Who Will Profit from Social TV Service?
Insights and Queries From A Technology Disruption Model

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Disruptive Technology

Firm	Price	Primary Performance (Basic Features)	Ancillary Performance (Additional Features)
Incumbent	High	High	Low
Entrant	Low	Low	High

Product Performance (y-axis)

Second (entrant) Technology

First (incumbent) Technology

Time/Engineering Effort (x-axis)

Example Cases:

Mini mills

Disc Drives

Ref: The Innovator's Dilemma, Clayton Christensen (1997)

Question: Does Social TV Service fit this picture?

Social TV Service

Starting from CFP Working Paper
Innovation at the Edge: Social TV and Beyond, Natalie Klym and Marie Jose Montpetit, September 1, 2008

"edge-based trends [are] driving 'social TV,' including the <u>personalization of devices</u>, the <u>integration of social networks with the video value chain</u>, and <u>P2P networking among STBs</u>."

Is Social TV Service a Disruptive Technology?

Firm	Price	Primary Performance (Basic Features)	Ancillary Performance (Additional Features)
Traditional TV Service (Incumbent)	$50-$60 (High)	Device Quality Connection Quality Content Quality (High)	Mobility Sharing Content Sharing Experience Device Variety (Low)
Social TV Service (Entrant)	$0-$ (Low)	Device Quality Connection Quality Content Quality (Low)	Mobility Sharing Content Sharing Experience Device Variety (High)

"Technology disruption *alone* may not change the existing industrial order despite meeting Christensen's Conditions. One must also look at other technological, market, and organizational uncertainties."

Does Technology Disruption Always Mean Industry Disruption, Chintan Vaishnav, ISCSD 2008, Athens, Greece
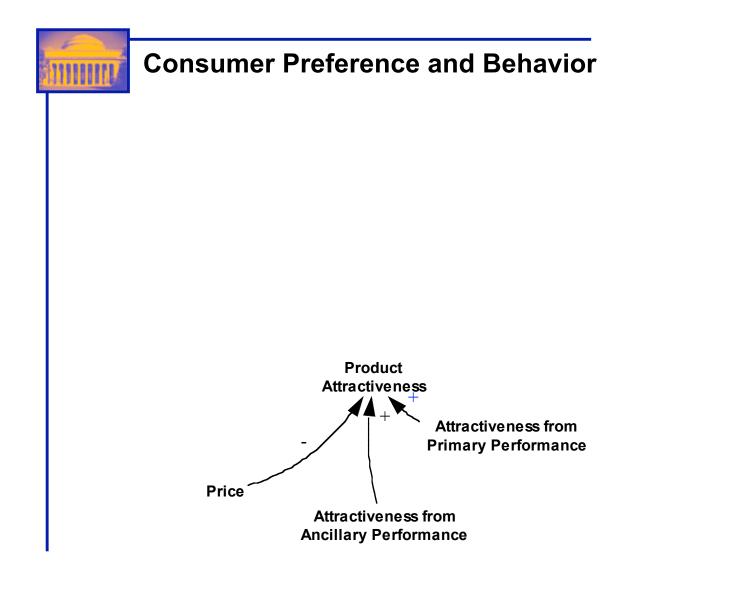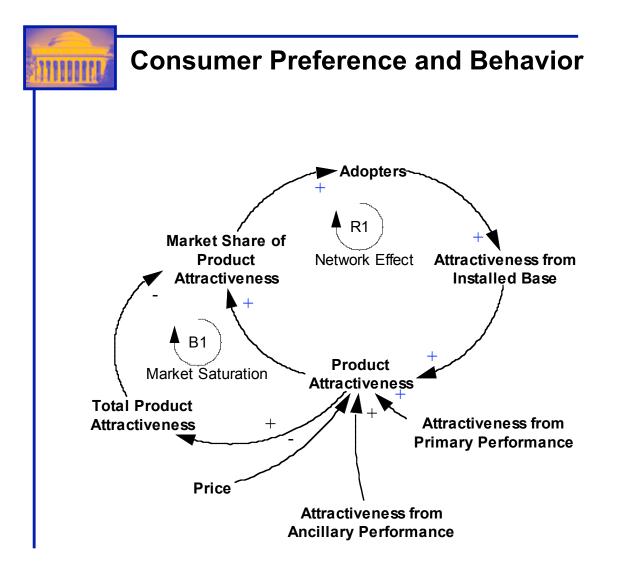
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The Disruption Model

Model Setup and Assumptions

- A behavioral model (akin to behavioral game theory model)
- 2 Firms – Incumbent, Entrant
- 20 year period (think technology paradigms…)
- Incumbent enters at Year 0
- Entrant enters at Year 6 (when incumbent is mature)
- Firms initialized with Christensen's conditions…
  - Entrant has half Cost base than Incumbent
  - Entrant has half Initial Primary Performance than Incumbent
  - Entrant has double the Initial Ancillary Performance than Incumbent
- Both Incumbent and Entrant are equally capable (technically and organizationally) to produce the same products
- Consumers are homogenous in their preferences

Consumer Preference and Behavior

Product
Attractiveness

+

Attractiveness from
Primary Performance

+

-

Price

Attractiveness from
Ancillary Performance

Consumer Preference and Behavior

Consumer Preference and Behavior

Switching to Competitor

R2 Switching Behavior

-

-

Adopters

+

R1 Network Effect

Attractiveness from Installed Base

+

Market Share of Product Attractiveness

-

+

B1 Market Saturation

Product Attractiveness

+

Total Product Attractiveness

+

-

Attractiveness from Primary Performance

+

+

+

Price

Attractiveness from Ancillary Performance

The P2P Networking of STB

Traditional service – simplified version

Social TV service – operator based – P2P Networking of STBs

- Instant Messaging-like Overlay (IPTV Middleware, True2Way)
- P2P connection between STBs in a home/office
NK, MJM, Social TV White Paper

Q: What do these trends broadly imply?
A: Higher Direct Network Effects?

Model Lessons: Network Effect

Adopters

Adopters[Incumbent] : Active Base Case	—1——1——1——1——1—
Adopters[Incumbent] : Network Effect Hi	—3——3——3——3——3—
Adopters[Entrants] : Active Base Case	—4——4——4——4——4—
Adopters[Entrants] : Network Effect Hi	—6——6——6——6——6—

With network effects the equilibrium can be winner take all (WTA).
The strength of network effect determines the winner
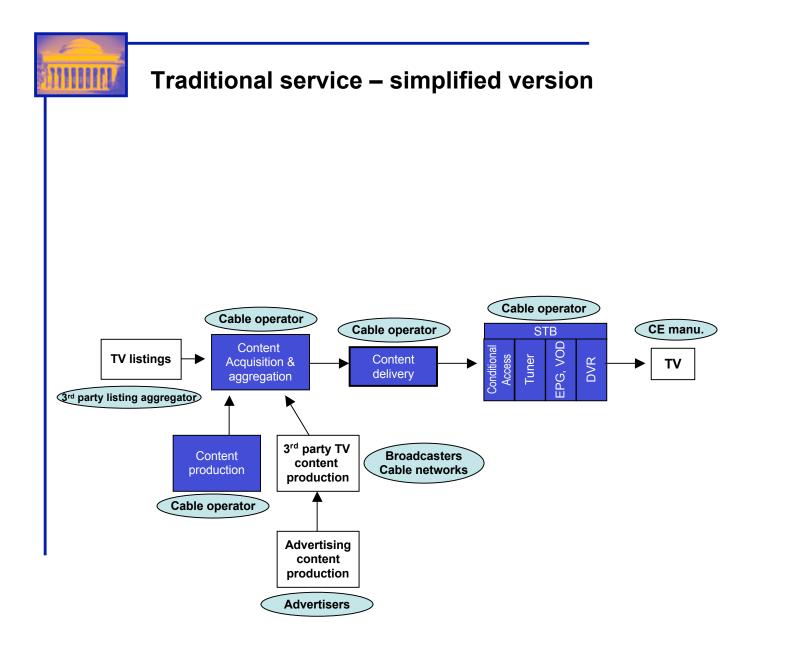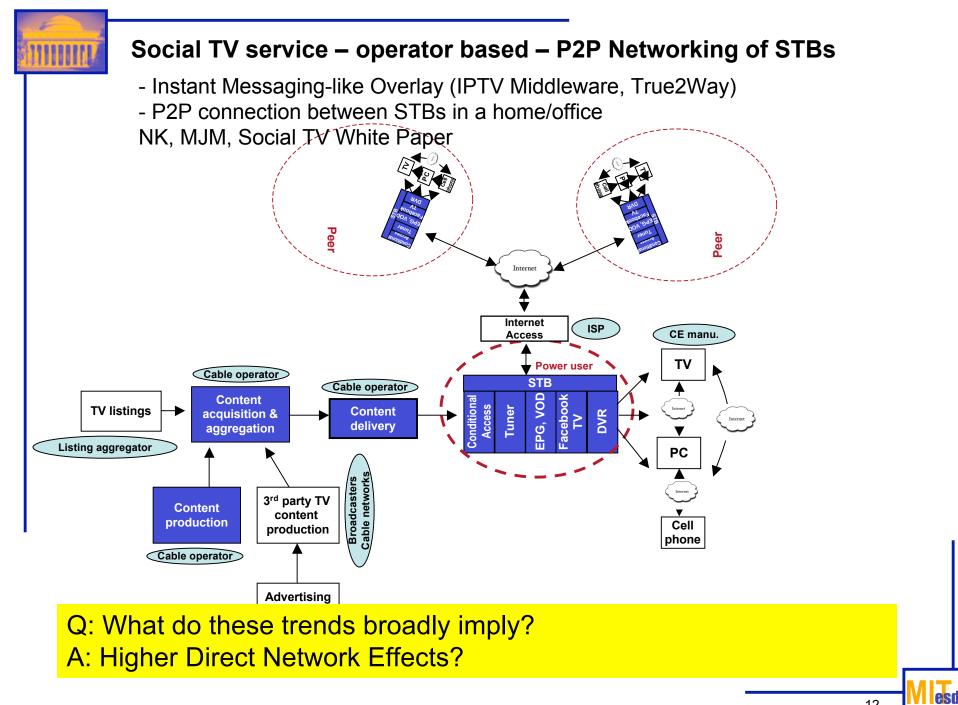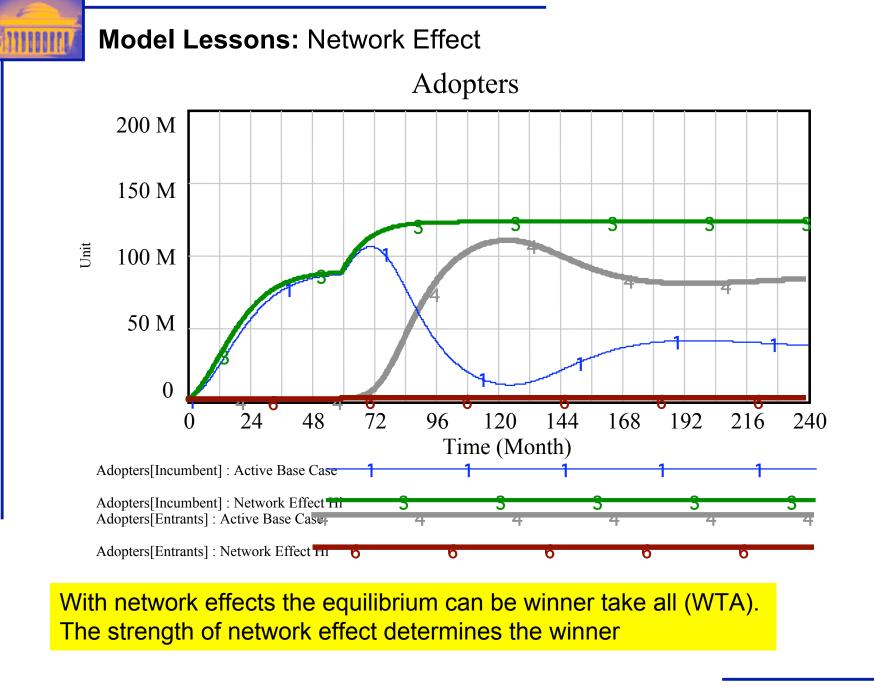
What does the P2P networking of STBs mean?

The cable operator that produces, acquires, and delivers content popular for social interaction (e.g. sports) could enjoy strong control over the viewership of some programs that is difficult to dislodge.
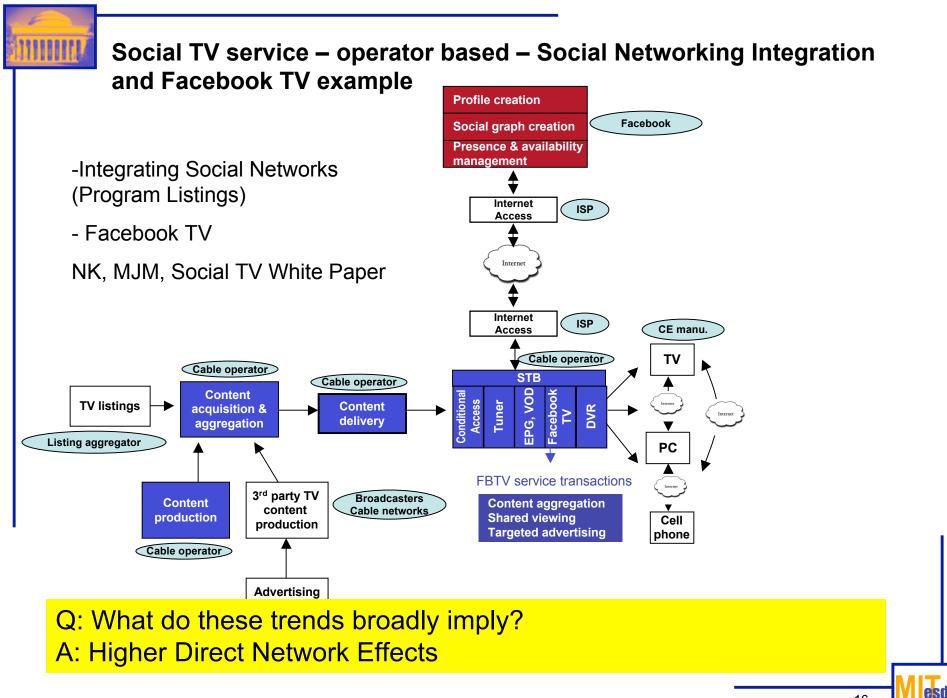
P2P networking of STBs works very well with the operator's current business model for them to capture value.

The Integration of Social Networks

Social TV service – operator based – Social Networking Integration and Facebook TV example

-Integrating Social Networks (Program Listings)

- Facebook TV

NK, MJM, Social TV White Paper

Profile creation

Social graph creation — Facebook

Presence & availability management

Internet Access — ISP

Internet

Internet Access — ISP

Cable operator

STB
Conditional Access | Tuner | EPG, VOD | Facebook TV | DVR

CE manu.

TV

Internet

Internet

PC

Internet

Cell phone

FBTV service transactions

Content aggregation
Shared viewing
Targeted advertising

Cable operator

Content acquisition & aggregation

Cable operator

Content delivery

TV listings

Listing aggregator

Content production

Cable operator

3rd party TV content production

Broadcasters Cable networks

Advertising

Q: What do these trends broadly imply?
A: Higher Direct Network Effects

What does the integration of social networks mean?

Who captures value (enjoys higher direct network effect) due to integrating social networking or Facebook TV?

– Traditional Players

- – Content Producer (?)
- – Content Acquisition / Aggregator (?)
- – Content Delivery (Provider) (?)
- – Device Manufacturer (?)

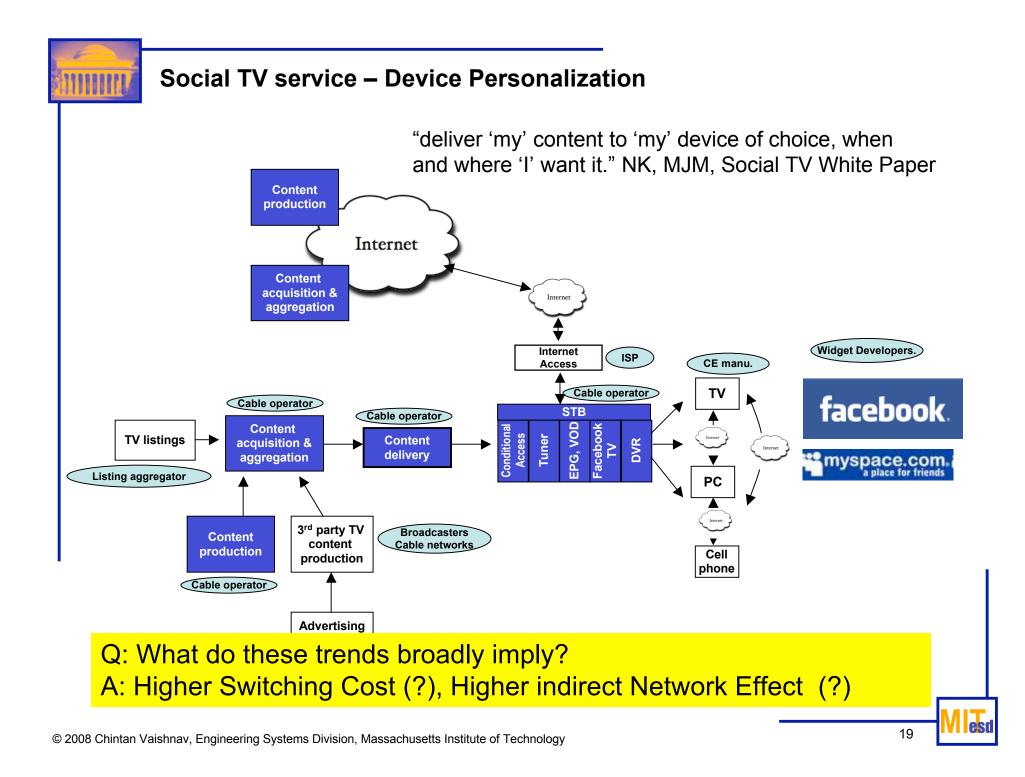– Social Network Websites (?)

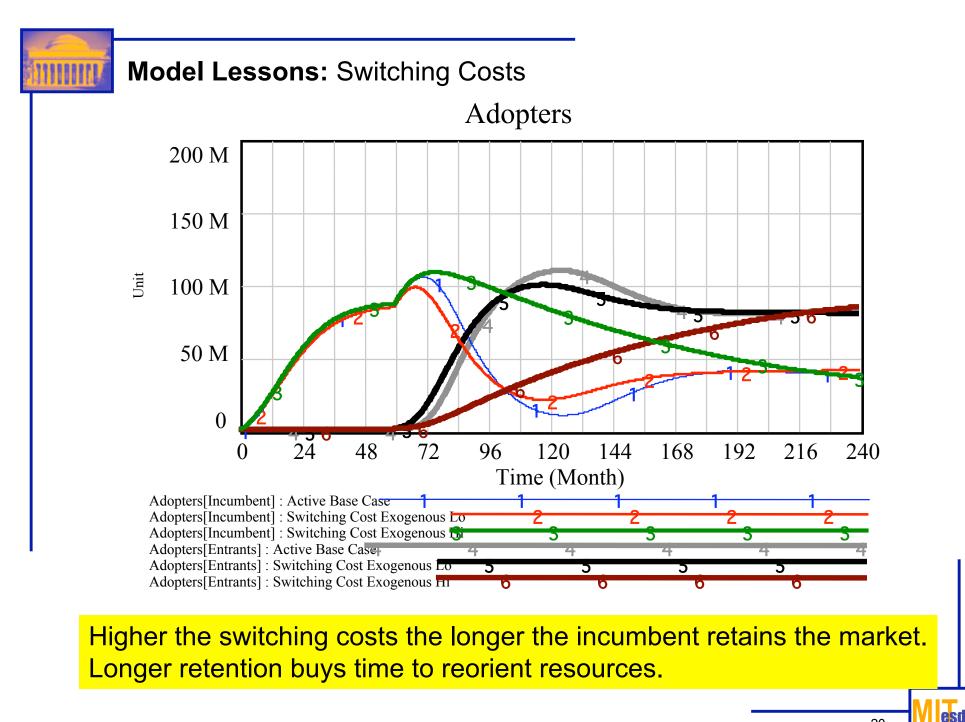How do they monetize the benefits?

What does it mean to make TV interface like a social networking site (like in Facebook TV)?

The Personalization of Devices

Social TV service – Device Personalization

"deliver 'my' content to 'my' device of choice, when and where 'I' want it." NK, MJM, Social TV White Paper

Adopters

Adopters[Incumbent] : Active Base Case — 1 1 1 1 1
Adopters[Incumbent] : Switching Cost Exogenous Lo — 2 2 2 2
Adopters[Incumbent] : Switching Cost Exogenous Hi — 3 3 3 3 3
Adopters[Entrants] : Active Base Case — 4 4 4 4 4
Adopters[Entrants] : Switching Cost Exogenous Lo — 5 5 5 5
Adopters[Entrants] : Switching Cost Exogenous Hi — 6 6 6 6

Higher the switching costs the longer the incumbent retains the market. Longer retention buys time to reorient resources.
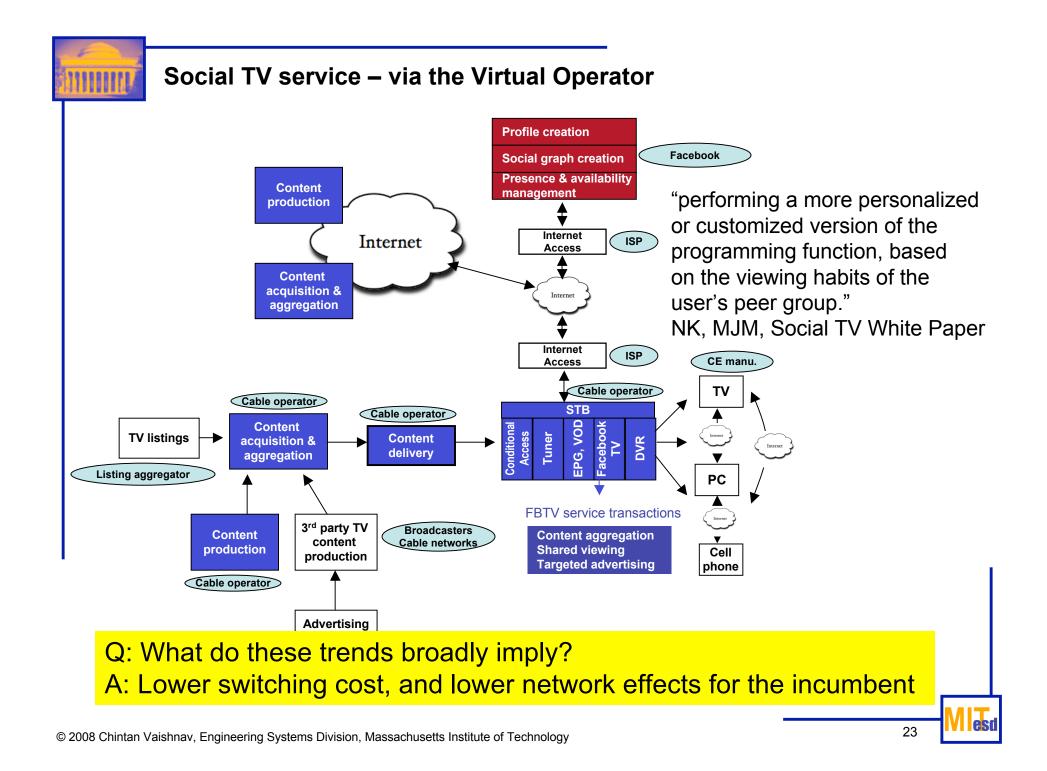
What does the device personalization mean?

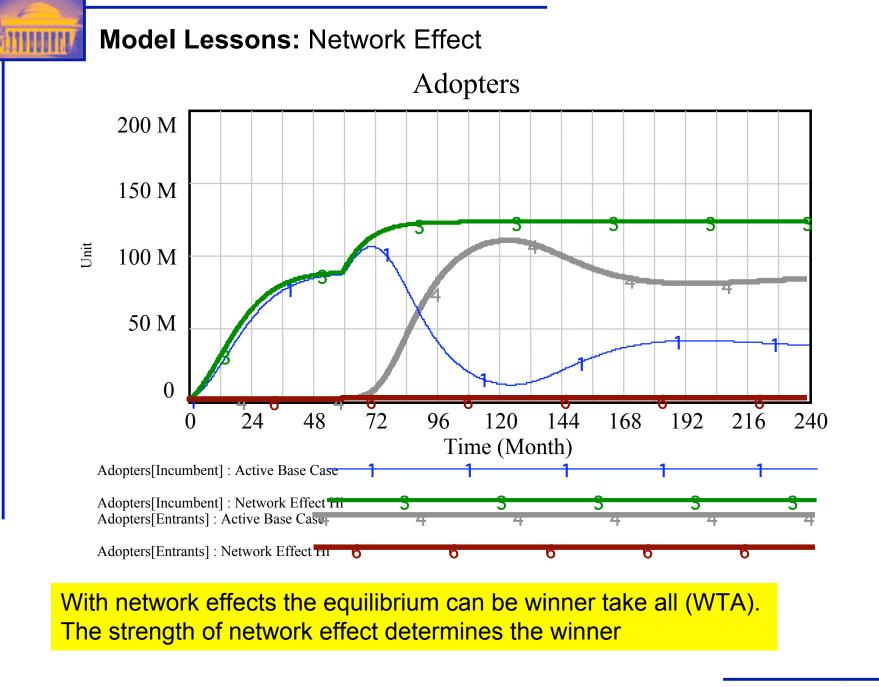Who captures value (enjoys higher customer retention) due to device personalization?

- Content Producer (?)
- Content Acquisition / Aggregator (?)
- Content Delivery (Provider) (?)
- Device Manufacturer (?)
- Social Network Sites (?)

How do they monetize the customer acquisition/retention?

The Rise of the Virtual Network

Social TV service – via the Virtual Operator

"performing a more personalized or customized version of the programming function, based on the viewing habits of the user's peer group."
NK, MJM, Social TV White Paper

Q: What do these trends broadly imply?
A: Lower switching cost, and lower network effects for the incumbent

Model Lessons: Network Effect

Adopters

With network effects the equilibrium can be winner take all (WTA).
The strength of network effect determines the winner

What does the rise of the virtual operator mean?

If the virtual operator offers attractive customized programming, and matches other performance parameters of the traditional operator, this erodes both…
- the ability to retain customers
- the indirect network effect on advertising

…then there is higher potential for industry disruption.

Thank You!

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