

Interview with Rod Nelson Vice President, Innovation and Collaboration and VP Communications Schlumberger



Rod Nelson is vice-president, Innovation and Collaboration, as well as VP Communications. He is responsible for all internal and external communications and identifies external technologies and innovations applicable to the oil and gas industry. Rod has held a number of senior positions including, VP Strategic Marketing and VP Oil Field Services.

Rod led the technology task group for the 2007 landmark National Petroleum Council's global oil and gas study, "Facing the Hard Truths about Energy." He also serves on a number of joint industry steering committees and boards including, the corporate advisory boards of the American Association of Petroleum Geologists and the World Oil Awards. Active in the community, he is on the board of directors of the Greater Houston Partnership and the Fort Bend Education Foundation.

He holds a bachelor's degree in engineering from the University of Wisconsin, Platteville, WI, and an executive MBA from MIT's Sloan School of Management. Rod can be reached at rodnelson@slb.com

Interviewed by Doug Berger, managing partner, INNOVATE LLC. doug@innovate1st.com

Doug: Let's talk about Schlumberger's main pillars of innovation.

Rod: First and foremost, there is our culture and our history. Schlumberger was built from an innovative idea that developed into a business. From the inception of the company, the early charters stated that scientific pursuits should outweigh economic pursuits. The scientists within Schlumberger are quick to remind managers of this fact when push comes to shove at budget time.

Another pillar from a business standpoint is our belief that our primary differentiator is technical leadership in our domains of interest. We invest heavily in technology. I think that everyone in this company knows that management views technical leadership as a real differentiator.

A third pillar is our belief in the global nature of business and intellectual capability. Talent is everywhere. We want to tap into it and Schlumberger is a global company. We operate in over 80 countries. We also believe in the global nature of technology development. We have geographically dispersed our technology development centers around the globe. We have centers in Russia, China, Japan, France, the U.S., the U.K., and Norway. We try to include any intellectual talent that's out there. We are as diverse as we can be in terms of our actual human resources, and we try to make sure that we are diverse in our connections outside of the company. Whether a leading university is in Russia or Boston, we pursue them with equal vigor.

Doug: I understand that Schlumberger has created an internal marketplace in which people get the chance to take an idea, an innovation, and see how far they can make it go. Can you elaborate on that?

Rod: We have multiple ways in which engineering or research projects get underway. One is classical, where marketing comes to the R&D organization with a client need. We have a software system that allows anybody in the company, anywhere in the world, whether that person is a maintenance technician in Indonesia or the president of one of our divisions, to input a client need or a project idea on their desktop. Those ideas are managed and selected by a process run by our product line management. The president of each product line company is responsible for his R&D budget, managing all of those ideas and deciding which ones will come to the top to be funded.

The other way that we foster ideas and innovation is by allowing researchers or engineers the opportunity to pursue an idea of their own, independent of this classical process. They are able to ask for funding and receive a reasonable amount of money just by submitting a very short description of their idea via email or a one-page document. Once a year, sometimes twice a year, we review that project to see how it's going. If somebody really believes in an idea or a project, he/she typically will find a way to do it anyway, whether sanctioned by the company or not. We hope that we have people who feel that strongly about their ideas.

We are sanctioning people's belief in their ideas as opposed to forcing it underground, which has occurred in the past. We have said, "Okay, we recognize that this stuff is going to happen. Let's fund it. Let's review it periodically, and then let's find a way to turn that Skunkworks project into a product-line owned project through the enabling of some kind of interaction between that researcher or that engineer and upper management."

We do this in several different ways. We have staged an Innovation Fair, where we invite everyone who receives funding to present a poster within a Fair atmosphere. We hold the Fair outside and some people dress in costumes. People walk around and learn about these different projects. When the product line presidents see something that they like, they negotiate with that individual. "What do we need to do to turn this into a project for my product line that will benefit me? How much do I need to fund? How do we incorporate it into what we're already doing?"

We've also organized reviews within the centers where each of these projects is funded. Those reviews are classical PowerPoint presentations. We invite a mix of people to come and listen to these presentations. Product line presidents, our most senior level technical people, and our Schlumberger *fellows* are all there. Here again, the interaction is about how do we turn this thing into a project, or how do we roll it into an already ongoing project. How do we make sure it ultimately sees the marketplace? We foster those interactions.

Doug: Do you personally operate the innovation funding?

Rod: Yes and no. In most cases, it first goes through the technology center manager, with whom I have agreed upon a pot of money that he/she is empowered to invest.

Doug: What are some of the guidelines that you and your center managers use to screen these early-stage ideas?

Rod: We try not to get too judgmental at the early stage. We try to look for things that are risky from a technical standpoint. In many cases, they are competitive with

technologies that we are already investing in, and therefore a manager of a business line might be hesitant. We look for things that will enable us to engage with companies or expertise outside of our own company. We look for where the funding will pass through our own person to a university professor or a small startup company so that we are able to leverage ideas from outside at the same time.

Doug: You're looking for the more disruptive, more unconventional innovations. How do you bridge something that's a little far out on the technology side, into commercial practicality?

Rod: You described it well and one of the tricks is to find that bridge. The meetings, reviews and Innovation Fair all play a part. We also have people in each center who have a marketing background, and whose job it is to interact with these researchers and engineers to help them understand the final customer need and the size of the market. When we have review meetings, part of my role is to help find that bridge and make a connection between the right people. In some cases, it's as simple as saying, "What you're doing here would benefit this project manager at another center."

There are others like myself, who have been around for almost 30 years, who go around saying, "What you're doing here would really benefit this project in Japan or this project in Russia." or "I think if you combined this with this piece of technology, which I saw six months ago, we'd have something." We have ten Schlumberger *fellows* who have been around the company and are the top technical talent, and they review these projects, and help make those connections.

Innovation is like playing a contact sport. By the very nature of these projects, these individuals are big proponents of that technology. It's something that they believe in and something that they want to do on nights and weekends if they get some funding. Therefore, they typically take every opportunity to talk pretty aggressively to somebody about this idea. When they get a product line president in the room, you'd better believe they're selling the concept.

In addition, we have self-forming technical communities we call *Eureka*. There's a Eureka community on rock physics, signal processing and advanced materials, for example. We are so geographically dispersed that a few years ago we saw a real need for enabling a material scientist in Houston and a material scientist in Siberia to talk to each other about shared problems and shared experiences. The Eureka communities allow people of like disciplines to communicate with each other, not just on a technical basis, but also about market needs and a variety of other subjects. Some of these communities have organized Webcasts with external speakers who come in and talk about a problem. It's turned into a bigger deal than we initially imagined. They form a real sense of community. They're self-governed. The company just provides a small bit of money so that they can meet once a year, and a Website where they can inform each other about what they're doing. On the Eureka Web site, you can find other people of like interest. You can pose problems. You can subscribe to electronic journals.

Doug: Is there some underlying social media technology like wikis or blogs that you're using as an Internet-enabler for communication?

Rod: It's wikis and bulletin boards. Other companies find it interesting that we pretty well leave it to the communities themselves to govern and manage their own bulletin boards. They have to make sure that incorrect things are not said. Typically, we don't have a problem with improper content, but sometimes there can be questions

about whether an answer was technically correct. Generally, they are very good at self-policing.

Doug: Many companies are used to innovation as a structured process. Process is not the fundamental pillar by which you are operating this part of innovation.

Rod: That's right. Eureka communities and the whole idea of funding these innovative projects that didn't find a home in a normal structured process are a pretty big part of the way we do things. The big, expensive projects sanctioned by a product line are long, expensive bets on the future. These other projects tend to be shorter, less expensive, and more collaborative in the sense that the money is typically spent outside of our walls, and we're quite happy about that.

It has also enabled us to steer the cultural supertanker toward ideas and expertise from outside of the company. It's very easy for a big company to get caught up in how great they are, especially when you've been a leader of your industry for a while. Endorsement of these small innovation projects and the Eureka communities, has moved the culture away from a possible not-invented-here syndrome, toward "Let's make sure we're looking everywhere for the best ideas, the best technology." That's more in keeping with the underlying original culture of the company, which was to go anywhere.

There was a saying when the company first started, "Where the drill bit goes, Schlumberger goes." That meant that in 1920, if somebody drilled a well in the Siberia swamps, we would go. If somebody dropped a rig into the Columbian jungle, we'd go there, too.

Doug: I'm getting the impression that although this marketplace innovation is a material contributor to growth, it's not being tracked and managed in the same way as is close-to-the-business growth.

Rod: That's exactly right. Certainly, on large projects that are obviously material to a business line, ROI calculations and return calculations are done. When you get to the other end of the spectrum, the smaller projects, the more risky projects, we absolutely don't require them to do any sort of ROI calculation. We are quite happy to have a significant percent of those projects not make it. We've had plenty of experiences when a project looks like it hit a dead end, but three years later, we can go back and say, "Well, we either we learned something from that project that we don't have to repeat, or there was a piece of that project that we could recycle into some other idea."

Doug: This plays out nicely within the walls of the R&D technical community. How is the leadership in the business oriented, such that they find this a fertile environment rather than a disruptive environment?

Rod: Let me come back to the underlying culture of the company. The basic beliefs that good ideas can come from any part of the company or from outside the company; that a bit of competition, both external and internal, isn't necessarily a bad thing. We have plenty of examples of where we've excelled because one of our competitors came out with a new mousetrap, and we had to play catch-up and leapfrog. Management all the way up and down the company sees that a competitive nature, both internally and externally, is a real motivator and a real benefit.

Doug: I suspect that if I were sitting in a strategic conversation at Schlumberger, it might have a very different tone than how we think of corporate strategy conversations.

Rod: I think that's true. Generally, the conversations, even at upper-management levels in Schlumberger, tend to be less linear and more open. There's a belief in the underlying R&D organization and the talent there to do the right things. While ultimately upper management is responsible for making the big bets, they're not the only ones with good ideas. Therefore if a researcher, for a hundred thousand dollars, has the ability to pursue a radical, disruptive idea, that's a good thing.

Doug: What seems to be missing is an orientation of control.

Rod: Control is a word that we don't often use. Obviously, money talks and the way that you control what really happens is through funding. Upper management certainly holds the purse strings, but we don't think of it in terms of hierarchy. We think of it as, "These are experienced managers. That's their job." I think that's pretty well received.

A side effect of our being so geographically dispersed is that we have had to focus on standards. If you're buying a certain type of electrical connector, and it's going to perform the same basic function anywhere in the world, you would like to think that you could just agree on one part, stock that one part or buy that one part from a vendor, so that everybody can use the same electrical connector. In a global organization, this is more difficult than it sounds.

Doug: The marketplace is not efficient when you look at any single event. There's an overall efficiency that the entire system gives you, but it comes at a price to any individual transaction.

Rod: One could argue that if you wanted to be as efficient as possible with your engineering dollars, you would put everybody in one place. The downside of that in our view, is that you are unlikely to tap into as much talent and make as many connections as you would if your centers are dispersed across the globe.

Doug: What other hidden gems would you like to illuminate for our readers?

Rod: One of the things that we are known for, which people have found quite interesting and we've found very rewarding, is that we have co-located our research centers with major universities. We closed and moved a U.S. research center to Cambridge, Massachusetts and co-located it with MIT, Harvard and Boston University. Again, we believe in physical contact and physical presence.

If you're drinking from the same coffee pot, it's much more likely that you're going to have a discussion about what you might do together, or some new idea might get sparked that otherwise wouldn't have by just exchanging emails or phone calls. Our lab is adjacent to the MIT campus. We can invite the professors to lunch at our cafeteria, and those with whom I've spoken have said that our food is better than the university food.

We've also done this in Cambridge, in the U.K. In Russia, we're next to the Moscow State campus. In Saudi Arabia, we're adjacent to the King Fahd University campus, likewise in Beijing. We've found that by developing relationships directly with individual researchers and bringing in their post-docs, for example, good things happen.

Doug: Are there any concluding remarks you would like to make?

Rod: In our case, the company culture is such that scientific and engineering talent is very highly valued, and we try to hire the best people and put a lot of trust in those people. We believe that talent exists everywhere, and that no single country and no level of management have any lock on the best ideas. One should be as open as possible, and enable innovation to come from anywhere. This mindset has benefited us. I think that whatever a company does in terms of fostering innovation, looking for collaborations from the outside, you ought to think about doing it in a way that will make logical sense to those people in your company who have helped to build your company and are its real backbone.

