Guardian's Evolution

Scott Thomsen & Russell Ebeid

Discuss Guardian's Innovation, Its Focus on North America and the Industry's Biggest Threats

by Megan Headley

When William Davidson, owner and chief executive officer of Auburn Hills, Mich.-based Guardian Industries, passed away in March 2009, the company lost a visionary and a leader (*see April 2009* ***USG****lass, page 14*). Since 1957, Davidson had led Guardian from its beginnings as a small glass company to its position today as one of the largest international glass manufacturers. Davidson's passing led a shift in the company's management as Russell Ebeid—for years now the face of Guardian's Glass Group—was elected as chairperson of the board in addition to his role as Glass Group president.

On February 17 of this year, the company established the new position of group vice president for North American Flat Glass operations and appointed Scott Thomsen to the new spot. Some may have seen it as an unusual move, putting the self-proclaimed "glass nerd," who has led the company's Science & Technology Center he helped establish in 2000, in a position that gives him oversight of all aspects of the North American flat glass business. But Thomsen says that those who know him understand it was just a step from having oversight of these operations to having total accountability for the same.

Still, the move is meant to send a clear message that Guardian is more focused than ever on leading the way in product innovation, embodying its belief that if you're not adding value to float glass, then you won't last in the current glass market. But Guardian—with facilities on five continents—also is using the move to focus on its "home base" of North America at a time when many companies are stretching overseas. When **USG**lass sat down with Thomsen and Ebeid, they explained that message in detail.

Scott Thomsen

USG: What were your first career aspirations? How did that bring you to Guardian?

ST: When I got out of school, I didn't really know what I was aiming for. I wanted to work in avionics. That's why I went to work for Honeywell. I liked it, because it's exciting, because you're working on stuff for F-18s, F-16s, Boeing 777s, the space shuttle. I learned a lot fast, and got exposed to many, many different things.

I was in charge of all the displays on the space shuttle upgrade when I was at Honeywell. It's an interesting story and it's how I wound up affiliated with the Davidson companies. We had won the space shuttle contract to do the displays and the computers for the upgrade. The supplier of the liquid crystal displays was a company called Hosiden of Japan. Then the Senate got involved and said we could not use imported display technology on the space shuttle. They heard there was a company in Michigan called Optical Imaging Systems (OIS) that was capable of doing it and [said that] it should be done there. I was getting ready to go to Japan and all of a sudden I was told "no, you've got to go to Michigan."

My first thought was, "you've got to be kidding me," because this is a big Japanese company versus a small start-up in Troy, Mich. But I came up here and that's when I met Ralph Gerson, Bob Gorlin, Jeff Knight and then, eventually, [William] Davidson. For a period of about two years, I was their biggest customer on behalf of Honeywell. Then finally one day they said, "Well, would you like to come work for us?"

When Mr. Davidson and the U.S. government put in millions to build the first large LCD factory in North America, that's when I said, "okay, I'll come." So in August of '94, I went to work at OIS. Then in the fall of '98 I was approached about coming to Guardian and starting the innovation initiative. At that point, Guardian had little in the way of organized R&D in glass.

USG: So you had second thoughts about the job?

ST: I don't talk about this story much, but I originally told Guardian no. Part of the problem was that in 1977 Mr. Davidson had made several statements in the press that he didn't believe in spending a lot of money in R&D … in the glass business because there was no return. So in the fall of '98 when Guardian made me an offer, I was thinking "What am

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Russell Ebeid

USG: How have your duties been redistributed since Scott has taken over this new position?

RE: With the passing of Bill [Davidson], who was a one-man private company, now we have additional duties. Before, you'd go to Bill and you'd hum him a few bars and you were on your way. Now we've got to watch for other shareholders, whereas before all I had to do was please Bill. Our duties are really expanded, rather than redistributed.

In a way, things are shifting. Yeah, before I had North America and now I'm moving it to Scott. Scott is moving the science and technology down to others. It's an evolution, rather than a revolution of assignments, duties and, overall, we have more areas to cover.

USG: Has Scott made any decisions differently than you would have yet?

RE: Not really. First, everybody is different. Scott's done things I wouldn't have done, I've done things he wouldn't have done. That doesn't mean they're wrong. That's just, once again, the evolution. People have different styles, people have different strengths, people have different weaknesses and, at least in my view, even if he did something wrong, that's the way you learn.

Now, the people under him that were under me are probably seeing a different style. I know they're seeing a different style of management but I think he will have success—he's already had success. I'm not concerned.

USG: When Scott's promotion was announced earlier this year, the news release noted that he was helping Guardian renew its focus on being "the industry leader in North America." What do you think it takes to be the market leader?

RE: Let me go back to scratch in a way. We started in the business in 1970 making glass. At that time, we were the first new glass company to enter North America. At that point, it was "just make glass." You didn't have to temper, you didn't have to laminate, you didn't coat, you didn't have to make mirrors, all you had to do was learn to make glass. No one helped us. We just kept working long days until we finally got it right.

The first era is where we were a fast second and we grew around the world. Our advantage was we started efficient plants, so we had cost savings. We were the first ones to marry a business to the technology. All of the other companies, they had technical people who didn't know a customer or they had salespeople who didn't know a factory. We were

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I going to do? Am I a figurehead so you can say you've got an R&D program?"

Then Guardian said it was targeting 50 percent [value-added production], and a new R&D building would be built. I could see the commitment. When I came we were in North America and Europe at about 5 percent. Now most of our plants in the United States and Europe are close to 50 percent [value-added production].

***USG:** R&D has been a big focus for you; you hold more than 60 patents. You're obviously still leading R&D work, but do you miss the development work itself?*

ST: You go through a phase, I call it being a "beaker boy" or a "nerd." At some point people either want to get into technical management or want to go into general management. If they don't get into general management, they stay on the technical ladder.

One of the many things that Mr. Davidson was good at—I mean obviously he was brilliant—he would always see more in people than what the label was. A lot of times at Guardian I was classified as "the nerd." And if you are a nerd that's what you are; you fit that box. If you are an operations person, that's all you can be. Taking over product marketing in 2005 really helped me. The reasoning was that Mr. Davidson liked total accountability. By having marketing and R&D—what he called innovation—all under one person, now this person has to identify the markets, decide what products are needed, develop the products and then take them and sell them. Basically, it's from beginning to end, one person. It's not marketing throwing it over to R&D, R&D throwing it over to sales.

And another thing—and this was Mr. Davidson's idea, it wasn't mine—was that we do the majority of our scale-up at the production facility across the street. This got early buy-ins from the operations people, and it got the scientists quickly into the production environment. It's really helped with the hand-off and speed and reduced cost and shorter time to market.

This (along with my work with the architectural sales force) was a great developing ground. I already had been working with every plant intimately for 11 years, so I knew all the plant managers, the salespeople and the globe in terms of customers, competitors and products.

That's why at first some people were like "why would Guardian put the head of R&D into leading North America?" But, really, it wasn't much of a step.

***USG:** So what have been some of the new duties then since taking this step—and what challenges have you tackled first in this new role?*

ST: I think it's one thing to [provide] support from a product and marketing point of view and it's another thing for 100-percent, full-circle total accountability. The biggest challenges have been, for example, that we've closed three fabrication facilities. Nobody likes to do that, but it should have been done before. I worked at OIS when we shut that down and sold it off, so I'd been through it before. It's a challenge that's never fun.

We tried to do the best we could to find people jobs. Walled Lake [Mich.] was close to Carleton, so we were able to take some employees and put them in Carleton, same with Tillsonburg [Ontario], which was very close to our Rexdale [Ontario] facility. That was part of the problem—we had two facilities too close to each other.

***USG:** You mentioned you felt these facilities should have been closed sooner. That begs the question, have you and Russ Ebeid so far disagreed on any of the decisions that have been made since your appointment?*

ST: No, I've been left alone. That's something that's just my personality and nature. Mr. Davidson never told people what to do, ever. I run things by [Russ] before I go do them. He doesn't say "you can't do that," he'll say "I wouldn't do it but that doesn't mean you won't." I remember one time last fall we were sitting at a restaurant in Europe and Russ told our sales guy, "yeah, he never listens to me," and I said, "no, that's not true, remember that day about four years ago—I listened to you." We joke about it.

***USG:** But it seems like you two have struck a good balance.*

ST: I think Mr. Davidson picked people for contrasting styles. I'm a very aggressive person and that's where I think Russ and I have always been a good pair. I usually move very quickly—sometimes too quickly. Russ is very patient, that philosophical leader who sometimes you would say moves too slowly—we've been a good balance.

***USG:** When your promotion was announced earlier this year, the news release noted that you were helping Guardian renew its focus on being "the industry leader in North America." What do you think it takes to be the market leader?*

ST: If you take a step back, for Guardian in the '70s the focus was on North America—with Carleton, Corsicana [Texas], Kingsburg [Calif.]. Then in '81, when Guardian went to Luxembourg, that really became the start of the overseas expansion. Through the '80s it was pretty much all overseas; most of the capital spending has been overseas. It's hard to argue with, because you have economies where you have GDP of 4, 6, 8 or 10 percent, combined with countries that have very low consumption per person of glass.

If you look at it from the customer point of view, Guardian was never viewed as the leader in North America. In the past, PPG—"glass since 1883" is in their logo—and Pilkington had been because they were there in North America the longest. They had the most assets and that was the focus. We want to be the preferred supplier to the key companies in North America. It's a big change.

In the past, Guardian had been just a float company—and I don't like to use the word "just" because Guardian's always had strong manufacturing, distribution and logistics. But to become a complete supplier you have to have services. Now we're doing our customer service logistics (CSL) program, for example. It's really an advanced form of distribution, which Guardian had never done before. We're doing loyalty programs for fabricators and for glaziers—now we have our glazier connection program.

So when we say "the market leader," it's to be above that critical threshold in quality, service, logistics and to be able to provide tools and services for our customers throughout the supply chain—not just the direct B2B [business-to-business] sale. We want to influence the architect and the glazier and then support the fabricator. That's really where we're going. And I think we're moving quickly.

***USG:** This is a tough time to take the helm. What challenges are you first addressing?*

ST: To me—and I know it sounds crazy—but there's not a direct correlation between the state of the economy and company performance. What I mean by that is, in certain aspects of North American markets, we had relatively small presence. When you have the right products, logistics and services, you should be able to sell more. This year the big focus has been in segments that are core to Guardian that we should be participating in more actively. That's been a big emphasis for us: where can we expand the business?

***USG:** Regarding expanding the business, Guardian is known as being very shrewd in its acquisitions. What particular areas will you concentrate on in the future?*

ST: I'd say right now, yes, we're looking at different opportunities. Guardian's always been an opportunistic company. What can we do to enhance our current asset base that makes us ultimately more profitable, but also gives us access to products or services we may not have today? Or allows us to better balance our production mix across all our facilities? We're definitely looking at whether there could be potential acquisitions, but they have to be ones that make us stronger. We're looking at a few and, if in the end it does make us stronger, then we have to seriously consider it.

***USG:** Looking outside of North America for a moment, have you noticed that there are some things the U.S. glass industry does particularly well compared to other countries around the globe? Particularly poorly?*

ST: I'd say one strength for North America in the last five years has definitely been in the product marketing area. I think the main area there has been developing services, programs and tools that allow Guardian to penetrate further down the channel ... With SunGuard, for example, we developed it here and we basically exported it to South America, the Middle East, Asia and Europe. North America has become the product marketing hub. We're developing an interiors' program, it's the same thing. It's going to be developed, launched here and then exported around the globe.

***USG:** And have you been importing any "best practices" from outside North America?*

ST: Definitely. For example, in Europe they have a very good system for sales forecasting and pricing tools. We're learning from those experiences.

That's one advantage that I think has helped me in North America. Because I've spent so much time overseas the last 11 years I've been able to select best practices from around the globe. Our operations in Asia, Africa, Middle East, South America and Europe have taught us how to do things differently.

Something that's always a challenge in a company the size of Guardian is how to learn best practices, because we have, historically, a decentralized culture. So if you're in Egypt, you run Egypt and you worry about Egypt, but you're not going to South America or the United States to see what things are going on. When you're a flat organization you don't want to have a lot of overhead, so you have very few people in the company that actually touch every plant, and that's a downside. There are many positives to the flat, decentralized structure, but one of the downsides is that the transfer of best practices becomes more challenging.

***USG:** Speaking of integration, many mid-sized to small contract glaziers are watching larger suppliers market themselves to architects as total solutions. We are beginning to see these companies subcontract labor-only jobs. Do you think this is healthy for the industry?*

ST: The question it comes down to is vertical integration. If you do a case study on vertical integration in the glass industry it's a complete mix. You have people that are vertically integrated and have done that very successfully, you have people that are vertically integrated and failed miserably. To me, it comes down to who the leadership of the company is and whether or not they have the vision and the ability to execute that vertical integration. A lot of the companies that have tried to vertically integrate don't necessarily have the right resources—human, capital, intellectual property—to be able to have enough of a differentiation. A lot of times people vertically integrate because they think they're going to save on total supply chain costs, but a lot of times that doesn't materialize ...

***USG:** Years ago Guardian was the center of discussion when it sold glass directly to a casino owner who was a friend of Mr. Davidson. At the time, he said it was a one-time deal. Does Guardian still avoid such direct sales?*

ST: It depends upon the segment. For example, in solar we sell concentrating solar power mirrors directly through the channel. Are we going to be in the near-term installing insulating glass units into a commercial building? No. Really there's no general statement you can make that we're not going to go down and sell a completed assembly ... The best

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way I can describe it is the only time we will do it is if it's the only way to get our product to market.

USG: *If not this, then what do you think are the biggest problems facing your customers?*

ST: I'd say the biggest challenge right now our customers are facing is cash flow. It is. If you look at any of the statistics from the Zellman report, the National Association of Home Builders, any of these industry studies say it's not going to improve appreciably in the next 12 to 18 months. So really the biggest challenge for our customers right now is cash flow and having sufficient business to keep the doors open.

That's one of the things we've been doing with our CSL program. Guardian always sold in full truckloads. One of the things we've really rolled out in the last nine to ten months is that we're now selling glass by the case, which is a complete paradigm shift for Guardian. This is a way to help customers with their cash flow, so if they don't need to buy a full truckload now we'll sell them [smaller] amounts. We're also doing multi-drops out of our float plants, which we historically did not do. What that's doing is it's opening a whole other level of customer that we've never serviced.

Now, that does create some contention. There are people out there where, that's what they do for a living—distribute cases. Now that the primary glass manufacturer distributes cases it will create some contention. But my experience, globally, in distribution is that the glass companies provide more of the standard products and the distributors do more of these specialized, custom products.

USG: *Would you say the economy also is the biggest threat to the glass industry as a whole right now?*

ST: I would say probably the biggest threat is reduced demand for an extended period of time. That's a pretty generic answer, but how many float lines were fully operational and running at maximum tonnage in 2003, 2004? Almost 42 float lines. How many are there today? You've had floats demolished, you've had them taken down. Right now I'd guess the industry is running 25 percent below peak capacity—and you still have people that are crushing glass on the weekends and not pulling maximum tonnage. How long can people hold on if they're not meeting their minimum thresholds for production capacity, in terms of costs? I'd say that's the biggest challenge.

The second challenge, is can all the glass companies innovate at the same rate? Companies are becoming more and more differentiated by what products you have and what services you have … Let's say in residential you've got one company that's forging ahead and they're mainly focusing on that; if you want to be competitive in that you've got to be right there with them … then in commercial, then interiors and then in automotive. I think that's what our ultimate goal is: we want to be strong in all the market segments.

It brings a lot of advantages to be that diversified, but to become that diversified requires a lot of spending and capital and R&D and marketing …

USG: *Another challenge we've been hearing about lately are the changes to regulations and codes impacting glass. What's your take on this?*

ST: I think it's great. We've placed a greater emphasis on regulatory and the glass industry. I feel, we could do more to help influence the codes to promote glass. I think you will see more of an increased presence from Guardian in this than in the past, because when you look at the majority of value-added in the glass business, it has been mandated. For all the great marketing that everybody does, the bulk of the value-added still is legislative-driven.

USG: *It does seem that a lot of products out there are a reaction to restrictions or limitations put on glass by other groups.*

ST: As opposed to the other way around, being proactive. When you're looking at ASHRAE, for example, if the technology does not improve appreciably for the U-value of openings, they may downgrade the window-to-wall ratio from 40 to 30 percent. Look—how much glass is needed if that were to occur? And this is not just the primary glass manufacturers, this is the fabricators, the glaziers—the whole channel is affected by that change.

USG: *So when it comes to driving regulations such as this, or driving codes, do you see this industry having a role in that?*

ST: Oh yeah, but we need more information to be able to convince them. For example, up to 25 percent of the U.S. electricity draw is from lighting. So if you go to OLED technology you could reduce that to where it would be 15 percent—that's meaningful … To the government, it has to be meaningful on a macro level. Part of it would be "if all new buildings built beyond 2015 in commercial in this many billions of square feet were able to generate X amount of electricity then this is what it means to the grid." If you can't relate it in terms like that and it's not meaningful, no way.

USG: *Considering energy efficiency has been such a focus for Guardian, how do you react when groups like ASHRAE slam glass as an inefficient product? How do you hope to combat that perception?*

ST: People always ask me who Guardian's biggest competitor is and I say it includes the brick, mortar and stone industries. It's the non-glass building materials that are the competitors. The real competition is alternative building materials. We need to improve our products, providing better information on the energy of the buildings …

USG: *Given your background in product research and development, where is there yet to go with coatings?*

ST: Guardian was behind when I came—we had four coaters and now we have 16. We have the most vacuum coaters in the world. We do coatings for electronics, solar, interiors, residential, commercial and automotive, so it's six segments where we're doing research on coatings and we still have a backlog. There is still significantly a lot more that can be done with coatings. At some point, you will start to see certain segments where you're reaching the plateau. But right now … people know we're working on vacuum insulating glass, and we are now working on technologies that will become more critical once the industry has reached the coating plateau.

USG: *During your talk at GANA's Fall Conference last year you said of solar glazing, "The key is sustaining growth in a controlled manner." Would you say this describes Guardian's growth in the solar glass market?*

ST: Over the last five or six years we've doubled our revenue every year and this year we're on pace again. Our strategy for solar is it is growing, and it is going to be a major channel for glass. We're working on everything from thin film photovoltaic (PV) products to crystalline silicon PV products, concentrating solar, thermal hot water. We have business in every channel right now on a global basis.

USG: *We've heard that PV may not be the most efficient solar technology currently. What technologies should glass companies looking at the solar market focus on now?*

ST: See, part of the challenge is … because we also have a BIPV activity, we've partnered with a couple German thin film producers that buy Guardian glass. We're actively out bidding projects right now. I would say BIPV is the first application that's both for fabricators and glaziers. I do see another possibility for glaziers in roof-mounted installation of PV for commercial buildings. In Europe I've seen several large "cladders" doing both the façade and the roof systems. It's a whole new area for them because before they were never involved in the roof; that was a separate contractor and a whole separate set of requirements and supply. So it's a new source of revenue and profit, but it's still similar—aluminum and metal framing. I would say that is the predominant thing that's going to happen. You've either got to figure out how to make BIPV work or you've got to go to the roof.

USG: *Overall, where do you see the architectural glass industry in 2025?*

ST: If the innovation continues at the pace it is, and if we do our job, hopefully you will see that the window-to-wall ratio can approach 50 percent. To me, the industry has done

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its job when instead of going from 40 to 30 percent we can go from 40 to 50 percent.

And I think that, in the end, you will have fewer glass companies. Today, anybody can get a float line. Companies will license you the technology. You will have to have a total package of coatings, laminated, float, acid-etched—you're going to have to be a complete supplier in the next 5 to 10 years.

***USG:** Is there anything else you'd like to tell our readers?*

ST: I'd say our number-one driver right now is increasing value-added content. We want more than 50 percent of the tonnage to be value-added when it leaves Guardian—not by revenue, but by tonnage. We've already got some plants at 60, 65 percent ... It's easy to pick the number but now that means we've got to have the right products, we've got to have the right marketing programs, we've got to have the right channel programs, we've got to have the right sales force. That one number has huge implications to the organization.

People will also see Guardian become a much more service-oriented company, less transactional. That's one thing I hear a lot from customers, that Guardian is viewed as a transactional company. We've lost loyalty to a certain extent in North America because of that. We've got to be more consistent going forward.

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the first ones that married the two together. And that was our advantage, too.

Now we're into a different area and that's the technology, the innovation. That started when we saw China coming and I thought, "oh man, we need better technology." We started that technology center 11 years ago and I think what Scott's got going there is pretty exciting. He has taken us to a new era with the innovation and the patented products.

We were a "maverick" when we started and now I believe we have more capacity in North America than the second-place float guy. We have gone from maverick to the leading glass producer capacity-wise in the United States. So now how do we sell out all that capacity? By innovation.

About five years ago we said there's another era coming, one that's in the marketing and the branding. This takes a long time to get going. I use Nike as our example. In the beginning the tennis shoe said N-I-K-E and now, after you've seen it, it's just the swoosh and you know it's Nike. I said, "this is going to be a ten-year project for Guardian, that someday you're just going to see the horse and people will know that's Guardian, and there will be some image that will come to mind." I hope the image is, if it's on a windshield, "that's a good windshield," and if it's on a mirror, "that's a good mirror."

***USG:** So what's the next step?*

RE: The industry is shifting from the glassmaker to the glazier and to the consumer.

That's what I believe will be the next step. You're already starting to see the fabricators fragment again. They accumulated and now they're fragmenting.

At some point you're going to read about ShowerGuard [Guardian's shower product] and think, "I could use that. Where do I get this?" You're going to go to anybody that has it rather than being loyal to one fabricator. That's going to be a big hurt to fabricators who are used to customers coming in or soliciting with local pricing.

This industry is going to continue to shift downward to the consumer level. It's going to keep shifting downward. The same way as when you want Tide detergent—do you care what store you buy it from? It doesn't matter. You know the brand you want. And that's where I hope the Guardian brand is. "I don't care which fabricator it is—I want that Guardian horse." That's where I hope we're going to end up. Or that's the path we're leading to.

***USG:** We're already starting to see larger suppliers market themselves to architects as total solutions. We are beginning to see some of these companies subcontract labor-only jobs. Do you think this is healthy for the industry?*

RE: I think it will be healthy for the industry but unhealthy for certain companies. These are companies that won't change or are too slow to change or don't recognize change. It'll be negative for some companies.

Now, it'll be good for the industry as consumers are more aware of the use of glass and the innovation. With showers that are easier to clean, you're going to see all-glass bathrooms. You're going to see walls made out of glass instead of plasterboard and drywall. You're going to see a lot of glass products through innovation and marketing and what have you. The business, the square footage, the tonnage of glass is going to grow exponentially. But can the existing companies you know handle it? I'm not sure.

***USG:** You mention that such changes could be unhealthy for some companies. Do you see this helping Guardian in future acquisitions?*

RE: First, I think the economics of the past year were disastrous for the industry in general. When you don't build houses and cars, that's 80- to 90-percent of the usage of glass. You know how bad the companies were doing last year. Fortunately, financially, Bill [Davidson] left us debt-free. The

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economy hurt us, no doubt about it, but we weren't in debt like the others.

USG: *To back up a bit, what areas of the world do you think possess the most growth potential for the industry?*

RE: Well, I'll divide the world into three parts. The first part is Western Europe and the U.S. Mature markets, 20 kg of glass per person usage per year. You'd better have innovation for that group if you're going to do something there.

Then you've got Central Europe. It was under Communism, now they're free. The money's coming down to the people finally, they're buying houses and cars, and they're so close to Western Europe that they want those advantages. They don't want a Trabant; they want an Audi, or they want a Mercedes. Now, that second part is maybe 8 to 12 kg of glass per person, and that can still double in volume. As they get more money, they'll want more products.

Then you have the third part, the BRIC countries: Brazil, Russia, India and China. India is about 3 kg per person. If they had the same wealth as you and I in the United States, that country would have 100 float lines. In a Western economy it takes 10 million people for a float line. They've got a billion. There is tremendous growth to be had. It all depends on how quickly the money gets down to the people and the country gets roads and infrastructure and electricity and stuff like that.

So I see opportunity everywhere, but it's different. In the U.S. and Western Europe it's got to be innovation, it's got to be technology, it's got to be patentable stuff. The other part of the world, once again Central Europe, they're into laminated and tempered now—that's old for us, but it's new for them. Then the rest of the world of underdeveloped nations, they're just happy to have some glass.

USG: *What do you feel the U.S. glass industry does particularly well compared to other countries around the globe? Or particularly poorly?*

RE: When it comes to energy savings, which is a hot topic, Europe is clearly first. The United States is a sleepy second, I think. We're just now getting to the solar and all that; that's been around Germany and Spain for a period of years. I think most energy savings comes from Europe, but I think styling will come from the U.S. Even a lot of American architects are in the Middle East doing work in Dubai.

Now I'm talking about what's inherent in our cultures, but if you talk about the glass industry—what is the glass industry in the United States? A lot of the traditional manufacturers have come and gone or are pulling back from certain segments. What's left?

You saw our place [Guardian's research center]. It doesn't have coaters—it has developmental equipment because our tech center is right next to the factory. In other companies they develop something and then they throw it over the wall and say "go produce it." We've married our groups together. All developments are done on a production coater in a factory. Now, we do test samples because we can't shut the machine down all the time, but there's no production equipment in that tech center deliberately.

USG: *You paint a rather bleak picture for glass manufacturers. If you had to put your finger on one thing, what would you say is the biggest threat to the glass industry as a whole?*

RE: Some companies have had what four, five presidents in the last 15 years? Others have just quit. These people are employees and they have to show some results on their promotion. They're not in it for the long-term. When Bill Davidson was here he wasn't thinking tomorrow. He was always looking down the road. We have never made short-term decisions, even though we may have made a few more bucks. Glass plants go down into the ground 30 feet. They're not on trailers that you move, so you better do the right thing for the long haul.

That's the beauty of not having debt, that's the beauty of being a private company, and that was the beauty of having an owner that's worth millions.

USG: *What about your customers? What do you think is the biggest problem they're facing?*

RE: When you say our customers versus customers in general … I've had people come in here and say "Russ, we want to give you our business." I may have been knocking on their door for 20 years. We have had customers unsolicited come in and say, "we want to give you business because we're not sure whether our supplier is going to be around …"

USG: *Another challenge we've been hearing about lately are the changes to regulations and codes impacting glass. What's your take on this?*

RE: First, codes are a good thing because it forces performance instead of bull. Take low-E—if there weren't a code for window glass and energy savings, no one would buy it. You go to the Middle East and they've got their doors open in department stores and the air conditioning is just flowing out, they don't care. So codes force, in this case, energy savings. I'm all for codes.

Generally, though, the glass industry is weak when it comes to codes because we throw stones at each other … We fight each other and then the brick people come in and say, "okay, eliminate glass, that takes care of the energy losses."

USG: *Where do you see the architectural glass industry in 15 years?*

RE: The consumer is going to pick which products he wants. The industry is shifting from producer to fabricator to glazier and architect to consumer and the consumer will be the king. If you go buy a tape measure and they have one that says Acme and one that says Stanley and they're the same price, which one are you going to buy? Stanley. They may be made in the same factory but you go for the name. I hope we're going to be the Stanley or the Nike or the horse. ■