Introduction

• Summary
  – OpenTV and Interactive Television
  – Value Chain Analysis
  – Television Trends
  – Porter’s Analysis of Five Forces
  – SWOT Analysis
  – Recommendations
  – Takeaways
OpenTV and Interactive Television

- OpenTV’s Value Proposition
  - End-to-end software that enables interactive television

- Definition:
  The possibility of interacting with TV programs:
  - Enhanced Broadcasting
  - Interactive Advertising
  - Net TV
  - T-Commerce
  - Video on Demand
  - Interactive Program Guide

- Shift from passive to active
  - couch potato to mouse potato
Value Chain Analysis of Interactive TV

<table>
<thead>
<tr>
<th>MSO</th>
<th>Set-Top Box Manuf’s</th>
<th>Real-Time OS</th>
<th>Middleware</th>
<th>Application Vendor</th>
<th>End Viewer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Satellite Terrestrial</td>
<td>Motorola Pace Scientific Atlanta</td>
<td>Power TV Wind River Mentor Graphics Windows CE</td>
<td>OpenTV Liberate</td>
<td>TV Networks Film Distributors Service providers</td>
<td>Consumers</td>
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- Consumers
- TV Networks Film Distributors
- Service providers
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- Windows CE
- Mentor Graphics
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TV industry at a glance

• Multichannel Video Distribution Market:
  – 100M Households , 80M Subscribers

• Two major players in US:
  – Cable (80% of subscribers)
    • mature, segmented, highly profitable, steady
    • analog network
    • $36.1 billion revenue (1999)
  – Direct Broadcast Satellite (DBS) (20%)
    • recent, technologically advanced, small, high growth
    • digital network
    • $5.3 billion revenue (1999)
Trends: Towards Interactive Television?

• Rapid growth in Digital Broadcast Satellite
  – 60-100% last year
• Rapid Digital Cable Deployment
  – competitive threat from DBS
  – FCC Digital TV Rollout Schedule
• Success of interactive television in Europe
• Growth in iTV revenue from advertisers, applications, services
• Forrester iTV User Survey Results
## Added Value by Player

<table>
<thead>
<tr>
<th>Player</th>
<th>Added Value</th>
</tr>
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<tbody>
<tr>
<td>MSOs</td>
<td>Revenue from new subscription, transaction fees from T-commerce and interactive advertising</td>
</tr>
<tr>
<td>Advertisers</td>
<td>Effective advertising, customer profile</td>
</tr>
<tr>
<td>Content &amp; Application Provider</td>
<td>Revenue from sale of interactive programs</td>
</tr>
<tr>
<td>Middleware</td>
<td>Revenue from sales, license &amp; transaction fees</td>
</tr>
<tr>
<td>STB Manufacturer, OS developer</td>
<td>Revenue from sales</td>
</tr>
<tr>
<td>Viewer</td>
<td>Enhanced Broadcasting, VOD, IPG, personalized services (banking, traffic information, local weather)</td>
</tr>
</tbody>
</table>
Five Forces within ITV

- **Industry Rivalry**
  - High
  - Buyers

- **Suppliers**
  - MSOs
  - Content Provider
  - Applications Providers
  - Middleware
  - STB manufactures
  - OS Developers
  - Advertisers

- **New Entrants**
  - High
  - Software Giants
  - Telecommunication companies
  - New MSOs

- **Substitutes**
  - Med/High
  - Viewers
  - Standard TV
  - Internet over PC
  - Other Established Media

- **Buyers**
  - Low
## SWOT of OpenTV

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td><strong>Weaknesses</strong></td>
</tr>
<tr>
<td>• Network effects</td>
<td>• No significant deployment in US</td>
</tr>
<tr>
<td>• Strategic alliances</td>
<td>• Lack of IPG solution</td>
</tr>
<tr>
<td>• Strong IP Portfolio</td>
<td>• Late to market in NG products</td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td><strong>Opportunities</strong></td>
<td><strong>Threats</strong></td>
</tr>
<tr>
<td>• Applications</td>
<td>• Competition from Microsoft, AOL, and others</td>
</tr>
<tr>
<td>• Microsoft stumble</td>
<td>• Slow adoption</td>
</tr>
<tr>
<td>• Lack of standard in ITV middleware</td>
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</tbody>
</table>
Current Strategy Versus Our Recommendations

• Current Strategy
  • Transition Open TV from Early Adopter Market to Early Majority
    – Attack the Satellite Service Sports Fanatics Niche
    – Create a “Whole Product” for its customer
    – Choose Non-interactive TV as its only competition
    – Create Market-Centric Value

• Future Niches
  – Local services
The Whole Product

- Satellite Providers
- Sporting Events Coverage
- Set-Top Boxes
- Customer Service
- Sales/Distrib./Installation

Open TV
Takeaways

• Idea or opportunity? Where’s the pain?
• Need for killer application
• Distribution roadblock – cable monopolies
• Next Big Thing – Dot com to Dot TV?
• T-Commerce – mass customization
• Extend core competencies out of middleware