



The Innovators

Think *breakthrough*

Achieve the *extraordinary*

December 2006

Interview with Jim O'Connor, Corporate Vice President, Technology Acceleration, Motorola Inc.



Jim O'Connor is Corporate Vice President of Technology Acceleration for Motorola, Inc. Jim is responsible for evaluating the technical and commercial merit of a wide variety of technologies and go-to-market strategies and championing the top business plans through the Early Stage Accelerator Innovation program. Previously Jim was Managing Director and co-founder of Motorola Ventures, the corporate venture capital investment arm of Motorola, Inc. In 1998 he served as a White House Fellow appointed by President William Jefferson Clinton. Jim was named a Henry Crown Leadership Fellow by the Aspen Institute in 2004. Jim can be reached at james.oconnor@motorola.com.

Interview conducted by Doug Berger, INNOVATE LLC. www.innovate1st.com

Doug: Jim, please give us an historical perspective on the Early Stage Accelerator.

Jim: Motorola is a 78-year-old company. In 2003 we were celebrating our 75th anniversary. We had incredible innovation stories to tell: the first commercial cell phone, the first car radio, the transponder that delivered the discussion from Neil Armstrong on the moon. However, for the three years prior to the end of '03, we had a limited amount of successful output from our labs.

When Padmasree Warrior came into her role as the Chief Technology Officer, she really wanted to shake up the technology office. She called it 'breaking glass.' Padmasree's blog: <http://blogs.motorola.com/author/padmasree-warrior> was one way she reached our staff. Motorola's Early Stage Accelerator was initiated by Padmasree and Motorola's overall senior leadership team at the time, including Ed Zander, just as he was joining Motorola

Padmasree wanted to approach ESA from a venture capital mindset. At the time, from '99 until 2003, I was Managing Director and co-founder of Motorola Ventures, our venture capital arm, which is focused on making external venture investments. Padmasree gave me the opportunity to apply my external venture experience to internal ventures. We created the Early Stage Accelerator, which was tasked with looking at the best ideas in the corporation, then funding and treating them like internal startups.

We realized early on that one of the big inhibitors to innovation in a large company is faulty knowledge management. If big companies like Motorola, who have so much going on, don't set up a structure for sharing good information in a very transparent way, bad decisions will be made.

So we structured two groups who helped to really alleviate that problem. The first was the Innovation Leadership Team, comprised of our top technologists, strategists and

operating people. They meet six times a year to help our Early Stage Accelerator team vet ideas. If an idea gets through the Innovation Leadership Team, it goes to the Motorola Innovation Investment Board, made up of our business unit heads; Padmasree, our CTO, Rich Nottenburg, our Chief Strategy Officer, David Devonshire, our CFO, and Warren Holtzberg, head of Motorola Ventures. These are the general partners within the fund who will then say, "Yes, you can deploy \$3 million for this project if you agree to these milestones."

Doug: What are the criteria by which something would get managed through the Early Accelerator, rather than through one of the business units?

Jim: Any idea has to meet three main criteria in order to come through our group. First, it has to be a reach-out, new-new, whitespace opportunity. This is defined, in terms of full scale product commercialization, as being anywhere from 18 months to five years out.

There are many opportunities that fall into a second category that we call cross-business opportunities. These are ideas that are applicable to two different Motorola businesses. If they are not funded by an ESA, they may fall through the cracks. There may also be ideas that can achieve a scenario of one plus one equals three, by leveraging the capabilities of both business units. A corporate group like ESA helps to coordinate and provide additional seed capital for these cross-business collaborations.

Then the third criteria, and this a key category, are disruptors. The idea is that we would rather disrupt ourselves than be disrupted by somebody else. That is a really important concept. We look at a lot of ideas that are disruptive to the market. We think that it makes sense for us to handle those types of ideas from a corporate perspective, rather than always having them reside in the individual business, which is where disruption could occur.

Doug: From where do your ideas come?

Jim: Ideas come from several key sources. First are the Motorola Labs employees who number roughly 700 to 800 people. These are the top technologists in their field and they are considered technically the best and the brightest with respect to futuristic technology thinking.

The second source of ideas is the business unit organizations - primarily go-to-market teams, strategy teams, and technical teams. They see gaps and needs in the market that could translate into product opportunities in two or three years.

Thirdly, and this is really an important one, we look to customers. We often sit in on meetings and are part of the overall process with customers. We identify gaps and then set up commercialization tiger teams for large customers.

Doug: At what point are you marrying technical people with the more marketing, finance and commercial people, in order to look at the commercial and business potential of the idea? Is that a function of the Early Stage Accelerator?

Jim: Absolutely. In the ideation phase, we play several roles to help bring that idea to market. The first is that of being consultative to the person or team who generated the idea. For instance, someone may have a good idea on the back of a napkin, but we can tell them whether or not it makes sense, or if it's already being done elsewhere. For example, there may be a huge intellectual property issue or significant barriers to entry. The ESA team does all of the typical five forces analysis and strategic analysis. Within the consultative phase we do advocacy work. So, as we go through the process of taking the idea through our Innovation Leadership Team and the Innovation Board,

ESA actually becomes one with the idea generation team and advocates on behalf of their idea, if it has met our criteria.

Finally comes the management phase. Should the project be approved and funded, we will create a complementing set of people to augment the team and bring the idea to life. In the case of iRadio, for example, we had a very strong operating team from our mobile devices business who wanted to do this new kind of audio offering. We complemented their real operational skilled team with several members from our labs who had strong experience and who became, in effect, their key technical complement.

Doug: If we could jump to the end of the process and talk about a venture group that is close to commercialization. How does it integrate itself in go-to-market mode with the businesses, or go-to-market independent of the existing business units? What is the thinking, the mechanism, the process for re-integrating it into a business unit or for saying it's going to market independent of our existing business units?

Jim: This is the process we call graduation. A typical ESA project will last anywhere from a year to two years, with an average time period of 18 months. Remember, a lot of these ideas have been maturing in research, so it's not as though they are starting from ground zero. In a fashion similar to that of a startup, when the project is funded and we go into the management phase, we structure a Board of Advisors or a Board of Directors. These boards include the key operating unit people from the business to which we think this idea will graduate.

As the Board meets monthly or at least quarterly, they give product guidance and directives to the project team, ensuring that they are meeting all of the key milestones and deliverables that a typical operating unit would expect of their own technology or product.

This creates a seamless transfer of products, technology or business into the business unit -- that's what we call graduation. It's not some absolute point in 18 months time that you just hand over with a bow to the business. It's actually a continuum of time that can occur over a six to nine month period. During that time particular elements of the business really become part of the project team, and the actual startup project team begins acting as if they're part of the overall business PNL earlier than they might otherwise have been.

This transition works well because it gives the operating unit visibility to the idea early on, and gives them the opportunity to provide guidance on the things they like or don't like. It's good for the project team because they have been a pseudo-part of the business organization for several months.

We have evolved our business units such that there is a core for today's product and market elements of the business. Each business also has an Advanced Business Team that is designed to take more risk and have more financial exposure. The key is to graduate from the Early Stage Accelerator into the Advanced Business Team.

In summary, we realized early on that you must have the highest level of buy-ins. The second thing that's critical is to have the money to actually make this a reality. Thirdly, customers create the pulse.

Doug: Let's talk about a few success stories and then talk more about the model and process you've been using.

Jim: One of our projects which resulted in a product that is now called MotoWi4 Canopy, is the first big success that everyone talks about inside Motorola. Canopy is Motorola's early broadband wireless offering. It was incubated in the labs for several years prior to being funded by ESA. It then quickly graduated into the business. It's a disruptor

and a really good success story because it's a significant revenue generator. People inside recognize this as a key fundamental disruptor that was properly incubated and brought to market.

The second interesting success story is iRadio. We incubated this for a year in ESA and were able to get it to the point where it twice won the best radio service award from Digital Entertainment and Media Excellence awards, which is the category leader in this area. Motorola's iRadio demonstrates our ability to fund the disruptor early on and bring it to market with a real core start up team.

Doug: Let's talk about some lessons you learned the hard way; things that really personally challenged you and developed you over the last two years in your leading the ESA.

Jim: External venture funds are very different than an internal startup. They can be extremely entrepreneurial and open to risk taking, just by the nature of wanting to be the next Google. But in other ways, they don't always understand the Motorola culture or our typical development cycle. I think one of my hard learned lessons was the distinction between an external startup and an internal startup.

Secondly I learned that you don't need a lot of money in an internal startup to get an idea across the finish line. By that I mean that you can leverage significant costs for an idea which have already been incurred within the company and within the operating units. Inside Motorola, we can leverage 26,000 engineers. We've got hundreds and hundreds of go-to market team people within the company. So, what may take \$10 million to develop outside, could be done with \$1 million inside Motorola, because of our ability to leverage extensive capital investment and people in tech investment throughout the corporation.

Another hard lesson was that of knowing that when you graduate a program into a business, it is only just getting it started. The new business has got to be something that you really watch and monitor closely, and help to nurture once it gets into a business, because strategies change. It's what we call the soft handover approach. You can't just throw an ESA project over the transom and say, "Here, guys – catch." It's more of a connect point where we bring them forward earlier on to see the technology in the product, and we then carry it on further by continuing with the actual elements of the project.

Doug: If you were coming in now with a clean slate, looking at the Motorola of 2006, what would you see as the next level, the quantum step forward, in Motorola's innovation efforts?

Jim: We are in a market that's moving extremely fast. The challenge is to fuel the fire of these ideas quickly and urgently enough to move them to market at a pace that's probably three times what it was in 2003. Look at U-Tube; who knew that a year ago that Google would buy it for \$1.6 billion. In the whole innovation realm, you have to move as quickly as the nimble startups.

Earlier, I mentioned our Innovation Leadership Team. It was primarily North America driven for the first two years. In the last year, we realized the necessity of having regional local teams for ideation, so we established regional ILT's in India, China, Africa, Europe, Israel, and Latin America. This enabled us to create field ideation for particular ideas and products that may not even need to go through North America, but may just make sense in India or Latin America. All of these are separate teams, yet they are connected. They are funded through our fund. This year approximately 15 percent of our fund will be directed at international projects and this number will quickly grow to almost half. That's a really interesting change. Imagine the perspective we have looking across seven different regions on how innovation is done

differently. I can tell you that the speed of innovation in India and China is extraordinary.

Doug: In every executive, lies their own personal spark, their own personal passion. So that people can get a more personal feel for you, what about this whole area is your own creative expression?

Jim: Two things immediately come to mind: one, I love taking risks. I like being in an environment like this, just like ventures, where I was able to come into something that was really unformed and create something out of nothing. I find that interesting. I like coming into things that have great opportunity but haven't been working, and in a short period of time, change them and fix them, and leverage the great competency of a company to get things aligned. That's the number one thing that drives my team and me.

Secondly, I think it's very interesting to be in a position where you can take something that is a general idea one minute and turn it into an actual product which ships 18 months later. That's really cool!

Velcro Points

1. Approach early stage businesses with a venture capital mindset.
2. Have business unit executives integral to early round funding.
3. Graduate the new venture into an advanced technology group within the businesses.
4. Have senior executives populate the corporate mythology with innovation success stories.