

## Eslambolchi's Top Ten

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What do you get when one of *Light Reading's Top Ten Movers and Shakers* presents at a *Light Reading* conference? Another Top Ten List, of course.

Hossein Eslambolchi, President of AT&T Global Networking Technology Services as well as CTO and CIO of [AT&T Corp.](#) (NYSE: T), unfurled his own Top Ten List in his keynote speech at yesterday's joint [Heavy Reading](#) and [Light Reading Insider](#) conference, "The Telecom Recovery: Opportunities Amid the Chaos."

Eslambolchi's vision of the future is that "IP will eat everything," and he foresees the advent of "SOIP -- Services over IP." The Internet's growth is still exploding, and, as devices with IP addresses are added to the network, the network itself will continue its [explosive growth](#), he says.

Eslambolchi had plenty of examples of the magnitude of the IP explosion, but perhaps none was as dramatic as this: As he sees it, "the rate of Internet expansion is about 1.5 times that of the universe." He sees 1 million terabytes of data extending across the Internet by 2005.

Here's Eslambolchi's complete list of prognostications:

- **10. Information mining will transform the way we do business**

In 10 years, the amount of information on global networks will double every 11 seconds. Tools that manage and mine this information will be crucial.

- **9. Home LANs will proliferate**

Pure and simple, as the home gets wired, more and more devices will be connected to the IP network.

- **8. Nex-gen distributed computing is growing**

The grid computing model is gathering steam, and networks are merging with classic computing. The big question here is, "How do we tap into that huge computing power?" Businesses will not be measured by how many people they'll have working, but by how many MIPs and how much storage they have to automate their systems.

- **7. Security is critical**

"Making the network secure is a critical factor." Today's networks need real-time virus scanning and intrusion detection tools.

- **6. Death of locality**

"In an IP network, locality does not matter." Ultimately, it's the circuit-switched network that ties us down to certain locations, but IP allows us to roam the planet and have the network track our location.

- **5. Convergence of communications and computers will become a reality**

This is about delivering on the promise of what used to be known as CTI (computer/telephony integration).

- **4. Sensor networks will be everywhere**

The global IP network will be well equipped with sensors, which can monitor everything. Security will be a key element of this. Eslambolchi says that RFID technology could be a big part of this, whereby common everyday items will carry an IP address and an RFID tag. Sensor networks can be used to pick up this ID and do something meaningful with that info.

- **3. The wireless Internet will be big -- driving mobility**

Wireless networks are exploding. 'Nuff said.

- **2. Broadband will be common**

Eslambolchi defines broadband as 40 Mbit/s, contending that, as telecommunications technology is following the [Moore's Law](#) path of expansion, 40-Mbit/s connections will be fairly common by the end of the decade.

- **1. IP will eat everything!**

Finally, the AT&T CTO says that IP, quite simply, will rule the world, and he expects about "90 to 95 percent of entire global communications" to be IP-based by the end of the decade.

Eslambolchi says the network will be consumed by the "IP Pac Man," which will consume everything as common devices get IP addresses. The advent of IPv6 means that there are enough addresses to cover everything on Earth many times over, and that just "everything on this planet will have an IP address," including household appliances and vehicles.

Eslambolchi concluded that IP network developments have only just begun, comparing today's state of communications to where "[chemical engineering was in 1948](#)." IP is becoming the single system of communication, along the lines of how DNA rules the genetic code, he sa