

From Analog to Digital: Technological Redeployment in the US Cable Industry and its Competitive Implications

Claudia Loebbecke

Department of Media and Technology Management
University of Cologne, Germany
claudia.loebbecke@uni-koeln.de
www.mtm.uni-koeln.de

Wilson Wong

Computer Information Systems Department
Bentley College
Waltham, MA
wwong@bentley.edu

Prof. Dr. Claudia Loebbecke, M.B.A., University of Cologne & Wilson Wong, Bentley College

Agenda

- US Cable Industry
- Competitive Situation for Cable Operators
 - Market for Content Services
 - Market for Information Services
- Technology Driven Business Model Changes
- Outlook

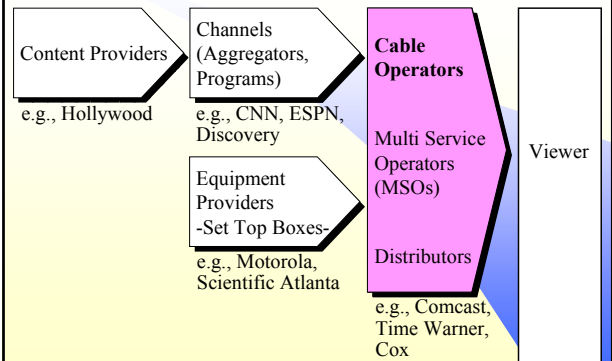
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US Cable Industry (2006)

- Multiple System Operators (MSOs)
 - Top 4 MSOs control nearly 75% of 65.6 mill. subscribers
 - MSOs have attracted 31 mill. customers of total 65.6 mill. to digital cable
- Cable Industry Challenges
 - Attempts to profit from technological upgrade from analog to digital
 - Increased competition as content provider
 - Increased competition as information and communication service provider

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Value Chain - Video Content Services



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DVR Features and Drivers

- Cross-promotion & lead-ins ⇌ Questionable
 - Role of prime time and concept of live shows ⇌ Minimized
 - 'Call-in' model ⇌ Not feasible
 - Channel surfing ⇌ Reduced
 - Exposure to commercials ⇌ Reduced
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- Different forms of advertising (e.g., promotions within programs)
 - Replay figures replacing Nielsen Data
 - More accurate information about viewers

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DVR Impacts on Value Chain

- DVRs: Business model - Trade off required !
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- The diagram shows **Cable Operators (MSOs)** receiving **Income** from **Advertising (from channels)** and **Subscription (from viewers)**. Both sources of income are shown to be negatively impacted by **DVRs**, indicated by downward arrows. A pink oval labeled **Trade-Off!** highlights this relationship.
- On-demand sales ⇌ DVRs - Not both !
 - DVDs (and their exchange platforms) ⇌ DVRs

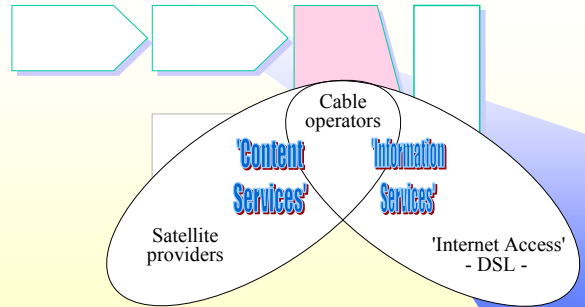
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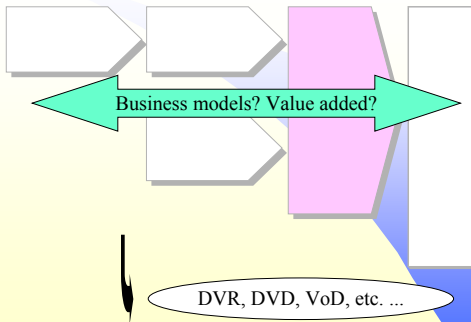
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Infrastructure Competition



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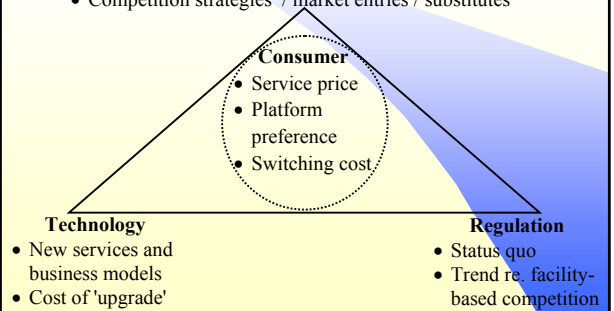
Innovative End-User Devices



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Drivers of Infrastructure Competition

- Market Situation / Industry Structure**
- Status quo - Installed platforms
 - Competition strategies / market entries / substitutes



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Information Services – Cable versus DSL (Sept. 2007)

	Dig. cable	DSL
Market- / Industry-structure	<ul style="list-style-type: none"> • 31.4 mill. subscribers 	<ul style="list-style-type: none"> • 4 big ILECs* > 25.4 mill. subscribers (92% mark. share) • Higher concentration
Regulation		<ul style="list-style-type: none"> • Access regulations ('Open access rules') • '1996 Telecommunication Act': Deregulation until 1999 • '2003 Triannual Review': Permission for services bundle
Technology	<ul style="list-style-type: none"> • Investments > US \$1,000 per cable customer 	<ul style="list-style-type: none"> • Cost of 'Last Mile' as doubtful economic calculation

* Incumbent Local Exchange Carriers

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Technology Factors as Transformation Drivers

- Innovative storage devices
 - DVDs
 - Additional content
 - Higher quality picture
 - Possibly reducing demand for on-demand movies
 - DVRs
 - Possibly reducing advertising viewed
 - Viewing time independent of broadcasting time
- Broadband connectivity to home ➔ Video distribution over Internet
 - Competition with television-based video programming
 - Reach viewers in other countries

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Technology Driven Business Model Changes - Content Provider Strategies -

- Prime time less important
- Prices for advertising to fall due to lower viewership
- Product placements to be placed in programs themselves
- Technology to leverage basic viewer information into greater precision for targeted advertisements
- Changing metrics to accommodate DVRs
- DVR viewing patterns supplementing Nielsen ratings

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Technology Driven Business Model Changes - Industry Structure and Value Chain -

- Substitutability of distribution technologies
 - Broadcast, cable, and satellite for video delivery
 - Broadcasters losing their competitive advantage in reaching national audiences
- DVRs reduce already low 'on-demand' sales
 - No additional charges compared to on-demand video
 - Faster response as content is locally stored
- Digitalization of content facilitating Internet-based distribution

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Outlook

- Video Content Services
 - ➔ US: Large cable incumbents challenged by small, but promising satellite broadcasters
- Information Services
 - ➔ US: New entry cable players as serious threat to ILECs
- Competitive situation in both markets heavily depending on 'Industry Structure' & 'Regulation'
- DVRs and Internet-based distribution jeopardizing cable industry's business model of subscription fees and advertising income
- Revenue split among advertisers, channels, content distributors and Hollywood studios to be reassessed

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.... Questions, Comments, Complaints ?

Thanks for your attention !

✉ claudia.loebbecke@uni-koeln.de

✉ wwong@bentley.edu

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