

Inventing a New Internet: Learning from Icarus

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Tetherless Access

Past EE380 Talks

- This will be my 3rd talk
- First in the '90s on wireless MANs
- Second, May 2000, 'Networking Tonga from the Ground Up and the Sky Down'

Personal Log

- Native of Detroit
- Left 1970 to SIU Carbondale & World Game
- User of ARPANet in 1974
- Silicon Valley 1976
- Serial Entrepreneur
- Wireless Internet startup in 1990
- Many wireless projects in developing countries

Personal Log (cont.)

- Member of NSF team that brought the Internet to Mongolia in 1996.
- Dubbed 'Broadband Cowboy' by Wired Magazine in 2002.
- Primary mentors: Bucky Fuller & Paul Baran
- Back to Detroit in 2010

Myth of Icarus

- Historical perspective: Start before 19th century
- Little is really new...
- James Burke's 'Connections' methodology
- The Adventure Begins...

First Premises

- First comes a technology
- As time passes it becomes more accessible/affordable
- “Good Enough” is acceptable for most folks
- More than we know is always happening under our ‘radar screens’
- Wireless is one of our technologies which is most akin to magic (Clarke’s 3rd Law)

As fast as it gets



Telegraph - 1830's



From 'Foot Speed to
'Light Speed'

Early “Wire Head”



The Victorian Internet

Tom Standage

Telegraphic Networking

- Access
- Infrastructure
- Networking Protocol Suite
- Internetworking
- Costs

First signal across Atlantic - 1901

St. Johns,
New Foundland



Cornwall,
England

**Wireless Commercial
Service started in 1903**

Early “Wireless Heads”



**“From Lightspeed to
Lightspeed”**

Wireless Networking

- Access
- Infrastructure
- Networking Protocol Suite
- Internetworking
- Costs

Commercial Internet

1995

‘From Lightspeed to Warpspeed’

Internet Networking

- Access
- Infrastructure
- Networking Protocol Suite
- Internetworking
- Costs

‘Internet’

‘You keep using that word and I don’t think it means what you think it means!’

Second Curve Internet

- Free Network Foundation (FNF) - Innovation under Austerity
- New America Foundation - Open Technology Institute (OTI) - Commotion Project

At only 45 years old... the Internet will be laid to rest in 2014. And Silicon Valley is thrilled. Because they know... *The Economist* believes the death of the Internet "will be transformative."

In fact, the CEO of Cisco Systems -- one of the largest tech companies on the planet -- says somebody's going to bank "\$14.4 trillion in profit... from one concept alone." And this FREE video gives you what you need to capitalize on the little-known company behind this concept...

**R.I.P Internet -
1969-2014**

Darknet

- Another 'loaded' word...
- More going on there than you're aware
- "All for one and one for All" protocols
- Innovation w/o permission
- Example of second curve Internet

Questions?