

Internet architecture and governance

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Motivation and outline:

- Strong movement to control the Internet:
 - what motivates it?
 - will it succeed?
- Main points:
 - extensive historical precedents for control
 - main motivation economic
 - extensive arguments for control from economics
 - control move likely to fail because of special features of the Internet (migration of costs and intelligence to edges, connectivity and not content is king, ...)

*Absurdities of government regulation often
rooted in corporate practices:*

Cats is 'dogs'
and rabbits is
'dogs' and so's
Parrats, but this
'ere 'Tortis' is a
insect, and there
ain't no charge
for it.

Punch, 1869



Open architecture vs. drive to price according to value:

[Alexander Graham] Bell should have anticipated Bill [Gates] and let someone else put in the phone infrastructure while he collected by the minute and distance (and even importance of the call if he could have figured a way to monitor it) in perpetuity.

email from Warren Buffett to Jeff Raikes
of Microsoft, Aug. 21, 1997

Key question:

How much control over content should carriers exercise?

- ◆ **Block video?**
- ◆ **Prevent WiFi hot spots?**

Voice telephone content is private now, but:

In Britain in 1889, postal officials reprimanded a Leicester subscriber for using his phone to notify the fire brigade of a nearby conflagration. The fire was not on his premises, and his contract directed him to confine his telephone ``to his own business and private affairs." The Leicester Town Council, Chamber of Commerce, and Trade Protection Society all appealed to the postmaster-general, who ruled that the use of the telephone to convey intelligence of fires and riots would be permitted thenceforth.

18th Century: Beverley Beck Navigation

| <u>Cargo</u> | <u>Toll per Ton</u> |
|---------------------|---------------------|
| Sand | 2p |
| Timber, stone, salt | 6p |
| Iron and lead | 12p |

There is extensive evidence that such practices often aid society's welfare, in accordance with standard economic doctrine.

Conclusions:

- Extensive arguments from economics and history for controlling the Internet
- The control arguments may not carry the day because the Internet is special:
 - connectivity is far more valuable than content
 - costs and intelligence moving to the edges
 - analogies with recent evolution of transportation

More evidence, arguments, and speculations in “Pricing and architecture of the Internet ...” at: <http://www.dtc.umn.edu/~odlyzko>