Connected Life Market Watch

Transitions in Consumer Video Entertainment in the German Market

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March 2011

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

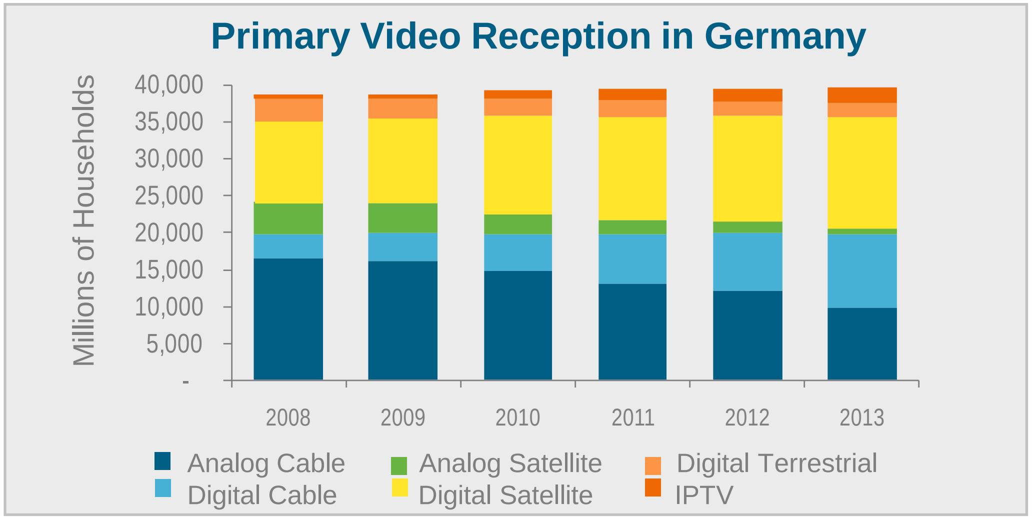
Agenda

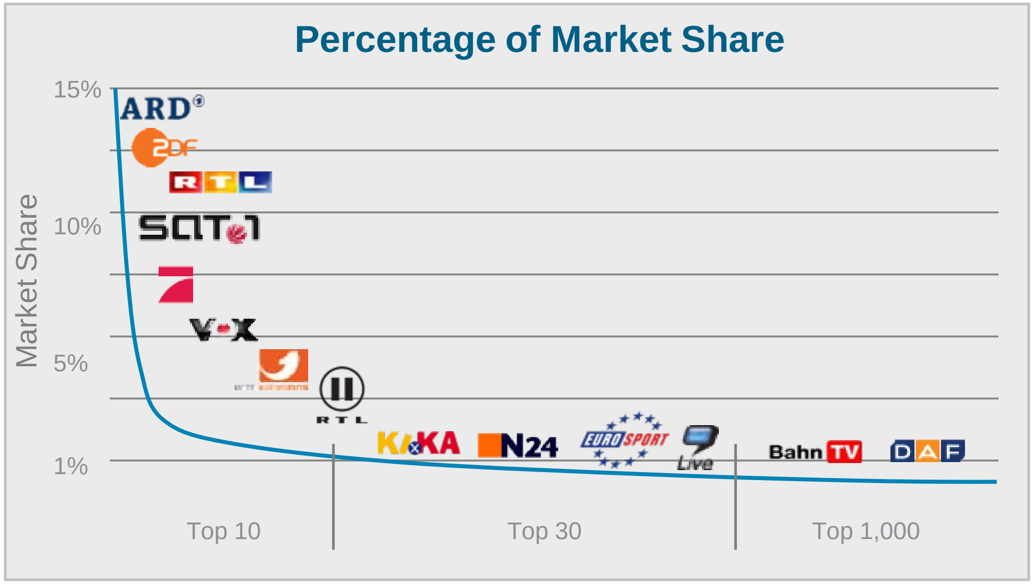
- Situation: Germany Video Market Overview
- Key Transitions: Consumers Taking Control
- Impact of Transitions in Consumer Video
- Going Forward: Trends to Watch
- Going Forward: Service Provider Opportunities

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

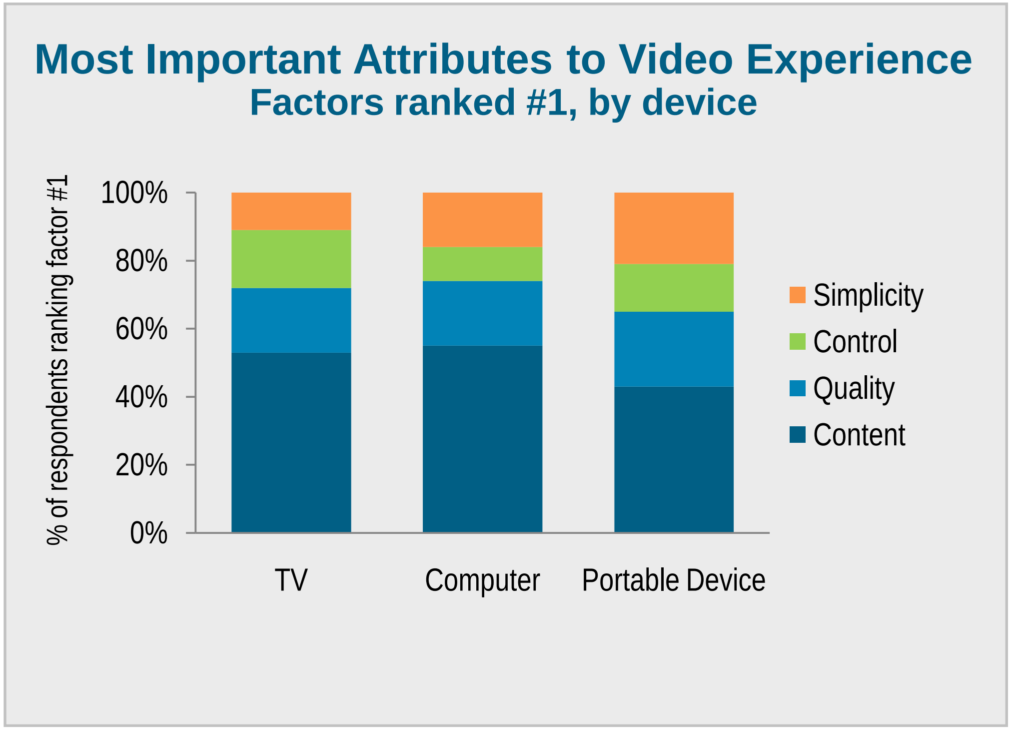


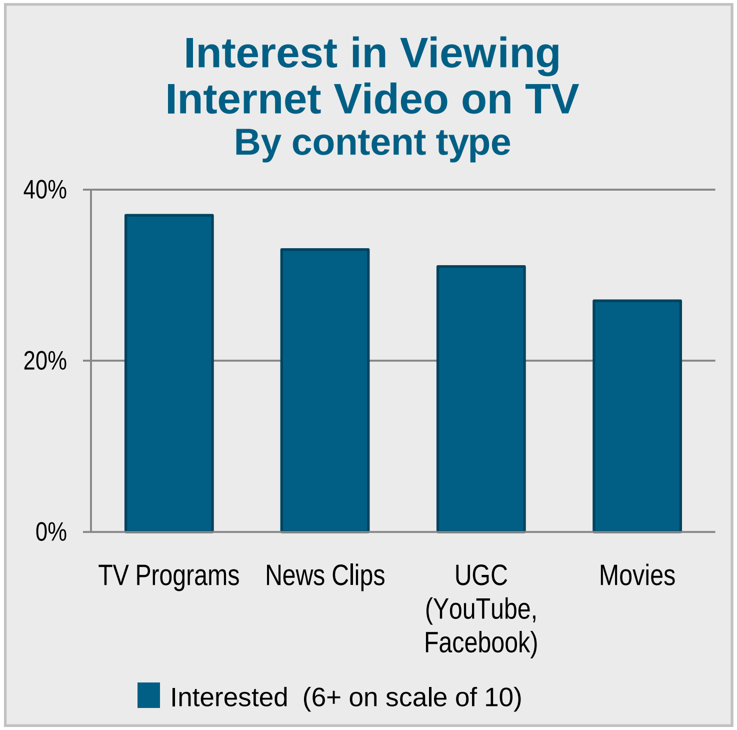


Source: Bitkom, Goldmedia, 2007

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)





Source: Cisco IBSG Connected Life Market Watch, 2010

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

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

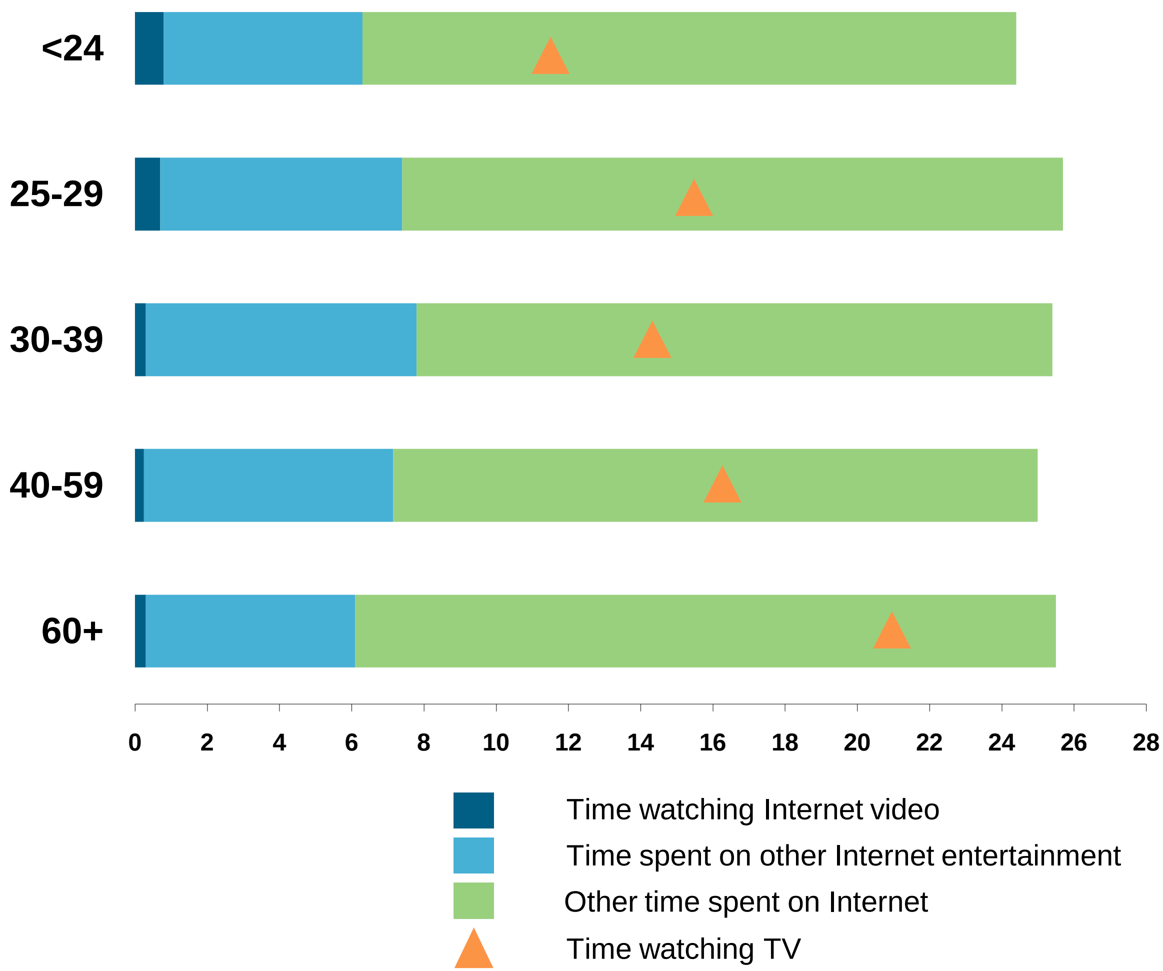
Source: Cisco IBSG Connected Life Market Watch, 2010

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

Internet and TV Viewing by Age

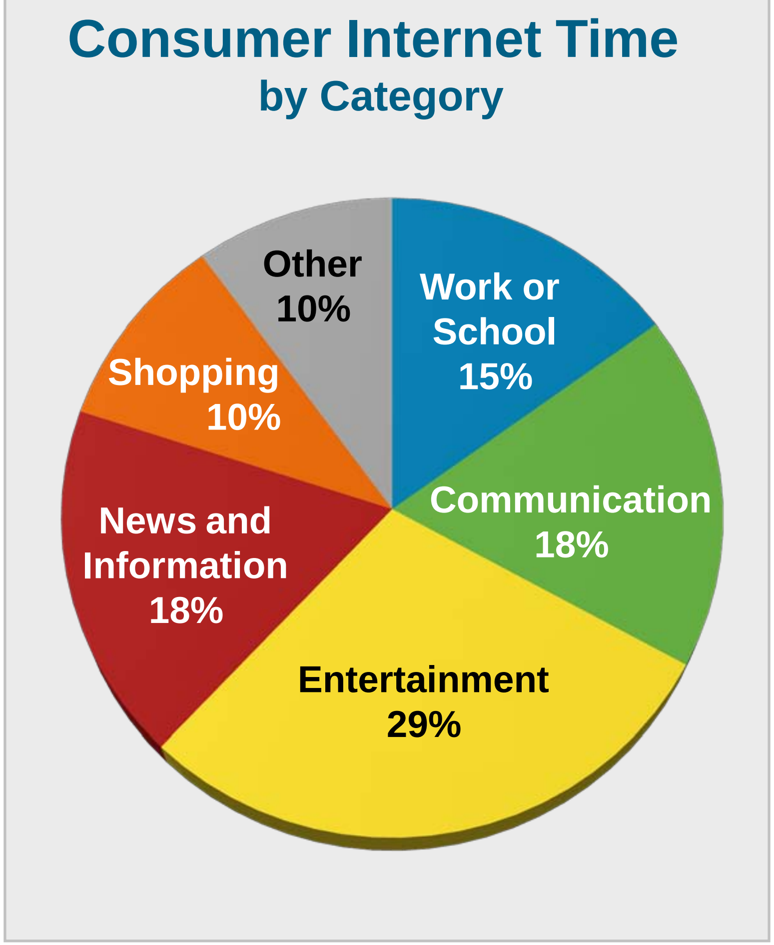


Source: Cisco IBSG Connected Life Market Watch, 2010

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



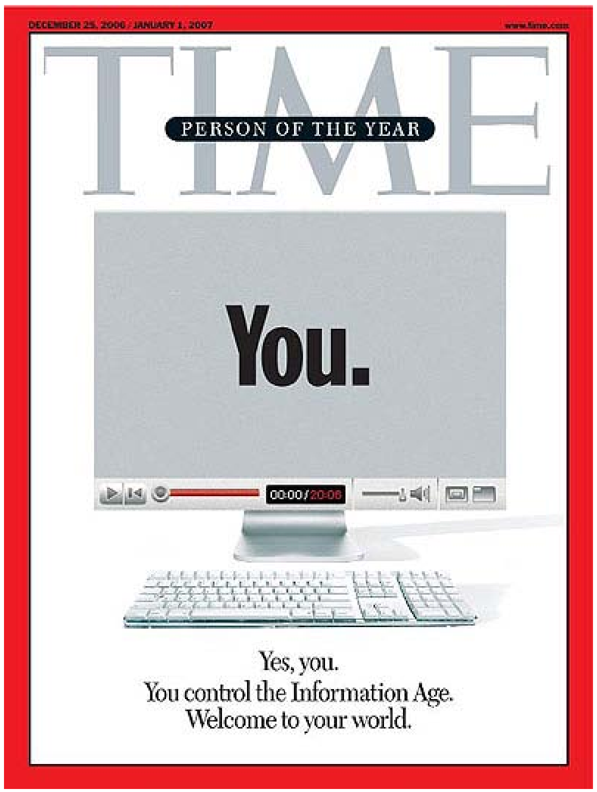
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

Key Transitions:
Consumers Taking Control

Consumers Are Taking Control of Video Entertainment Experience

2006 *TIME* Magazine Person of the Year



Consumers got the message

- 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

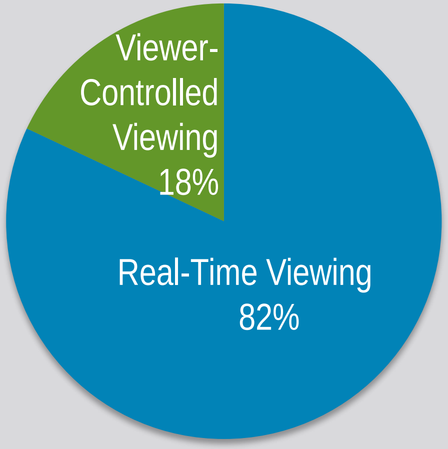
Traditional TV Experience Is Changing

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

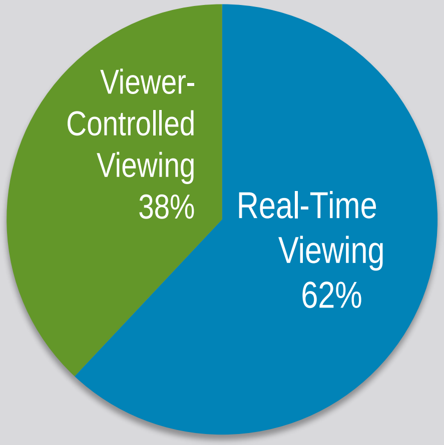
Real-Time vs. Controlled Viewing

Average Consumers
(Percentage of Time Spent)



Base: German broadband consumers

DVR Owners
(Percentage of Time Spent)



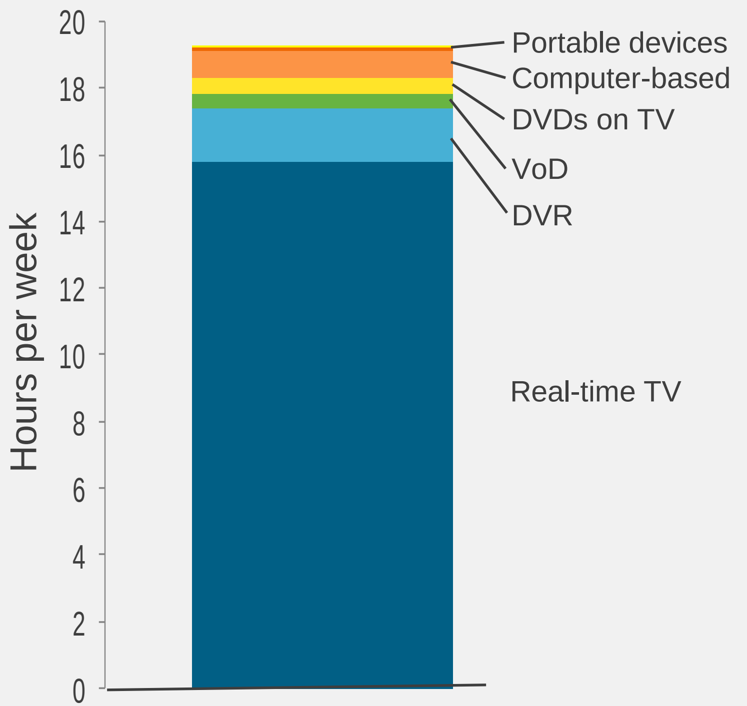
Base: German broadband consumers with DVRs

Source: Cisco IBSG Connected Life Market Watch, 2010

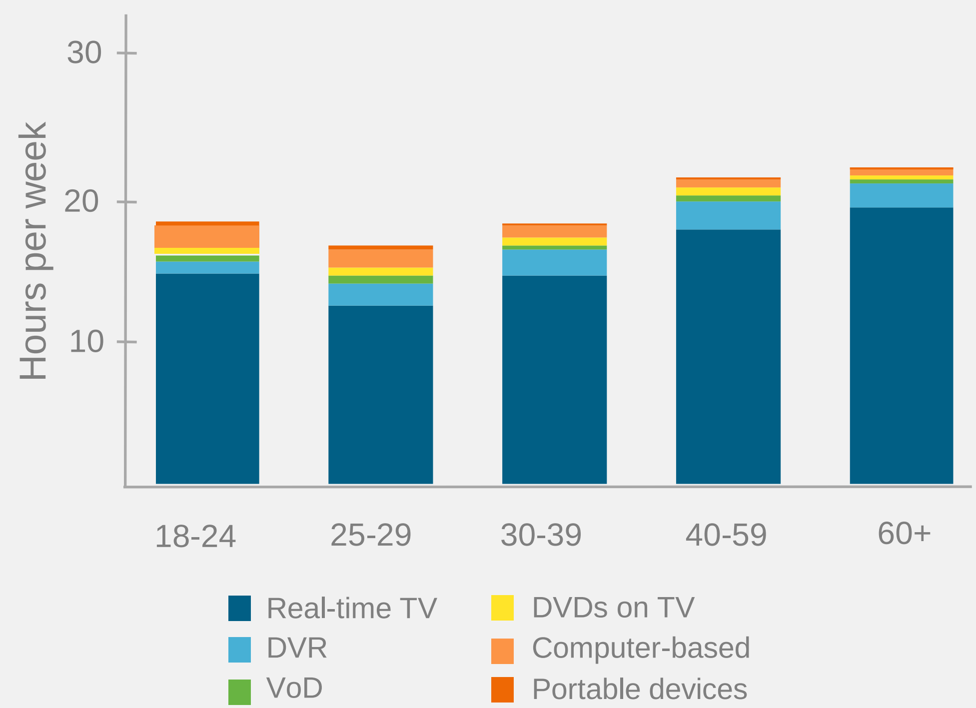
TV-Content Walled Garden Is Cracking

Consumers Are Supplementing Linear TV with Other Video

Time Spent on Video Entertainment Weekly



Time Spent on Video Entertainment (by Age)



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

Consumers Are More Aware of Choices in Video Entertainment

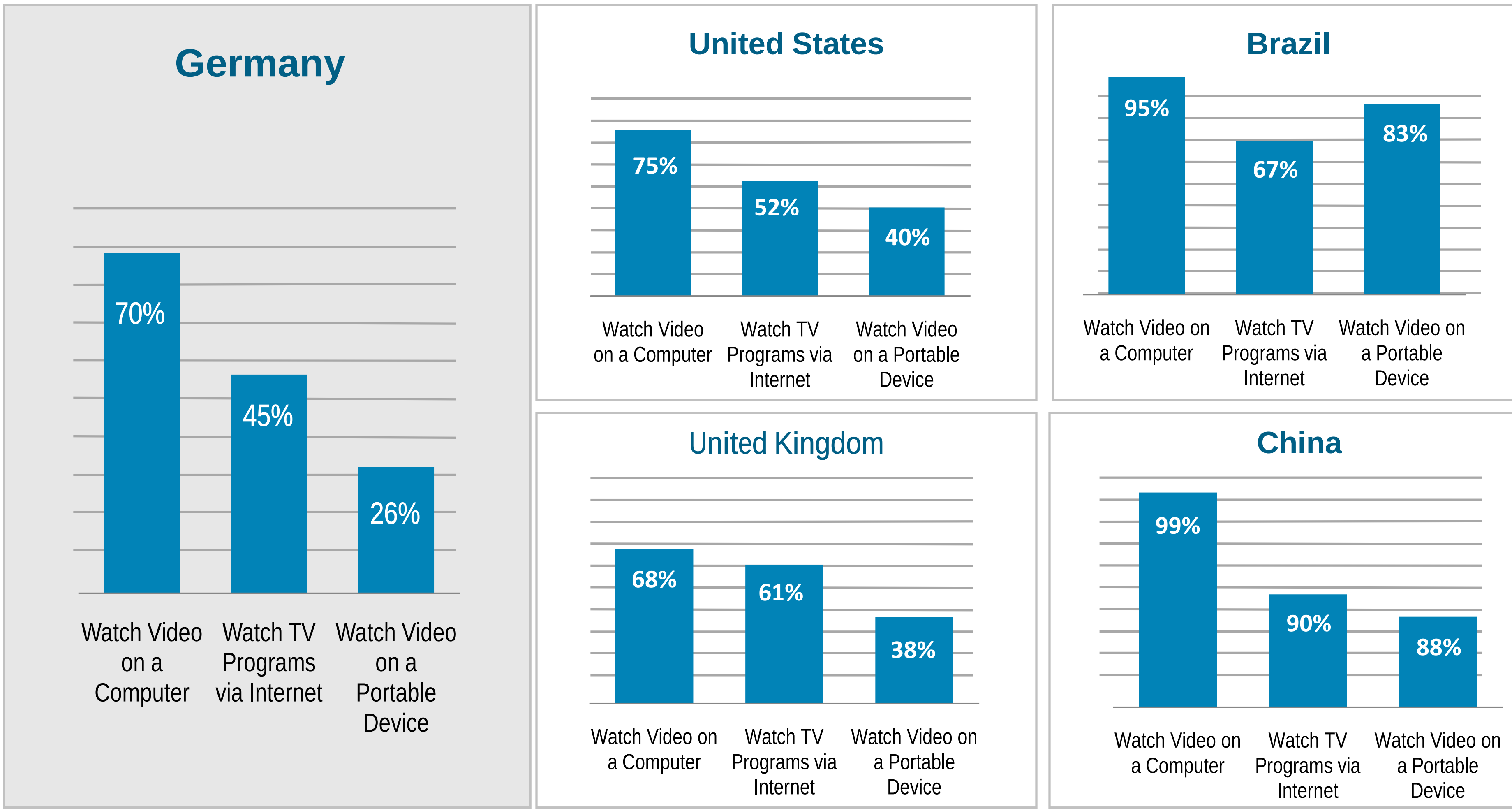
In an average month:

- 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



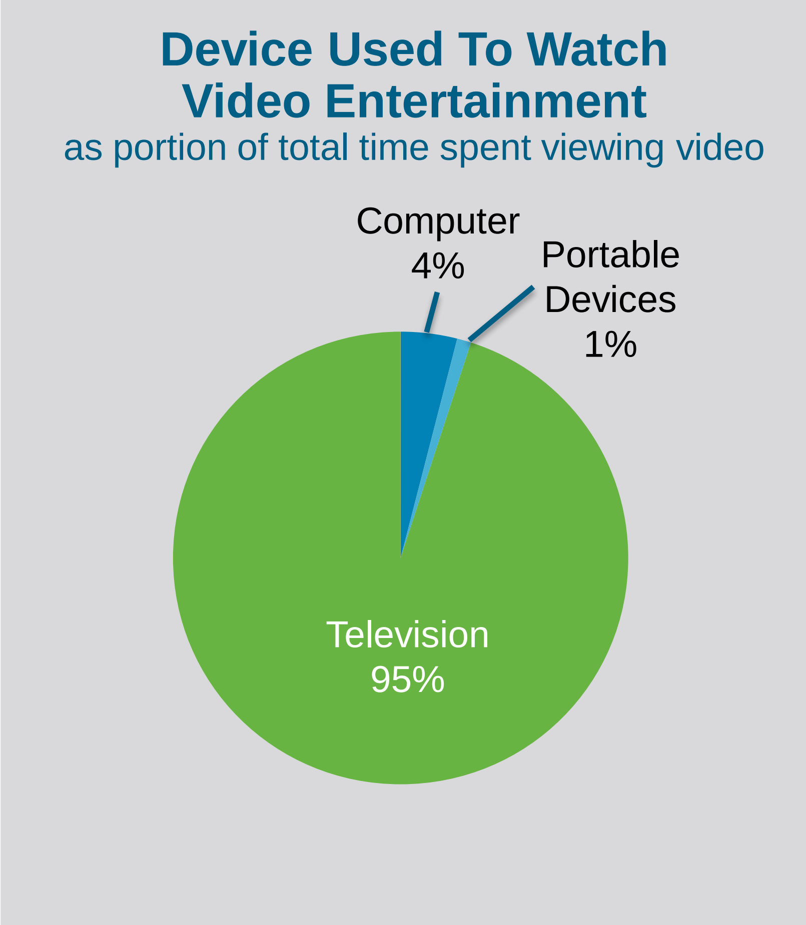
Source: Cisco IBSG Connected Life Market Watch, 2010

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

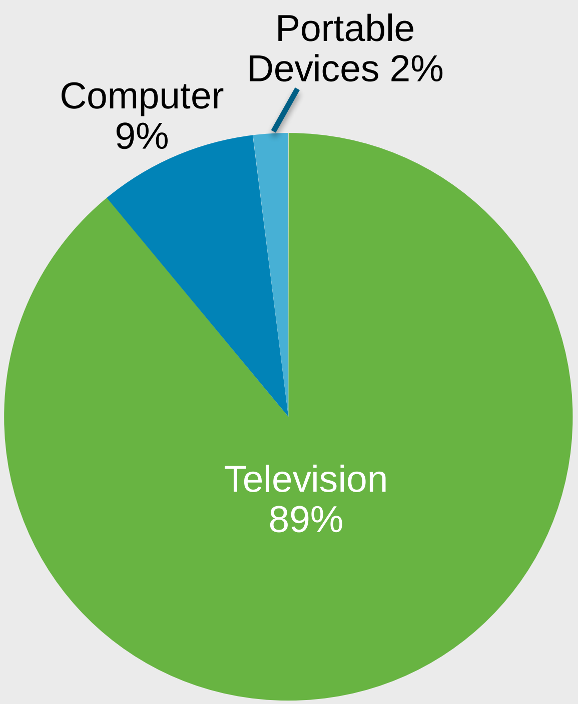
Base: German broadband subscribers

Young Consumers Are Spending More Time Watching Video on Non-TV Devices

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

Device Used To Watch Video Entertainment
as portion of total time spent viewing video



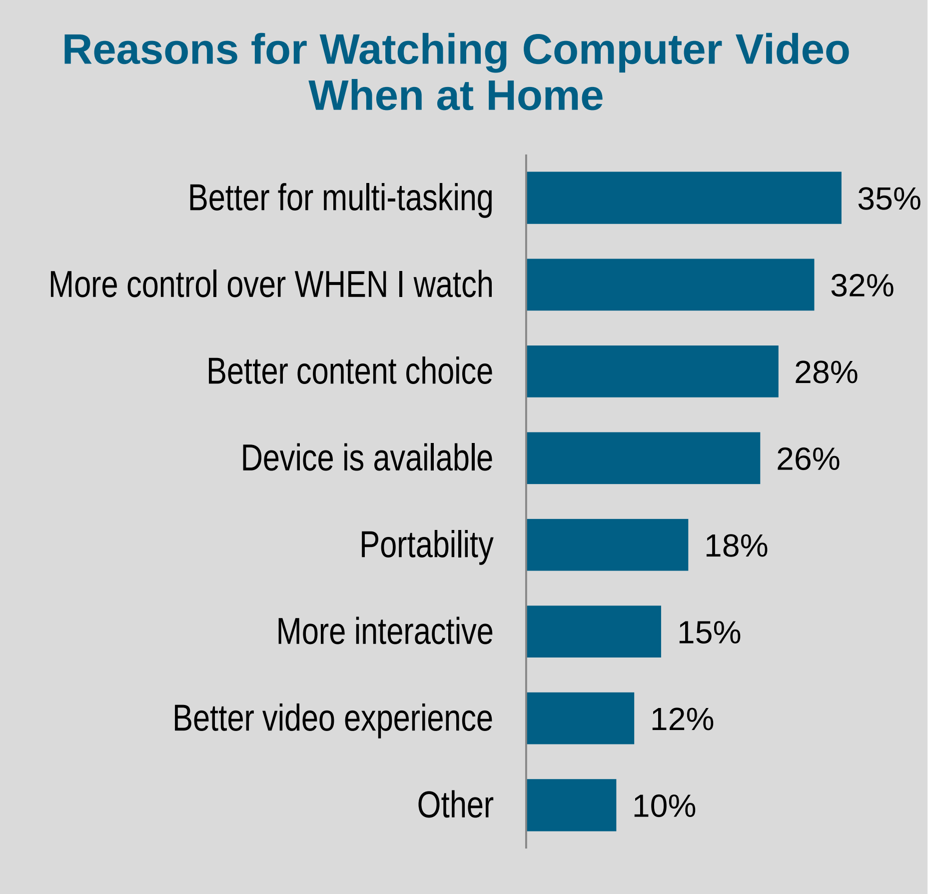
Base: German Broadband Consumers 18–24 Years Old

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

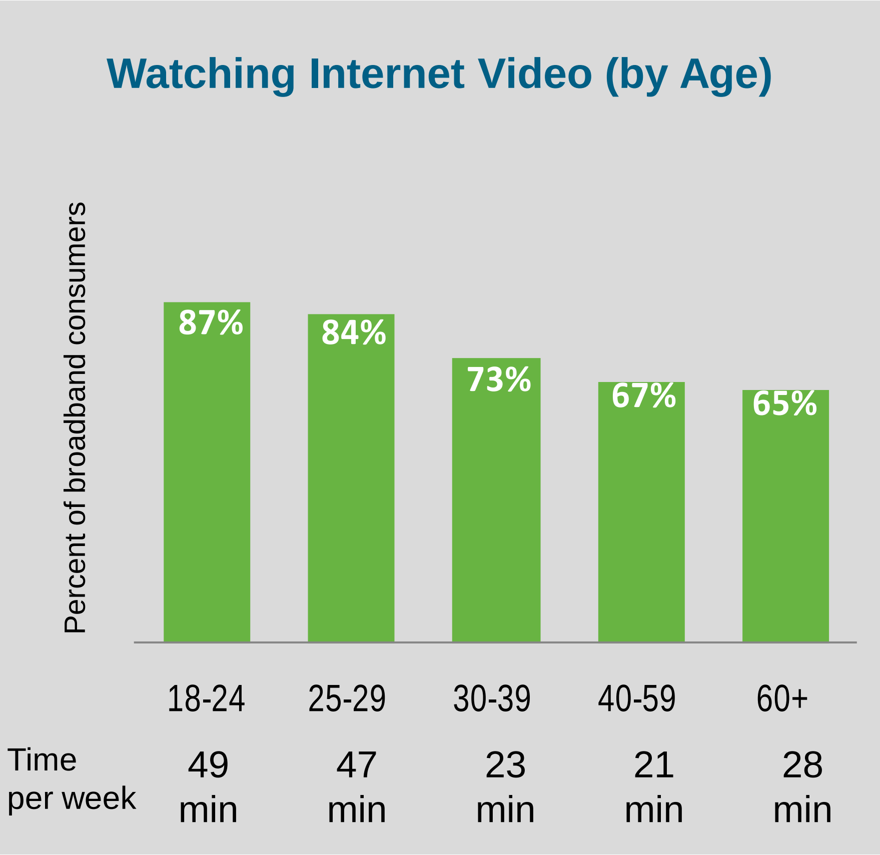


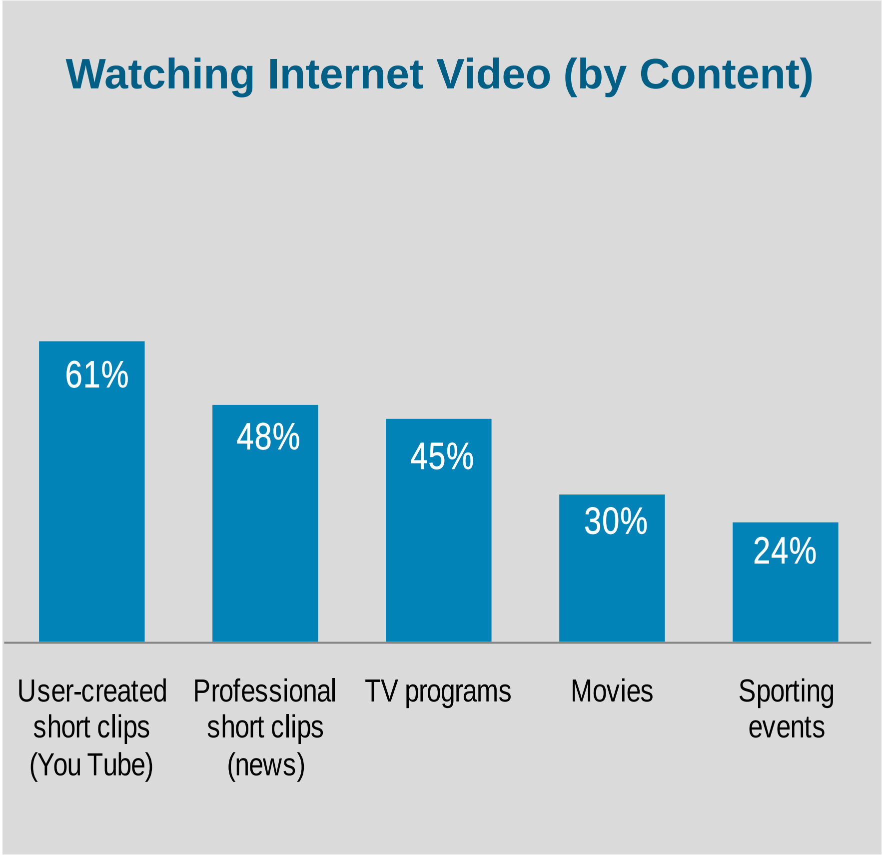
Source: IBSG Connected Life Market Watch, 2010

Base: Watch video on computer at home

Consumers of All Ages Watch All Types of Internet Video Content

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





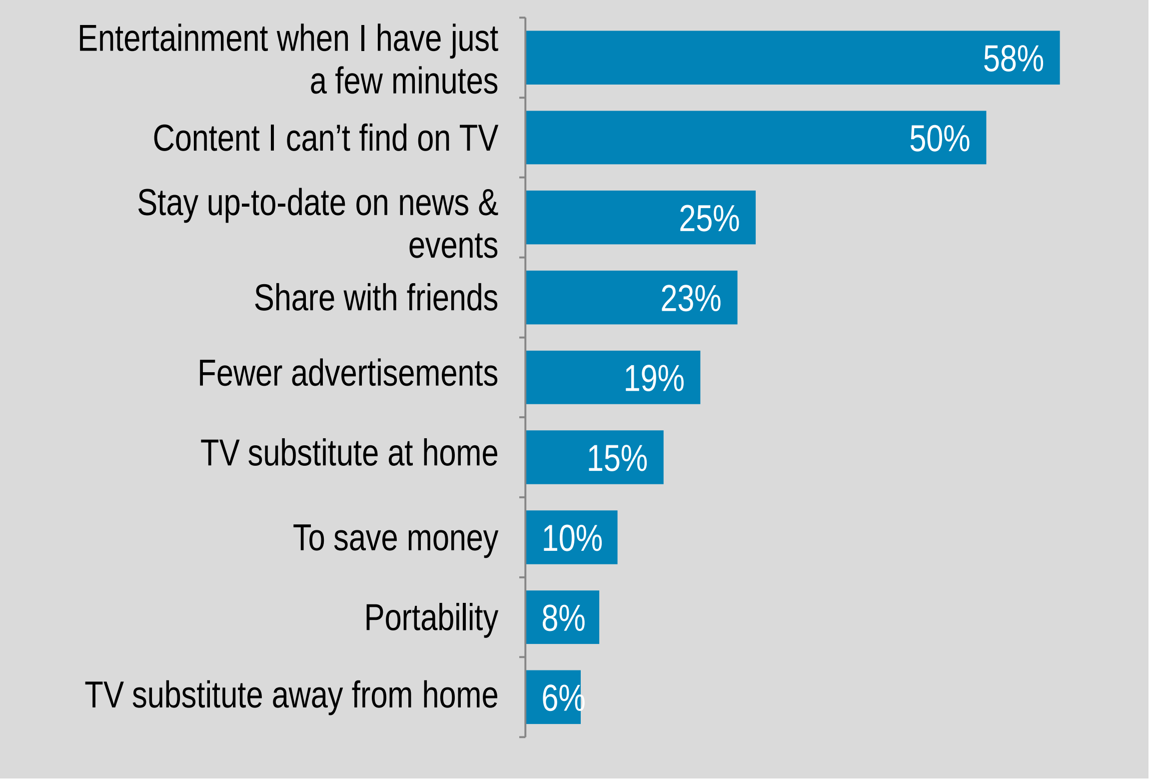
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

Internet Video Has Different Value Proposition from Traditional TV

Reasons for Watching / Downloading Online Video

- Choice, control, and convenience are driving Internet TV use
- "Snacking" and non-TV content are key drivers



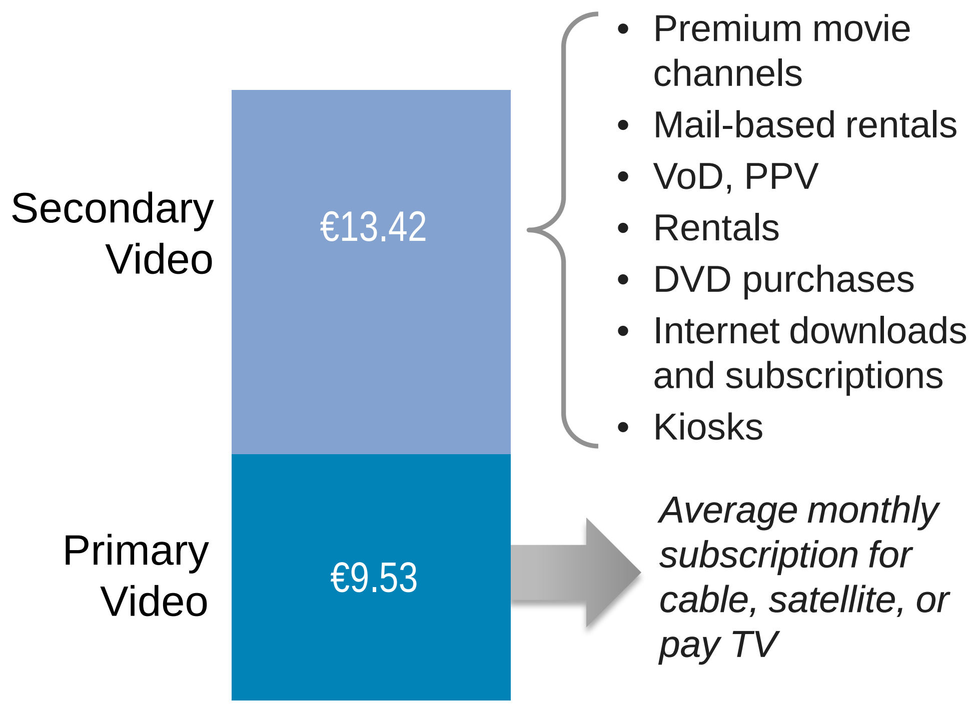
Source: Cisco IBSG Connected Life Market Watch, 2010

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 *a 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



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

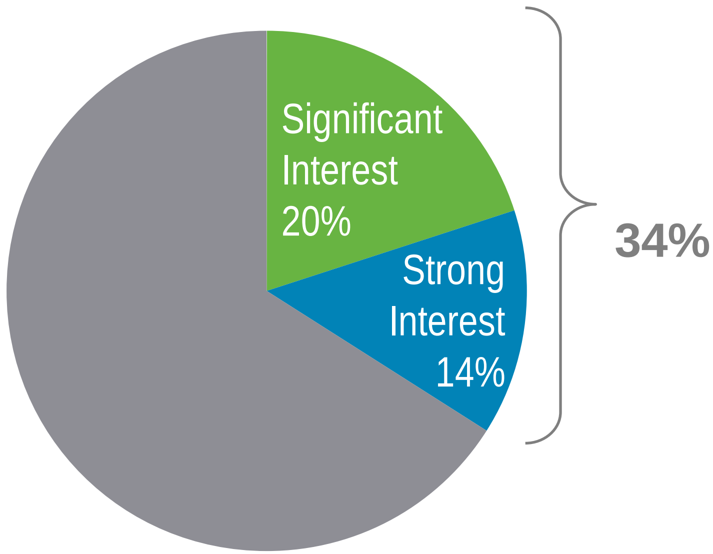
Impact of Transitions in Consumer Video

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

Consumer Interest in Service that Simply & Easily Enables Internet Video on TV



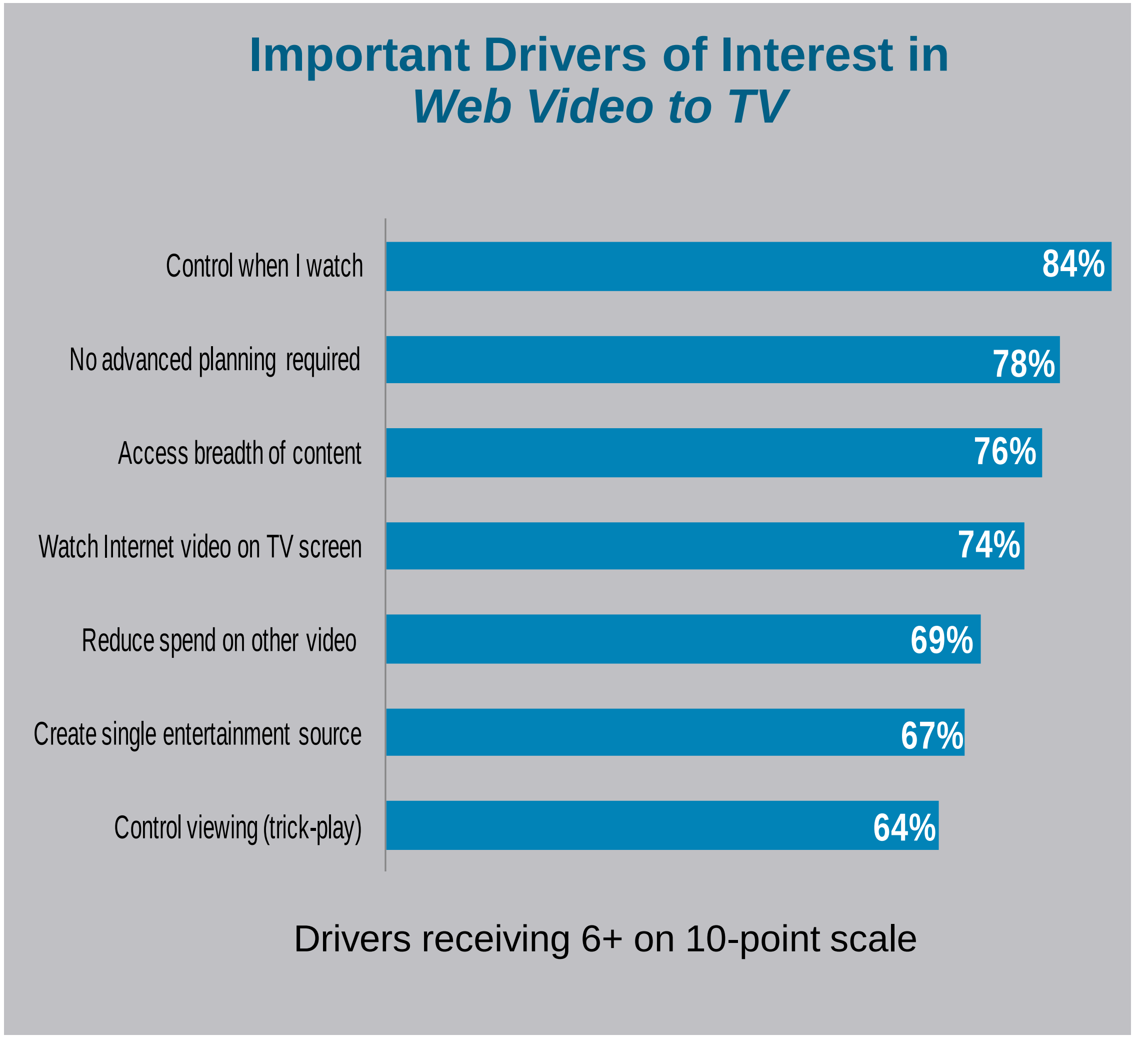
Q: How interested would you be in this offering, if it were priced at a level you consider reasonable?

Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

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



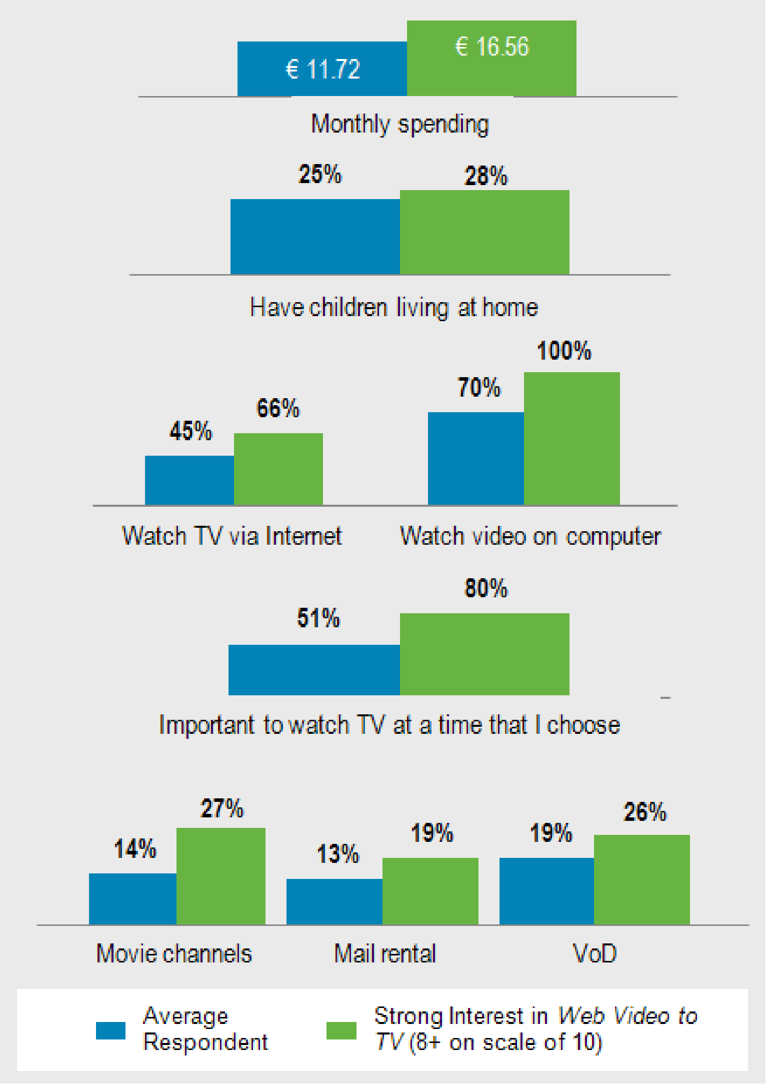
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Any Interest in *Web Video to TV*

Concept Attracts Average Consumers Who Want To Control TV Experience

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

Higher Use of Alternative

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

Lower Use of Traditional

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

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.

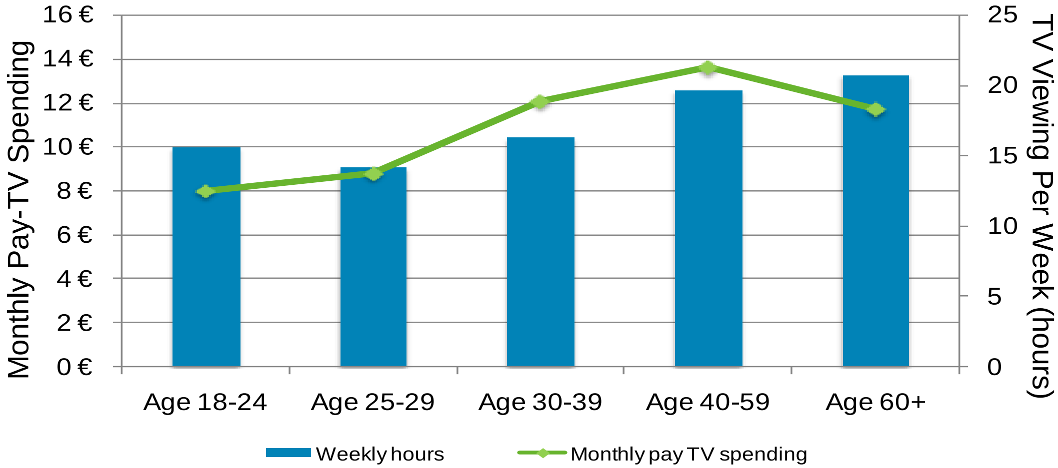
They use only their computer and/or portable devices to meet their video entertainment needs.

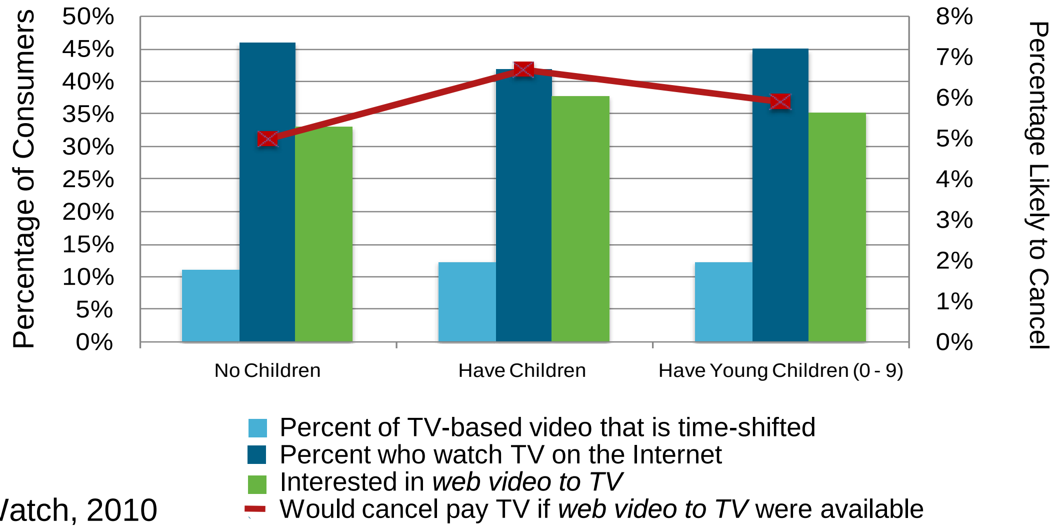
Source: Cisco IBSG Connected Life Market Watch, 2010

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



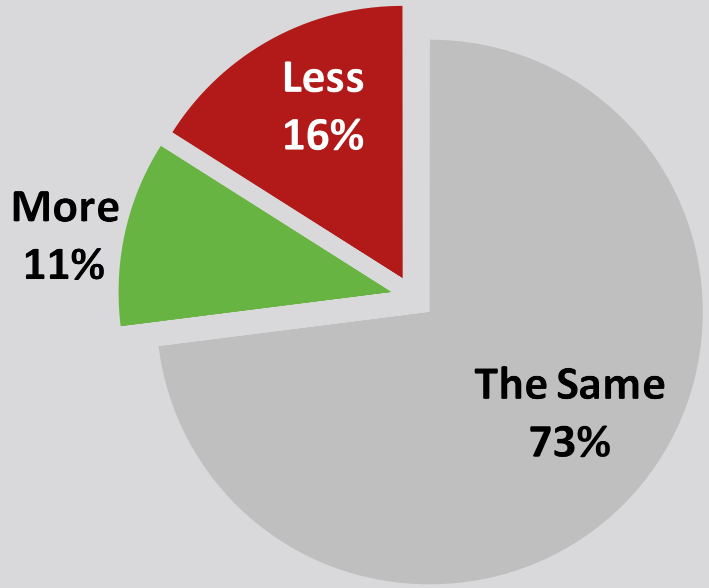


Source: Cisco IBSG Connected Life Market Watch, 2010

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

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?

Source: Cisco IBSG Connected Life Market Watch, 2010

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?

Potential To Cancel Pay-TV Service
(Percentage of pay-TV subscribers who would cancel)

Potential to Cancel Premium Movie Subscription
(Percentage of premium movie channel subscribers who would cancel)

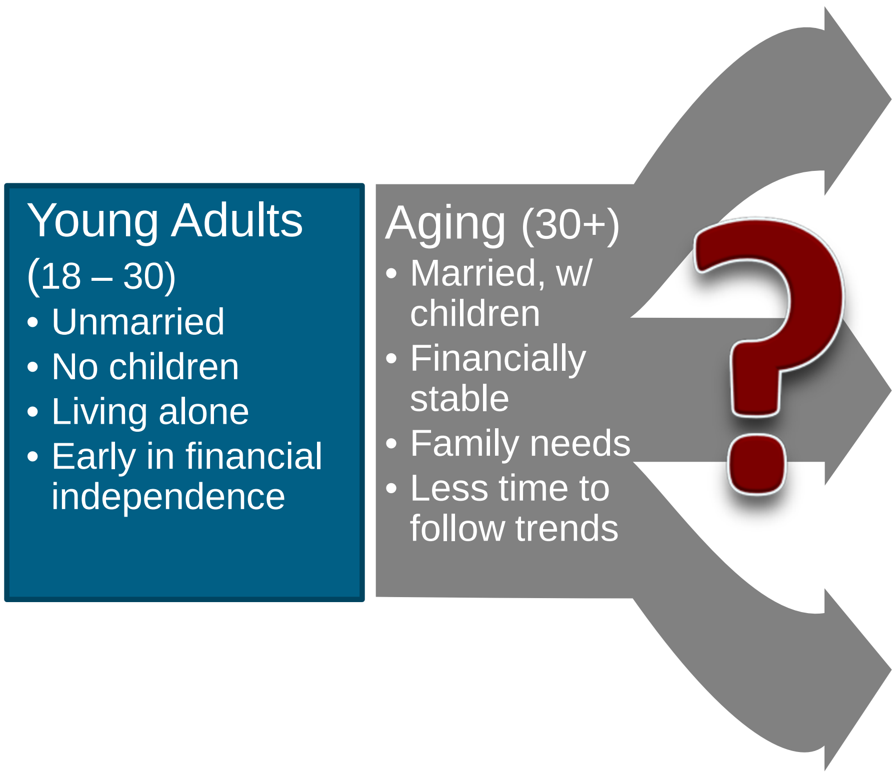
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

Evaluating the Long-Term Threat

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

Forecasting Future TV Behavior



Source: Cisco IBSG Connected Life Market Watch, 2010

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?

Going Forward:
Key Trends To Watch

1 Trends To Watch: Moving Internet Video to the TV

Migration to 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.

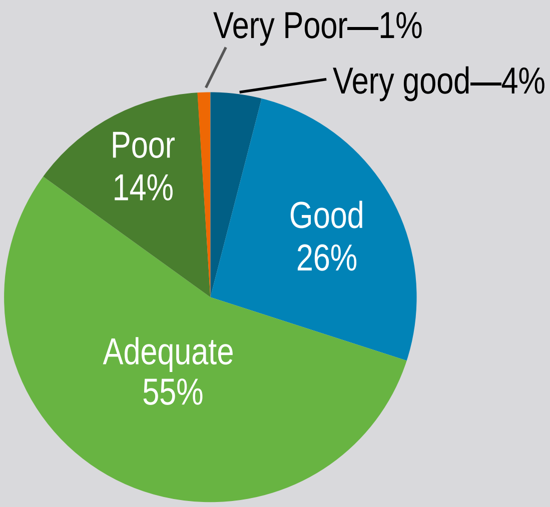
Source: Cisco IBSG Connected Life Market Watch, 2010

2 Quality Can Impact Internet Video Use

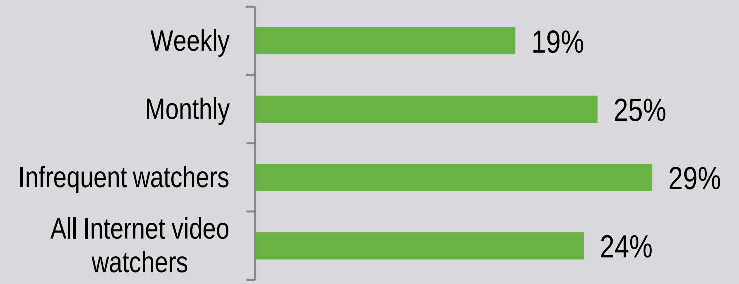
Impact of Quality

- 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

Perception of Internet Video Quality



Percentage of Consumers Who Limit Internet Video Viewing Due to Quality

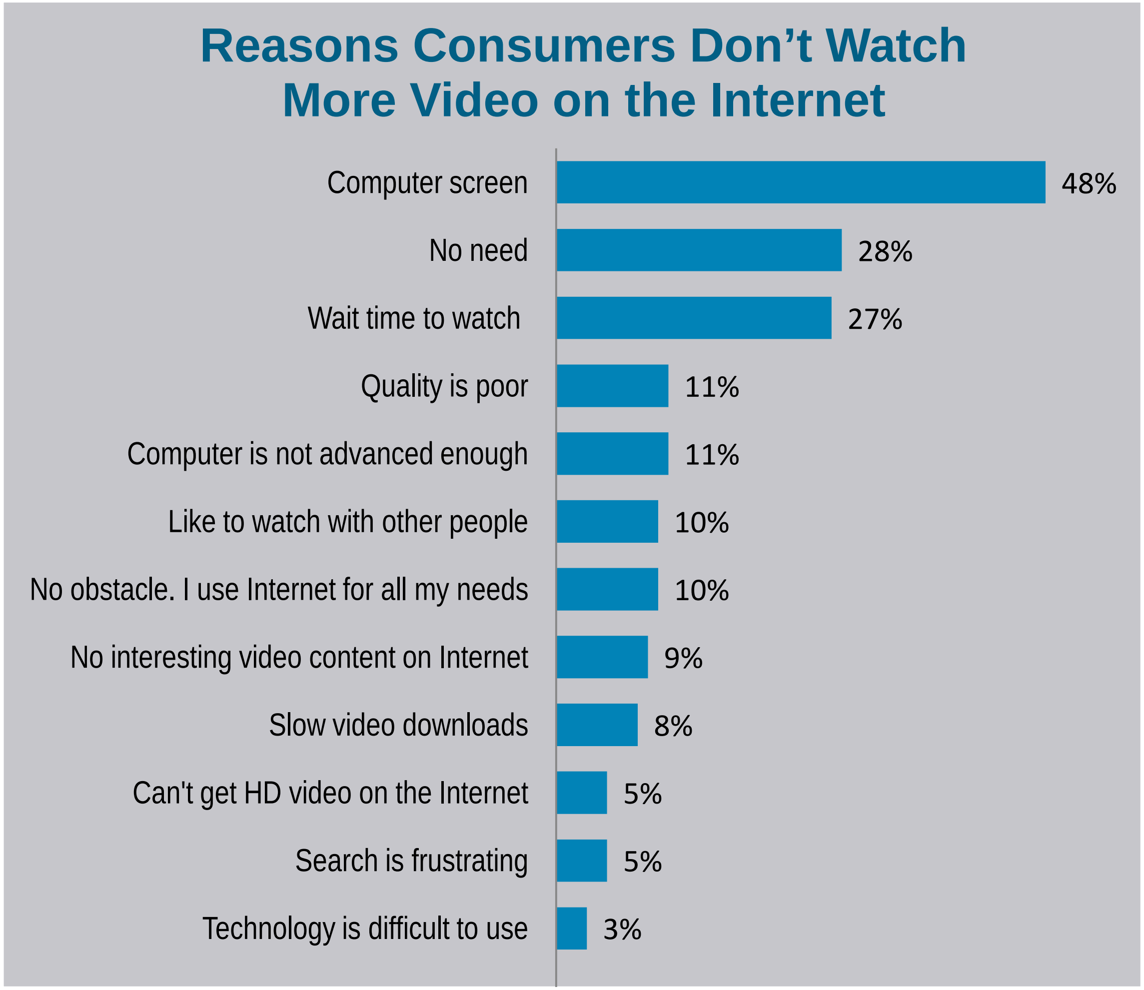


Source: Cisco IBSG Connected Life Market Watch, 2010

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



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: German broadband subscribers

3 Trends To Watch: TV Screen Becomes New Internet Screen

TV Internet Access

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

4 Trends To Watch: Introduce Social Behavior into TV

TV Social Behavior

"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

Applications that….

1. Enhance a live group experience
2. Create a "virtual" group experience, watching TV with people in other locations
3. Foster interaction with the TV programming itself (decide plot lines, vote on reality winners)
4. Create a peer recommendation engine and commentary on viewing

TV Viewing Behavior Is Complex

- 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

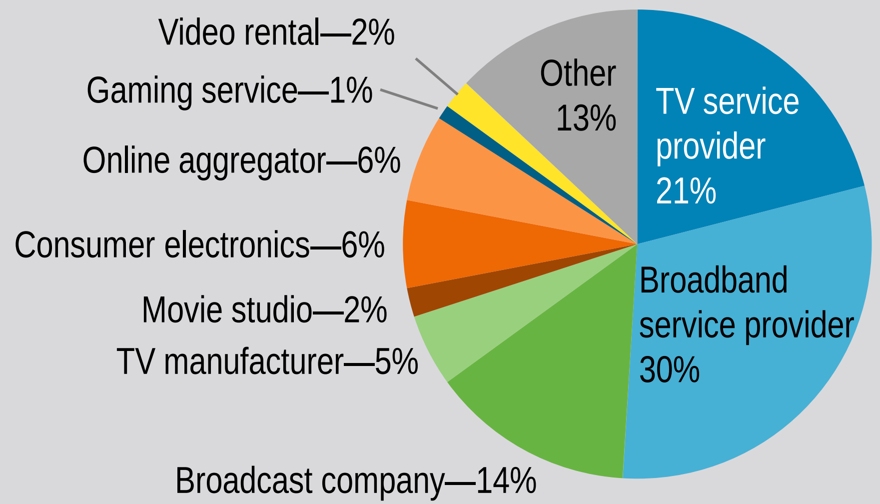
Going Forward:

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

Preferred Provider for *Web Video to TV* in Germany



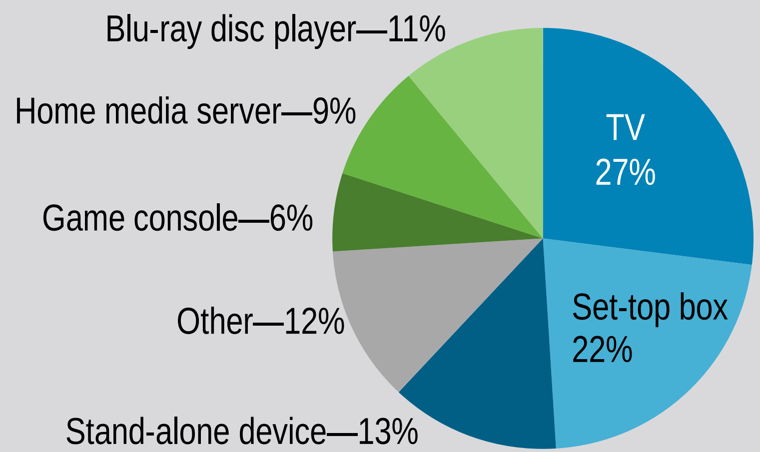
Base: Interest in *web video to TV*

Source: Cisco IBSG Connected Life Market Watch, 2010

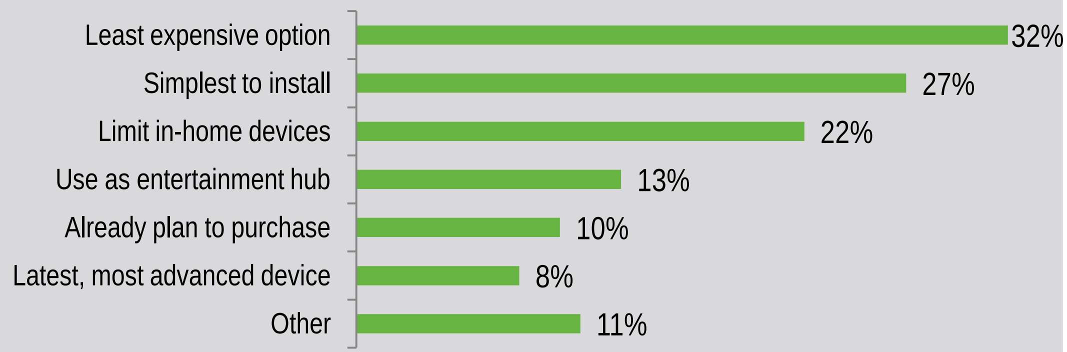
CE Manufacturers Do Not Currently Have Edge in Device Choice

- 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**



Device Selection Criteria (select all that apply)



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

Connected Home Move Digital Content Around the Home	Service that makes it easy to move digital content such as photos, music, and videos **from** any TV or computer in the home **to** any other TV or computer in the home	**36%**
Select Camera Angles	Feature that enables you to choose from different camera angles to view your show	**29%**
Social TV Friend-to-Friend Chat	"Friend-to-Friend TV" feature that enables you to invite friends to participate in interactive chat sessions while you watch TV and to share the same viewing experience	**18%**
Interactive TV Retrieve More Info	Feature that enables you to use your TV to retrieve information and videos about the program you are watching, while you are watching it	**35%**
Internet Widgets	Service that provides quick access to a selection of Internet sites directly from your TV	**29%**

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

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