

On October 31, 2007 ticktockstock.com had the opportunity to spend some time with Brad Ketch, President and CEO of Rim Semiconductor.

Welcome Brad! It's been over a year since your last ticktockstock.com interview. Tell us what has been happening with Rim Semiconductor?

George, I'm really glad to have the chance to talk to your readers. The crew here at Rim Semi is working very hard to execute on the tremendous opportunity before us.

As you know, this morning we made an exciting new announcement. Rim Semi and the Internet Protocol Subscriber Line – Special Interest Group (IPSL-SIG) will be holding its second meeting in Milan, Italy during the 1st week of December 2007. I believe this meeting will be real milestone for Rim Semi.

All along, the goal of the SIG has been to get a couple of meetings completed during 2007. And we did it! It wasn't without a lot of hard work. In order to be effective, IPSL-SIG meetings require a great deal of advance planning. Many companies had to be lined up, agendas had to be prepared and of course, the draft of the IPSL 1.0 protocol had to be completed. This high degree of preparation is required so the formal meeting could be as productive as possible.

One of the things I'm most excited about is our host, who is new to ticktock readers. I'd like to introduce to you Pirelli Broadband Solutions. Please visit their website at: <http://www.pirellibroadband.com/web/default.page>

Pirelli Broadband is a world leader in equipment manufacturing. They are headquartered in Milan, Italy and closely tied with Telecom Italia. Pirelli Broadband is very innovative and forward leaning. Because of their very high quality innovative engineering staff, Pirelli is a natural fit for the IPSL family.

Pirelli Broadband will not be the only new attendee at the SIG meeting. We are expecting many new European players, all of whom will be potential customers of Rim Semiconductor. Additionally, I expect new Asian partners to attend.

Though the date is yet to be determined, we expect the spring 2008 IPSL-SIG meeting to be held in Shanghai, China. Our new Asian partners will be the focus of that meeting.

As you can see, this time of building the IPSL-SIG and adding key industry partners is a real watershed moment for Rim Semiconductor. Each new member who joins the SIG further validates to the world the reach of the IPSL solution.

These new players in the Rim Semi/IPSL family will have the opportunity get to know each other, work together and in some cases, build a standard together. The IPSL-SIG will bring the draft version of the standard, which is now ready for distribution. At the Milan meeting, technical committees will be established to debate the draft standard. This is typical of the good work standards bodies perform.

Brad, why have an IPSL-SIG? Why can't Rim Semi just make a chip and sell it?

We could, but our market size and opportunity would be limited to a small fraction of its present potential. Generally, large telcos require standards-based equipment. Smaller telcos generally don't care. Without acceptance by standards bodies, the market for IPSL would be limited to those smaller companies. By developing a worldwide standard we literally open up the IPSL solution to the world!

What are telecommunications standards?

Basically, telecommunications standards are the underlying laws which govern how telephone networks work together. Without them, global telecommunications would be impossible. If readers want more information, the Communications Standards Review website is a good start. <http://www.csrstds.com/stdsover.html>

We want to be recognized by the major standards bodies. The road to standardization by one of these organizations however, could take years. We've got a head start by developing the IPSL-SIG. We think that we are creating enough momentum that IPSL will be attractive to one or more of the major standards bodies.

Generally, the road to standardization is a bumpy one. It is highly political and often requires much technological compromise. Because many DSL technologies were birthed through this process, performance has suffered. Because the challenges facing video over broadband are so large, a technology birthed in committee would likely suffer the fate of previous DSL technologies and deliver less performance than is possible.

In contrast, IPSL is a completely new technology with innovations that are wholly different from yesterday's old standards-based technology. Industry partners will be allowed to contribute to parts of the IPSL protocol. By adding their proprietary intellectual property.

The IPSL-SIG was birthed out of Rim Semiconductor. Though it is our baby, it is a wholly independent California corporation. A SIG is like a consortium or forum. It has its own executive director, Bill Narin, who is paid by the SIG. Presently, the SIG has about 12 participants. Thus far, only two have paid to become voting members. *We are expecting more partners to join as voting members at the Milan meeting.* Voting members have directional authority for future IPSL modifications. The cost to attain this level of authority is significant.

Brad, will the size of the SIG influence its acceptance into a major standards body?

Absolutely. The goal of the SIG is to work itself out of a job. Because of the size and scope of the industry leaders currently involved in the SIG, *widespread adoption of IPSL technology could require the support of as few as only three or four voting members.*

IPSL-SIG growth equates to adding new industry partners. We will likely need to announce several larger equipment makers that are fabricating products based on IPSL. And we'll need to have the IPSL 1.0 formally adopted. By that time we'll have critical mass surrounding IPSL for both widespread adoption and large standards body incorporation.

And thus we will have achieved our goal. The end result of creating the IPSL-SIG is faster adoption by the large telcos, driving revenue growth for Rim Semi for years to come.

Which standards bodies are likely candidates?

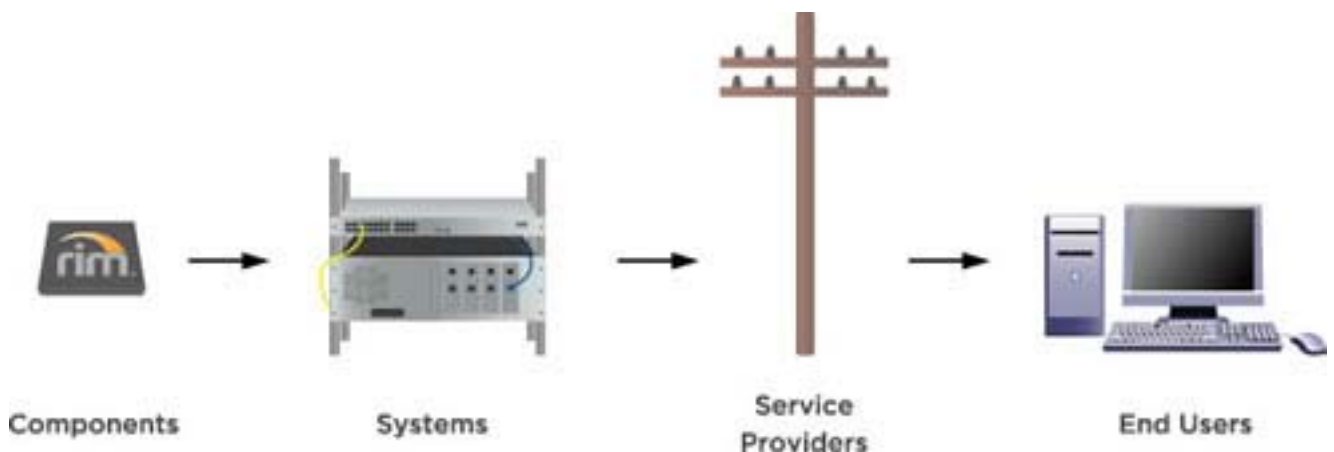
The Metro Ethernet forum, the ITU-T or the DSL Forum would be likely candidates. Because of our growth, some of these groups have already expressed interest in having the IPSL-SIG join their teams.

How often will the IPSL-SIG meet?

We will have had two meetings by the close of our inaugural year. We are planning 3 meetings for 2008, and expect 3-4 meeting each year after that.

Testing, trials, and MOUs: How do they differ?

Each of these arrangements is a type of contract. The type of contract depends on the industry relationship. While we market to telcos, we market and sell to original equipment manufacturers (OEMs). Telcos do not buy chipsets. The OEMs do. Examples of equipment makers include: Cisco, Alcatel-Lucent etc. Extreme Copper is an example of a smaller equipment maker, which by the way has the potential for rapid growth. Equipment makers sell directly to the telcos. The equipment maker (systems)* buys directly from us and sells to the telcos (Service Providers). The diagram below is a simplified version of how our chipsets flow. If you reverse the arrows, you'll see how the revenue flows.



In order to simplify the process, we market directly to telcos. Before making purchasing commitments, equipment makers like to know telcos are serious about launching a service based on IPSL. By marketing to telcos, we smooth the way for equipment makers to purchase our chipsets.

Generally, IPSL trial agreements are memorialized in the form of a Memorandum of Understanding (MOU). The MOU spells out the business relationship, pricing and the order process. In general a MOU describes the mutual responsibilities of each company. A MOU indicates that if Rim Semi is successful in meeting the needs of the equipment maker, they will buy. http://en.wikipedia.org/wiki/Memorandum_of_understanding

We have entered into many different MOUs, some with the largest telecom equipment companies in the world. Their names cannot yet be disclosed.

Since the telcos don't actually buy anything from us, our contracts with them are not called MOUs. We call them Service Provider Agreements. The contract language is similar. The telco is obligated to place the IPSL technology through a significant verification process. Once it performs as advertised, the telco is *obligated* to notify the equipment maker(s) of their intent to purchase telecom equipment based on IPSL.

We have Service Provider Agreements with some of the world's largest telcos. These names also have yet to be announced. We've only publicized agreements with some of the smaller telcos. Just as our partners have responsibilities as part of the contract, so does Rim Semiconductor. Because the telecom world is a highly competitive, we have pledged not to disclose technology trial agreements with some of our larger partners. Abiding by the non-disclosure agreements is part of our responsibility to the contracts. Once formal purchase orders are received, we might be able to make these industry partnerships public.

Does the tech really work? This is the question some investors still ask. How can you answer that question?

George, I'm not clear as to why this is still a question for some. Publicly we have said so in many ways, that without question, the tech works! The telecom industry considers Telcordia the most respected telecom equipment validation organization in the world. It is their mission to review new technology, perform real-world trials and report these findings to the industry. Their results are respected worldwide. Telcordia has said the tech works! In fact, as we have already announced, we continue to work with Telcordia on future IPSL applications.

I think time frames for completing network trials is the challenge to investors. Telcos take purchase decisions very seriously. Each telco is different. Their network and service requirements are different. Their customer demographics are different. When evaluating a new tech, especially one that is completely new to the industry, telcos need to know everything about its capabilities. They want to know its pluses and minuses. They want

to know how it performs under various conditions. They want to know for which customers it is recommended and for which customers it is not. The larger the network, the more involved the trial process becomes.

That's not say this (trial process) is never ending. Again, we're very happy with how far we've come. Introducing new technology into a telco network is not too dissimilar to introducing a new drug to the market. The technology is looked at from every possible angle for a long time before final purchase orders are prepared.

Brad, regarding telco trials and developing the IPSL 1.0 standard: Is it somewhat like creating a one size fits all suit of clothing?

In some ways yes! Basic IPSL protocol works under most conditions. It is natural that a telco would want to optimize any new tech deployment for the specifics of their network. Much of the time-consuming portion of the trial process involves tweaking the tech for maximum performance within individual telco networks. However, the fine-tuning process cannot go on forever. Once the IPSL 1.0 protocol is ratified at the December 2007 Milan IPSL-SIG meeting, I expect there will not be much future opportunity for major changes. Even now we are beginning to kick-off the tape-out process in prep of producing the ASSP.

Brad, what is the tape-out process?

Basically, it is the completion of final chip performance modifications before it is sent to TSMC for mass production. If ticktock readers would like to learn more, here is a link to additional information. <http://www.answers.com/topic/tape-out?cat=technology>

Again, the good news is that every telco and equipment maker involved in testing is very delighted with IPSL performance and is anxious for us to speed the ASSP completion process.

On October 18-19, you were a featured speaker at the Center for Telecom Management (CTM) Roundtable, in Menlo Park, California. There, you rubbed elbows with industry leaders in worldwide communications. Tell us what it was like?

The environment was really great. The conference is a safe haven where executives can come, let their hair down and ask questions which they otherwise couldn't get answered. There was no press. There were no comments made for the record. In that environment I could be sitting across the table from a telecom executive from Asia. She, for example, might have a wireless game site for cell phones. I could ask her direct questions about costs, economics and revenues without concern for public scrutiny.

As result of this freedom, I was asked many, many questions about broadband over copper. I mean a lot of questions. I believe the interest was generated because they exactly understood my message. That message is the same message Mark Cuban has

been preaching.

Here is a recent quote from Mark Cuban. "The internet is dead and boring," Cuban says in an interview with Portfolio.com: "We have reached the point of diminishing returns with today's internet. The speed of broadband to your home won't increase much more in the next five years than it has in the last five years. That is not enough to work as a platform for new levels of applications that will require much, much higher levels of bandwidth." <http://www.portfolio.com/views/columns/the-world-according-to/2007/08/23/Mark-Cuban>

In other words, without a major overhaul of the copper pipe going into the home, there is no chance for a significant increase in broadband speeds to the home!

While at the CTM roundtable, several industry leaders corroborated my assertions. I'll share with you a couple of comments by these leaders, but due to confidentiality constraints, I can't name the authors.

I was speaking with one of the senior executives of a mega web company. Every one of your readers would know this company. After completing my talk, he leaned over to me and said, "That was a terrifyingly good talk." Why would he say that? Because he knew his labs had amazing new web 3.0 applications that are sitting there, not being launched. Why? Because with current technology the broadband pipe to the home can't expand to accommodate the demand!

Here is another example: One large telco showed us the layout of a neighborhood that was fed by a remote terminal with a DSLAM that was serving DSL to homes in the neighborhood. He said: "If 5% of those homes are watching YouTube at any one time, this DSLAM is shut down due to over- capacity." A 5-minute YouTube clip utilizes more bandwidth than 6 months of email! What percent of customers do you think are watching YouTube right now? I don't know but I would guess it is approaching 5%.

Here is another example: At the roundtable, one of the fiber-to-the home equipment makers said, "I kind of doubt Brad's numbers are quite as real as he has stated! Then a senior executive from probably the second or third largest telco in the world said, "everything he just said is the God's honest truth, and he's absolutely correct that our number #1 problem by a factor of 10 or 20 is copper! Fiber is not going to happen fast enough. YouTube is bringing us to our knees."

We read about FiOS (fiber) from Verizon. We read about DSL. The truth is the average person gets bandwidth below 1 megabyte to the home. Many of your readers will view tick tock stock.com on dial-up. As result, the web 3.0 media rich applications are not getting funded. So my message to everyone was, "if you are waiting for broadband to magically open up, I've got news for you, it not going to happen." Fiber cannot possibly be trenched fast enough. Wireless is not reliable enough.

My final message to the CTM was: *"retrofitting the network for video will not just*

require an upgrade. Retrofitting the network for video will require a total overhaul. Extreme innovation must be adopted by telcos. Because of current and projected consumer broadband demand, simply tweaking the existing network is not an option."

Brad, where is the money being spent in wireline broadband?

As part of our marketing to telcos we learn the business drivers behind the rollout of broadband video. The main costs issues include:

1. The cost to upgrade the copper network.
2. The cost/complexity of the back office software systems, the middleware, the stuff that runs IPTV.
3. The cost to acquire and manage content. For example, they might have to negotiate with Cartoon Network to have their shows added to the program offering.

The cost to upgrade the copper network represents 90%of the concern.

Worldwide, last year there were 5-10 times more new copper loops deployed than the number of new fiber and wireless loops combined.

This doesn't count the existing embedded base of 1.4 billion worldwide copper loops. So, the take home message is; *it's all about copper!*

Are you saying that outside of copper, there is no other technology being seriously considered for major deployment?

Correct, with the exception of Verizon (fiber). Their new numbers announced yesterday are impressive and growing. On a worldwide basis however, they are statistically insignificant. New fiber deployment represents about 2% of the new broadband lines worldwide. The remaining 98% will require upgrade to IPDSL-based technology.

Then performing this overhaul cannot be accomplished economically without leveraging the copper infrastructure?

It is literally implausible. Only by completely overhauling the old network, can the telcos expand the pipes big enough to meet future broadband demand.

A recent quarterly report mentioned a \$500,000 engineering expense. What is its purpose?

Every month we have recurring expenses for our engineering staff. This expense will continue to grow as we add new engineering talent. We are now turning the corner and beginning the tape-out process for ASSP completion. eSilicon will help us tremendously with that process. As your readers know, for their role in ASSP completion, eSilicon has received restricted stock in Rim Semiconductor. The restricted stock will offset some of

the costs for completing the ASSP. The remaining costs will be paid in cash. We will give them \$400-500 thousand dollars for their work. This is above and beyond our normal monthly burn rate of expense. This is what we refer to when we say that we'll have \$500,000 engineering costs.

Are you hiring more engineers specifically to help with field trials?

We don't routinely hire engineers specifically for customer support. We have only one engineer with the title of Field Engineer. We expect that most of the engineers in the company will provide customer support. Many companies follow this model. At Amazon.com for example, Jeff Bezos requires every employee, no matter the rank, to work one day a year in the call center. He follows this rule himself. By having Rim Semi engineers regularly interface with customers, we insure that future releases of IPSL based technology will have our customer's best interest in mind.

Hey, George I've run out of time. I've really enjoyed our time together. Let's pencil in another interview some time after the first of the year.

I look forward to another talk Brad then.