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

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

US Cable Industry (2006)
- Multiple System Operators (MSOs)
  - Top 4 MSOs control nearly 75% of 65.6 million subscribers
  - MSOs have attracted 31 million customers of total 65.6 million 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

Value Chain - Video Content Services
- Content Providers (Aggregators, Programs)
  - e.g., Hollywood
- Channels (Aggregators, Programs)
  - e.g., CNN, ESPN, Discovery
- Equipment Providers
  - Set Top Boxes
    - e.g., Motorola, Scientific Atlanta
- Cable Operators
  - Multi Service Operators (MSOs)
    - e.g., Comcast, Time Warner, Cox
- Distributors
- Viewer

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
- Different forms of advertising (e.g., promotions within programs)
- Replay figures replacing Nielsen Data
- More accurate information about viewers

DVR Impacts on Value Chain
- DVRs: Business model - Trade off required!
  - Income
    - Advertising (from channels)
    - Subscription (from viewers)
  - DVRs
    - Trade-Off!
- On-demand sales ⇔ DVRs - Not both!
- DVDs (and their exchange platforms) ⇔ DVRs
Agenda

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

Drivers of Infrastructure Competition

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

Consumer
  - Service price
  - Platform preference
  - Switching cost

Technology
- New services and business models
- Cost of 'upgrade'

Regulation
- Status quo
- Trend re. facility-based competition

Drivers of Infrastructure Competition

Innovative End-User Devices

Business models? Value added?

DVR, DVD, VoD, etc. ...

Information Services – Cable versus DSL (Sept. 2007)

Dig. cable
- 31.4 mill. subscribers

DSL
- 4 big ILECs* > 25.4 mill. subscribers (92% mark. share)
- Higher concentration
- Access regulations ('Open access rules')
- '1996 Telecommunication Act': Deregulation until 1999
- '2003 Triannual Review': Permission for services bundle
- Cost of 'Last Mile' as doubtful economic calculation

Cost of 'upgrade'

Market- / Industry- structure Regulation

Technology
- Investments > US $1,000 per cable customer

- Incumbent Local Exchange Carriers

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

Technology Driven Business Model Changes

- 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

Technology Driven Business Model Changes

- 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

Technology Driven Business Model Changes

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

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

Agenda

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

Outlook

- 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

Thanks for your attention!