



The Internet Vision

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**There is nothing like a
dream to create
the future.**

”

Victor Hugo

The Internet is...

- ... A technology
- ... A society
- ... A dream

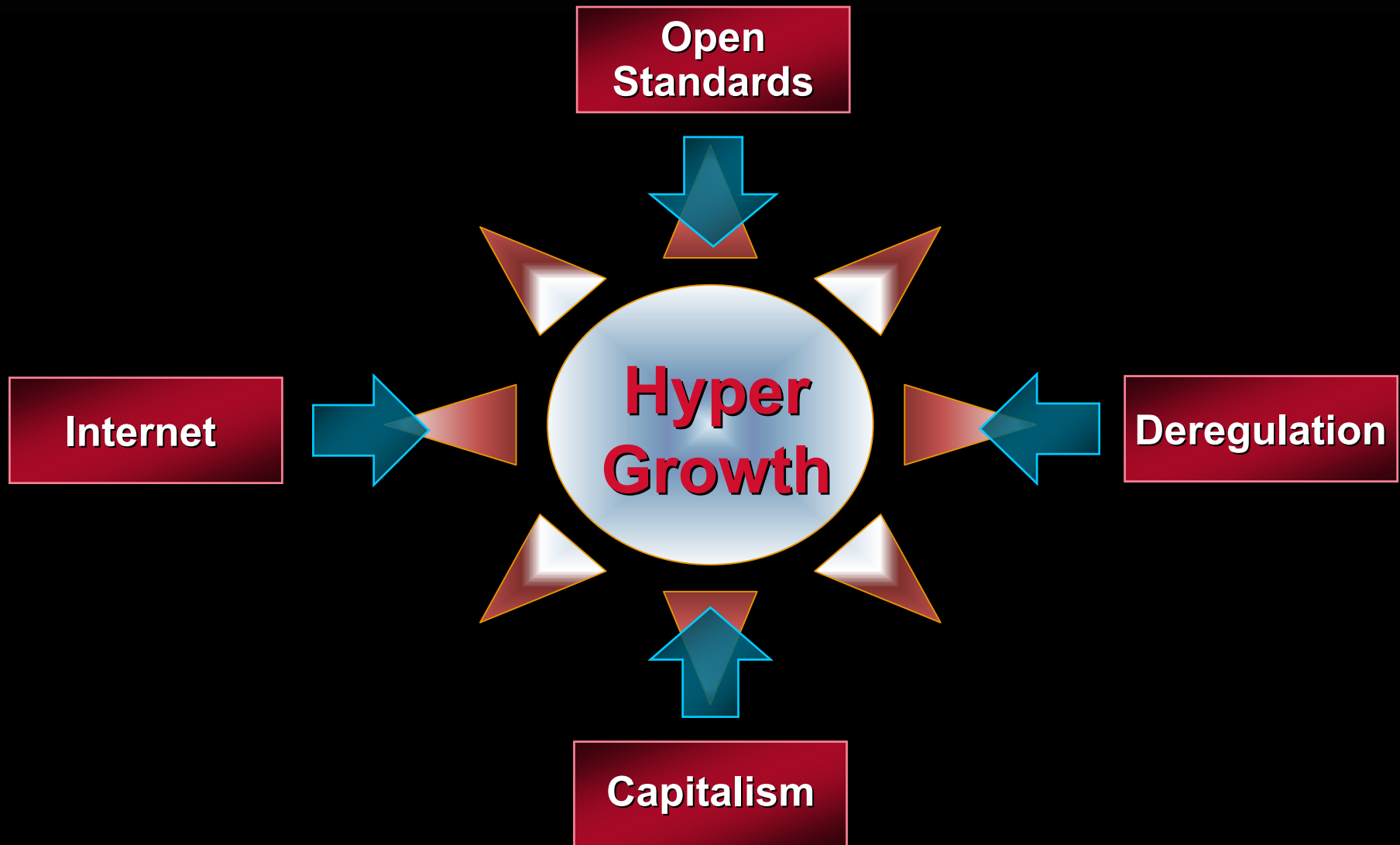
The Internet Is Changing

- **Society is adapting to the Internet**
- **Technology is continuing to change**
- **A challenge-rich environment**

Technology Predictions

- **Technology: About as challenging as predicting that a rock observed falling will hit the ground (eventually)**
- **Social consequences: Nobody knows – but we will find out!**

Drivers for Market Development



The Internet Tornado



Bandwidth Tsunami

Traffic at the Core
of the **Internet**

100%
per year

(oops)



'96 '97 '98 '99 '00 '01 '02

Optical Networking



**Revolutionize
Transmission Infrastructure**

Bandwidth

IP Optimized

Segmentation

Wireless Internet

- Internet—anytime, anywhere
- Internet to the masses
- Conquering the digital divide



3G and IP Wireless



anytime

anywhere

Capacity

IP Services

**New
Applications**

Intelligence to the Internet

Everything on the Web



Complexity and Scale



Personalization

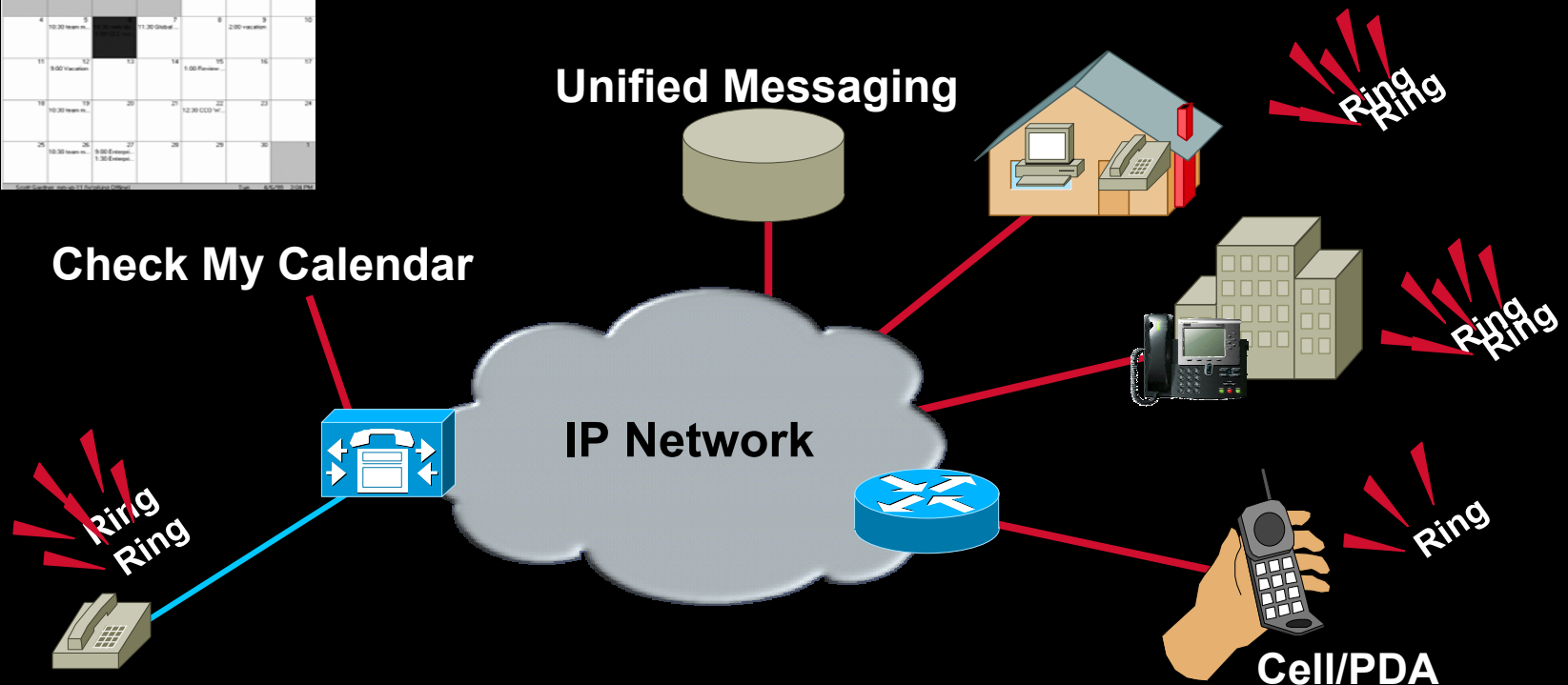


Personal Assistant

**If it's my wife and I am in a meeting,
send to unified messaging**

If it's the boss, and I'm not in a meeting, call me -- but don't call my mobile phone

If it's a customer, call me everywhere!



Network Appliances

Dedicated computer appliances
bring the necessary ease of use

Set top boxes

Downloadable Audio (MP3)

Electronic Books

Intelligent phones

Browser appliance

“5 IP devices per body”

Connected to the Internet and to each other!



The Internet Home



2000.1.2:00:00

1999.1.1:59:59

1999.1.1:59:58

1999.1.1:59:57

1999.1.1:59:56

1999.1.1:59:55

1999.1.1:59:54

Quo Vadis, Society?

Who owns your persona?

- Who says what you see?
- Who sees what you say?
- What holds you?



The Digital Divide



- **Coming to a curbside near you**

Personalized Ads..and then?

- Corporations serve you to serve themselves



- Governments control...what?

Tussles in Cyberspace

- **Sharing doesn't come free**
- **Managing common resources**
- **Management \neq Control**
- **Tussles result**

Single Sign-On

- I think I should have one smart card
- The bank thinks I should have one smart card
- The government thinks I should have one smart card
- We don't agree.
- Things don't happen.



Tending The Dream

- **We have achieved our vision**
- **We have achieved much that had no part in our vision**
- **Therefore, our joy is sometimes tempered with despair, but...**
- **We have reasons to hope.**

The Role of the IETF

- **The IETF is a community that produces standards for the Internet**
- **Its mission is to do so with openness, honesty and quality**
- **As the Internet changes, IETF will change too**
- **It will remain true to its core values.**

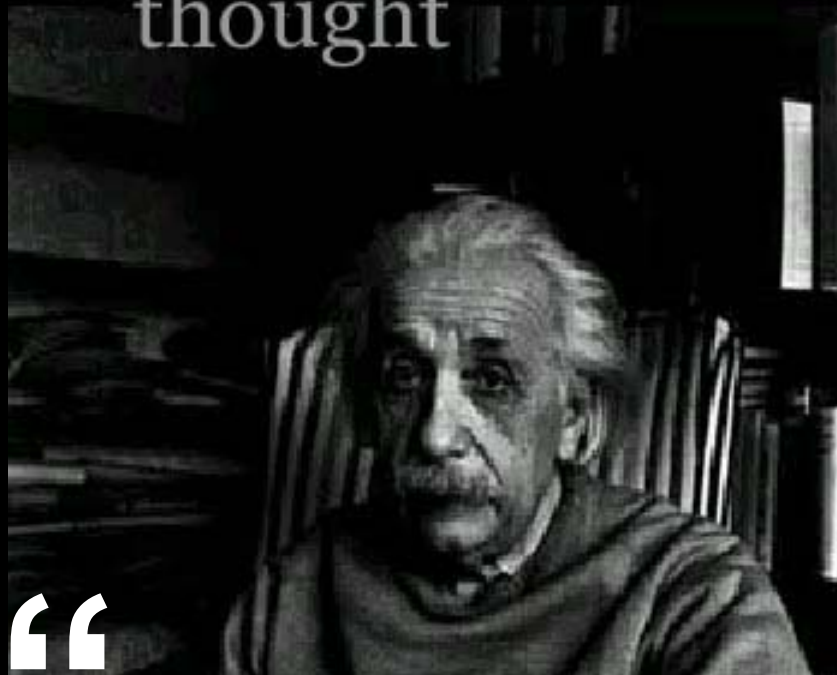
Watch Out for Omega Points

- **Today, 10 Gbit/sec is a lot**
- **100% per year: 1 Terabit/sec is a lot in 2010.....?**
- **Quantitative change turns into qualitative change**
- **People are the same.**

Ideals for the future

- **Capitalism creates wealth**
- **Markets have no conscience**
- **Networks change everything**
- **We are responsible**

PARTING thought



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**We cannot solve
problems by using the
same kind of thinking
we used when we
created them.**



”



Are You Ready?