

WCA
Third Screen
Feb. 20, 2007

Mark Steele

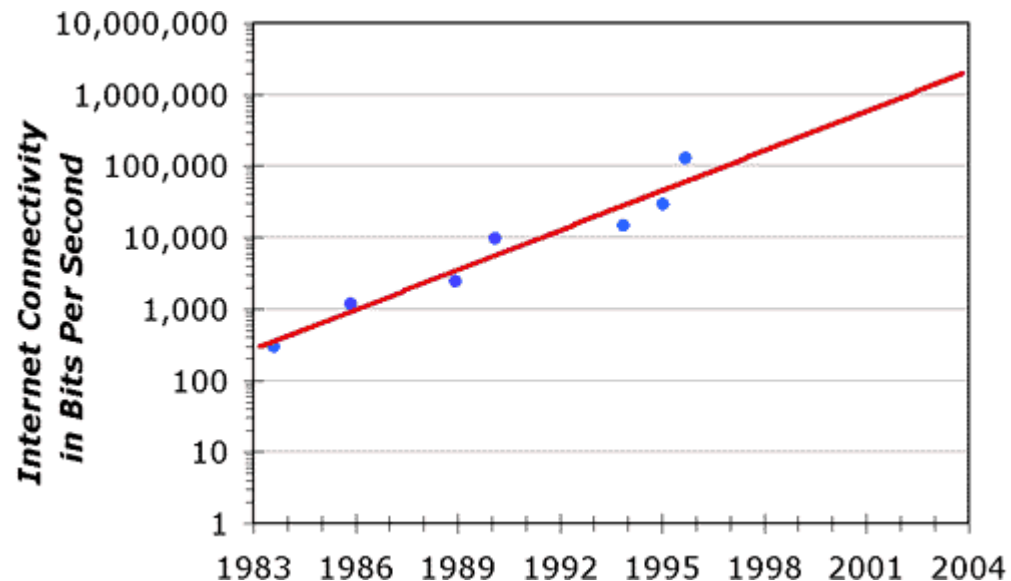
CommNexus San Diego
Motorola Enterprise Mobility

What Drives new Applications and Content?

- Bandwidth
- Tools
- Business Models
- Social trends

Nielsen's Law: Bandwidth

- **50% Annualized Growth Rate**
 - **Compound Growth Over Ten Years= 57x**
 - **Moore's Law: 60% AGR, 100x over 10 years**
- years



Wireless Bandwidth Reality

- “Lumpy” and discontinuous improvements vs. smooth
- Types of improvements
 - Better performance for existing applications
 - Existing applications are extended
 - New applications are enabled
- Feedback between speed and applications
 - Speed leads to above improvements
 - Improvements,, esp. new applications leads to need for more speed

Negative Feedback

- Especially at 'lumps', just before breakthroughs:
 - Speed gains taper off or disappear
 - Content continues to expand
 - Usability erodes
 - Valleys of despair and disillusionment
- Examples:

Not Just Speed Now...

- Location
- Presence
- User-generated content
 - Drives UPSTREAM speeds vs. download
- Social networking going mobile

How can we apply this?

- Until upload speeds are improved, can Mobile YouTube happen?
- Will MediaFLO provide leap for mobile video download or just real-time viewing?
- How much bandwidth is enough for mobile office workers? Hint: 600kbps = 'office'
- What are the implications of Moore's Law giving us 2x CPU/memory growth vs. bandwidth over next decade?