it's more successful with each change that we make on it. It's convinced us that we're on the right track. Now people understand the car. The customers understand the car. The marketplace understands the car. And this car will do more to pave the way for our upcoming designs than any other car we've ever had. So the car is paying off in many ways. It's a very profitable car for the Ford Motor Company, which is always key in our establishing whether or not a product is successful. It can be successful design-wise, but if we don't turn a profit with it and get the return on investment, the designer hasn't done his job. We really did our job on this one. We think we met both objectives. We're getting the right return on investment, and it's a successful design. I think it'll go down as a successful design exercise.

Q Were you happy with the design of the Mark VII?

A We went for a very functional image on the Mark, also. The LSC has been very successful, especially on the West Coast. The people that have bought the car, based on our research and interviews, are extremely pleased with the car. It meets their objectives. It has all the handling characteristics and dynamics that coincide with what we're

suggesting with the looks of the car. So, yes, we're very happy with it. We think that the traditional Mark buyer probably doesn't understand the Mark VII. I have to distinguish between the Mark VII and Mark LSC as well, because it is not a traditional car. This car will have probably a longer conditioning period than most new cars we've introduced, and, of course, we've just taken a totally different tact with the Mark when compared to the Mark that it replaced. And they are just at the opposite ends of the spectrum. That's all there is to it. But it'll be interesting to continue to track the Mark, now with General Motors downsizing their Eldorado. That new downsized Eldorado will be out this Fall. Now, understand, it's twenty-four inches shorter than the Mark, so that's really small. So if people think the Mark is small, which our traditional Mark buyers seem to think, the Mark may, all of a sudden, this Fall when the Eldo comes out, look very large. So it might recapture some of those customers that moved away for a time. It is a downsizing world. We got there first with the Mark in downsizing. We really came down in size, and it may not have appealed to some of those traditional buyers, but when the traditional buyers see that the whole world is coming down in size, around that the whole environment has changed, they may find the Mark to be just the right size car for them.

I think the jury is still out, but I'm the eternal optimist, and we're going to track it. We'll keep our eye on it. But the LSC has performed very well for us.

Q Could you [describe] the LSC?

A Yes. The LSC is really a designer's car or a car enthusiast's car. We've met all the criteria that anyone with gasoline in their blood would appreciate. We've had a number of buff magazine reviews as favor-

able as I have seen on our Mark VII. So the buff people really like the car. The enthusiasts are very impressed with the car. Unfortunately, there probably aren't enough enthusiasts and buff people out there to determine whether or not a car is successful. But, on the other hand, if a product is right, and I think the LSC is right because of its suspension, and its handling characteristics, and performance, and looks. The ergonomics of the car -- the interior -- obviously is well laid out. Everything is very logical. This is what the real enthusiast appreciates in that kind of car. I think more and more people are trending this way, but a lot of customers that like that kind of design or like their friends to think they appreciate good design, tend to favor European-type cars -- Mercedes and BMW to be specific - and will pay twice as much for a Mercedes or BMW. And, in actual fact, the Mark delivers just about everything they can get on those other cars at half the price. We're talking about a \$25,000 versus a \$50,000 car. Some of them have come around. I ran into a fellow in California the other day that traded in a Mercedes on a Mark. He was planning to buy another Mercedes, but he thought he'd give an LSC a try. So he got the LSC and bought his son a T-Bird and his wife a Cougar with the money left over instead of buying just one Mercedes. He said, "I love the car." He said, "Unfortunately, people think I've dropped in status a bit because I'm not driving a Mercedes, but I've to tell you, I love the LSC." Maybe if enough people see that and understand this car and really appreciate the dynamics of it, it will start to catch on even more.

But I still think the jury is out. Some in the company don't think it is. Some think that maybe we did just downsize it a little too quickly on the Mark. Some people think it looks a little too much like

the Bird. So there are a lot of issues walking around on the car. And, I suppose, if we had to do it over, we may not have gone into the luxury functional image that we developed for the car. Some people say it's just too damned European. Maybe we moved too quickly. But, if we did move too quickly, the car still has an opportunity to mature and that appreciation for it may come around when the new Eldo comes out, and they find out how small those cars can really get.

Q Were there any faint hearts along the way that might have counseled not to go too fast on this design?

A No. We were on a bit of a roll when the car was being developed, and we were very enthusiastic about the Thunderbird and the Cougar. We really felt we were going in the right direction, and just about everybody that I can recall felt that way. Upper management really supported us on the design. But, I think, we could have done things with the car. For example, in the interior on the Mark VII -- not the LSC -- we could have gone more American. We kept the interior very pure on that car. Americans still like shiny velour materials, and the tufted seats, and over-padding, and woodgrain and chrome. They really do, especially that traditional Mark buyer. That's who we're trying to appeal to, and we probably just over-corrected a bit and went and tried to sterilize the Mark buyer or purify him. You can only take so much at a time, and people really don't want to turn that quickly, we're finding out. The traditional buyer.

The LSC buyers love the car. The people I've talked to just think the LSC version is terrific. "It's just what we've needed." I'd just like to see a few more of those buyers out there. Get a few more of them out of their Mercedes and BMW's into this car. I still think the oppor-

tunity is still out there, so we'll see.

Q You're going to keep the LSC?

A Oh, yes.

Q Could you give us an in-depth look at the Taurus/Sable project -- which will have an introduction this Fall -- the reasons why it was done, and some of the design problems and decisions that you had to make along the way? Apparently, this was one of the first projects to really have an overall integrated team effort. Could you explain some of that to us.

A First off, when we set out the objectives for this car and worked out the image strategy with sales, marketing, engineering, manufacturing, product planning, we concensed on developing a car that was best in class in every detail. In the design areas that we had control over, we wanted best-in-class aerodynamics, best-in-class ergonomics, and best-in-class package. By that, I mean the interior package -- hip, shoulder, head room -- including luggage capacity. That was the premise that we based this car on and held to throughout the entire program. I've got to give a lot of credit to our engineering vice-president, Lou Veraldi, who was in charge of the entire program. With the effort that he put into this and the guidance and the leadership that he provided on this program to assure that we maintain the original objectives throughout, we are winding up with a best in class car. There's no question about it.

If you can judge a car at all by the reviews that we've been getting from the automotive press and buff magazines, they've all been very, very favorable. The reaction has been absolutely first-class. The reaction has been similar to that [which] we had to the '83 Thunderbird, but much more positive, because these cars are what we call "clean piece

of paper cars." There's hardly a carryover nut or bolt on these cars. Every component is new. Everything is well done. It's a no-excuse car. If we don't get these cars -- the Taurus and Sable --right, we just have to point the finger at ourselves. We can't blame anyone else. They're our cars. And everyone involved in the program has stood behind the cars. One of the most encouraging aspects of it is that everyone who's been on the program and others throughout the corporation who have seen the cars, all want to buy these cars. That's all there is to it. You can't get a better vote of confidence [than] that people just plain want them.

On just design, specifically, we won best-in-class aerodynamics, so that had a very strong influence on the overall shape and form of the car. That's why you'll notice we're continuing with this aero look that we initiated on the '83 Thunderbird but in a much more refined way. But it's definitely an evolutionary design theme that we're developing in the Ford Motor Company. It's our look, and, frankly, if we didn't develop these kinds of cars and this kind of a look, the motoring public would be disappointed. They expect it from us now. Aerodynamics are the price of admission. We established aerodynamics in the automobile industry. We were criticized for aerodynamics by our competitors for one very simple reason, and that is they simply didn't have aero, so they had to say, "We didn't know what we were doing." Now they're all trending that way, which we predicted, by the way. We knew our competition didn't have any choice that they would have to follow. They could not continue to build boxes.

However, we will not be beating the drums about aero as much as we have in the past. It's just, as I say, the price of admission. People

do expect aero. We will have best-in-class aero, and I don't think we have to talk about it as much. The car makes an aero statement. People accept it now. And the most pleasing part about it is people aren't accepting the design because it is aero. If we had brought this car out five years ago, people would probably have asked, "Why did you do this car? Why does it look this way?" And then we'd have to tell them aero. Now they look at it and say, "I like it. By the way, it is very aerodynamic, isn't it?" And that's the approach that we like when we've established that look. It's our look, it's our Ford look, and we're getting a lot of credit for it. It's a new look, and that's important. We want to be new, we want to be different, but it has to be new and different and good. We're on very solid ground with this design premise that we're using on these cars.

So the cars have a lot of new features with their new flush aero headlamps with polycarbon lens. The lens in the headlamps are ten times stronger than the sealed beam headlamps that we use on cars today. We have polycarbon on bumpers, which are extremely strong.

Q A new alloy?

A It's a new plastic that we're using on these bumpers. The bumper and headlamp lens are made of the same material since the headlamps are a clear version of it. The headlamp material is stronger than sheet metal. It will be more resistant to dents and breakage than sheet metal, which is great, because most headlamp breakage occurs from stone impact, while these will be very resistant to that sort of thing. If a lens does crack, the light will still function. And if a bulb ever burns out, you just simply change the small bulb in the back of the lens, so it's a very simple operation. You can carry spare bulbs with you in your car. It's

not a problem. So a lot of features. These are customer pluses.

We're coming up with other new features on the car. We have the insta-clear windshield. It'll be an industry first. We'll have the first windshield on a car that will melt a quarter of an inch of ice in less than two minutes. [In] about a minute and a half you're windshield will be completely melted, which is really great, especially in the climate we live in and all the northern parts of the country. It's a totally new technique. This was developed by our Ford Glass Division, so it's an in-house development. You'll see that as a very big plus feature on these cars. I hope we tell people about it, because I find it important. You know, we had a heated windshield some time ago on a Mark, but it was a totally different concept.

Q How does this one work?

A It's a new type of laminate that they're using between the laminated glass -- a film. It's some kind of a zinc/aluminum combination. I can't give you the technical details on it. It's opposed to this gold film that we used on the Marks several years ago, and that was an extremely expensive process. It cost about one thousand bucks to replace the windshield on a Mark if you broke one. This will be about a \$200/\$250 type option, so they really got their cost out of it, and it's much more effective -- much faster meltdown on it.

Q What's the melting agent on this? A sophisticated wiring system?

A It's just this film -- this metal film that's built into the laminate. It's transparent -- it's clear.

Q How does it melt the ice?

A It's heated. It's electrically heated, but it's a film, so you don't see any lines or grid. It's just clear. It has a slight bronze

color to it which you'll notice from the exterior of the car, but it's hardly perceptible.

The interior of the car, the instrument panels, are all an ergonomically laid plan and design, and we have more differential between the Taurus and the Sable, or the Ford and the Mercury, than we've ever had on cars in this range. And that was one of our design objectives. The sheet metal was totally unique between the two cars. Now there's very definitely a very strong family resemblance between these cars, which was planned. There's a common thread working through these cars between the Ford and Mercury, so you know they're out of the same stable, but yet they're very unique cars in their own way. Where the Mercury moves up range is in its detailing -- very, very little bright detailing on the Mercury. We've achieved bright value without the use of chrome. For example, the Mercury has a full-width light bar grill, which is done in polycarb, so we get this bright effect without adding chrome to the car. There's no chrome in the bumpers, no chrome in the side moldings -- in the protection moldings. There's just bright detailing around the window glass, which, by the way, is flush. We have flush glass -- 360 degree flush windshield, flush side glass and flush backlights.

Q First time it's gotten flush glass?

A First time. We will be the first American manufacturer to have flush glass -- 360 degree flush glass -- in these cars. So the cars have a lot of newness in the interior and exterior-wise. You will notice these cars on the road very definitely. I followed one over here on Allen Road just the other day, and you can't help but notice these cars on the road. That's good news. You can notice things that are bad, also, but you will notice these, and, hopefully, people will like them.

They'll notice the stance of these cars. We've really had a very concerted effort here to get better tread on these cars. We have a better tire to sheet metal relationship on these cars than we've had on any other car. European cars are known for good stance and a good tready look. The Audi 5000 is a good example of that. And yet when you put an Audi 5000 next to either of these cars, the wheels on the Audi look as if they're tucked under the car, which was similar to what we were caught up in Detroit for years. So these cars are the best in the industry for this look. We want to be best-in-class in aesthetics, also, on these cars, and we've achieved a lot of that. But stance is really key. If you get the right tread to sheet metal relationship on a car, you're off to a pretty good start. Get the right glass planes in -- you're off to a good start.

We got those basic building blocks -- those basic ingredients -- that we put in place, and the people here in the Design Center put a lot of that in place. Our package people, especially, who work with our engineers, and our engineers supported us, and lot of it had to do with Lou Veraldi and his European experience. Lou and I worked on the Fiesta program in Europe, and that was another, in my opinion, best-in-class car -- one of the hottest cars we'd ever done. It's the smallest car we'd ever done, but probably the best quality car we've ever built. And Lou applied the same engineering philosophy to the Taurus and Sable that he applied to that car, and every last detail has been scrutinized and gone through and blessed by Lou, and we consensed on it with the group that we were working with throughout the corporation and just made sure that every detail was the best on these cars. And, I think, the cars really show that. It's going to pay off.

I think the cars are exciting, they're a new shape, they're aero, they make a strong statement on the road; they will look like nothing else in their class. We've had a number of competitive makes in for comparison. We've had them on test trips. At this point, I'm just talking about the design of the car, and when you get into the dynamics of the car and the performance and handling, you will find that they are just superb automobiles. We've delivered on the promise suggested by the design of these cars. Our objective was to design a car that did suggest the dynamics, and we've done our job, and our engineering community has gone beyond what I ever expected we would develop in this corporation for handling, and ride characteristics, and just the total vehicle that we wound up with is a result of a great effort on the part of everybody in the company.

It was a real team process that we used. Everybody felt part of the team that worked on the project, from the designers, through engineering, through manufacturing, through our suppliers. Everyone felt totally involved in these cars. I've never seen anything like this on a project. This has to be the best project I've ever been involved in yet in my time at the company, because it was such a unified effort. People were listened to, people contributed to this program, people have a part of themselves in these cars. They really do. I've never seen a project like this, and it shows -- it will show -- in the final production vehicles.

Q Can you back up a bit and detail some of the discussions with the product planners, with the engineers, and the designers, and, perhaps, where the first impetus came for this type of a car? Was the thought that you would replace a very conventional, older set of cars that were

still selling but were rapidly becoming an anachronism in the early 'Eighties?

A The cars that we were replacing are today's LTD and Marquis. Now these are not the full-size LTD. Crown Victoria was the LTD, which are very conventional, very traditional cars, selling very well. They're rear-wheel drive. The cars are nicely proportioned. We must be doing something right with these cars, because, as I said, they are selling extremely well right now. And, naturally, when you try to replace something like that what we consider a winner, you have to use a bit of caution, because we've moved 180 degrees from those cars. A lot of people thought it was a lot of risk. When we set out the initial objectives, we knew that we were going for a different type of automobile, yet we were going for the same market segment, and the big underlying question on all of our discussions was how much will the customer reach? How much can we pull away from the LTD and Marquis? We crossed that bridge when we made the decision to go to front-wheel drive. All of sudden, we're talking about totally different vehicle dynamics. And, by the way, Lou Veraldi's direction and objective on front-wheel drive was -- and you won't believe it -- "make those front-wheel drive [cars] handle like rear-wheel drive cars." And, at that point, you have to ask yourself, why do a front-wheel drive car? Well, because competition was going that way, and we've had....

Q The wave of the future?

A I'm not so sure about that, Dave, because you'll hear a lot of pro and con. All the buff people prefer rear-wheel drive, and a lot of people that drive in the snow like front-wheel drive. The handling types don't care, they can still drive rear-wheel drive in the snow. I've been

doing it all my life. It doesn't matter. We can satisfy both needs. We really can. We could have a discussion on front versus rear-wheel drive cars until hell freezes over, and it really doesn't make any difference. You can do good cars both ways, and there are advantages to both, and we can offer both, and we will offer both. We'll continue with both. We're not putting all our eggs in one basket going one way or the other. And I don't believe one will take over from the other.

I'll just say one more thing about front versus rear-wheel drive. Look at some of our competition. Say, the big automobile manufacturers that are really respected like Mercedes. We're on safe ground when we talk about Mercedes. They've got all the research and development money that any automobile manufacturer would ever want. At least, that's the way it looks to me, and they recently have brought out two new models. They brought out the 190 Mercedes, which is a small car. It's about the size of Tempo/Topaz. Our Tempo/Topaz are front-wheel drive, and most cars in the U.S. in that segment are front-wheel drive. Here's Mercedes walking in the door with all the R & D money in the world, and what do they do? They developed a whole new car -- clean piece of paper car. Guess what? Rear-wheel drive! So much for front wheel. If it's so damned good, why isn't Mercedes doing it? Why isn't BMW doing it? If it is really so good, why don't the big boys do it? Mercedes just brought out the new mid series. I believe they call it the 300 in Europe. I'm not sure what they'll call it in this country. It hasn't arrived here yet.

By the way, I think [the 300] is a great-looking car -- the best looking Mercedes they've ever done aesthetically. I don't think the 190 is a good-looking car. Well built, obviously. Well engineered. Design-

wise, it's kind of a zero car, but the new 300 series Mercedes is very well done. Again, what did they do? Rear-wheel drive! Now they didn't have to. Nobody put a gun to their head and said you have to. I think they made a very logical decision, and, assuming they went through a logical process to arrive at that conclusion, they decided rear. So that's why I'm saying front-wheel isn't the be-all to end-all, but we are doing it. It's more a marketing need. I don't believe it's a marketing necessity, but in this environment, we have to take these issues under consideration, and if that's the way it's trending in the U.S., why not be there?

There are some interior advantages to going front-wheel drive. Obviously, you get a lower front compartment floor, which allows us to have six-passenger seating in a car of this size, which is really great. So there are a lot of really good advantages to it, and we are taking advantage. But I just thought it was interesting to note that Lou Veraldi's direction was -- and he signed up to this -- "Give me a front-wheel drive car that handles like a rear-wheel drive car." And I've got to tell you, it does. And I've got to tell you that it'll be the best handling front-wheel drive sedan in its class. There's no question about that.

And they had opportunities in engineering, because this was the first car that we actually did driving market research on. We had dynamic market research on these cars down in Florida. I think it was right around Christmas time, and we had both the Taurus and the Sable down there -- sedans and wagons -- and had people drive them. The only issue that people were concerned about on driving performance and handling the cars was steering for parking. Some people thought that the power

steering on it was just a little taut. They would have gone for a little less effort. And I was really proud of the Ford Motor Company and our engineering group that decided, no, because if we do that, we'll lose some of the linear effect that we have on down-the-road steering, say at 50 miles an hour, and they wouldn't sacrifice that just for a little less parking effort. Now the parking effort is absolutely minuscule. It doesn't even faze me. I don't even notice it. It doesn't matter. But I'm talking about a very typical, average American driver who would possibly notice something like that, but I will guarantee they'll get used to that the first time they drive the car around the block and park it a few times. It's absolutely no problem at all. But, normally, we would have backed down on that, and say we must have a soft, cushiony ride and one of these super-easy, effortless power steering units in here where you lose all feel of the car -- an all-down-the-road feel. We didn't do that. Our engineers maintained the steering integrity on this car, and I'm just super proud of them for sticking to it and believing in what they're doing and going for it, because it will pay off. Once people get in these cars and drive these cars, they'll never go back to the old traditional type of ride and handle we've had on typical American cars. These are superb automobiles. And I'm talking out of school, because I have nothing to do with the steering and handling performance of these cars. I'm improving performance somewhat with aerodynamics in the vehicle, along with lift characteristics aerodynamically, but not with any of the mechanicals. But because of the concerted effort that we had on the development of these cars, we wound up with a couple of superb automobiles. But, the proof is in the pudding, and I tell people that have seen these cars [who] seem to be very enthusiastic about them,

that that's only half the story. It's one thing to fall in love with a car to look at it. And that's important, because you have to get people into showrooms to buy them. So we've done our part in design, we'll get people in [to see] the cars, we'll get them in showrooms. Hopefully, they'll open the doors, get in, and sit down in the cars. But when they turn that key and drive them out of the showroom, they'll really have the surprise of their lives and find out that these are absolutely first-class or best-in-class automobiles. I think we've completed the circle on those cars.

Q How early do you remember that you began talking seriously about a new generation of Fords?

A I'm lousy on dates as to when we actually started the program.

Q Less on the dates and more the discussion that ensued -- the early exploratory discussions, the next stage decisions, and what kind of give and take you had with the various units of the team? How senior management viewed it?

A As I mentioned earlier, we established at the outset of the program that we wanted a best-in-class automobile. We all subscribed to that. Put that stake in the ground. When we came back into design, we explored a number of design themes, with aerodynamics being the driving force behind the design. We concensed on that. We knew our aero objectives would be on the cars. We also set out in design -- just in-house now, aesthetically -- and set down a few ground rules. And one that was a real driver -- and we set it in as discipline -- was we wanted this car to look like no other car on the road. We're right down to all the detailing of the car. We didn't want people to even look at or try to function a door handle and feel that they had seen this door handle

before. Even the door handles were unique -- different. I think every piece of detailing on this car is unique. People have never seen it before.

However, they say, "How far can you go with that? I want to recognize this as an automobile and not a strange piece of architecture out there." But we felt that if we really held to our functional design theories, it could be different and still be good and well executed. This was key to it. And everybody subscribed to that. Now we explored a number of early design themes and went in a number of different directions. With our basic proportions, at some points we got very, very soft and very -- I don't want to say too aerodynamic. There's no such thing as being too aerodynamic, but some of them got a little -- yeah, you'd never seen these shapes before, but they were just plain unusual and not comfortable. And it's hard to describe and to understand why a design is good. When do you know you've arrived at the right design? When is the overall proportion really correct -- aesthetically correct? When is it good? If you've never seen it before, how do you know it's correct? This is the crystal ball area that we're working in all the time.

We went through that, and I set in some disciplines here in the Design Center with the teams. I set up Taurus teams. It was the first time we'd ever done this. I set this team up so that the designers, and engineers, and modelers on the program would handle the project as we used to say, "from cradle to grave." I thought that was kind of a bleak outlook on a car. I now say, "from conception to birth." The same team has been following the car all the way through. We eliminated our feasibility studio at the time we were working on this project, so that all feasibility for this car was handled by this one design team. For years,

in this building, the production studio would develop the car, design the car, and then hand it over to the feasibility studio for final feasibility. And every time a car would be handed over to them, they would feel obligated to change it. It's just human nature. That's all there is to it. Whether it needed it or not, they changed it.

In this case, I believed when one team handles it, we'll save a lot of time if we don't change it -- step one. Number two, by maintaining the same team with their enthusiasm and interest and responsibility for the car, they will maintain the original design intent, because it's their's, they believe in it, they understand why they did it. We would have design continuity throughout the program if we would do this. And we did this, and this was the first car line we did that on. Now we're continuing to operate that way in all of our studios, and our feasibility studio is gone forever. There is no separate feasibility studio. The feas is handled right in the production studio with the people that developed the car. They are responsible for it. The designers, and engineers, and modelers on the program appreciate it that much more. They became much more of a team.

We also did one other thing. For the first year of the program, we had the interior and exterior of this car handled under one director, and it was Bob Zokas on that. It worked out very well. Then when interiors finally got to the approval stage, we kept the same design group on it, but they came under Trevor Creed in the interior studio, because they had the wherewithal and all the facilities to really carry on the project. But it was the initial design team that maintained the program all the way through, and that paid off.

I tried a couple of other things on this car. I had a real effort

going on here to get best-in-class detailing, and that's very difficult to describe, but [what you see] when you look at a car is key.

I spent some time with our operation in Europe, and there was a certain quality that we had in our products in Europe that we, frankly, didn't have here. It's a visual thing. It's not that this molding will not hang on any better, or this bumper won't function, or the window won't go up and down any better. No, the functions were all there.

Q The Europeans had [a certain] flair that didn't come over here?

A Yes. And it was almost an intangible thing. I've been trying to isolate it ever since I've been a designer, but especially after my time in Europe. It started with being in Australia. It started when I left America. I could look back at America, be outside, and look at America more objectively and say, "What are these other people doing that we're not doing there? Why do they have a look?" Australia was an eye-opener for me, because Australia was really neutral. It wasn't American, it wasn't European. Australia could get the best of both worlds. If you were a consumer in Australia, you could even get Oriental cars, American cars, European cars. And after living there for four years and really being in with people, I could take a much more objective look at ourselves in the total world picture and say, "Why do these Australians really buy Mercedes, or BMW, or a European Ford product, or Japanese? What is it about it?" I really tried to dissect it. And, again, after spending the time in Europe, I looked into it more. Then coming back to the U.S., I felt a real need to try and get that feel. So it's not just a European look, it's not just a sloping hood or a faster windshield, or flush glass. What is the detailing? How is the car assembled to give it a more quality look? We're using the same gauge sheet metal, we're using

the same kind of glass, the same kind of rubber, the same kind of plastic. What are they doing with these materials to make them look more quality?

I got down to shape and form of moldings in the design of a molding or the way it worked with the sheet metal and the way it was detailed into the overall fit and finish of the car. For example, take a belt molding or a window molding. What was it about the way we handled that on our European cars versus American cars that gave it a more quality look? And it got right down to the actual section of, say, a belt molding. You can use the same material here and there, but they designed the section. It had a fuller section to it, a more rounded section, it suggested more depth, more ruggedness. It suggested durability, it looked stronger, and then the way it fit to the sheet metal gave it a better fit -- a better look of more quality fit.

I always thought plastic had, in this country, a cheap connotation. You remember when plastics were first introduced twenty years ago people would say, "Oh, that's one of those cheap plastic things." Whatever it was, if it was a piece of furniture, or a cup, or a saucer, a plate, or a pen or whatever, "Oh, that's a cheap plastic thing." You don't hear people saying cheap plastic any more. People don't talk about plastic that much any more.

The Italians never felt that way about plastic. The Italians handled plastic like it was a fine piece of wood that was modeled, and carved, and formed, and shaped, and it had a look of quality about it. For some reason, the Italians never associated a cheap connotation with plastic. I don't know why. They just handle it differently. They had a different way of looking at a piece of material. I'm probably getting a

little esoteric, but this all plays back into why does a car look like quality? It's not, to me, just door margins being perfectly aligned. That's important. We know how to do that. We're doing that. But, to me, it's what's in between those door cuts --the sheet metal in between. How is it handled? How is it developed? How is it fabricated? How is it assembled that gives it the the total shape -- a quality look? What makes it a quality-looking piece of equipment?

I gave it a lot of thought and consideration, and I thought one of the issues I'd like to cover here is to get someone in from Europe that understood detailing. And, frankly, one of the best guys I could think of in understanding that kind of detailing was a designer that I brought over from Europe, Ray Everts, and Ray has been with us from the outset of this program. Ray really has a way of looking at details and working with engineers in developing details that give a quality look to a car. Although Ray was the exec designer on the program under Bob Zokas, the main the reason I wanted Ray to come over here was to get the right kind of detailing on this car. We have guys in this building that understand shape and form. There was no problem there. I never had any problem there at all, and Bob [Zokas] is one of them. Fritz Mayhew is another one. Dave Turner is another one. These guys really understand new shape, new form. They know how to develop it. They have a wonderful feeling for it. The one ingredient that I felt was lacking around here was this absolute attention to detail and a knowledge and background and feel that was this know how to really get it, and that's what we needed.

So what I believe we achieved with this combination of people with Ray Everts and his detailing background and ability, and a Fritz Mayhew and a Dave Turner in overall shape and form [was that] we developed a

combination team that covered every design base on that car that was absolutely essential to pull off the right kind of product. The best-in-class product. So combining these people on this team was really interesting to see this [them] work because they had a lot of divergent ideas. Ray had certain feelings about basic shape, and form, and contour that was not necessarily shared by, say, Fritz and Dave. And that's no problem, and I wasn't worried about that, because I knew we would be able to work out the right shape and basic shape and form of the car and then handle the detail.

As a matter of fact, the way we handled the programs, once the basic shape and form of a car was established, which was very heavily influenced by Bob Zokas and Fritz and Dave -- after about a year or so on the program, and once we pinned down the basic silhouettes of the cars -- the basic shapes, the basic form, the basic graphics -- I was able to move Fritz and Dave off the project onto some new projects where I felt it was necessary to have them move into, but continued with Ray Everts on that project to make sure that the detailing was up to the quality standard that we initially set out for ourselves. He will be on the program following right on through the launch and working with the plan and insuring that we do maintain original design intent on those cars. It was a great combination of people. We had some diversified talent working on that car. It was the first time that I have ever put together a team, and it's interesting, in retrospect, to think of the process that I, personally, went through in putting this team together. It was the first time that I had ever put together a team like this that gave me complete confidence that I was covered on every detail and more than I'd ever been covered before. I've had guys work on cars who were just good detail

guys or guys who were just good shape and form guys, but to really get the right combination -- the team -- together is sometimes difficult to do, personality-wise, because they don't necessarily always click with each other. They can get in each other's way. So there was a little orchestration to do to get the right kind of music to come out of that orchestra. I think we got it. And I've got to hand it to these people. It's as if you're building a football team, you have to have the right players. You have to have the different skills. And people may not think that way about designers, in general. They say, "If the guy's a designer, he's a designer." But there are designers that are especially good in particular areas of design. I'm really breaking it down into fine detail, but that's why we did it on this program, and I think we'll see that it'll pay off when those babies start rolling off the production line. I really mean that. More so than any other car.

The '83 Thunderbird is a terrific car, but I don't think it'll come close [to the] detailing we're doing on Taurus and Sable. This is setting a new standard for us, which you'll see on all our up-and-coming cars. So this wasn't even an experiment. This was just a gathering of background and knowledge that I had experienced around the world and had been wanting to put together for some time, and this project walked in the door, and the company really stood behind us. Mr. Caldwell was here when we started on the project. Mr. Petersen was the president. They laid out the ground rules. We have to be best-in-class. We want this. They supported us on this, and they insisted that we come up with a different-looking car. We've got to make a statement out there, and how do you do it? That's easy to do. We can make a statement, but it's got to be a good statement, it's got to be a quality statement. So, with the

assemblage of this type of team that we put together here, and with Lou Veraldi's driving force coming through his support; not just drive, but support. I can't tell you how important it is to have the engineers' support on a program like this to make it work. It's got to connect. That's all there is to it. So it's the people, it's the team that did it. I'm absolutely delighted with these cars. They have to be winners. They just have to be winners.

One other thing that the designers did, we were getting into the process of our whole employee-involvement program in the Design Center -- throughout the whole corporation -- but we had a concerted effort here in the Design Center. We were working with an outside management consultant from California who's been with us for a little over three years. We were just treating ourselves differently in the Design Center -- all of our people. We wanted more participation. We wanted more bottom-up type of management style in the building; not top-down. I did not want to stand there and tell them what this car should be or how it should look. I don't want to get into the detail. I felt it was important for me to develop a design team that would work from the bottom up. Especially with the young guys. I wanted a young guy's input into this car. I wanted new ideas -- fresh ideas.

It was my job to create an environment here in the Design Center where people could express themselves. And this is all part of it. It is culminating in this kind of a car. This is the result of that kind of an environment. I think that's my real role here. I'm not supposed to go out and design every last detail. I have to create an environment where we will get the best details and design anywhere, because it's there in the building. All I have to do is set the stage for it and make sure

that it happens -- give them the leadership. That's what we believe in now in this corporation, especially here in the Design Center. We don't believe in management, we believe in leadership. Let people express themselves. This is supposed to be an idea mill. I've got to get ideas out. If we don't get new ideas out of this building, we're out of business. This is the way to do it, and that was the driving force behind this [project].

It happened at a time when we were really into employee involvement, and this affected the whole process -- when our designers laid out objectives and were able to talk about them, put their ideas on the wall, and let's go through it -- we had a lot of very open design discussion on it.

Q A more fair discussion atmosphere than before?

A Very definitely, and it was hard to initiate that, because designers weren't used to working that way in this building. But this helped pull more of them out of their shells and allowed them [the space] to express themselves. They felt better about it. They felt better about themselves because they made more of a contribution to the program. I'm not talking about the few names I've mentioned, I'm talking about all the designers and the modelers, everyone involved in the program. They knew it was their baby -- their car. It wasn't taken away from them and given to this feasibility [studio], they handled it all the way through. A lot of those guys are still on it, and the car will be going in production in about another month and a half.

Q The advance reports have been rather good, and, especially, the emphasis on ergonomics, which, I guess, is the [process] of making the driver comfortable, and that you had put much more detail into that

[area] than you had in the past?

A We did. And it was much easier to do when you're starting with a clean piece of paper. We weren't starting with any carryover components. The field of ergonomics deals with the relationship of man to machine and how man better relates to machine as far as operation of control switches, visibility of all instrumentation, visibility of the road, and seating comfort. This got into the seats of this car, which we did a lot of market research on to find and develop the best seat in the world. We wanted the best-in-class seat. That doesn't mean it has to be the most expensive seat, because it doesn't, but it can be best-in-class, and we believe we achieved that. We market researched and test drove what we considered the best seats in the world -- European and American -- and developed the seats for the Taurus and the Sable based on the conclusions that we got from that market research. We tested a number of people in a driving mode. Not just static seats, because you can get a totally different picture from that. But these seats are comfortable. And the big issue there is we wanted to eliminate driver fatigue, and by eliminating driver fatigue, you have a safer driver. He or she will be more alert and be able to handle a car better under all circumstances and react positively better and more quickly. We think we achieved that.

Again, we went out and set out for best-in-class ergonomics, and we believe we did achieve it. Even right down to the design of the knobs and controls on the instrument panel. For example, we have twist knobs on the heater and AC controls on these cars. Again, for feel for quick reach, quick identifications, and the driver doesn't have to take his eyes off the road for any extended length of time to understand how to operate any of the equipment.

We found out something interesting in market research. We were concerned about the twist control thing, and people may not like them or understand them. We found they really did like them, and, especially, women liked them because they associated the twist controls with their appliances at home -- ranges and this sort of thing. They understood it, and the logic behind a twist dial just made eminent sense to them.

Q The tactile feel...?

A The tactile feel, yes. It all plays back into this. It all helps again suggest the quality of the car, too. Tactile experience is extremely important -- the sound, the feel, the touch. We're appealing to the senses here. What is quality? How does it come through to people? They feel it in many ways, and that's important to get all the controls right, too, to make sure you have answered that requirement.

Q And you adapt easily to digital readouts?

A You can, but we're not trying to make that decision for people, and we've had many long discussions on that in the corporation on digital readouts versus analog, so we are offering both. We are not trying to pin that down. Generally, younger people like digital; more mature people like analog; performance-oriented people like analog. We can do electronic analog. We've got all the combinations, and we feel it's not up to us to make that decision. It's up to us to offer both to the consumer and let them make the decision. It'll probably be a 50/50 split on it. We're not going to stand here and say one is better than the other. It's like front-wheel drive versus rear-wheel drive, if we're really customer-driven, we'd better offer both as long as there's that kind of a split in the marketplace, and that's been our approach to it.

My real role as Chief Design Executive for Ford North American

Design is one that I describe as acting as a catalyst to hold the right kinds of talent together and create an environment that [allows] talent to function in and offer the kind of leadership that helps these teams of people in a creative process. I feel it's extremely important to build the kind of an environment here that will allow people to surface [their] ideas, and express themselves, and feel free enough to come forward with new ideas and not punish people who come up with new ideas that don't necessarily work. Some corporate executives in Search For Excellence book talk about a company that gave the Golden Banana Award to the person who had an idea that they tried developing but didn't make it. But the importance of that is is you acknowledge people's creativity -- their creative minds -- and acknowledge the fact that they are trying to be creative even if that idea isn't worthwhile at the moment. I try to encourage that kind of thinking in our Design Center here. I think it's absolutely essential to continue a spirit and ability in an operation like this to come up with more innovative and creative design.

My basic design philosophy still is one of form follows function with extra "F's" that I added which are "flair" and "feeling." Design still must be exciting. You can follow the form follows function theory and, frankly, be very boring. It's important to have that extra ingredient of flair, because people still do become very emotional about designs, whether it's automobiles, or clothing, or furniture, or architecture. I think that's great. It's exciting. We're in a very exciting business, and we can be best as long as we continue on that path and offer something different, something unique, something exciting, something good. It's got to be well-designed. It's got to be functional. You can't just be exciting and non-functional. There are plenty of cars

like that on the road. My kids all love the Lamborghini Countach. You can't get any more excitement than you get in that car. Unfortunately, people can't ride more than five miles in that car without going nuts, but it's exciting. That, obviously, isn't the whole answer. We have to provide excitement, but we have to provide functional automobiles -- real world automobiles -- and that's what we'll continue to do here in the Ford Motor Company.

I really believe that in the future, you will see more of the best of today. You will see a progression, an evolutionary progression of the aero look. As I mentioned, we won't talk about aerodynamics that much, it will just be an integral part of design. It's accepted. If it isn't there, you will miss it. We will have it. We'll see cleaner designs. If I have anything to say about it, you'll see more exciting designs. You will see a certain uniqueness in Ford products that you won't see in other manufacturers. That's my whole goal; my whole mission here. One of the key words in our up-and-coming designs will be distinctiveness of design. We must have a distinctiveness there that has an appeal, an excitement, a flair, and a driving force behind it that will guide people into our showrooms and make them want our products over others. We will have that extra ingredient X. We will be on that leading edge because we really believe in it. We have the talent, we have the wherewithal right here in this Design Center to do it. I have told my people that in a number of meetings I've had with them. I've held what I've called vision meetings. We actually developed a vision document here to show us where we want to be in the future.

I believe, and I'm very sincere about this, we have the best design center in the world. We have some of the the best talent in the world right here in this building. I've been in design centers around the

world -- in Asia, in Australia, in Europe, England, Germany, Italy and competitive studios, large and small ones. I've been in American design operations, and I have a pretty good fix on the talent out there. I try to keep abreast of the new up-and-coming talent on our recruiting trips around the world -- and I've told this to my people -- I'm absolutely serious [when I say] we've got some of the best talent in the world here. So I've got some of the best ingredients and the makeup of the best design center in the world. I believe we can be the best design center in the world, and we will be. I've told this to my people, and I firmly believe it. I think they're getting more and more convinced of that every day when they see the kinds of designs they can turn out because they're proud of what they do. Now they want to drive the cars that they do. They want to tell their friends they work in the Ford Motor Company. When this happens, and it is happening, we'll have the wherewithal to develop the most distinctive designs out there.

I think our competition will really have something to be concerned about, because we're using a different process. Internally, we are using a different design process. We're coming up with design solutions through a process that I believe nobody else in the world is using domestically or foreign. We've got our own unique design process that I and our people are developing here, and they are totally involved in it. With that kind of commitment on the part of our people here and my own personal commitment to it, we really have the building blocks in place to be the best design center and come up with the best designs.

Q Do you feel that the company is committed to this vision? Have you been able to bring them along, as witnessed by the Taurus/Sable concept?

A Yes. I really believe the company is. I think the corporation has

given the Design Center enough autonomy to to express itself. We developed our own vision, which, very definitely, compliments the overall vision and direction that the corporation is moving in. I think this is unique [to] Ford Motor Company. I'm not sure if other corporations operate this way, but when we developed our own in-house Design Center strategies for the type of organization that we would like to have, we were allowed to bring in our own outside management consultant to work with us as other areas around the corporation were able to do, rather than just having one outside consultant handle the whole corporation. So we were treated as separate entities, but working together as a total corporation. This was a great approach to use, and it allowed the kind of departmental freedom around the corporation to give them their own identity and allow them to express themselves in a more creative way. This is why it is really working as a corporation and as a separate unit in the corporation here. We were able to develop our own vision, which complimented the total corporate vision, and that was part of the intent of it. It had to work. Although we wanted to develop our own vision, we knew it had to work with the basic corporate goals and corporate objectives and the total mission of the corporation. And it's doing that. So it's nice to be able to have this kind of autonomy and yet be part of the big picture and work well together. It should be a very successful corporate operation the way we've developed it.

Q It would be helpful for our reader/listeners in years to come if you could tell us where Ford is at this critical juncture in design history and what you're planning for the next fifteen years to the end of the decade in terms of design, and design philosophy, and [design product].

A To describe where we are at the moment -- that is our design position in the Ford Motor Company -- I have to briefly tell you a bit about how we arrived at this and where we're coming from. Over the last few years, our management has developed a strategy and a corporate design philosophy that we have been adhering to and are evolving now. We are really developing a strategy that is very, very concerned with the customer. We're holding meetings at the moment entitled "Concept to Customer:" the customer is [being] focused upon in a way we have never focused upon the customer before. We believe, and I subscribe to this, that if the product isn't right, if it doesn't appeal to the customer on the showroom floor, no matter what we say is right, it really doesn't matter. Now, in all fairness, the customer is looking to a designer/engineer for some guidance, but the guidance that we give them really has to fit into their general life style, and there's been a very concerted effort on the part of the corporation to meet this customer goal and all the customers' wants. This was one of the guiding principles that was moving us through this decade. You'll see it expressed in our upcoming designs that will be out in the very near term. The Taurus and Sable, we feel, are very definitely customer-driven type designs.

Q This is mid-'85, and they're coming out in the Fall of '85?

A That's right. It'll be the Fall of '85 -- November -- when those cars will be introduced. They go into production next month, in September of '85. They'll be '86 models.

We say we're customer-driven. We've done more market research on the Taurus and Sable than any other car that I've ever been involved in. But it's a different type of research. We are listening. With these new designs, we will not only be listening, but we will be telling or guiding

a customer, too, because the customer can't tell us exactly what he wants in the future not knowing what the future environment will be, and without knowing what options he will have to select from when it comes time for him to make his purchase. But we can still listen to the customers if we know, generally, what they want. The most difficult part of this equation is to add to what the customer wants. How do you give the customer something he doesn't know he wants? Now that's a tricky equation, okay, but it's not impossible, and that's our job.

It isn't spelled out in our corporation. We just say we're customer-driven, but we have to take it one step beyond here in the Design Center. We have to give the customer something he doesn't know he wants. First off, we have to satisfy all his needs. We have to give him everything he wants. That's rule number one. The next issue is how do we give him that extra ingredient "X" -- I'll call it -- reaching out into space and trying to find out what ingredient X is we think he will want and we know he'll want? I suppose in the past we have made customers want ingredient X, whatever it is, without them ever knowing about it five years hence.

This is having a very strong influence on all of our up-and-coming designs, but based on what we're learning from the customer, the American buyer is the person we're really focusing on, and the American buyer is becoming more and more international every day. Tastes on a worldwide basis are evolving and are becoming very similar, whether it would be in Europe, Asia, or America. It's not there yet. It's not a hundred percent at this point. It doesn't mean you can't sell one car all over the world because it's being done now and done successfully. But our primary goal here in North America is to please the American buyer. We are out

for the American market. If our products happen to spill over in Asia, the Pacific, or Europe, that's fine, and with the types of products that we're developing now, we'll certainly have that potential.

Some of the demands that we're picking up from the marketplace now -- i.e. that the fuel economy issues has somewhat settled down in 1985 because the supply is there -- all we're dickering is price at the moment, and that doesn't seem to be that large an issue. The buyers are really understanding that it isn't as large an issue as it appeared to be a few years ago. I always say that, because if you look at the price of fuel today, say we'll take a dollar a gallon for a base, and you can go a dollar twenty-five, a dollar thirty-five, but say a dollar a gallon today equates at 1955 economics to twenty-five cents a gallon when you bake in inflation, so it's really still an incredible bargain. That doesn't mean we shouldn't conserve it. We have to conserve it. We're all for fuel-efficiency, but we're giving it to the customer now. Even on our large cars are now really efficient.

By the way, on a recent test drive with our new Taurus, one of our development people just drove one of them from the Atlanta plant to Dearborn. I just got this yesterday from him. He averaged twenty-nine miles to the gallon on the highway with a Taurus. This just happened. That's really terrific fuel economy for a car like that.

Q Do you think a part of it was the flush aerodynamic design?

A There's no question about it. We contributed, in the last three years, a mile and a half per gallon to our corporate average fuel economy with aero alone. When you equate that to what it would cost to achieve a mile and a half for average fuel economy through mechanical developments -- engines, carburetion, transmissions, etc. -- your talking two and a half

to three billion dollars worth of development and investment to achieve that. So we in the Design Center feel we've made a significant contribution to fuel economy through aerodynamics by a more efficient bending of the sheet metal, if you will. And, why not? Yes, it has some bearing on it, no question about it, and we feel really good about it. And the car looks good.

It gets back to your question, where will we be going? What are we doing today design-wise? We'll be giving people cleaner cars. By clean design, I mean less in the way of add-ons. You'll see more efficient design. That doesn't mean we'll lack excitement. There's something very exciting about pure design, and we're getting more to this pure design concept -- a functional design as I've talked about before -- form follows function, but it's got to have those extra F's -- "flair" and "feeling." They're people who still get emotionally involved buying automobiles, and it's important to deliver on the emotional aspects on an automobile, too. Why shouldn't the world be excited. If you buy a suit of clothes, you like to at least like it, or you like one suit of clothes over another, or a tie, or furniture, or a house, or a product, or whatever you buy. However, there's more emotional involvement attached to the purchase of an automobile than there is most products. It's moving; it's a dynamic piece of equipment. Why not?

So you'll see this cleaner, more function look that we're developing now, and you'll see that progressing into the future. All of our future designs will be, as far as I'm concerned, holding to this formula, and we're holding to it on a worldwide basis.

Speaking of that, we are staying more in tune to the world design-wise here in the Design Center, because for the past few years now we

have been holding an international design conference. I'll be attending one next month -- September -- in Cologne. At these design conferences, we meet with design representatives from our design centers around the world, and that's Australia, Japan, Brazil, Argentina, the U.S., Italy, Germany, England, and we all gather -- the conference will be in Cologne, Germany, and will tie in the Frankfurt auto show.

I left one group out of the International Design Conference who is very important, and that's our California group. They're also represented at the design conference. We established a design group in California. It was a very small but effective group, and it is not owned by the Ford Motor Company. It's a private venture, but we have contracted with this group of designers called Concepts Center California. They're dedicated exclusively to Ford projects, and they have a total capability of handling the design from the initial sketch stage right through final completed fiberglass model. They've been very, very effective. They've contributed to a number of our programs here, and we have set up a unique working arrangement with this group. I mention it because they are part of this total design conference that I'll be attending in September.

We've met for the last three years, and we've had conferences in Europe and here, and we always try to alter the format of the design conference to keep it fresh and stimulating. It's a gathering of these design minds from around the world to give us their views on the way they picture design and the way it's trending in the different areas of the world. From this we can generally put together trends and directions that will affect us no matter where we are. As I've mentioned before, the world is very definitely getting smaller with the way we have com-

munications working so effectively for us these days. It's been very helpful for us to exchange ideas in these conferences and develop these new ways.

It's not only new designs, but we talk about new ways of doing business, better ways to interface our companies in different countries and better ways to interface with each other. Because of these conferences now, we're getting into more cross-pollination of designers. I, personally, think of design in international terms, not just local. We do have, obviously, local design requirements that we must respond to to meet the needs of the individual marketplace. But there are some overall guiding principles that have come out of these design conferences that will affect all of our designs. For example, it's important for people, that no matter where they are in the world, to recognize an automobile as a Ford product. Again, it gets back to the world becoming smaller, people are traveling more, and communications are just giving out information on a worldwide basis now. So people will see an Australian Ford in Europe or in the U.S., or an American Ford product in Europe or Australia, or a European product here -- one of our products here. And we're selling European products here now -- the Merkur -- and we're bringing in another version of that next year [Scorpio]. We want people to know that although it is different, we want them to see this common design thread working through all of our product lines worldwide. We're very proud of what we're doing. We believe we are developing designs around the world that are meaningful, that do make a statement, that have strong personalities. By meeting, as we are in these conferences, we'll be assuring that we can keep the kind of design continuity that we're starting to develop now.

I don't see this in any other corporation -- none of our competitors. They'll design cars in different areas of the world. Not too many people do that, by the way. The Japanese do, mainly, all their design work in Japan. Most European companies do all their work in Europe. But we are designing in different areas of the world for different markets and building in different areas of the world. I just wish other corporations would do that. I wish the Japanese would do that, by the way. That's where we're different, and we have a certain uniqueness that will pay off for us in the long run. We do have the ability to respond to local markets and requirements in different areas of the world with this, but we can still maintain a Ford design motif throughout all of these products, no matter where we are in the world, by keeping this close contact.

We're also getting more of a cross-pollination of designers now. In terms of international design, and I don't think [of] a designer as just an American, or just an Australian, or just a German, or Brit, or Italian, or a South American. I think of them as a designer, and what we're trying to do, and what we will be doing more of in the future is this cross-pollination. We doing it right now. We have Americans in Europe, we have Americans in Japan. I would like to have Japanese designers here, Australian designers here, Italian designs here, Australian designers in Europe, Italian designers in Japan and get more of this kind of mix of talent and develop it and think of these people on a much more international basis and feel comfortable about it -- feel comfortable about having an Australian designer working and knowing that he will be able to produce and understand the American market. It's a fresh approach. We get a new viewpoint on design by using this kind of

cross-pollination, and it's working. We're doing it right now. I have an Australian designer here working on a particular project right now on a car that will be sold here and Australia and the Asian Pacific area. It's just a delight.

I happen, personally, to be very, very comfortable with the concept, having worked in Australia, having worked and lived there, and lived and worked in Europe. I know some people aren't, but I really believe the world is trending this way, and we just damned well have to start to thinking this way. It is no longer an us and them. It's, hey, we're all in it together. We are the Ford Motor Company, and let's take advantage of it, because this is one of our real strengths -- the international aspect of our whole company. Years ago, I can remember Henry Ford talking about the international outlook of the company, and he wanted all of his top people to have international experience. It's really paying off in this company, and I've got to tell you, without it, we wouldn't have the Taurus and Sable cars that are coming out now. We wouldn't have the '83 Thunderbird, and the Cougar, and the Tempo and the Topaz in the form that you see them in today if it wasn't for our management in the Ford Motor Company in having this international outlook and having the international background and experience which allow them to have this outlook. It's a real international exposure that these people have that I want my designers to have, and then you will see that we will be able to reach out. We won't be afraid to reach out. Our management won't be afraid to reach out and have the distinctiveness to our designs, which is so key in the type of marketplace that we're getting now.

Let's face it, the buyers that we're appealing to, even here in the U.S., are just getting so much more international exposure, whether they

travel or just see it on T.V. You have to be dead if you're not affected internationally these days. We can't be as insular as we used to be in this country. The world has exploded us. We have to go beyond our shores now.

I think that's going to have a very strong effect on overall design, and we have the wherewithal and the talent. We have it here, and we have it on a worldwide basis in all our design centers in the world, and I want to take advantage of that. I want to utilize that, and I want the input of our designers from around the world in all our designs. It's stimulating. It stimulates my people here in the Design Center in Dearborn when I have designers come in from our international studios and give them a different viewpoint -- a different way of looking at things. I can't tell you how refreshing it is to walk into a creative environment and see these people from around the world perform and try it a different way -- try a different outlook. It's infectious. It affects all of our designers here, and it's a very exciting way to do business. We're in the excitement business -- my end of the business has to be.

Q No stodginess here?

A It better not be or we're dead. We know how to do stodginess. That's easy. A lot of people do that.

Q You did that for a few years?

A Yes. A lot of other people are still doing it around this town, and we want to break with that tradition, and we want to be on the leading edge of design, and, personally, that this is one of the best ways of doing it. I want to capitalize on the biggest asset that we have in this corporation and that's people, and I mean people on an international basis. Why not draw upon them? Why not use these minds? It's

there. The talent is there.

Q You're right about Henry Ford II, who branched out internationally right after World War II and kept after it. It seems to me that General Motors did not follow suit. They were somewhat surprised by this, even though they had their affiliates, it wasn't until very recently they began to move ahead in Europe. You've had quite a lead on them?

A Yes. And we've maintained that lead, and we certainly intend to keep it. I think we will because of our approach and the outlook that we have with our international operations. The important issue here is that we in the Ford Motor Company are not trying to tell our international operations how to do their business. We're not telling them how their cars should look. We're not saying, "Hey, if Taurus sells here, your car should look a Taurus over there." That isn't the approach. We've established a basic design premise for all of our cars, but we have to allow our international operations to have the autonomy to respond to the local market requirements and yet with this common thread working throughout designs so people recognize them as Ford products. I think that's key. That's important. I don't see our competitors doing that, and that's fine. Let them go the way they want to go, but it certainly seems to be working for us now. You'll see a lot more of that in the future in all our designs, and the annual design conferences that we hold are really contributing to this and keeping our designers in tune and abreast of what's going on around the world. It's just been very, very stimulating.

Q Where are you getting your apprentice designers from these days? We know of all the veterans you've had over the years, where are the younger ones coming from?

A Over the years, we've been getting most of our designers from the Art Center College in Los Angeles, which several years ago moved to Pasadena, California. That's pretty much been the mecca of automotive designers. I read in the paper yesterday that Toyota donated a million dollars to the Art Center, and, boy, the Japanese are not missing a trick. And they're getting their designers from there also. They've caught on to it. I've mentioned before in these interviews that now, as far as I know, just about every Japanese automobile manufacturer has set up a design studio in California. But we also get designers from the Center for Creative Studies here in Detroit. The industrial design department is being chaired by Homer LaGassey, who is an ex-Ford designer and has also had time at General Motors. He's probably one of the most enthusiastic designers I've ever met in my life. He has just turned that school around, and I hate to say it because I'm a alumnus of the Art Center, but they're giving the Art Center a run for their money. He is getting students from around the world now, and he is placing his students on an international basis. I had lunch with Homer the other day, and he was telling me they had about eight students on summertime programs with European automobile manufacturers. He's doing a superb job. So those are the two key schools on a worldwide basis, and all of the European and Asian automobile manufacturers are coming to the Art Center and to the Center for Creative Studies for design talent also.

Q Is Pratt Institute in Brooklyn and like institutes still turning out automobile designers?

A I understand they have an industrial design department, and I have never been there on a recruiting trip, but we do check them out periodically and also the Cleveland Institute. Brigham Young University has a

very good industrial design course, and we have recruited a few people from there. They have very good talent. But the main schools are still the Art Center and Center for Creative Studies very definitely.

Q Something we haven't covered, and it's a big part of your operation, the design of trucks, and tractors and allied implements. Did you do this with your left hand, or is this...?

A We don't like to think so, certainly not our left hand. It's a right-hand operation, and it's all part of our operation here, although it does have some autonomy in that we're dealing [with] our designers in truck. John Aiken is our director of truck design now. It's large/small truck, and it's interior and exterior truck design.

Q That's a good move.

A We think it is on this one, especially, and it's working very well. We're number one in light trucks sales right [now] in the U.S.

Q The Japanese are coming up fast?

A They are. They certainly are, but we're very well prepared for them. Thank God there's a twenty-five percent tariff on all those Japanese trucks coming in.

Q There is?

A Yes. There has been for the last several years. I just hope the government doesn't lift that. I won't get into why I think we should have tariffs or local restrictions, that would take me another seventeen hours to give my thoughts on it. However, maybe I should make a few comments on that just for historical purposes to see where that does eventually wind up ten years from now, because I'm very concerned and very worried about that whole aspect of this country going through our de-industrialization processes as I refer to it. It's a very serious issue.

Our truck studio gets a lot of visibility in this corporation. Again, we think that we're on the leading edge, not only car-wise, but truck-wise, too. The best overall selling vehicle in the world is our F-150 truck, and we sell more trucks as a single vehicle than any vehicle in the world.

Q A real workhorse?

A Yes, a real workhorse.

Q Gorgeous, too?

A Yes. It's a terrific vehicle, and they really like it. The people don't think in terms of trucks as being number one in sales, but they really are. I think our John Aiken, who's heading up that studio now with Graham Bell, is doing a superb job. Of course, they're working directly with Ed Williams, who is our vice-president in charge of truck operations. So what I'm trying to do is set up the studio so they have a direct interface with the operation they're working with, and in the case of truck, it's working extremely well.

Some people felt that one of the reasons we do such a good job overall in truck -- and I don't mean just truck design, but I mean engineering and overall development of trucks -- is because they seem to have more freedom and latitude. They seem to be able to hold with an original design concept and work the theme through without the changes that we go through on the car side. And I think that's simply because of competition out there. Obviously, we're getting a lot of competition from the Japanese now, but there was very definitely less competition on the truck arena than there has been in the car arena, and the changes weren't happening as quickly as they were in cars. So you can really start a project and stick with it and develop it right on through without going

through a lot of changes to respond to different things in the marketplace. I think that had a lot to do with it.

Q It is easier to change a truck design than it is an automobile design?

A No, it isn't, and we have to speak in terms of timing. It takes just as much time to redo or change a truck as it does a car. There are no shortcuts that can be taken on a truck versus a car. We're getting better at it, but if we come up with a new development idea or a timing shortcut on a truck, I can use it on a car and vice versa.

Q How do you do tractor design changes at Ford and in the industry?

A We are probably one of the unique vehicle manufacturers in that we are developing tractors also. Tractor designs, obviously, don't change as often as car designs do, but it can still be very exciting.

Q Certainly is a lot different than twenty-five years ago?

A Oh, my gosh, yes. Especially now with the cabs that we're building for all the tractors. They consider a tractor the farmer's office now.

Q [Fully] equipped?

A Everything from air conditioning, stereo and all the conveniences of home, which is fair enough. If you're out in a hot field in the middle of Iowa, you'd certainly want those kinds of conveniences. That's all handled by our staff industrial design group, and, again, they work directly with the tractor people, so it's a clear-cut design process that the people go through doing their tractor development, and it's been successful for us. But the tractor market now is becoming very crowded with a lot of people, and, again, the Japanese are moving into that end of the business, too. They saw a real crack there, and they're going after it. It's going to be a tough business. We've got one of the finest products

out there in the tractor end of the business, but, boy, competition is coming at us from left, right and center.

You can't sit back and pat yourself on the back for having done a good job on a tractor, a truck or a car these days. No, you absolutely cannot be complacent. You must continue to move ahead with it. You're dead if you don't. You're dead if you sit back and say, "Hey, we've really done a good job." Don't pat yourself on the back too long -- keep moving.

Q It would be appropriate at this point to explore both your ideas about the type of design think-tank that you established in California, which, I suspect, was largely your idea and your creation and juxtapose that or ally it with your own personal design philosophies as you saw them in the past and coming up in the future.

A We wanted a presence in California. We wanted some California input. People say, "Why?" We really believed that California is the melting pot of automotive design. Where else in the world can you see the diversity in the automotive marketplace that you can see in California? You don't see it in Europe, you don't see it Germany, you don't see it in the U.K. There's a certain sameness to European cars, or Asian cars and anything else, but, I'll tell you, California has it all. Everything is there from European cars, Asian cars, American cars, dune buggies, hot rods, the custom jobs, the low riders in downtown L.A., the surfer's beach buggies, pseudo-classic designs, antiques, replica cars. It's all there, and it's very normal to drive down a freeway in California and be surrounded by everything I just mentioned and, probably seventeen other variations.

Q A laboratory?

A It really is, and people there are used to anything. They're willing to try new ideas. Their whole life style is conducive to that. California really is on the leading edge in life styles in general. Their whole culture is a leading-edge culture in my opinion. They're always experimenting with everything.

Q Hip?

A Very hip, very with it, very on trend, which is probably the main reason that the Japanese are there because they want to tune into that and try to understand it. It must drive the Japanese nuts to try to understand. I'm sure they can't understand the United States, and then when they go to California, they must look upon that as another country. I think we in the United States look upon California as another country, so I can imagine how foreign nations look upon us.

We found that it's been very beneficial to have this group working with us in California. I've set it up in a way so that the California studio will interface with our individual studios back here in Dearborn. For example, if we are working on an Escort program, then the manager in the Escort studio works with the California studio as an extension of his own studio. If he is covering on an Escort proposal A, B and C, for example, A might be a traditional approach; B might be a very reaching, say, European approach; C might be a California approach that answers their needs out there whatever they might be for the particular car and that particular segment. So we wind up in a show then with three distinct proposals: chocolate, vanilla and strawberry. You're not just getting all the cars, all the proposals out of one studio, and it's really a fresh point of view that you will get from the California studio.

There's a bit of a fine line there, because although the studio

uses the California operation as an extension, the studio cannot direct them, or over-direct them. The studio designer and engineer will insure that the California car is on package and meets all the hard point requirements and dimensions so that it's not just some way-out, blue-sky proposal that has no meaning or basis. When the California proposals come in, they meet all of the requirements that the cars in the studio meet. These are not just orphans dropped off on the doorstep, they're very serious proposals. We have used a number of California ideas on our upcoming models. There's no question they have really contributed to the overall lineup.

Q How long have they been in operation?

A They've been in operation for about eighteen months now. It's been very successful. Dick Hutting, who is running the operation, is an ex-Ford designer. He is an instructor at the Art Center College in Los Angeles, so he keeps in tune with young talent out there, and this gives us an opportunity to keep fresh talent moving into a studio. And, by the way, we have design exchange programs that we're working out with California and Dearborn, so we can have his designers here and our designers working out there on projects. Again, just part of this exposure that is so absolutely essential for the designer to keep him abreast of the latest in design trends.

Q They're recharging you back?

A Absolutely. I think Mr. Petersen referred to it once recently as repotting our designers, and I thought that was a good way to do it. Pull 'em out and get the roots stuck into some fresh soil to get different nutrients in them.

I've been very pleased with the output, and just last week, I was

in Cologne, Germany, and had discussions with Uwe Bahnsen, our Vice-President of Design in Germany, and he's interested in utilizing our California studio, and I was pleased that he looked upon it with the kind of interest that he had. As a matter of fact, he was visiting there a couple of months ago on his way to Australia and had an opportunity to be shown around the operation and was very impressed with the quality of design that Dick was turning out. Impressed to the point that he would like the California operation to contribute design proposals for the European operation, which really pleased me because I was very satisfied with it, and it just reinforces my opinion on the California design center and how Uwe wants them there and for Ford of Europe, too. It just shows that California really is on trend. They understand the automobile business and where it's moving, which is what we all really want. Everybody wants a glimpse of the future. Everyone wants to know where it's going, and that's one of the reasons it's the exciting business I've found it to be all these years.

Some people still ask me how you can do this. They'll say, "You mean you've been designing cars for the last twenty-seven years? That's all you do?" I say, "Yes, that's all I do, but, boy, it's really been an exciting time because I've done it in the U.S., here in Australia and Europe, and it's just continually changing. There's no end to it." It's important never to think you have the perfect design. Once you do, you're dead.

Q You've been credited, rightly so, with bringing over the Euro look and mating that with the aerodynamic look. Is that a fair assessment?

A Yes. A number of people have said that. I don't refer to it as a Euro look. I refer to it as an international look. But, in all fair-

ness, that is where it is coming from. However, we've jumped ahead of the Euro look, and we're influencing the Euro look a bit. That may be a heady statement to make to say Dearborn is going to influence Europe, but they're looking at us now, and that's the position we want to stay in. The cars are selling, and that's about all we can ask for. That's the whole mission here.

Q The advanced studio is turning out some interesting concepts for you to work with. How does that work locally? Are you happy with that setup? It must be marvelous to have them available?

A It is, yes. The past few years our advanced group has turned out a number of cars that have contributed significantly to the designs that we're putting on the road. One of the most important aspects of that studio and the products that they're developing is that it conditions management to new thinking. For example, if they develop a car and -- they can have it in auto shows, but even to prior to that -- have it around and expose our internal management to a new design. It conditions management and paves the way for management to be more comfortable with designs, get used to it, understand it, and not be shocked by it when we work with some of those design elements on our new products. Because we not only have to condition management, we have to condition ourselves. I, personally, have to live with a new design before I'm comfortable with it. By the way, if I'm not a little uncomfortable with a design, there's not much new there. If the design sits around for two years, and I'm still uncomfortable with it, chances are it's not going to make it.

Q You prefer a little discomfort at the beginning?

A Absolutely. And I really believe that the customer out there in the marketplace should be a little uncomfortable with the design the

moment it hits the showroom floor. For example, we have lived here in the Design Center with the Taurus and Sable for the last three-and-a-half years, and we were a little uncomfortable with it at first, but we had to discipline ourselves to accept that, try it, give it a fair try, make sure management understood it, live with it for a few years. These designs will be all new to the customer. This is old to us now before it comes out because we lived with it for so long, but we predict the customer will be a little uncomfortable [with it].

Q Are there any final thoughts that you might have on automotive design in general? Any philosophical reservations you might have about what's happened or, more precisely, any excitement that you've found that's creeping into late twentieth century automotive design?

A I think, at this point in time, it's interesting to note a number of designs or design directions that different corporations around the world have moved in seem to have been right, but they've all seemed to be reaction type designs. A new design will happen in Europe, and Japan will catch on to it and try to run with it, develop it. The Japanese are very innovative. I don't believe they are inventive. The Japanese are innovative, Americans are inventive, Europeans are inventive, but I believe our cultures -- both European and American cultures -- although they differ, have a lot of similarity, and we foster invention. We reward invention. We reward risk-taking. The Japanese don't seem to do that because of their culture, and group thinking, and their group mentality. Obviously, it works very well in many aspects of life for the Japanese culture. They need this kind of culture to survive as a nation. They must work together, and their government, obviously, supports it. It works very well with the people. They work with their people, they

support their industry much more than I feel is fair. It gets into fair trade and a lot of other issues, which we won't get into. But we have the kind of inventiveness, and that's really key in America.

I may be placing much more importance and emphasis on this design freedom and latitude that we have in the U.S. that is real. I believe it's essential, and I believe that it's key to the success of our nation and the products that we're building in our nation. This is one area in our culture that -- I may be over-emphasizing it -- I believe will help our nation, because the Japanese can completely outdo us on wages. They just have lower wages there. They can beat the hell out of us on wages, and there's a very basic issue there: we either come down to their wage level throughout our entire nation -- not just the automobile industry -- and lower our standard of living to their standard of living, or they raise theirs to ours to balance this out. Having watched the Japanese since MacArthur signed the treaty with them in 1945 after the war, I don't believe they're going to raise their standard of living. I think they'll keep it low, and they will keep the value of the yen low just so they can have that leg up on us and really wipe out any industry that they decide to wipe out. Those are cold, hard facts, that's all. You can see it happening. I think if we don't recognize that, we're not in touch with the real world.

The one area that they haven't really zeroed in on, and I'm not trying to be punny about this with the Japanese, is the latitude that designers have in this country and in Europe, and we can really use that. That's one of the strongest forces that we have working for us. So we can outmaneuver them design-wise, but our government will have to give us a lot of support on an international basis to make our country com-

petitive with the Japanese. There are many ways that the government can do that, and they're just starting to wake up to that. It'll be interesting to watch and see how it unfolds in the next few years because we're going to need it as an industry. Otherwise, I think our industry will be in serious trouble, and the design won't make any difference. What the designers have to contribute just won't make any difference. They'll be able to undersell us.

Q Would you say that their concept is creative eclecticism and ours is creative innovation?

A I separate innovation and inventiveness. I believe innovation just takes a theme and works it and develops it. This is what the Japanese have been very good at for centuries. We look at Japanese porcelain or china, and the Japanese picked that china and just developed the processes to manufacture it and turn it out in mass. And they're doing the same thing with any other product or any other technology that they get a hold on, whether it's in the field of electronic chips or whatever. They don't necessarily invent. The Americans invent it. We do all the R and D here in this country, and then it's just cheap to buy the R and D and put cheap labor on it and build whatever product you want to build. You can zero in on any industry you want and wipe it out. I think that's what they do. We don't operate that way in this country. That's why we're going to have to make some changes.

That's the plus that we have going for us, and I want to capitalize on that, and it's just simply people that I'm talking about right now. I'll just speak of my end of the business. I have to really utilize the talent that we have available to us. That's just our strongest asset in our corporation and throughout America. It's our strongest asset that we

have to manage people. I have to, in our design operation, create the kind of environment that allows our designers to express themselves. If I can set up that kind of an environment and if we continue in the direction that we're moving and [we can] stay that jump ahead of everyone else. It's not easy to do, but it's absolutely essential to create that kind of stimulative environment. That's what I have to do and give them the kind of guidance and be in touch with management and keep management totally familiar with the inventive process and the creative process that we have going here so that management can move ahead with these ideas and get them into the marketplace for us.

Q This has been a problem in years past that management is not as creative or forward-looking as your design staff?

A I think it has been a problem, but I honestly can't blame management. I blame the design groups in the company for not taking the time to familiarize management and do the right kinds of presentations that will allow management to really understand what we're trying to do. So I can't lay any blame on management. I'm not trying to wave the flag at all this sort of thing, but I really believe that. If we fail to convince management, then I blame ourselves as a designer and as a design group, because we certainly have the opportunities now with the culture that we have in our corporation and this bottom-up process that we've developed in our corporation. We have the opportunity to let ideas bubble up to the surface. Again, it's my role to insure that management is familiar with the latest in design trends. If we fail to do that, I can't blame them. I have to say we haven't done the right kind of a presentation and convince them that this is the way to go.

Q They're certainly more enlightened than they have been in years past?

A Oh, yes. And, again, it's because of the exposure that management has had to the international marketplace which they're getting more and more out of. We really are. North American is not just the U.S., it's now Canada and Mexico. We're just spreading out as we go along and develop. I think it's a very bright outlook. I'm always very optimistic, but it's one of the most exciting times ever to be in the design business. And I love the international approach to it. I love the challenge of it. I know we have the management team and the right kind of talent in both design and in engineering to develop the right kinds of products. It's here. I've seen it happen, and I see it happening. I see the right kind of people here that want to make it happen.

Q You've led the industry into lower, rounder, [more] flusher and wider, do you see an end to that? How do you see it in the next twenty years? What type of practical design do you see? Would you see an evolutionary trend coming back?

A In the past, the designers used to base designs on one theory, and that's, if in doubt, go lower! We finally achieved a very, very low cowl on a product that we're in the process of developing just recently, and it was the first time -- and I mentioned this in one of our design subcommittee meetings to our management team -- we finally got the cowl so low and had an opportunity to go lower. It was the first time in my life as a designer I blew the whistle and said, "Hold it. I think we've gone low enough with that cowl." By the way, I refer to the cowl because I believe the whole car is set up by the cowl. Once you establish the cowl height, you establish seat height, you establish roof height and overall

height of the car, and the slope of the hood and the general architecture of the automobile.

Q Are you moving the engine midship?

A We're trying those things, yes. We're doing a lot of that sort of thing but not for four-door sedans and regular family sedans --more on sporty cars. I never thought I'd reach that point, but I finally said, "The question is, how low can you go?" We found out, and our engineers made a lot of breakthroughs recently on that. As I said, the alarm went off, and we said, "Hey, I think, we've gone about as low as we need to go," and still package people comfortably in the car. Because ergonomics are a big concern, and our people are doing an outstanding job on ergonomics.

So we have all the design tools to work with now. I can't say engineering is not giving us a low enough engine, or a low enough suspension, or a low enough cowl. All the building blocks are there. It's up to us to use all of these pieces now and of this latest technology and develop the cars. That's why it's so exciting because it is, very definitely, the first time in my life I can get out there and really start pushing the engineering community to give us support -- to dial a breakthrough every hour on the hour. We have the components to work with to do the kinds of cars that meet the requirements that we're setting out to meet these days, and that makes it a pretty exciting time.

I know I'm saying this now, and probably two weeks or a month from now I'll have some other new requirement that will jump out at us that someone else someplace in the world will come up with that we haven't thought of, and that'll stimulate a whole new round of ideas and a whole new approach. Or somebody will come up with a new breakthrough and a new

material that will give us more design freedom and flexibility. That's about the only thing I can guarantee. That will happen, and I don't know when or where or what the material will be or what the breakthrough will be, but that's what makes it such an exciting business right now.

Q Do you see the electronics concept taking over from the driver eventually?

A I hope not. I don't think it will. I think the driver wants to be in control. It's useful to have electronics to assist the driver. They're making some very significant breakthroughs in electronics now. One of the most exciting breakthroughs recently has been the anti-skid brake system. I had it on a Mark that I was driving all last winter, and that was just one of the most important dynamic breakthroughs I've ever seen on an automobile. It's easy to make a car go fast. We know how to do that. We're learning now how to make cars fuel-efficient. But that, to me, was one of the most dramatic breakthroughs to make a car not only stop, but stop in a straight line on ice, and it works! That was an electronic breakthrough.

There's another one that will be coming on stream in the very near future, and that's an electronic anti-slip device that will not allow your rear wheels or front wheels to spin on ice when you're accelerating. So you will not spin your wheels on ice any more. This is known technology. This is happening. It's there. We're doing it. It will be on cars in the fairly near term. So that helps the driver. That doesn't take the responsibility away from the driver. We don't want to take it away from the driver.

If I can just bounce back to California for a minute, the California culture encourages people to be in control of their lives,

right? If you don't like your wife this week, go get another one, or try that one. Or if you don't like your job, take off and live in the mountains for the next ten years. Do whatever you want to do, but you are in control. I don't know how far people really want to take that concept, but I believe this control concept will have a strong bearing on automotive dynamics. I firmly believe, when it comes to driving an automobile, the driver should be in control, and if we can use electronics or any other technology to assist the driver and allow him to be in control, it's worth it. It's worth the effort to get that into a car -- to make it safer for the driver, for the passengers, and for all the other vehicles on the road.

Q Thank you, Mr. Telnack.

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