Woodlawn Associates

Management Consulting

Success in a Rapidly Changing TV Market

May 2010

Executive summary

- **Internet video driving uncertainty among content owners, video distributors, and suppliers**
  - Want to know how to avoid disintermediation, improve bond with customers, and accelerate growth
- **Scenario planning can make potential outcomes tangible**
  - Aids in influencing and quickly interpreting events
  - One possible set of scenarios for Internet TV: Google Model Comes to TV, Rise of the Web Aggregators, To Each His Own, and Revenge of the MSOs
- **Environment requires intensive approach to product management**
  - Requires integration of internal data with information from across the value chain
  - Experiment—most infrastructure for Internet TV can be rented
- **Business development needed to align stakeholder interests. Recent conversations suggest:**
  - We have likely seen the limits of free, on-line distribution of produced video content
  - Mobile may be an opportunity to move quickly with comprehensive content
  - There may also be an opportunity to assemble specialized content bundles
- **Internet video could be >$1 billion business with attractive EBITDA margins**
  - Could also improve wireless or wireline triple-play financials by improving churn, ARPU, or market share
- **For traditional video distributors, internet video not the only risk / opportunity**
  - Also: operational excellence, M&A, increased competition, cost of content, other growth initiatives

Many uncertainties about internet video

Policy

- **Strong vs. weak net neutrality**

Technology

- Likelihood of technology and broadband competition overcoming weak net neutrality
- **Ability to consistently deliver high-quality video over IP**
- Delivery of IP-based video to TV screens via PCs, retail set tops, and connected TVs
- Technology standardization vs. fragmentation (H.264, VP8, Flash, Silverlight, HTTP, RTSP, HTML5, etc.)
- Ability of mobile networks to support significant video traffic at reasonable cost

Content

- **Ad-supported vs. pay (à la carte or subscription)**
- Pricing of ads inserted in/around on-line video
- Ability to assemble set of programming consumers will pay for
- **Comprehensive vs. specialized content bundles**
- Content owners going direct to consumers vs. through aggregator/distributor

Consumer

- Preference for PC consumption vs. TV consumption
- Demand for on-demand vs. linear programming
- **Number of consumers willing to pay for on-line and mobile video subscriptions**
- Pricing of on-line / mobile video offers
- Willingness to put up with non-standardization of technology, delivery glitches
- What makes a compelling user experience

Notes: Uncertainties in **bold** used to construct scenarios on following page

Scenario planning can make possible outcomes tangible

Some Possible Scenarios

1 **"Google Ad Model Comes to TV"**

- Moderate net neutrality
- Google supplements YouTube with ad-supported produced content and rivals Hulu
- Scale and personalization technology allow Google and Hulu to get significantly higher ad rates
- **Most content is available free (with ads) from Google and Hulu**
- **Cord cutters proliferate**
- **Comcast buys controlling stake in Hulu and becomes only traditional MSO to grow**

2 **"Rise of the Web Aggregators"**

- Strong net neutrality
- Content owners demand subscription revenue / other fees
- Free, ad-supported content on-line dwindles. Hulu withers
- Web aggregators develop comprehensive content bundles at prices consumers will pay
- **Hulu, Apple, Netflix, Google, mobile phone and TV manufacturers siphon customers and revenue from MSOs with à la carte and subscription TV services**
- **AT&T "goes virtual" and generates significant new growth outside its U-verse wireline footprint**

3 **"To Each His Own"**

- Moderate net neutrality
- Content owners demand subscription revenue / other fees
- Free, ad-supported content on-line dwindles. Hulu withers
- Web aggregators develop niche content bundles (sports, foreign languages, lifestyle, movies, etc.)
- **Some customers buy niche bundles in addition to conventional MSO services as new offers serve previously unmet needs**
- **Others swap traditional MSO products for modestly less expensive niche bundles to save money**

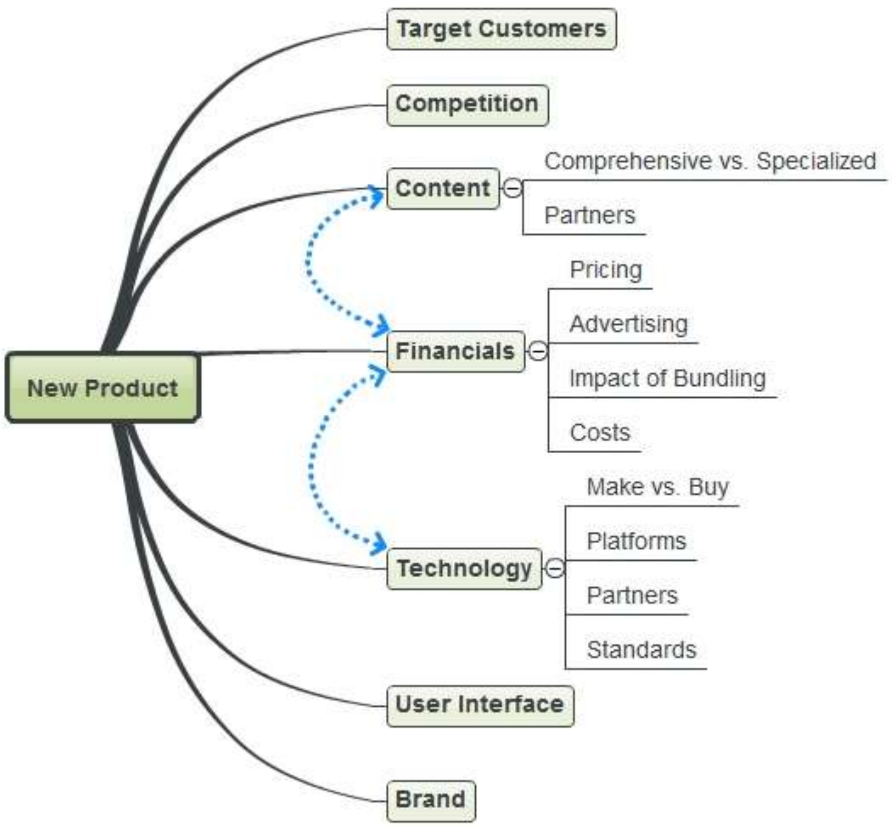
4 **"Revenge of the MSOs"**

- Weak net neutrality. MSOs handicap rival aggregators.
- Content owners insist on monthly subscription or other fees for access to content
- Free, ad-supported content on-line dwindles. Hulu withers
- QoS of content that remains on web not great. People streaming the 2011 Super Bowl miss plays
- **Little cord cutting**
- **MSOs bundle web TV to add value to core subscriptions. May pay more for content in return for web rights.**
- **MSO growth improves**

Source: Woodlawn Associates
Notes: These scenarios based primarily upon uncertainties in bold on previous page

Environment requires intensive approach to product management

General Questions for New Video Products



Specific Topical Questions

- **What content should we include?**
  - What will it cost to license?
- **Should we integrate third party OTT services?**
- **What should our user experience be?**
- **How can we take advantage of social networking without being faddish?**
- **How do we take advantage of home networking and media stored on PCs?**
- **How do we avoid cannibalization?**
- **What platforms should we use?**
- **What should I do about TV-based applications?**

Woodlawn Associates can integrate these items and insights from across the industry value chain

Experiment—infrastructure can be rented on Internet

	Content Management System	Transcoding	Ad Server	Ad Network	Content Delivery
Functions:	• Ingest content from owners • Manage rights windows • Manage which subs see which content • Insert and manage metadata	• Converts one video format to others • Important to offering best QoS with minimum bandwidth for various devices	• Stores advertising content • Inserts into video stream based as per agreement with advertiser (frequency, programs, demographics, etc.) • Sometimes given away by ad networks	• Sells ad space to advertisers • Can be used in conjunction with own ad sales	• Storage • Local caching • Delivery as close to end user as possible
Examples:	• thePlatform • Extend Media • Episodic (Google) • Brightcove • Ooyala • Delve Networks	• Ankoder • HD Cloud • Encoding.com • (Often done by CMS or client as well)	• Adtech / Lightningcast • Tremor Media (Acudeo)* • AdapTV (Onesource) • Google / Doubleclick (DART)	• Google • AdapTV (Marketplace) • Tremor Media	• Amazon • Akamai • Limelight • Level 3

Notes: * Based on Adtech platform

Business development needed to align stakeholder interests

- **We have likely seen the limits of free, on-line distribution of produced video content**
  - "We are going to play where the money is. For now, the new models don't replace the traditional revenue stream." – SVP, Distribution, A&E Television Networks
  - "Our position is giving away content is not a financially strategic move. Until we find a way to monetize it, we would steer clear of putting content on the web." – Vice President, Discovery Communications
- **Content owners prefer to work with traditional distributors for on-line distribution because it makes it easier to ensure they don't cannibalize existing revenue stream**
  - "We would probably be most interested in [doing a web TV service] with traditional video network operator…It would be easier to convince ourselves the model would not cannibalize our existing revenue stream." – Vice President, Discovery Communications
- **Another key issue in assembling an on-line service not linked to a conventional pay TV account is how to assemble comprehensive set of content at a price consumers will pay**
  - "Even if Hulu were to charge $10 per month for Hulu Plus and therefore pay some content owners, I would think it would be a lot less content than is available from a traditional TV subscription." – former executive, A&E Television Networks
  - "The number of networks on Hulu Plus is limited. Providers will not want to get less [than they are today]." – Vice President, Discovery Communications
- **There may also be an opportunity to assemble specialized content bundles**
  - Sports, foreign languages, lifestyle, kids, news, movies, etc.
  - "If the Big Ten Network were willing to give me a way to get that outside my cable network I would probably pay, since my cable provider doesn't offer it." – executive, major content owner
  - May increase overall revenue from video if meets previously unmet needs. However, users focused on a particular type of content may swap out traditional, comprehensive pay TV package
- **Mobile may be an opportunity to move quickly with comprehensive content**
  - "On the mobile side we don't really have a concern. We really don't see it competing with TV subscriptions." – Director, Discovery Communications

Source: Woodlawn Associates interviews and experience

Internet video could be $1B+ business

Pro-Forma Revenue, Internet Video Businesses

(Billions of $ annually)

ARPU \ Subs	5M	10M	15M
$8	0.5	1.0	1.4
$18	1.1	2.1	3.2
$45	2.7	5.4	8.1

Potential Collateral EBITDA Benefit, Wireless Business*

(Millions of $ annually)

ARPU ↑ \ Churn ↓	0	0.1%	0.2%
$0	0	362	723
$0.50	216	578	939
$1.00	432	794	1155

- **ARPUs at left could be for mobile, specialized content, and comprehensive content offers**
- **Our modeling suggests EBITDA margins of 17-24%**
  - Based on using SaaS and CDN partners. Could be higher if use internal assets
- **Key cost drivers:**
  - Cost of content
  - Network opex, including cost of content management system, ad server, storage, transcoding, and content delivery
  - CPGA – lower than traditional video distribution as no set-top box, installation, or truck roll
  - Churn – higher than traditional video distribution as lower consumer switching cost
- **Key risks**
  - Disappointing IP video performance
  - Low entry barriers causing lower margins
  - Consumers may not be interested in subscription internet video (c.f. lack of success of music subscription services)
  - Mobile video has not historically been a big success
- **Could cause significant collateral improvement in wireless or wireline triple-play businesses**
  - From improvements in ARPU, churn, or market share

Source: Woodlawn Associates analysis

Notes: * Assumes wireless business of 90M subs, $50 ARPU, 1.3% monthly churn, $300 CPGA, and 40% EBITDA margins (similar to AT&T Wireless and Verizon Wireless)

Woodlawn Associates

Management Consulting

- Growth strategy
- Restructuring
- Vertical / horizontal integration
- Competitor and market analysis
- Business development
- Strategic marketing
- Catalyzing innovation
- Strategic planning
- Scenario planning
- Portfolio optimization
- Business plans

- Process optimization
- Change management
- Organization design
- Pricing
- Customer retention
- Channel design
- Interim management
- Progress acceleration
- Goal setting and performance measurement
- Root-cause analysis

Industry Experience

- Cable TV networks and infrastructure
- Energy technology
- Gaming technology
- Medical devices
- Mobile devices and wireless networks
- Private equity
- Wind energy

- Acquisition / divestment strategy
- Acquisition / buyer screens and evaluation
- Negotiation support and valuation
- Financing strategy, fundraising
- Due diligence
- Integration or separation management
- Working capital management

Locations

- Chicago
- San Francisco

- Extensive experience in China, Japan, Southeast Asia, India, and Germany