Connected Life Market Watch

Transitions in Consumer Video Entertainment in the German Market

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## Connected Life Market Watch Program: Transitions in Consumer Video Entertainment

### Scope
- United States
- United Kingdom
- Brazil
- China
- Germany

### Approach

#### Market Watch Program
- Cisco IBSG’s recurring primary research program
- Monitors changing consumer behavior to identify key market transitions

#### Methodology
- Broadband consumers
- 20-minute online survey
- 5,500 total respondents
- December 2009 – January 2010

#### Segmentation
- Used proprietary scoring methodologies to identify consumer “technology” segments

Source: Cisco IBSG Connected Life Market Watch, 2010
Agenda

- Situation: Germany Video Market Overview
- Key Transitions: Consumers Taking Control
- Impact of Transitions in Consumer Video
- Going Forward: Trends to Watch
- Going Forward: Service Provider Opportunities
Situation: Germany Video Market Overview
Free-to-Air Content and a Few Strong Broadcasters Dominate TV Market

- Top 4 TV broadcast channels own about 50% market share
- Two public broadcasters (ARD & ZDF) lead the market and receive €7.3 billion in annual public funding
- Leading distribution media are satellite (43% of households) and cable (50%); digital terrestrial TV (DTT) and IPTV play only a niche role

Source: Bitkom, Goldmedia, 2007
Content Still Drives the Industry

- **Content** remains most important part of the experience, even as consumers explore new devices and new video sources.
- When consumers consider Internet-sourced video, they are interested in both traditional **professional content** (including TV programs, news, and movies) and **user-generated content** (UGC).

### Most Important Attributes to Video Experience
Factors ranked #1, by device

- **Simplicity**
- **Control**
- **Quality**
- **Content**

<table>
<thead>
<tr>
<th>Device</th>
<th>Simplicity</th>
<th>Control</th>
<th>Quality</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV</td>
<td>100%</td>
<td>90%</td>
<td>80%</td>
<td>50%</td>
</tr>
<tr>
<td>Computer</td>
<td>80%</td>
<td>60%</td>
<td>40%</td>
<td>30%</td>
</tr>
<tr>
<td>Portable Device</td>
<td>60%</td>
<td>40%</td>
<td>30%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010

### Interest in Viewing Internet Video on TV
By content type

- **TV Programs**
- **News Clips**
- **UGC** (YouTube, Facebook)
- **Movies**

Base: German broadband consumers
Broadband Consumers Are Investing Heavily in Home Video Experience

Average broadband household:

- 1.6 TVs, including 0.6 HDTV
- Spends €12 per month for pay-TV services
- Spends another €13 on other forms of video watched at home

<table>
<thead>
<tr>
<th>German Broadband Consumers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscribe to Cable/Satellite/Telco TV*</td>
<td>54%</td>
</tr>
<tr>
<td>Subscribe to premium movies</td>
<td>14%</td>
</tr>
<tr>
<td>Subscribe to online DVD rental (web-based service)</td>
<td>13%</td>
</tr>
<tr>
<td>Have at least one HDTV</td>
<td>52%</td>
</tr>
<tr>
<td>Have DVR</td>
<td>15%</td>
</tr>
<tr>
<td>Have gaming console with DVD functionality</td>
<td>27%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband consumers
Consumers Spend Significantly More Time on Internet than Watching TV

- Consumers spend more time in front of computer screen than TV screen.
- Entertainment-focused Internet time is less than TV time, but still significant.
- Total Internet time is about the same for all age groups.
- TV time is decreasing for younger groups.

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers
Entertainment is #1 Reason Consumers Use the Internet

- Entertainment is #1 reason consumers use the Internet
- Broadband consumers spend more than 25 hours per week on the Internet, with entertainment representing about 7% of those hours
- The Internet as entertainment doesn’t just appeal to early technology adopters
  - Late-market adopters spend more of their Internet time on entertainment than early adopters

Source: Cisco IBSG Connected Life Market Watch, 2010
Base: German broadband subscribers
Key Transitions: Consumers Taking Control
Consumers Are Taking Control of Video Entertainment Experience

- DVRs taught users they could take control of video experience
- This increased user control is driving four interrelated trends:
  1. Time shifting
  2. Device shifting
  3. Increased video-sourcing options (e.g., Internet)
  4. Increased spending control
- Together, these are part of larger viewer-controlled viewing trend

Source: *Time* Magazine, 2006; Cisco IBSG Connected Life Market Watch, 2010
Traditional TV Experience Is Changing

Consumers Are No Longer Making Appointments with Their TVs

- Consumers are changing their usage patterns
- They are no longer making appointments with their TVs
- They want to watch their video entertainment at the time they choose

Real-Time vs. Controlled Viewing

**Average Consumers (Percentage of Time Spent)**

- Real-Time Viewing: 82%
- Viewer-Controlled Viewing: 18%

**DVR Owners (Percentage of Time Spent)**

- Real-Time Viewing: 62%
- Viewer-Controlled Viewing: 38%

Base: German broadband consumers

Source: Cisco IBSG Connected Life Market Watch, 2010
TV-Content Walled Garden Is Cracking

Consumers Are Supplementing Linear TV with Other Video

Time Spent on Video Entertainment Weekly

- Portable devices
- Computer-based
- DVDs on TV
- VoD
- DVR
- Real-time TV

Source: Cisco IBSG Connected Life Market Watch, 2010

Time Spent on Video Entertainment (by Age)

- Real-time TV
- DVDs on TV
- DVR
- Computer-based
- Portable devices

Base: German broadband subscribers
Consumers Are More Aware of Choices in Video Entertainment

In an average month:

- 25% of German broadband consumers watch TV programs on Internet
- Broadband consumers watch about 2 hours of video from Internet
- 12% connect computer to TV
- Another 8% watch video on their mobile phones
- 14% of broadband consumers use their gaming consoles to watch DVDs
- 4% rent movies online from their gaming console

Source: Cisco IBSG Connected Life Market Watch, 2010
Many German Consumers Are Exploring Alternative Video Entertainment

Percentage of Broadband Users that Use Alternative Video Sources

Germany

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Video on a Computer</td>
<td>70%</td>
</tr>
<tr>
<td>Watch TV Programs via Internet</td>
<td>45%</td>
</tr>
<tr>
<td>Watch Video on a Portable Device</td>
<td>26%</td>
</tr>
</tbody>
</table>

United States

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Video on a Computer</td>
<td>75%</td>
</tr>
<tr>
<td>Watch TV Programs via Internet</td>
<td>52%</td>
</tr>
<tr>
<td>Watch Video on a Portable Device</td>
<td>40%</td>
</tr>
</tbody>
</table>

Brazil

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Video on a Computer</td>
<td>95%</td>
</tr>
<tr>
<td>Watch TV Programs via Internet</td>
<td>67%</td>
</tr>
<tr>
<td>Watch Video on a Portable Device</td>
<td>83%</td>
</tr>
</tbody>
</table>

United Kingdom

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Video on a Computer</td>
<td>68%</td>
</tr>
<tr>
<td>Watch TV Programs via Internet</td>
<td>61%</td>
</tr>
<tr>
<td>Watch Video on a Portable Device</td>
<td>38%</td>
</tr>
</tbody>
</table>

China

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Video on a Computer</td>
<td>99%</td>
</tr>
<tr>
<td>Watch TV Programs via Internet</td>
<td>90%</td>
</tr>
<tr>
<td>Watch Video on a Portable Device</td>
<td>88%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010
Today, Most Video Entertainment Is Viewed via TV

TV Is Consumers’ Preferred Device

- 52% of German broadband consumers have a high-definition television at home
- #1 reason consumers don’t watch more Internet video today is that they would rather watch on a TV screen than on a computer screen

But that is changing....

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers
Young Viewers Watch More than Twice as Much Non-TV Video as Average Broadband Users

- Average German broadband consumer spends 48 minutes per week watching video on a computer.
- Average 18- to 24-year-old broadband consumer spends twice that time, watching 1.5 hours of video on a computer per week.
- On average, German broadband consumers watch less than 10 minutes of video per week on portable devices, while 18- to 24-year-olds watch 20 minutes.

Source: Cisco IBSG Connected Life Market Watch, 2010
Yet Consumers Often Choose To Watch Video on Different Device

Many Consumers Watch Video on Their Computers To Time-Shift and Multi-task

- 70% of respondents watch video on computer an average of 1 hour and 10 minutes each week
  - 73% of this viewing takes place at home
  - 92% of 18- to 24-year-olds watch video on a computer; average 1 hour and 40 minutes per week
- 26% of respondents watch video using portable devices; average 38 minutes per week
  - 36% takes place at home

### Reasons for Watching Computer Video When at Home

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better for multi-tasking</td>
<td>35%</td>
</tr>
<tr>
<td>More control over WHEN I watch</td>
<td>32%</td>
</tr>
<tr>
<td>Better content choice</td>
<td>28%</td>
</tr>
<tr>
<td>Device is available</td>
<td>26%</td>
</tr>
<tr>
<td>Portability</td>
<td>18%</td>
</tr>
<tr>
<td>More interactive</td>
<td>15%</td>
</tr>
<tr>
<td>Better video experience</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: IBSG Connected Life Market Watch, 2010
Consumers of All Ages Watch All Types of Internet Video Content

Internet Video Is No Longer Defined Only by Young People Watching YouTube

Watching Internet Video (by Age)

<table>
<thead>
<tr>
<th>Age Range</th>
<th>Percent of Broadband Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>87%</td>
</tr>
<tr>
<td>25-29</td>
<td>84%</td>
</tr>
<tr>
<td>30-39</td>
<td>73%</td>
</tr>
<tr>
<td>40-59</td>
<td>67%</td>
</tr>
<tr>
<td>60+</td>
<td>65%</td>
</tr>
</tbody>
</table>

Time per Week

- 18-24: 49 min
- 25-29: 47 min
- 30-39: 23 min
- 40-59: 21 min
- 60+: 28 min

Watching Internet Video (by Content)

- User-created short clips (YouTube): 61%
- Professional short clips (news): 48%
- TV programs: 45%
- Movies: 30%
- Sporting events: 24%

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers
### Reasons for Watching / Downloading Online Video

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment when I have just a few minutes</td>
<td>58%</td>
</tr>
<tr>
<td>Content I can’t find on TV</td>
<td>50%</td>
</tr>
<tr>
<td>Stay up-to-date on news &amp; events</td>
<td>25%</td>
</tr>
<tr>
<td>Share with friends</td>
<td>23%</td>
</tr>
<tr>
<td>Fewer advertisements</td>
<td>19%</td>
</tr>
<tr>
<td>TV substitute at home</td>
<td>15%</td>
</tr>
<tr>
<td>To save money</td>
<td>10%</td>
</tr>
<tr>
<td>Portability</td>
<td>8%</td>
</tr>
<tr>
<td>TV substitute away from home</td>
<td>6%</td>
</tr>
</tbody>
</table>

- **Choice, control, and convenience** are driving Internet TV use.
- **“Snacking” and non-TV content** are key drivers.

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German Internet video users
Nearly 60% of Consumer Video Spending Is for Supplemental Options

- Consumers supplement their basic TV experience with as many as 7 other sources of video.
- Consumers can exert more immediate control over these *à la carte* options:
  - They have flexibility and can select the secondary video option that best suits the given situation.
  - In many cases, they can adjust their spending incrementally without entirely abandoning the service.

### German BB Consumers’ Monthly Video Spending

<table>
<thead>
<tr>
<th>Secondary Video</th>
<th>€13.42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Video</td>
<td>€9.53</td>
</tr>
</tbody>
</table>

- Premium movie channels
- Mail-based rentals
- VoD, PPV
- Rentals
- DVD purchases
- Internet downloads and subscriptions
- Kiosks

*Average monthly subscription for cable, satellite, or pay TV*

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers
Impact of Transitions in Consumer Video
Consumers Are Ready for New TV Services Such as Web Video to TV

Service Concept: Web Video to TV

- Simple and easy to watch different types of video available on Internet on your TV instead of on your computer
- Use TV's remote control to find and select program, movie, or clip from an Internet site and watch it directly on your TV
- Enabled through device attached to TV; separate from your TV service
- Still need TV service to access television channels, video on demand, and other services offered by TV service provider

Q: How interested would you be in this offering, if it were priced at a level you consider reasonable?

34% Significant Interest
20% Strong Interest
14% Base: German broadband subscribers

Source: Cisco IBSG Connected Life Market Watch, 2010
Web Video to TV Service Would Address Many Consumer Pain Points

- Moving Internet video to TV is important, but not only driver
- Consumers want control of when they watch their video entertainment
- Web video to TV addresses many other consumer pain points, from access, to content, to total spending

### Important Drivers of Interest in Web Video to TV

<table>
<thead>
<tr>
<th>Driver</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control when I watch</td>
<td>84%</td>
</tr>
<tr>
<td>No advanced planning required</td>
<td>78%</td>
</tr>
<tr>
<td>Access breadth of content</td>
<td>76%</td>
</tr>
<tr>
<td>Watch Internet video on TV screen</td>
<td>74%</td>
</tr>
<tr>
<td>Reduce spend on other video</td>
<td>69%</td>
</tr>
<tr>
<td>Create single entertainment source</td>
<td>67%</td>
</tr>
<tr>
<td>Control viewing (trick-play)</td>
<td>64%</td>
</tr>
</tbody>
</table>

Drivers receiving 6+ on 10-point scale

Source: Cisco IBSG Connected Life Market Watch, 2010
Profile of initial target segment for Web Video to TV:

- Slightly above average TV usage and spending
- Younger and more likely to have children living at home
- Have strong existing alternative TV behavior
- More likely to want to control their TV viewing and to choose viewing options that enable that control

Source: Cisco IBSG Connected Life Market Watch, 2010
Consumers Under 30 Are Less Tied to Traditional TV

<table>
<thead>
<tr>
<th></th>
<th>18-24</th>
<th>25-29</th>
<th>30+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch video on computer</td>
<td>1.7 hours</td>
<td>1.5 hours</td>
<td>0.95 hours</td>
</tr>
<tr>
<td>(hours per week)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watch TV via Internet</td>
<td>34%</td>
<td>15%</td>
<td>9%</td>
</tr>
<tr>
<td>(weekly or more)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect computer to TV</td>
<td>27%</td>
<td>37%</td>
<td>20%</td>
</tr>
<tr>
<td>(at any time)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase movies via gaming console</td>
<td>21%</td>
<td>22%</td>
<td>7%</td>
</tr>
<tr>
<td>(at any time)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spending on online video</td>
<td>€1.84</td>
<td>€1.29</td>
<td>$0.56</td>
</tr>
<tr>
<td>(average monthly)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>18-24</th>
<th>25-29</th>
<th>30+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch TV on TV</td>
<td>16 hours</td>
<td>14 hours</td>
<td>19 hours</td>
</tr>
<tr>
<td>(hours per week)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Real-time viewing</td>
<td>65%</td>
<td>56%</td>
<td>63%</td>
</tr>
<tr>
<td>(as percent of total video entertainment)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly German TV spending</td>
<td>€8.01</td>
<td>€8.82</td>
<td>€12.82</td>
</tr>
<tr>
<td>(average per household)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current TV cable/satellite subscribers likely to cancel subscription</td>
<td>13%</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>(if Internet video available on TV)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers
Some Groups Are Abandoning Traditional Pay TV

Internet Video Dominant

- 8% already use Internet video for majority of video viewing
- 10% of this Internet-video-dominant group do not subscribe to pay TV
- Another 4% of the Internet-video-dominant respondents would cancel pay TV if Internet video were easily accessible via TV
- This group is younger and more likely to live with roommates or parents and, in general, spend more time on the Internet

A very small group (2.6%) of consumers has no TV service at all.
They use only their computer and/or portable devices to meet their video entertainment needs.

Source: Cisco IBSG Connected Life Market Watch, 2010
Base: German broadband subscribers
However, Traditional TV Has Enduring Appeal in Key Market Segments

- Older consumers spend more time & money on traditional TV.
- Presence of children has little influence on parents’ type of viewing.
- While Internet video is in high demand, time-shifting is still strongly underutilized (low penetration of DVR in Germany).
- Low likelihood to cut the cord for traditional TV.

Source: Cisco IBSG Connected Life Market Watch, 2010
For Some Consumers, Internet Video Is Cannibalizing Traditional Linear TV

- For 73% of consumers, Internet TV viewing has not impacted their time watching TV
  - Others (16%) report some replacement effect
  - 11% report watching more TV, supporting theory that the Internet can find new user bases and/or help keep users loyal

- There is more cannibalization among younger consumers
  - 24% of Internet TV viewers aged 18-24 say they watch less TV on TV since they began watching Internet TV

Source: Cisco IBSG Connected Life Market Watch, 2010

Change in Consumer TV Time-Spend After Beginning To Watch Internet TV

Q. Since you began watching TV programs on the Internet, do you spend more, less, or the same time watching TV programs on a television?

Base: German Internet TV viewers
Internet Video Could Threaten Core SP Businesses

Greatest Threat Is in Secondary Video, but New Alternative Services Could Touch Core SP Markets

If you had…

- **Free** access to *web video to TV*
- Easy ability to watch all Internet video content on your TV
- On-demand access to prime-time TV shows, but **not** your regular TV service or your TV lineup as it airs . . .

...Would you make any changes to your current TV service package?

<table>
<thead>
<tr>
<th>Potential To Cancel Pay-TV Service</th>
<th>Percentage of pay-TV subscribers who would cancel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Internet TV weekly</td>
<td>7%</td>
</tr>
<tr>
<td>No children at home</td>
<td>6%</td>
</tr>
<tr>
<td>Less than $50K income</td>
<td>5%</td>
</tr>
<tr>
<td>Average subscriber</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential to Cancel Premium Movie Subscription</th>
<th>Percentage of premium movie channel subscribers who would cancel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Watch Internet TV weekly</td>
<td>9%</td>
</tr>
<tr>
<td>No children at home</td>
<td>8%</td>
</tr>
<tr>
<td>Less than $50K income</td>
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</tr>
<tr>
<td>Average subscriber</td>
<td>7%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers
Evaluating the Long-Term Threat

Will 20-Somethings’ Attachment to Pay TV Change as They Age?

What’s Likely To Change
- More disposable income
- Investment in home technology
- Time spent at home
- Degree of “busy-ness”
- Household decisions are compromises based on interest and needs of multiple people

What’s Likely To Stay the Same
- General level of technology comfort
- Awareness of options
- Desire for control, choice, and convenience

Market Evolution
- In the future, will these customers have the same options as in today’s market?
- Will new options make it easier to source video from alternative sources and watch it at home on TV?

Source: Cisco IBSG Connected Life Market Watch, 2010
Going Forward:
Key Trends To Watch
Trends To Watch: Moving Internet Video to the TV

The latest TVs & consumer electronics products make it easier to watch Internet video on TV

- 23% of German broadband consumers have already connected their computer to the TV
- 3% of German broadband consumers have already connected their computer to the TV

As Internet video moves to the TV, usage patterns will shift significantly

- Today, 93% of video entertainment is viewed on TV; it is the preferred viewing device
- #1 reason consumers don’t watch more Internet video is because they’d rather not watch their entertainment on a computer
- As consumer electronics offers make it easier to access Internet-sourced video on TV, usage patterns could shift rapidly

Source: Cisco IBSG Connected Life Market Watch, 2010
Quality Can Impact Internet Video Use

- Only 15% of Internet video viewers regard quality as poor or very poor.
- Positive perception may be related to low expectations.
  - 25% of Internet TV viewers say that quality limits them from watching more Internet video.
- With improved quality, 22% of Internet video viewers, and 26% of weekly viewers, would spend more time watching TV on the Internet.
- As competitors match each other in content and control capabilities, quality will rise as competitive differentiator.

Percentage of Consumers Who Limit Internet Video Viewing Due to Quality

- Weekly: 19%
- Monthly: 25%
- Infrequent watchers: 29%
- All Internet video watchers: 24%

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German Internet video watchers
Impact: Quality Improvements and TV Accessibility Could Boost Internet Video

- Major protections for traditional pay TV include screen preference, business models that enforce time delays, and video quality.
- The challenge is that these protections are not fully in the control of service providers.
- Content distribution policy changes and technology developments can drastically impact consumer behavior.

### Reasons Consumers Don’t Watch More Video on the Internet

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer screen</td>
<td>48%</td>
</tr>
<tr>
<td>No need</td>
<td>28%</td>
</tr>
<tr>
<td>Wait time to watch</td>
<td>27%</td>
</tr>
<tr>
<td>Quality is poor</td>
<td>11%</td>
</tr>
<tr>
<td>Computer is not advanced enough</td>
<td>11%</td>
</tr>
<tr>
<td>Like to watch with other people</td>
<td>10%</td>
</tr>
<tr>
<td>No obstacle. I use Internet for all my needs</td>
<td>10%</td>
</tr>
<tr>
<td>No interesting video content on Internet</td>
<td>9%</td>
</tr>
<tr>
<td>Slow video downloads</td>
<td>8%</td>
</tr>
<tr>
<td>Can't get HD video on the Internet</td>
<td>5%</td>
</tr>
<tr>
<td>Search is frustrating</td>
<td>5%</td>
</tr>
<tr>
<td>Technology is difficult to use</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010
Base: German broadband subscribers
### Trends To Watch: TV Screen Becomes New Internet Screen

#### As widgets proliferate, consumers may come to recognize TV as an access point to Internet

- In January 2009, Yahoo! announced distribution partners for its TV widgets. Today, more than two dozen widgets are available from Vizio, Samsung, LG, and Sony.
- Three weeks after Verizon FiOS launched updated widgets, it reported that “millions” of Tweets and Facebook gallery photos had been viewed by FiOS TV subscribers on TV.

#### This will be a learning year for consumers

- Today, only 1 out of 3 German broadband consumers expresses interest in accessing Internet content from the TV.
- However, in aided discussions, interest grows.

#### Market impact may not be in competitive differentiation, but in consumer perception

- Cisco IBSG expects competitive differentiation in GUI and general ease of use versus exclusive widgets or applications.
- The significance of TV widgets may not be in the competitive edge they deliver, but in their role in fundamentally changing the way consumers view their TV screen—opening the door for consumer telepresence and other services.

Source: Cisco IBSG Connected Life Market Watch, 2010; company reports; Cisco Canvas Focus Groups, 2010
## Trends To Watch: Introduce Social Behavior into TV

“TV is fundamentally a social experience, and the only reason people haven’t engaged socially with their TV screens to date is that they haven’t had a convenient way to do so.”  
—Forrester, August 2009

### 4 Potential Social TV Developments

<table>
<thead>
<tr>
<th>Applications that….</th>
<th>TV Viewing Behavior Is Complex</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enhance a live group experience</td>
<td></td>
</tr>
<tr>
<td>2. Create a “virtual” group experience, watching TV with people in other locations</td>
<td></td>
</tr>
<tr>
<td>3. Foster interaction with the TV programming itself (decide plot lines, vote on reality winners)</td>
<td></td>
</tr>
<tr>
<td>4. Create a peer recommendation engine and commentary on viewing</td>
<td></td>
</tr>
</tbody>
</table>

### TV Viewing Behavior

- People watch TV alone about half the time
- People multi-task while watching TV about 40% of the time

### The Value of Social TV Is Unclear to Consumers

- Only 10% say the desire to watch with others prevents them from watching more Internet TV
- Only 19% of broadband consumers express interest in friend-to-friend social TV service

Source: Cisco IBSG Connected Life Market Watch, 2007, 2010; Forrester, 2009
Going Forward: Service Provider Opportunities
SPs Are Strongly Positioned To Deliver Internet Video to Consumers

- 51% of consumers prefer an SP to deliver web video to TV service
- SPs can address consumers’ concerns, including up-front cost and quality
- SPs should work with retailers to optimize offers that require consumers to buy separate device
  — 73% would buy the enabling device at a consumer electronics or Internet retailer
- This preferred position could change quickly if any player launches aggressively

Source: Cisco IBSG Connected Life Market Watch, 2010
CE Manufacturers Do Not Currently Have Edge in Device Choice

- Consumers prefer to enable their *web-video-to-TV* service through stand-alone service-specific devices (such as Roku or Apple TV), or existing set-top boxes

- Price was key criteria for 32% of respondents; other factors were more important for 68%

- Easy installation and limiting number of devices in home were also important

**Web Video to TV: Preferred Device**

- TV 27%
- Set-top box 22%
- Stand-alone device—13%
- Other—12%
- Blu-ray disc player—11%
- Home media server—9%
- Game console—6%

**Device Selection Criteria** (select all that apply)

- Least expensive option 32%
- Simplest to install 27%
- Limit in-home devices 22%
- Use as entertainment hub 13%
- Already plan to purchase 10%
- Latest, most advanced device 8%
- Other 11%

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Interest in *web video to TV*
# SPs Have Many Options in Developing Their Advanced Video Strategy

## Consumer Interest in Select Advanced Video Service Concepts

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Interest (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service that makes it easy to move digital content such as photos, music, and videos <em>from</em> any TV or computer in the home <em>to</em> any other TV or computer in the home</td>
<td>36%</td>
</tr>
<tr>
<td>Feature that enables you to choose from different camera angles to view your show</td>
<td>29%</td>
</tr>
<tr>
<td>&quot;Friend-to-Friend TV&quot; feature that enables you to invite friends to participate in interactive chat sessions while you watch TV and to share the same viewing experience</td>
<td>18%</td>
</tr>
<tr>
<td>Feature that enables you to use your TV to retrieve information and videos about the program you are watching, while you are watching it</td>
<td>35%</td>
</tr>
<tr>
<td>Service that provides quick access to a selection of Internet sites directly from your TV</td>
<td>29%</td>
</tr>
</tbody>
</table>

Source: Cisco IBSG Connected Life Market Watch, 2010

Consumers rating interest 6+ on a 10-point scale
Service Provider Next Steps: Preparing for Video Disruption

- Consumer video entertainment is poised for significant disruption
- As incumbents, SPs are strongly positioned, but many factors outside their control could alter the market landscape and drive rapid changes
- To prepare for the disruption, SPs can:
  1. Develop services, such as web video to TV, that provide consumers with more control
  2. Stay ahead of changes in the video experience, such as interactivity and TV-based Internet access
  3. Fully take advantage of monetization options to capture and retain value across the complete portfolio and full customer lifecycle

Source: Cisco IBSG Connected Life Market Watch, 2010