



THE SKY IS FALLING...

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At NetEvents in Portugal, Nokia Siemens Networks Head of IP transport Bernd Schumacher told his audience that most telecom operators agree that 100X increase in internet usage is expected by 2015. Operators expect 5 billion users and are scrambling to cut operational costs.

Below you can see a chart detailing the explosion of consumer traffic. That by itself puts pressure on the current internet infrastructure, enough pressure that AT&T claims the internet could implode if no investments are made.

But you have to add to this consumer explosion both the business traffic (and their new love of video) and the latest craze of device-to-internet traffic (where razor blades tell their warehouse what truck they are taking to the store).

Schumacher says "the future has already started" and predicts most carriers will have to move to Carrier Ethernet technology to attempt to accommodate the surge. The widening financial crisis globally only serves to underline the main concern of all carriers, a concern that existed before the Wall Street crisis emerged and a concern that is now exacerbated by the crisis: Who can now afford to spend billions on infrastructure?

Monthly Consumer Internet Traffic Worldwide, by Segment, 2006-2012 (% of total and petabytes*)

	2006	2007	2008	2009	2010	2011	2012
P2P	59.6%	51.4%	44.4%	39.8%	36.6%	34.5%	33.2%
Online video via PC	11.8%	19.0%	25.3%	28.4%	29.5%	30.1%	30.6%
Online video via TV**	0.6%	2.9%	6.2%	9.8%	13.1%	15.7%	17.4%
Web, e-mail and data	22.3%	20.9%	18.8%	17.3%	16.4%	15.6%	15.2%
Gaming	4.0%	3.9%	3.5%	3.3%	3.0%	2.7%	2.4%
Video communications	0.7%	0.7%	0.7%	0.6%	0.6%	0.7%	0.8%
VoIP	1.0%	1.1%	1.1%	0.9%	0.8%	0.7%	0.6%
Total (petabytes)	2,280	3,397	5,315	7,735	10,884	14,950	20,331

Note: *1 petabyte equals 1,000 terabytes; **includes video delivered via Internet to a TV screen, by way of an Internet-enabled set-top box or equivalent device

Source: Cisco Systems, "Cisco Visual Networking Index - Forecast and Methodology, 2007-2012," June 16, 2008; eMarketer calculations, August 2008

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Why does retail need to know about this? Two very important facts emerge from Schumacher's presentation: first, keep repeating this word to yourself..femtocell, femtocell, femtocell...It's an odd name for the consumer product that may bail mobile operators out of their crisis.

A **femtocell** is a small cellular base station, typically designed for use in residential or small business environments. It connects to the service provider's network via broadband (such as DSL or cable); current designs typically support 2 to 5 mobile phones in a residential setting. A femtocell allows service providers to extend service coverage indoors, especially where access would otherwise be limited or unavailable.

Airvana, a femtocell producer, says they cannot build femtocells fast enough to keep up with demand. You see, for a mobile operator, femtocell spells benefits from the improved capacity and coverage and a reduction in both capital expenditure and operating expense. Mobile operators will grow desperate to get these into homes because they alleviate the pressure of adding costly infrastructure. In fact, they will grow so desperate they will embrace anybody with a plan of how to get them into the hands of the public. And that's where retail comes in...

Schumacher's speech points out that it may pay operators to give femtocells away if they can't penetrate fast enough. But why give them away when retail can work with mobile operators on

subsidized sales, value-for-money bundles and other traditional retail offers?

Of course, before we can sell any of these, someone has to change the name “femtocell” to some term the public can embrace. Companies like Thomson are planning to rebuild DSL routers with femtocell embedded inside: so maybe Next Gen Routers will end up as an expression. There’s consumer marketing required here that far exceeds the operators’ native abilities.

The next point that arises is a little disturbing. The 100X-fold increase brings out the worst in telecom operators, it brings out recidivism (by definition, a return or relapse to a type of behavior, and the dictionary actually suggests “such as drug taking”.) And the drug of choice for operators is billing by usage. Customers of Comcast USA now have an invisible barrier on their monthly data usage: 250GB per month, per account.

Users over the Comcast limit get a phone call warning. Go over a second time and Comcast suspends your service for a year. That really hurts customers streaming HD video or using online backup services. And Comcast will not provide tools to help users monitor usage.

Cable & telecom instinct (even in Europe) is not to ramp up infrastructure for the coming video explosion but instead use lack of infrastructure as an excuse. They want desperately to get back to their high margin pay-as-you-use model that defined the wired phone era.

You are warned.