



The Summit: You Have to Be There!

By Steven S. Ross ■ *Editor-in-Chief*

Journalists live for the “Aha! moment,” the excitement of seeing the facts fall into place, revealing a new pattern. In a fast-moving field like Fiber-to-the-Home, such moments are common. Despite the deadline pressures and the detail-work of running a magazine, those “Ahas!” make the job exciting and fun.

One of the biggest “Aha! moments” of the year came in May, at our own Kill-erApp conference in Fort Wayne.

It seems that new applications in telecommuting, telemedicine, entertainment, security, energy management, education and more are crowding onto our networks – demanding not just bandwidth but also service reliability. Aha!

As most network operators realize, the nation’s networks are carrying a lot more than “Web” traffic these days. In fact, traditional Web page views now account for only about a fifth of the load. Video has been the big new source, but its growth masks other trends. YouTube, which went live only in February 2005, now accounts for about 10 percent of all Internet traffic. It is, in fact, generating more traffic than the entire Internet did in 2000. But it is still responsible for only about half of streaming video delivered to users from central servers (see this month’s First Mile for details).

Property owners, managers and network providers have been eyeing the sharp growth in peer-to-peer traffic, ascribing most of it to audio and video downloads. Many have told us that tighter digital rights management by content providers should reduce the rate of bandwidth growth and delay the inevitable need to bring fiber all the way to dwelling units.

Dream on.

Only 3 percent of all Internet traffic is non-HTTP streaming video. Interactive games account for almost as much – and game traffic has been more than

doubling annually for the past five years. There’s plenty of audio, but even Napster in its unbridled “everything is free” heyday would account for only about 4 percent of all traffic at today’s volumes.

In short, illegal traffic is not accounting for much, if any, of the traffic growth. Instead, it is the complexity and volume of two-way flows that is defining it. Complexity and volume – much of it automatically generated – is increasing fast.

The Aha! Moment

Think about it. The telemedicine people already knew they would be responsible for adding network traffic. At the Fort Wayne conference, they outlined systems – already in place – that not only store patient medical records but also send relevant information to multiple medical service providers – pharmacies, opticians, physical therapists. Dentists can learn first-hand of a patient’s allergies to antibiotics. Primary care physicians can know to check for tuberculosis or malaria when a person gets back from an overseas trip – and to forward the traveling kids’ checkups and immunization records to the local elementary school. Shut-ins can have vital signs and consumption of RFID-tagged medicines and foods monitored automatically.

What surprised them was that others could play the same theme song. Traffic planners and Homeland Security experts discussed in-car systems that keep drivers informed about looming traffic and weather problems – but that also send weather and traffic information back to aggregation points that use the data to advise other drivers. Such systems are already in use among long-haul truckers.

Educators and telepresence experts discussed ways dispersed students and workers can interact with each other and not just supervisors or teachers.

Property owners looked at technology that adjusts lighting and building energy use to external weather conditions and to inhabitants’ needs and preferences. They saw security systems that go far beyond basic video monitoring – allowing automatic data push to absent tenants’ PDAs, phones and laptops. They saw network providers at their side, thinking about how all this might affect revenue flows.

Available Now!

But perhaps most importantly, they all saw each others’ hardware, software, and network needs. And so did we.

Folks, all this stuff – and a lot more – is available now. But the networks are just being put into place. The latest upgrade to the Internet’s “operating system,” IPv6, for instance, allows essentially unlimited addresses per user – enough so that all appliances, dwelling units and even all clothing can tie into a network. Soon, you will be warned about a light bulb about to fail – or a stove left inadvertently turned on.

As bandwidth and reliability increase, services such as these are queued up, ready to march into customers’ homes along with the HDTVs that are already there. All customers, not just the wealthy. Why? Because they help cut medical, energy, and insurance costs while improving quality of life for all. Aha!

Read about some of what we saw in this month’s issue. And don’t miss our annual Broadband Summit this September 10-12 to find out how you can help make it all work. Aha! **BBP**

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