# The need for speed: What's next after 10G?
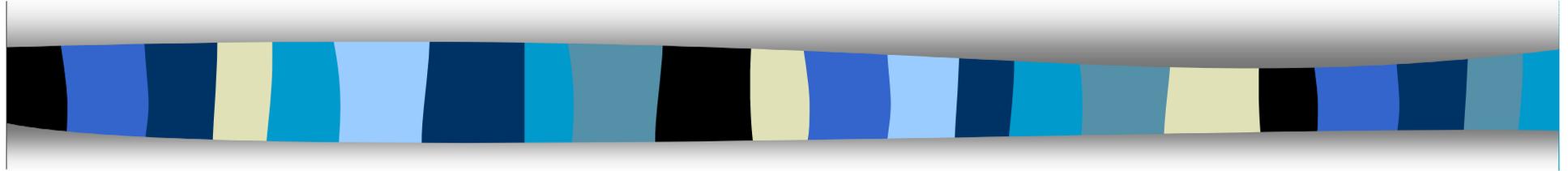
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Scary Doom Curve
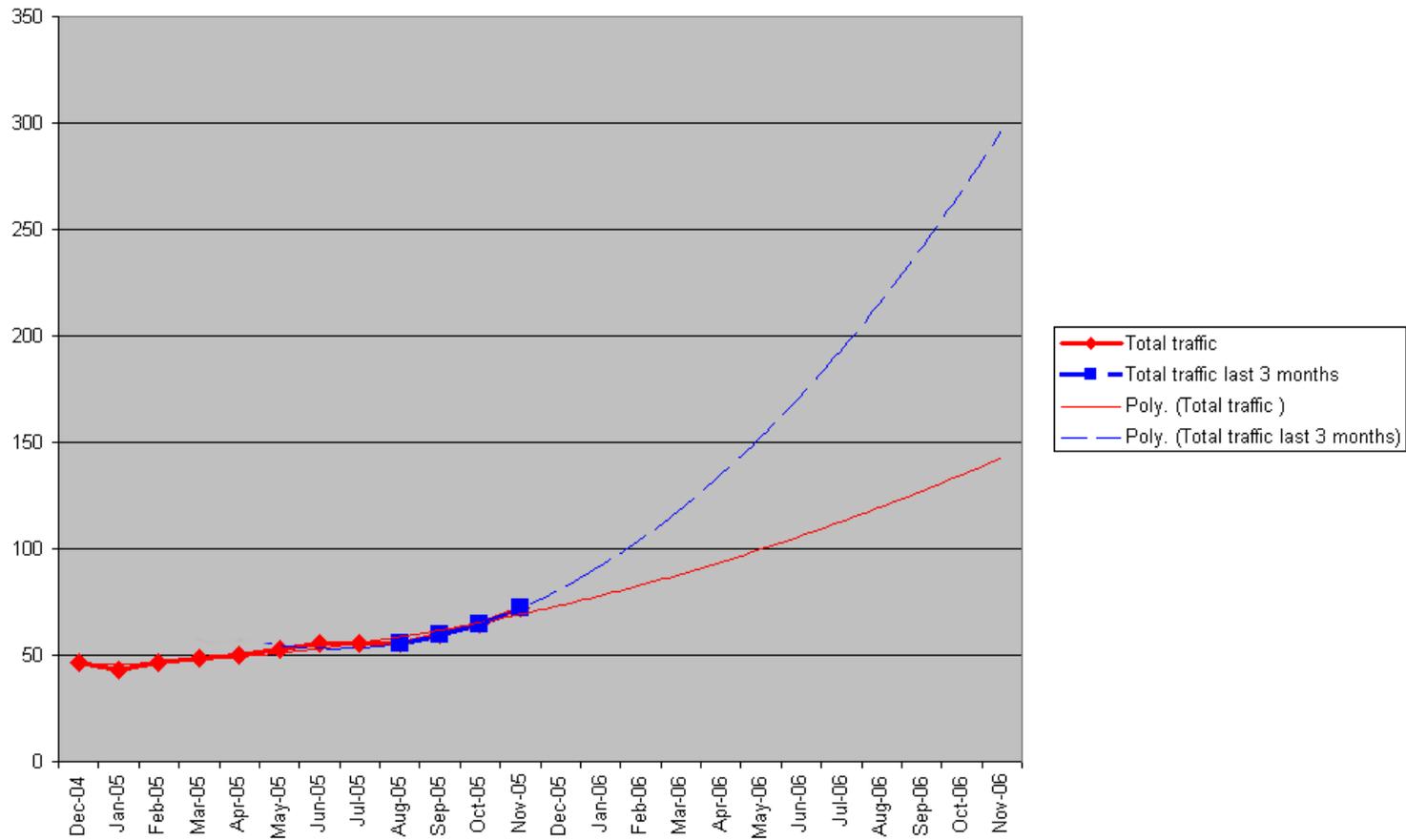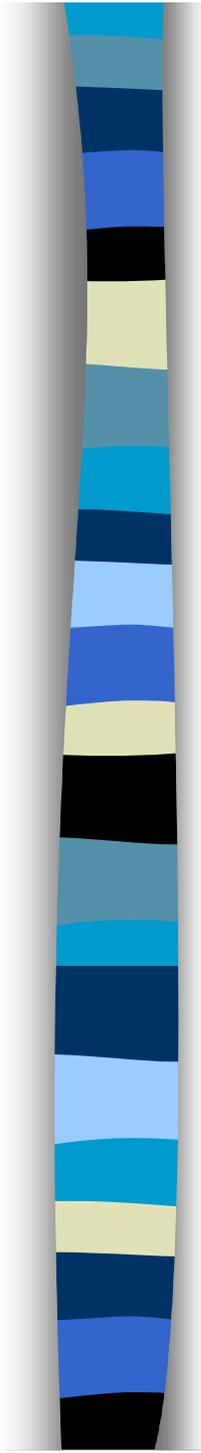
Where's it all coming from?

- Increased access speeds
  - ADSL2, WiMAX, FTTx, buzzword, buzzword…
- More applications
- Industry consolidation
  - Fewer people needing bigger pipes
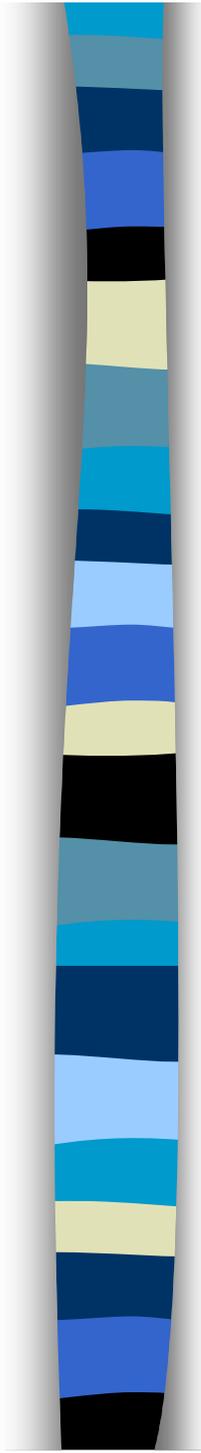
Think back to Seattle

- Chap from Force10 came and asked:
  - "What do you want, 40G or 100G?"
  - The answer seemed to be 100G
- We can do 40G now:
  - Expensively @ OC768
  - Cheaply @ 4x10GE
- Therefore 40GE is a chocolate kettle
  - A waste of devel time and cash
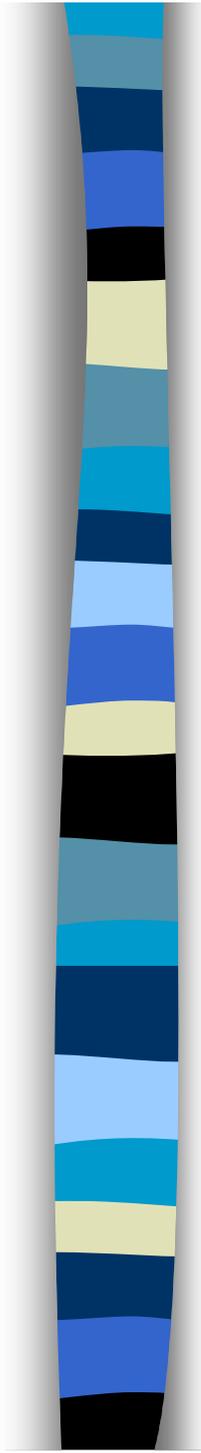
Hey, but can't we just…

- Build fat 8x10G link-agg?
- Rate limit/transfer cap users?
- Implement QoS?
- Throttle p2p apps?
- …well, yes, you could.
- But it either doesn't scale, isn't an option, or is costly and complex.
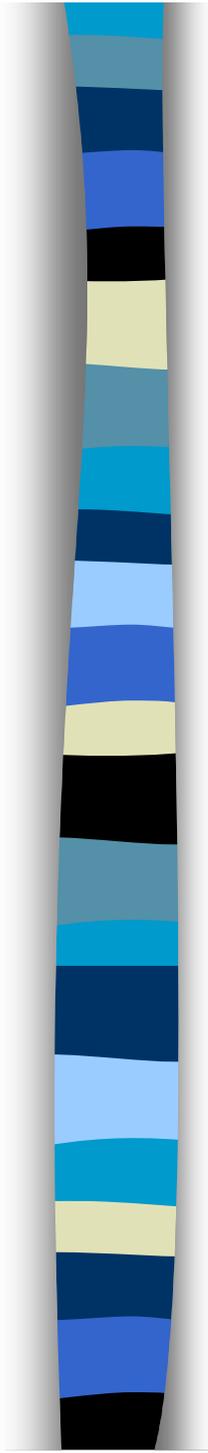
It's easier to overprovide…

"For a number of years, we seriously explored various "quality of service" schemes, including having our engineers convene a Quality of Service Working Group. Our research came to the conclusion that it was **far more cost effective to simply provide more bandwidth**. *With enough bandwidth in the network, there is no congestion and video bits do not need preferential treatment."*

- Gary Bachula, VP Internet2
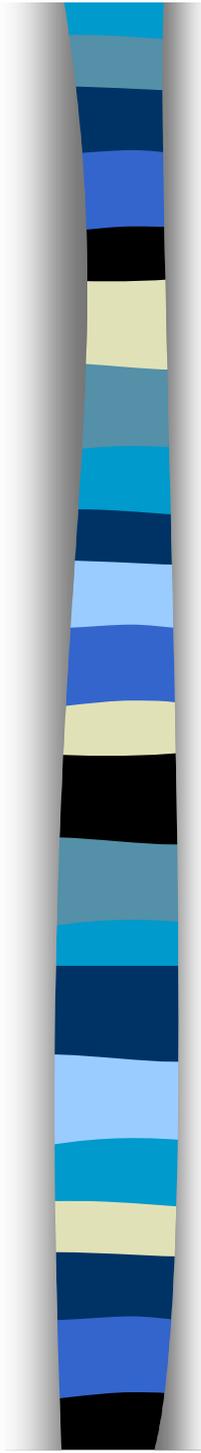
…with the right technology

- We already need something faster than 10GE (and 40GE?).
- We're already building 8x10GE link agg bundles on a single span!
- Common engineering sense says that your backbone has to be some multiple larger than your largest customer connection.
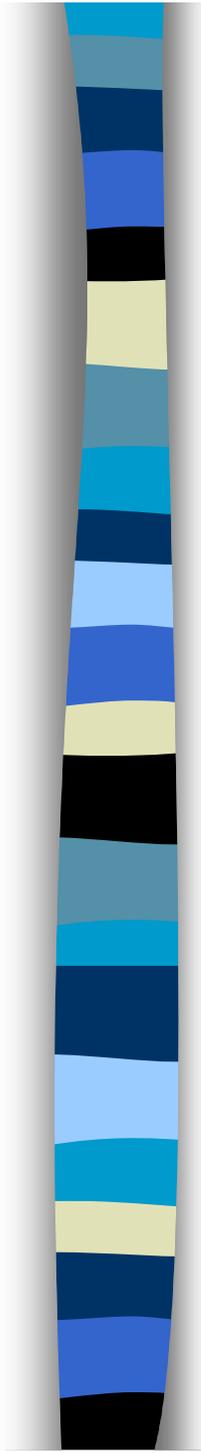
Your vendor needs you…

- Probably *…even if they don't realise it yet!*
  - Stand up Ted Seely!
- Some vendors are saying that the next Ethernet standard is 5 years out. **Too late**!
- Apparently, the IEEE 802.3 HSSG *isn't convinced* that it needs to start work on the next Ethernet standard.
- Is it only going to happen if we drive it?