

People to watch: Ali Hedayati

A conversation with key players in San Diego's technology and life sciences industries.

June 30, 2006

Company: Kalon Semiconductor

Title: Co-founder and CEO

Age: 47

Based in San Diego, Kalon Semiconductor received \$10.9 million in venture capital. Hedayati is the former general manager of Intel's Centrino Wireless Products Division.



What does your technology do?

The company is working on a wireless technology in the ultrawide band spectrum for distribution in the home of high definition video. Within the home, it's initially targeted to unwire the wired elements – the televisions, digital video recorders and camcorders – within at least one room to start with at very high bandwidth.

So what it does, if you look at your entertainment system and all the cables you have back there. You really don't have the flexibility to move all this around. We're going to enable the end users to buy different consumer electronics, maybe a DVD player, and just put it in anywhere in the room, without having the cable to connect it to the display.

How did you become interested in this technology?

I've been interested in this technology for quite some time, about five years. The usage model is extremely attractive. If you notice the past three or four years, wireless has become a way of life from a consumer perspective. And the capability to transmit high definition is something that the consumer electronics market is driving right now.

How difficult is it to transmit high definition video wirelessly?

It's a tough problem to solve. The data rate to transfer video is very large, particularly in high definition. Also, when you look at video, the resolution is so high with flat panel and plasma that you will see the simplest imperfect pixel. That's why it's tough. There's no tolerance (for a bad picture). So the quality has to be extremely high. You can't tolerate any dropped frames. Wireless is just a more difficult medium to deal with. When you look at wired, wired is a very controlled medium. Wireless you have the environment to deal with.

Look at the cell phone. It's very irritating when you drop a call. Well, just imagine you're watching TV and you see a line across it. It's not going to go well. That's what makes it difficult.

What type of devices would use the chips?

Our initial target is devices in the same room, then later room to room. I personally think that in technology, trying to solve all the problems at once is not a very feasible approach. It's a step-by-step approach to problem solving that you need because the problem is very complex. I think that is part of the reason why wireless in video hasn't gotten much traction.

How will you approach the market?

The interesting thing about the consumer electronics market is there is a certain level of cost tolerance. No matter how good your technology is, if you don't hit a certain level of costs, your technology will not be adopted.

We know you've got to have the right technology at the right cost, otherwise it's not going to work. Look at the costs of flat panels today. You can buy a 50-inch flat panel for \$1,900. And most of that cost is in the panel. That doesn't leave much room for the electronics. Those are the market dynamics.

One of our differentiations is just that. We provide the architecture to give the optimum performance at the optimum cost.

When will the chips hit the market?

We haven't disclosed too much about this one yet. But our target is to have the product ready in 2007.

When you look at the wireless environment, for me it's the most exciting thing to do. Just imagine you have a digital camcorder. You shoot the video. You come home. Instead of fiddling with the camera and wire. You just turn the camera to the display. Video over wireless is an emerging market. I think consumers are demanding the technology.

– MIKE FREEMAN