

**George Nolen, President/CEO Siemens ICN**  
**Panelist Remarks: “Advancing to the New Network: Winning Solutions”**  
**Supercomm Plenary Panel: Weds, 6/5, 5:15-6:45p**

**Draft Speech, v2 5/22/02**

**Advancing to the New Network: Maximizing Return on Assets**

**TRT: 08:00**

**[SLIDE 1: Nolen Title Slide]**

Good afternoon.

*[Optional intro icebreaker]*

As I was getting ready to board my flight here Tuesday, I overheard a young man nearby yelling at no one in particular.

Of course, just a few years ago before everyone had cell phones, you’d assume such a person was crazy and talking to one of their other personalities ...

But today you assume they’ve got an ear bud and mike in place, and, in this case, I thought the fellow was talking to his girlfriend, mother, or – who knows? – maybe his parole officer.

Then he turned around and I noticed he had no ear bud ... he WAS crazy!

So the moral of the story is this: If you’re crazy these days, telecommunications can make a great cover ...

And, conversely, if you’re in telecom these days, you might feel like you’re going crazy!

Yes, the telecom industry these days may feel a bit chaotic, even insane. Many of the reasons for this have been discussed around these halls here at Supercomm for the past few days.

But when you boil things down, there are a few simple root causes of the economic challenges we've been facing.

### **[SLIDE 2: Unprecedented Increase in Volume/Volatility]**

First, telecom networks face continuing and unprecedented growth in traffic volumes of up to 80-90% per year ...

[SIDE NOTE: That's more than 10 times historical norms and 80-90% growth on today's volume is more total traffic growth than at the peak of the dot-com frenzy!]

Second, since 1995, there's been a huge increase in traffic volatility – of up to 300% or more. Traffic volatility, by the way, is the frequency with which network traffic patterns change over time.

So what's the issue? Well, first of all, traditional network technologies (e.g., TDM, circuit-switching) were designed for slow-growing, incremental traffic that's relatively stable and predictable. They were NOT designed for and simply cannot economically cope with the new environment ...

### **[SLIDE 3: Revenue Are Not Keeping Up]**

... And while the compound effect of increased volume and volatility is pressuring both capex and opex, revenues have simply not kept pace. “Network Productivity” – or simply, the dollars of revenue per dollars of cost – is declining. As a result, economic value is being destroyed ... and we’ve all seen the consequences of that!

**[SLIDE 4: Revenues Decoupled ... ]**

While voice revenues have long fueled carriers’ business models, the Internet has been rapidly changing the game. As an example, McKinsey estimates that by 2004, the revenue per Internet megabyte will drop almost 90% from 4 cents to just a half cent! That’s what happens when traffic grows so fast without appropriate mechanisms to charge for it.

**[CLICK TO BUILD SLIDE 4]**

Take email, for example. Email has been and remains a “killer app” by all measures – in terms of adoption rates, usage rates, and so forth.

But here’s the dilemma: A typical email today is radically different than it was just a few years ago. An increasing number of emails are carrying more and more bandwidth-intensive attachments.

Consider the fact, for example, that well over 20 million digital cameras have been sold in the U.S. (units) The vast majority are purchased with the intent of sending digital pictures via the Internet. And most people tend to send multiple pictures to multiple addresses!

As a result, bandwidth (and costs) per email have been rising, while associated revenues have not!

Web surfing is another example of a “killer app” that – with increasingly rich and streaming graphics, audio, and video media – has dramatically increased in its bandwidth intensity ... but inadequate growth in associated costs.

These examples illustrate a basic problem: In the past few years, revenues have been disassociated from their related cost drivers.

[GEORGE NOTE: We are not advocating a strictly variable, usage-based pricing paradigm but we do advocate that revenues and costs be appropriately related and managed to enable a more sensible economic model.]

So what are carriers to do?

Obviously they need to break this vicious cycle and restore a sound economic foundation.

Like the subject of this panel: they need to advance to the new network – the Next Generation Network ...

... Networks that have the scalability, flexibility, and intelligence required to thrive in the new environment.

... Networks that reverse the decline in Network Productivity.

... Networks that can enable carriers to transform the challenges of our new environment to new business opportunities.

**[SLIDE 5 : Benefits of advancing to the new network]**

So how do we describe the Next Generation Network? While people often talk about network convergence, we see it as a “revenue-converging” network that integrates many different applications, services, and data types (including, for example, voice and video) to maximize Network Productivity – again, the dollars of revenue per dollars of cost.

It’s a network with far more powerful, flexible, intelligent elements that can reduce the number of network elements needed by up to 80%, compared to legacy alternatives.

And because networks would be far less complex and have much more intelligence and automation, operating expenses on a capacity-equivalent basis could be cut by as much as 40%.

Furthermore, given their increased flexibility and service management capabilities, new networks could boost revenues by 10% or more per user, while increasing productive (or effective revenue-generating) capacity by up to 15%.

And, by the way, did I mention that the Next Generation Network could also enable new services to be developed and deployed in as little as 1/10<sup>th</sup> the time?

It would also be a flexible, agile network with a full range of management options from traditional models to ones with fully-adaptive, self-managed capabilities.

In addition, it would provide flexible and scalable bandwidth via a number of features:

- Intelligent route planning and load balancing that make greater use of edge and access networks, raising overall network productivity.
- Status-dependent, tiered quality of service that prioritizes traffic, like the commuter lane out on I-75 running through Atlanta.
- Profitable access points, where carriers and third parties can attract users, deliver content and services, and overall cultivate new revenues from the network.
- And it would have flexible scaling that puts capacity where it's needed in the network.

What's more the new network will enable an expanded arsenal of new revenue-generating service options. It will also enable a "re-connection" of revenues with their associated costs in a more sensible way.

Let's take a look at a couple simple examples.

**[SLIDE 6 : Example 1 - "Click-Pic"]**

This is a fairly simple example of how we might be able to leverage already proven “killer apps” to stimulate new revenues. In this case, having received an email with photo attachments, I click to view the photos.

**[SLIDE 7 : Example 1 - “Click-Pic” Second Slide]**

I then have the option of clicking to make a phone call to the person who sent it or if they choose, call the person in the photo itself.

**[SLIDE 8: Turbo Browser]**

Here’s another example: We call this our “turbo browser” ... it depicts a prototype we’re working on and shows how the Next Generation Network can help stimulate new revenues, while at the same time, connecting revenues with the associated cost drivers.

Say you’re browsing Volvo’s website, with fairly modest bandwidth requirements, but then come across a clip that is best viewed at 10 megabits/sec or so ... you just click on your browser’s turbo button and hold on to your hat.

So where’s that burst of bandwidth come from? From an intelligent edge router ... certainly not from some core element. And who pays for the burst? If it’s an ad, the advertiser does; if not, the end-user.

This is just one example of both flexible, scalable bandwidth provisioning AND a new source of revenue. If you haven’t yet been to our booth and seen our softswitched call center demo, I invite you to do so to see yet another example, but this one showing the converged “triple-play” of voice, data, and video.

[START TO CLOSE]

**[SLIDE 9: We're all in this together]**

As important as new technologies and architectures are and for all the cool stuff you can see out on the show floor, in the end, carriers need pragmatic solutions to real-world business challenges.

Of course, these include meeting the many operational demands of integrating a solution into the network management system and the OSS ... but going further, it means working with the carriers' lines-of-business to conceive, develop, package, price, and promote new services.

In advancing to the new network, vendors must help carriers navigate the complex maze of technical, operational, and regulatory issues to ensure a safe, minimally disruptive and profitable journey ... ultimately needed to benefit end-users and shareholders alike.

*OPTIONAL: This is where Siemens' global knowledge can come to bear. For example, regulators required British Telecom Wholesale to offer flat rate Internet Call Origination service to other operators. BT knew an upgrade to their existing network would only be a temporary solution, so they chose Siemens to build a new discrete signaling network that separates Internet traffic from the signaling traffic, which is then aggregated and managed separately.*

It sometimes seems like many companies are waiting for an economic rebound, but I believe that true industry leaders must step up to the plate to lead the way to a new era of innovation, growth and prosperity.

I challenge my colleagues in the vendor community to look beyond the technology, even beyond the new network, for solutions to the business challenges facing carriers today.

Carriers need us to work with them and interoperate with each other across their ENTIRE supply chain, not just within their network ... to come up with new, lower-cost means of provisioning and operating networks of the future, while working with their business lines to help them develop, market, and sell new services.

Together we can help them restore their profitability and balance sheets, while boosting their market caps. If there's anything that we've learned from the telecom downturn, it's that we're all in it together, and I suggest only by working together can we turn this industry around.

After all, new solutions – not just for carriers' networks but also for their business models – are the key, first, to restoring the long-term health of our industry; and, second – and most importantly – to sustaining economic growth that will benefit everyone in this country.

Thank you.