Competition and Industry Structure in Local Access

David D. Clark M.I.T. Internet Telephony Consortium

David Clark, M.I.T.L.C.S. #I1

Slide #p

Purpose of this talk

Construct a picture of the emerging relationship between facilities and services in local residential access.

Speculate on what this might mean for industry structure, competition and regulation.

Provide a framework for debate. Start an argument?

David Clark, M.I.T.L.C.S. #I1

•

Slide #p 2

The naïve model of competition in local access

Simple head-to-head facilities-based competition.

- Lots of people install copper pairs to sell POTS.
 - Lots of people install HFC to sell cable TV.

Does not seem to be happening...

Uncertain business case.

- Can competition be sustained?
 Significant costs
- Regulatory barriers (your country may differ)
 - Long run unbundled pricing.

New approaches to service offering.

Need technology to support multiple businesses.

David Clark, M.I.T.L.C.S. #I1

Slide #p

What is actually happening?

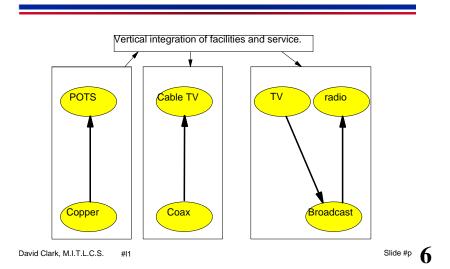
1) Wireline services.

- Incremental upgrade of existing technology
- Permit entry into new lines of business.
- 2) Wireless services.
 - More greenfield (tower) investment.
 - Waiting for the launch of satellite.

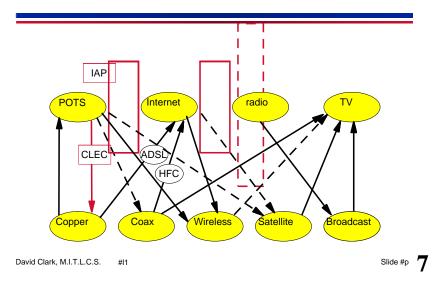
David Clark, M.I.T.L.C.S. #I1

Slide #p 5

The old order



The emerging order

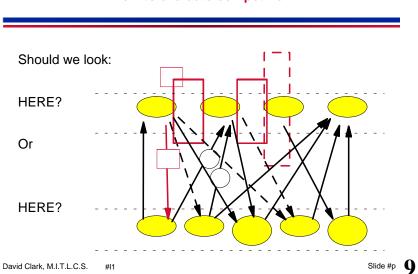


This picture raises questions...



David Clark, M.I.T.L.C.S. #I1

Slide #p 8



How to evaluate competition

The service-centric view

Consumer does not care about competition in facilities.

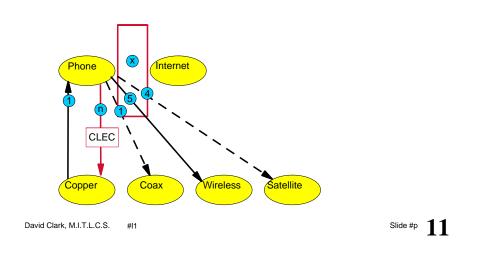
- Consumer cares if there is adequate competition in services.
 - Actually, consumer only cares about shape of product space...

This conclusions raises questions... What constitutes a service?

David Clark, M.I.T.L.C.S. #I1

Slide #p 10

Telephone as an example



Two interpretations of this picture

- 1) This represents rich competition in telephone service.
- 2) This represents a number of distinct services, some of which are competitive.
 - Distinguish each sort, and separately assess.

Which approach is right?

There is no *a priori* answer. It depends on the specifics.

What features constitute POTS? (Is POTS the right baseline?)

Great debate material.

David Clark, M.I.T.L.C.S. #I1

Slide #p 13

Another question...

What does "facilities-based competition" actually mean?

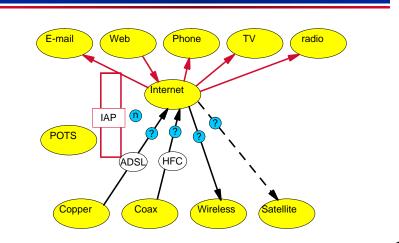
One answer: not much. Only can be discussed in context of particular <u>service</u>.

Internet as an example.

David Clark, M.I.T.L.C.S. #I1

Slide #p 14

The Internet picture



Is Internet service competitive?

 (At least) two sorts of service: High performance. Two facilities-based providers. No unbundling likely. Basic Lots of providers over POTS. Fight over the boneslow value subscribers. Nomadic (wireless, satellite, etc) Too immature to be sure. Love to discuss. 		
David Clark, M.I.T.L.C.S. #I1	Slide #p	16
What is the effect of the Internet?		
Internet seems to lead to open competition above it. Vertical integration of Internet and applications not likely. Why? Open interfaces, diversity of content.		
Integration of facilities and Internet service more likely. • Limited evidence to date supports this.		
Need to observe, and perhaps rethink, where we focus concern about depth of competition.		
David Clark, M.I.T.L.C.S. #11	Slide #p	17
A new wireline facilities build-out?		
Fiber to the ?? Not likely to be many such investments.		

- But might just make existing services more competitive.
- But what if it is so much better it kills off all the current infrastructure?
- So if it happens, must it be "unbundled"?

Better to regulate (or not) service than facilities. But what is a "service". Convergence blurs all boundaries.

If there is a new generation of facility installed, is that pro or anti-competitive?

David Clark, M.I.T.L.C.S. #I1

Slide #p 19