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

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Communications Futures Program
MIT
Disruptive Technology

<table>
<thead>
<tr>
<th>Firm</th>
<th>Price</th>
<th>Primary Performance (Basic Features)</th>
<th>Ancillary Performance (Additional Features)</th>
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<tbody>
<tr>
<td>Incumbent</td>
<td>High</td>
<td>High</td>
<td>Low</td>
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<tr>
<td>Entrant</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
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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 personalization of devices, the integration of social networks with the video value chain, and P2P networking among STBs.”
Is Social TV Service a Disruptive Technology?

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<tr>
<td>Traditional TV Service</td>
<td>$50-$60</td>
<td>Device Quality</td>
<td>Mobility</td>
</tr>
<tr>
<td>(Incumbent)</td>
<td></td>
<td>Connection Quality</td>
<td>Sharing Content</td>
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<td></td>
<td>(High)</td>
<td>Content Quality</td>
<td>Sharing Experience</td>
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“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
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

Attractiveness from Ancillary Performance

Price

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Consumer Preference and Behavior

- Adopters
- Attractiveness from Installed Base
- Market Share of Product Attractiveness
- Network Effect
- Total Product Attractiveness
- Price
- Attractiveness from Primary Performance
- Attractiveness from Ancillary Performance
- Market Saturation

R1
B1

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Consumer Preference and Behavior

Switching to Competitor

Market Share of Product Attractiveness

Market Saturation

Total Product Attractiveness

Price

Adopters

Network Effect

Attractiveness from Installed Base

Product Attractiveness

Attractiveness from Primary Performance

Attractiveness from Ancillary Performance

Switching Behavior

R1

R2

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The P2P Networking of STB
Traditional service – simplified version

- TV listings
- Content Acquisition & aggregation
- Content delivery
- Conditional Access
- STB
- Cable operator
- Cable operator
- Broadcasters
- Cable networks
- Advertising content production
- Advertisers
- 3rd party TV content production
- Cable networks
- Cable operator
- Cable operator
- CE manu.
- TV
- 3rd party listing aggregator
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

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

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

Q: What do these trends broadly imply?
A: Higher Switching Cost (?), Higher indirect Network Effect (?)
Model Lessons: Switching Costs

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

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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