Next - Generation Networks
How Many?

Dennis Weller
Chief Economist - Verizon
CITI
23 June 2005

“There is no reason anyone would want a computer in their home”

Ken Olson,
President, Chairman and founder of Digital Equipment Corporation, 1977

“I think there is a world market for maybe five computers”

Thomas Watson,
Chairman of IBM, 1943

“This ‘telephone’ has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.”

Western Union, internal memo, 1876

“640K (of RAM) ought to be enough for anybody.”

Bill Gates, 1981
“Stocks have reached what looks like a permanently high plateau.”

Irving Fisher, Professor of Economics, Yale University, 1929

Now more than ever, cable’s digital broadband technology is the platform for the future.

Kyle McSlarrow, President and CEO, NCTA, 2005

“Fios will change the competitive landscape in the video marketplace, both now and in the future. From day one, we’ll offer a new technology, a new business model and a new customer experience.”

Ivan Seidenberg, CEO, Verizon, 2005

“The market can sustain only one wire to the home.”


Can we predict how many? Do we need to?

- Prediction is risky
- Policy based on predictions about market structure is often wrong
- Need to respect what we see
  - Investment in multiple platforms
  - Richness and diversity of markets
- We may need to wait to see how this turns out
- We may need to clean up afterward

Can We All Be Right?

- “Now more than ever, cable’s digital broadband technology is the platform for the future.”
  - Kyle McSlarrow, President and CEO, NCTA, 2005
- “Fios will change the competitive landscape in the video marketplace, both now and in the future. From day one, we’ll offer a new technology, a new business model and a new customer experience.”
  - Ivan Seidenberg, CEO, Verizon, 2005
- “The market can sustain only one wire to the home.”

Transforming Verizon Through Investment in Next-Generation Networks and Services

- Wireline: Fiber to the premise
  - 3 million homes passed by end of 2005
  - Now in 250 communities in 15 states
- Wireless: 3G broadband
- Services and Integration
  - To deliver the greatest possible value to consumers
- In rural areas
  - WiMax in Grundy, Virginia and other communities
  - Partnership between Verizon Avenue, local government, and Alvarion
- Not cheap
  - Verizon will invest about $14.5 billion in 2005

FTTP Full Build & Overlay Architectures

FTTP: The Perfect Broadband Platform

Bandwidths & Services

FTTP Network

HFC Network

Data / Telephony / VOD

Data / Telephony / VOD

Broadcast Video

Broadcast Video

HD/VOD

42 MHz

550 MHz

4 x POTS

Ethernet

Video
**Verizon Fios**
Wireline Broadband Access

- Leapfrogs Cable Modem & DSL!

**Fios TV**

- Rollout later in 2005
- Will begin with:
  - 300 channels of video
  - 2000 choices for video on demand
  - Easy interface
  - Parental control
- Will add:
  - Full interactivity
  - Two-way video
  - Integrated shopping (T-commerce)

**T-Commerce**

- Like the recipe he’s making?
  - Click to see the recipe
  - Click again to add the ingredients to your shopping cart
- Here, integration means:
  - Two-way interactivity
  - Integration between Fios TV, iobi shopping platform, and billing
- Partnerships with content provider, shopping services

**Verizon Wireless**
High-Speed Internet Access

**Verizon iobi Home**
IP Enabled Telephone Service
Service Control

World Automobile Production

1. GM 8,186
2. Ford 6,567
3. Toyota 6,420
4. Volkswagen 5,024
5. DaimlerChrysler 4,232
6. PSA Peugeot Citroen 3,310
7. Nissan 2,042
8. Honda 2,922
9. Hyundai 2,697
10. Renault 2,386
15. BMW 1,118
41. Porsche 81
Total 60,599 (2003, in thousands)

Features of Broadband Markets

- New investment in several platforms
- Multiple submarkets
  - By geography
  - Heterogeneous customer preferences
- Product differentiation
  - Characteristics of the platforms
  - Competencies, focus
- Established players with sunk investments
  - Plus a number of new entrants
- Competition between integrated and third-party services

Many connections to the home

Verizon Wireline Footprint

Video markets and provider competencies
Verizon’s Approach to Video Markets

Verizon Regional Hub Office: Local presence and capacity
Verizon IP Delivery: Targeted delivery to small audiences

What Will Happen?

- No one can predict with certainty
- But there are good reasons to expect platform competition will be around for a long time
  - Market is diverse, multi-dimensional
- We should resist the temptation to prejudge outcomes
- Policy should be accommodating. Important factors are:
  - Ability to generate and capture downstream value through integration
  - Ability to differentiate
- The next few years will be interesting