Connected Life Market Watch

Transitions in Consumer Video Entertainment in China

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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

Connected Life Market Watch Program
China Nationwide Survey

Results of this report were based on nationwide survey of 1,500 broadband customers in following areas:

Participating provinces

Tier 1 cities (800 samples):
Beijing, Shanghai, Shenzhen

Tier 2 cities (350 samples):
Chongqing, Anhui, Qingdao

Tier 3 cities (350 samples):
Zhengzhou, Kunming, Chengdu, Dalian, Shenyang

Source: Cisco IBSG, 2010

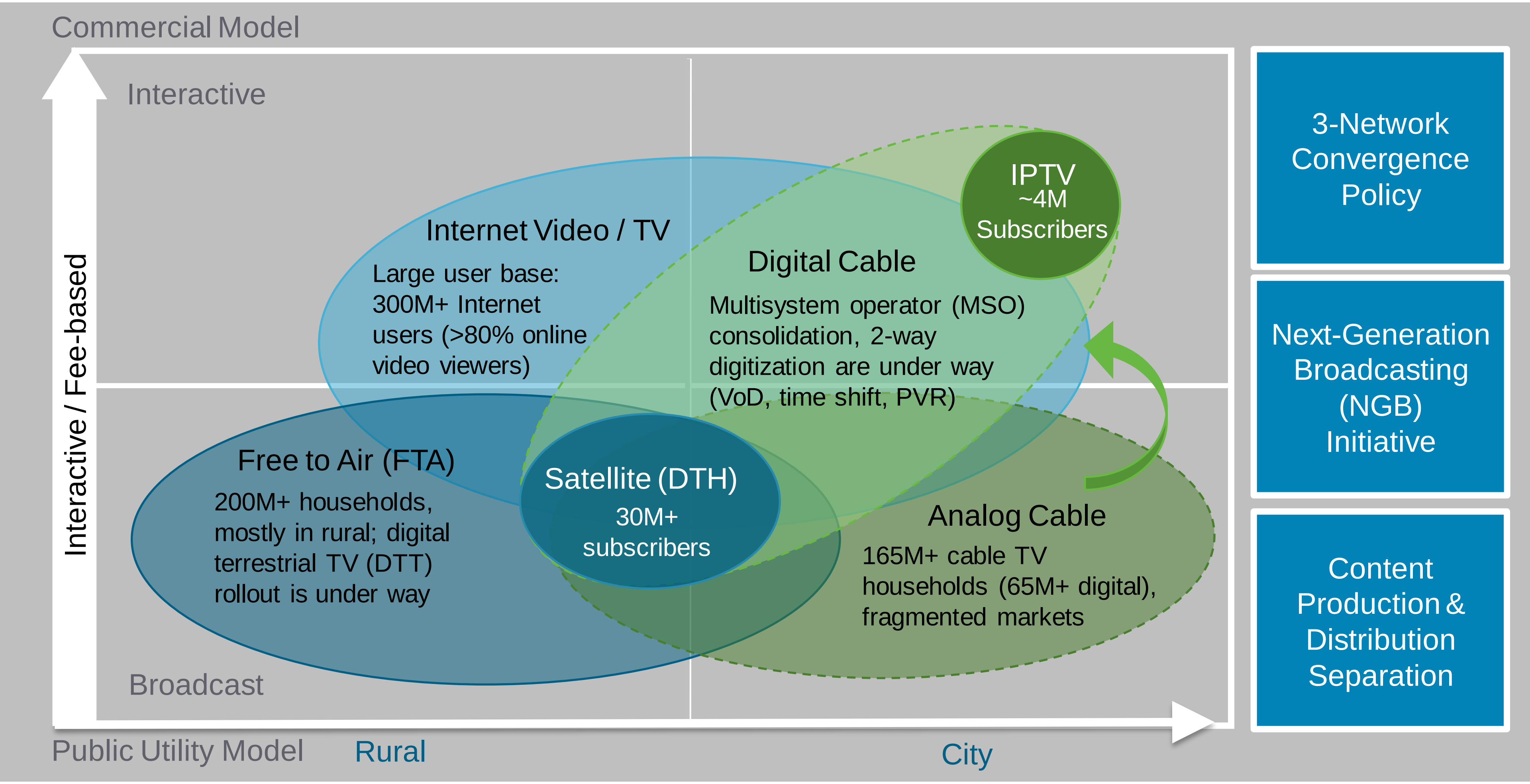
Agenda

- China Video Market Overview
- Key Facts
- Key Transitions: Consumers Taking Control
- Impact of Transitions in Consumer Video
- Trends to Watch
- Service Provider Opportunities

China Video Market Overview

China Video Market Landscape

Massive Subscriber Base, Mixed Business Models, Cable-Dominated



Source: Cisco IBSG, 2010

Competition in Video Market Is "Controlled"

	Cable TV	IPTV	Internet TV	DTT / Satellite TV
Subscriber Base (Millions)	167M	4M	300M (Internet users)	200M / 30M
Main Coverage	City	City	City + Rural	Rural
Competitive Advantages	▪ Massive base ▪ SARFT* regulatory support ▪ NGB, convergence initiatives	▪ Telco has strong capital and execution ▪ Convergence initiatives (lifting licensing & content issues	▪ Massive base ▪ Pervasive coverage ▪ Differentiated content ▪ Consumer electronics support	▪ These remain a public utility model serving rural areas
Competitive Disadvantages	▪ Fragmented market ▪ Low ARPU ▪ Complex MSO holding structure ▪ Capital constraints ▪ Weak execution	▪ Small base (due to licensing & content) ▪ Low ARPU ▪ Bandwidth constraints in some cities	▪ Regulated ▪ High running cost (bandwidth leasing) ▪ Lack of viable commercial models	

Source: Cisco IBSG, 2010

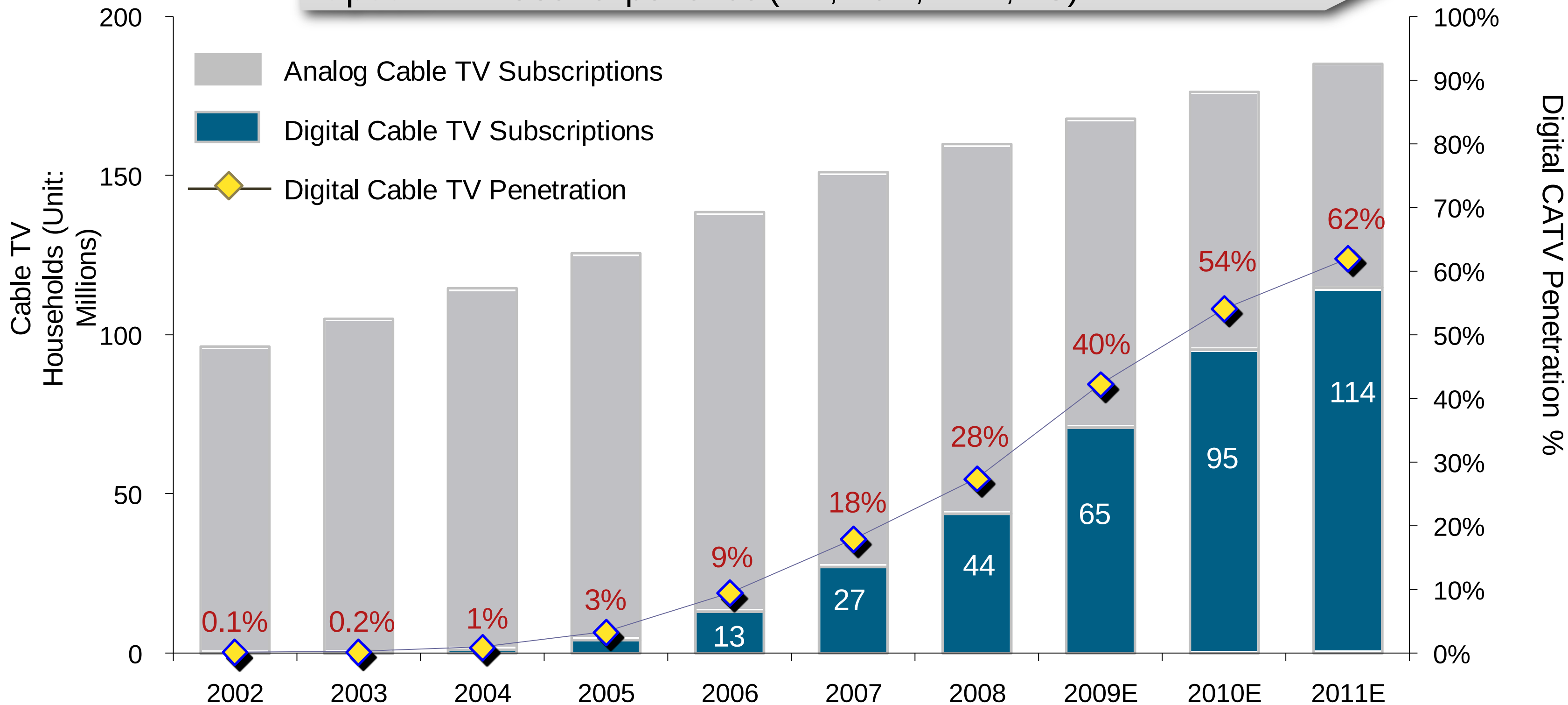
*State Administration of Radio, Film and Television

Cable TV Transformation Driven by Consolidation and Move to Digital

Cable TV Digitization Path

MSO Consolidation
- 2,000+ MSOs→300+ MSOs→31 provincial networks →regional networks
- 1-way digitization "Pingyi"

ARPU Upsell
- Rural coverage, 2-way upgrade (80% by 2012)
- User experience (iTV, VoD, PVR, TS)



Sources: Guideline, Cisco IBSG, 2010

Cable TV Consumer Spending Is Small—Only 25% of Broadband Spending

	China		United States	
End of 2009	Cable TV	Broadband	Cable TV	Broadband
ARPU(US$)	$2-3	$10	$75	$45
Subscribers (millions)	167 M	95 M	65M	80M
Penetration (% of total households)	43%	25%	58%	70%
Digital Subscribers	65 M		40M	
Digitization Rate (% of total CATV subscribers)	42%		61%	
Cable Broadband Subscribers		3 M		41M
Cable BB Market Share (% of total BB subscribers)		3%		51%

Broadband ARPU = 4x cable TV

Broadband still has plenty of room to grow

Government agenda: complete digitization by 2015

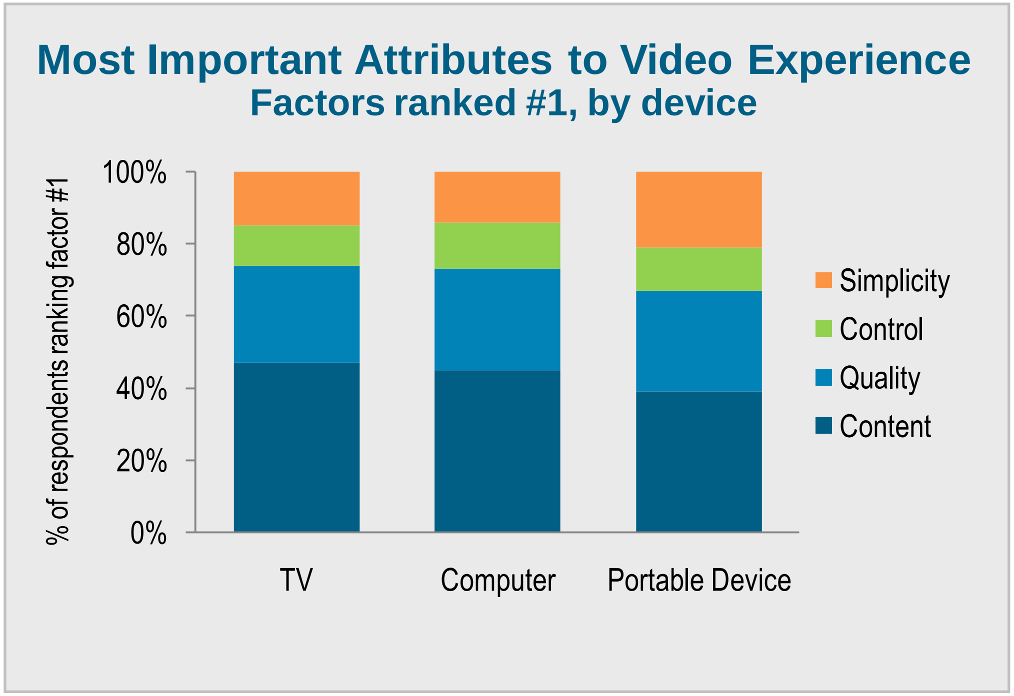
Cable broadband market share is small

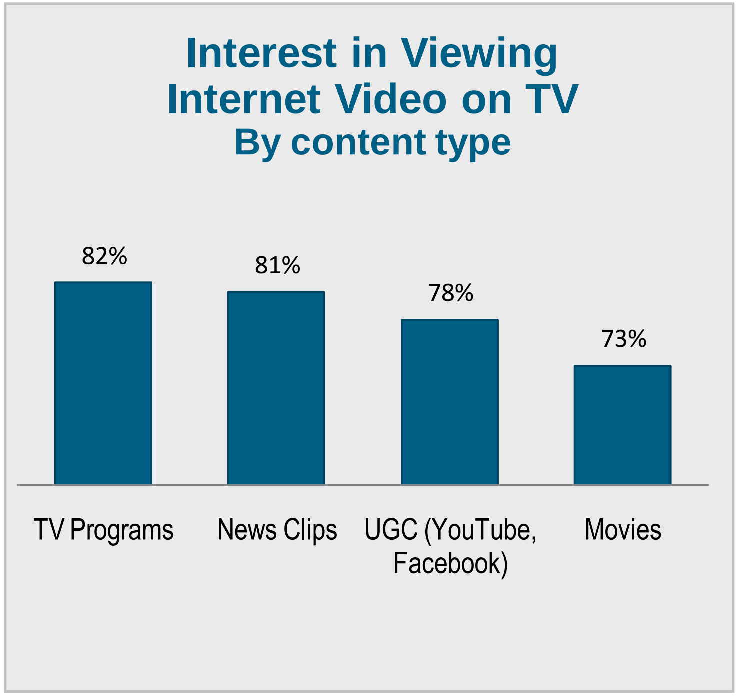
Sources: Cisco IBSG, Comcast, 2010

Key Facts

Diversified Content Is Key

- **Content** remains most important part of the experience, followed by **picture quality,** as consumers explore new devices and new video sources
- Consumers have high interest in viewing video over Internet in almost **all content types,** including TV programs, news, user-generated video, and movies





Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China broadband consumers

Broadband Consumers Are Investing Heavily in Home Video Experience

Average broadband household:

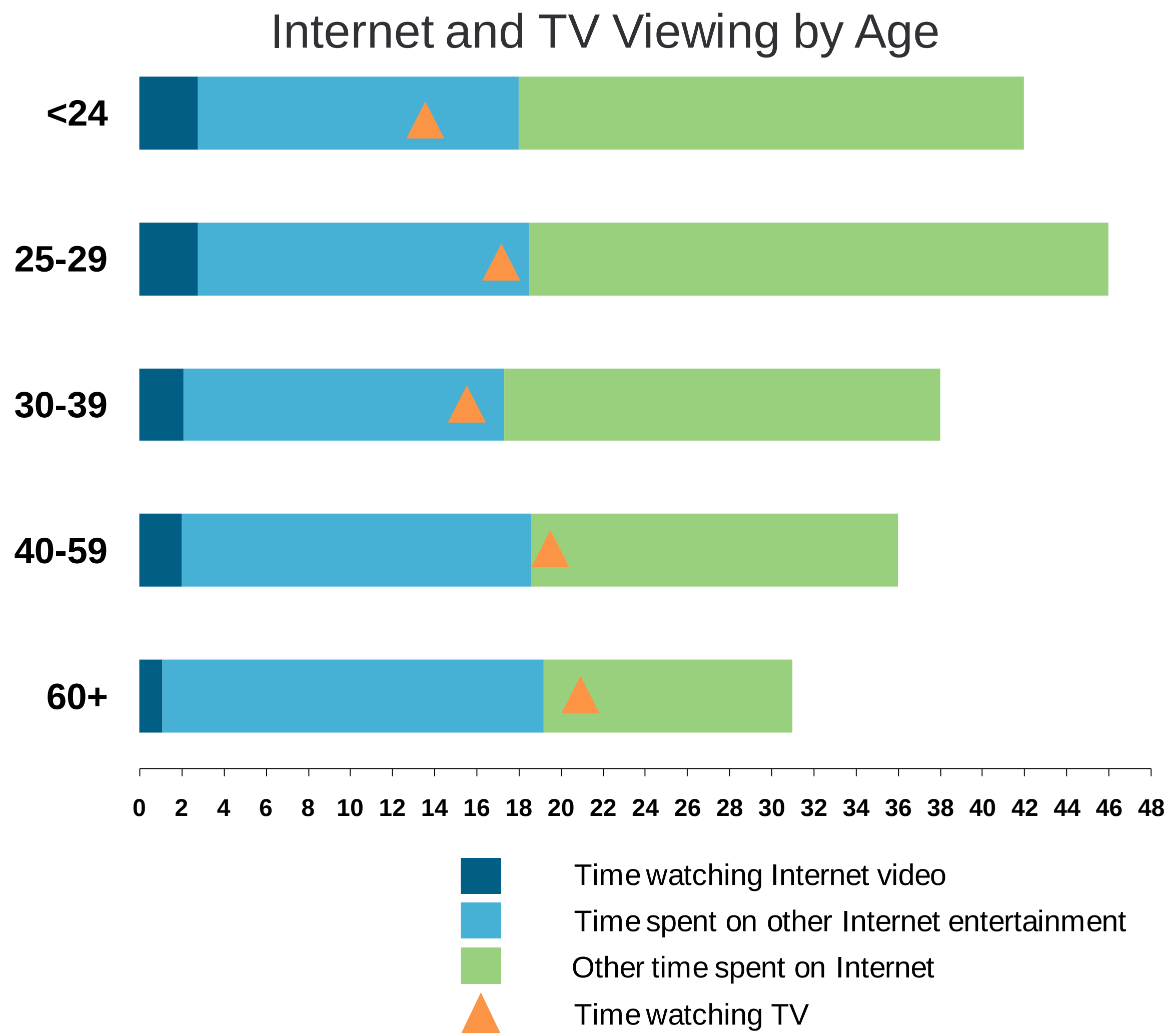
- 1.8 TVs, including 0.9 HDTV
- Spends ¥14 per month for pay-TV services
- Spends another ¥34 on other forms of video watched at home

China Broadband Consumers	
Subscribe to Cable/Satellite/Telco TV	90%
Subscribe to premium movies	44%
Subscribe to TV VoD service	50%
Have HDTV	72%
Have DVR	26%
Have gaming console with DVD functionality	12%

Source: Cisco IBSG Connected Life Market Watch, 2010

Consumers Spend More Time on Internet Than Watching TV

- Consumers spend more time in front of computer screen than TV screen
- Entertainment-focused Internet time slightly exceeds TV time for those under 40



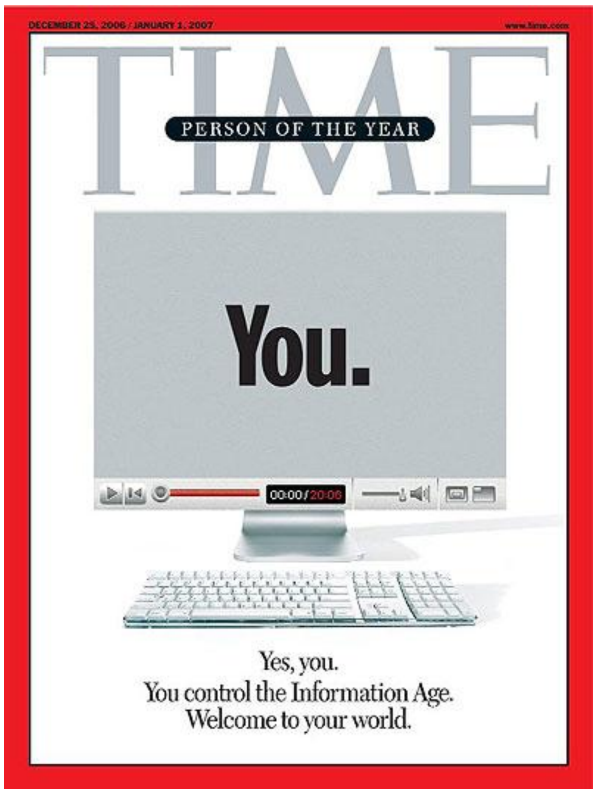
Source: Cisco IBSG Connected Life Market Watch 2010

Base: China 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

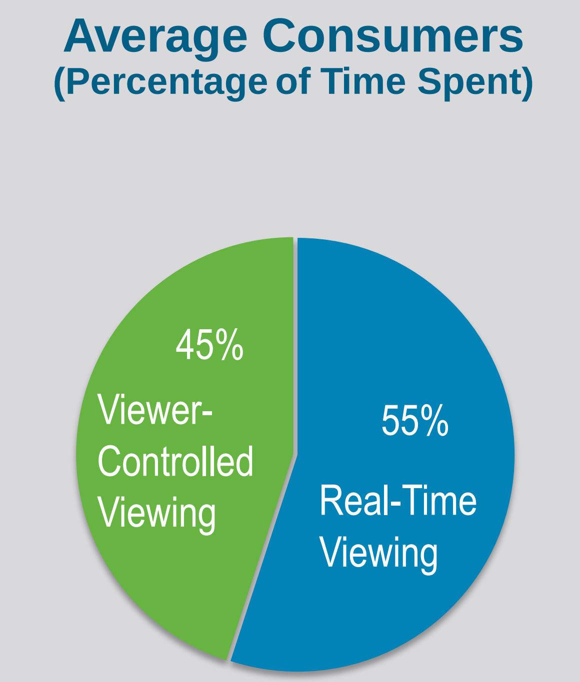
Source: *Time* Magazine, 2006; Cisco IBSG Connected Life Market Watch, 2010

Traditional TV Experience Is Changing

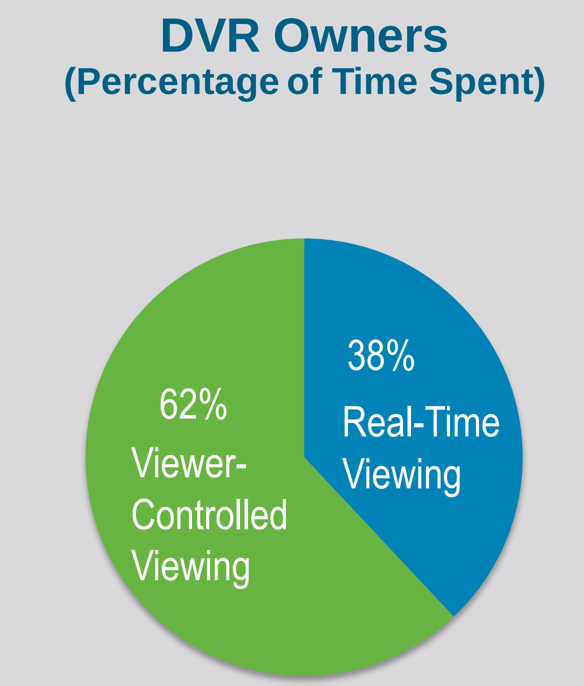
Consumers Are No Longer Making Appointments with Their TVs

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

Real-Time vs. Controlled Viewing



Base: China broadband consumers

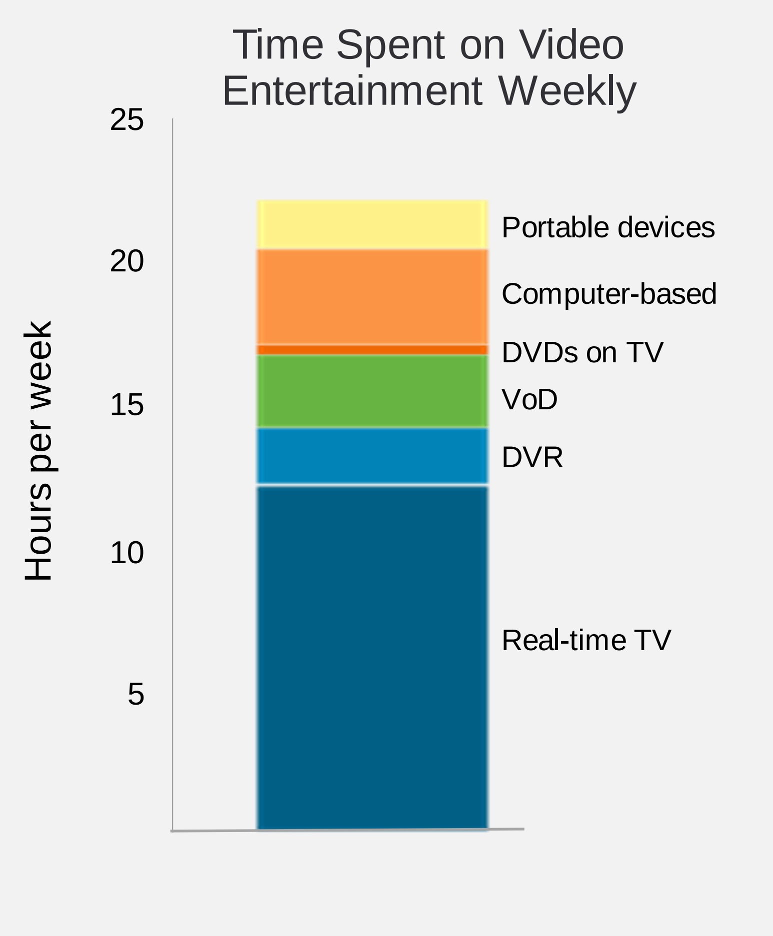


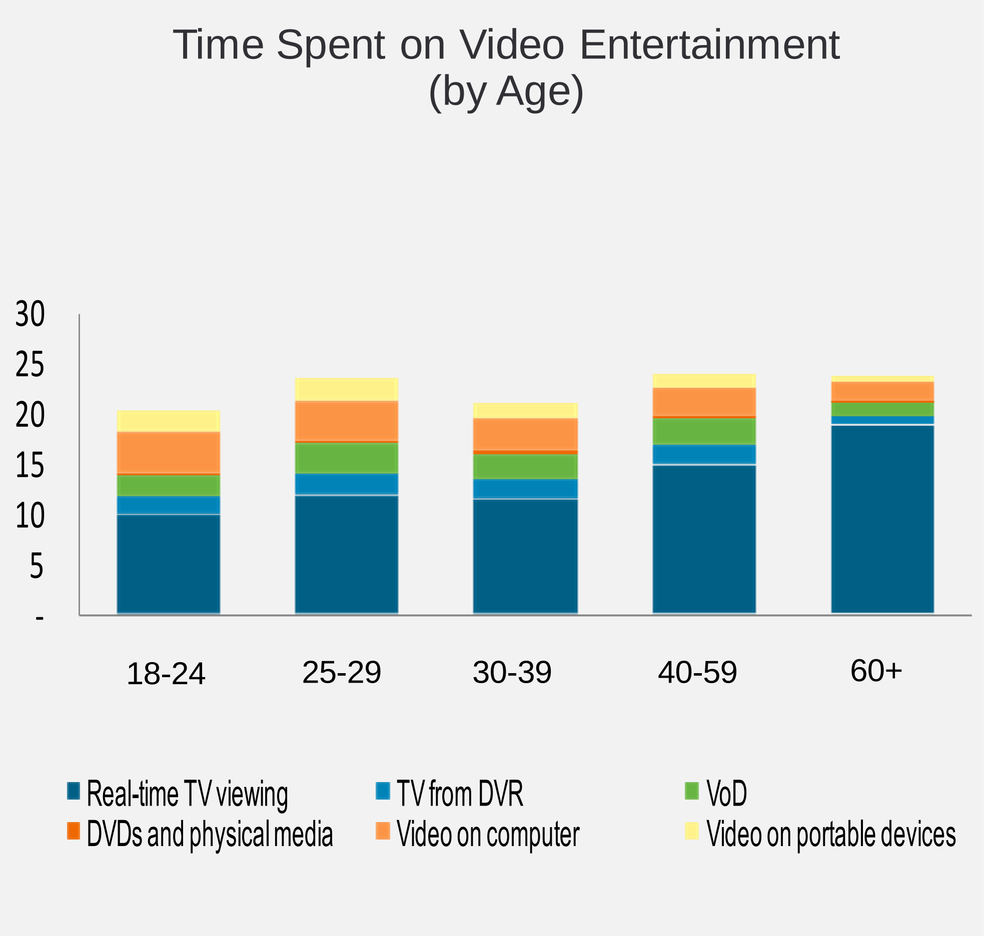
Base: China broadband consumers with DVRs

Source: Cisco IBSG Connected Life Market Watch, 2010

TV-Content Walled Garden Is Cracking

Consumers Are Supplementing Linear TV with Other Video





Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China broadband consumers

Consumers Are More Aware of Choices in Video Entertainment

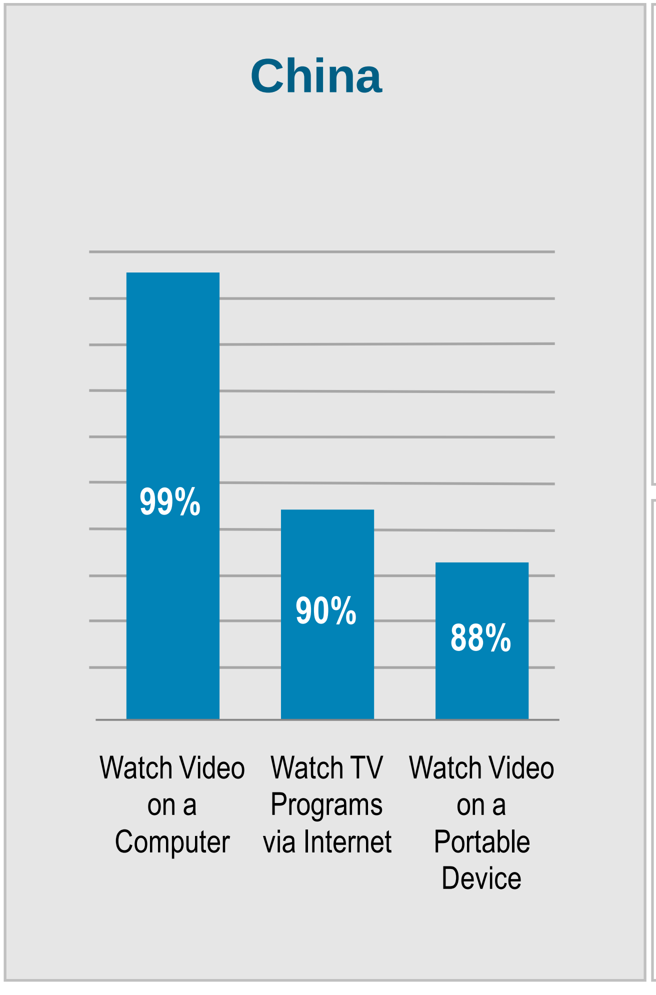
In an average month,

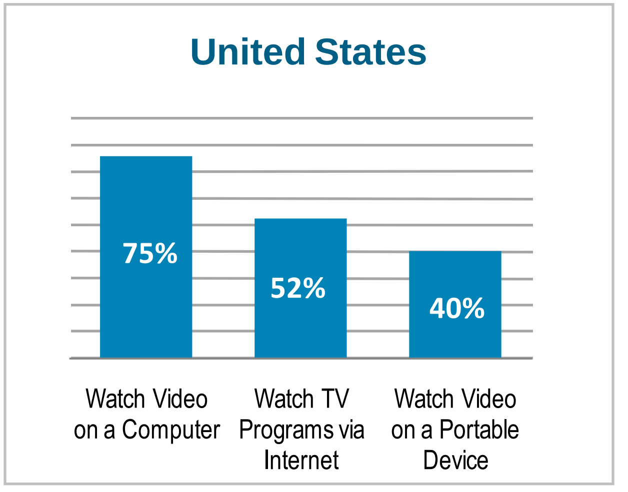
- 90% of broadband consumers watch TV programs on Internet
- Broadband consumers watch more than 8 hours of video from Internet
- 59% connect computer to TV
- Another 67% watch video on their mobile phones
- 12% of broadband consumers use their gaming consoles to watch DVDs
- 9% rent movies online from their gaming console

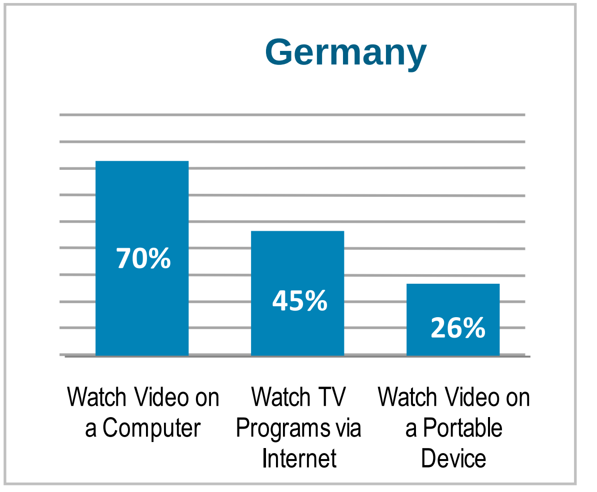
Source: Cisco IBSG Connected Life Market Watch, 2010

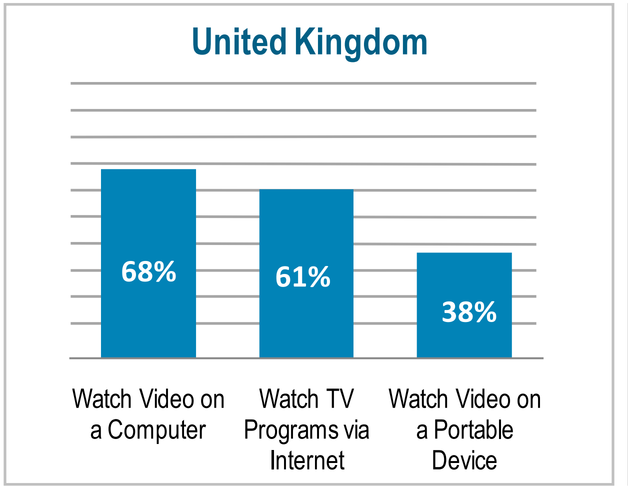
Consumers Are Exploring Alternative Video Entertainment

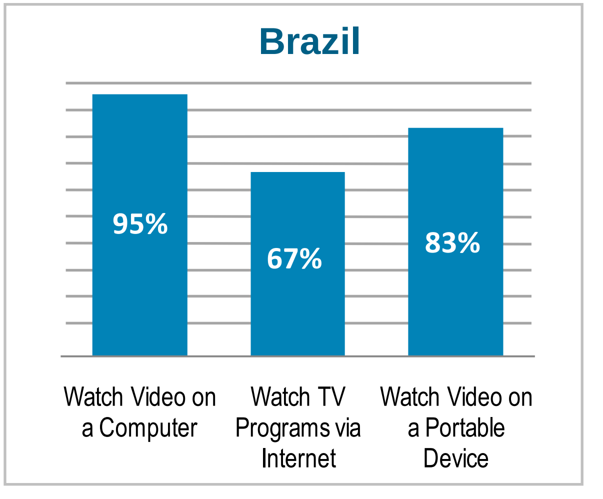
Percentage of Broadband Users that Use Alternative Video Sources











Source: Cisco IBSG Connected Life Market Watch, 2010

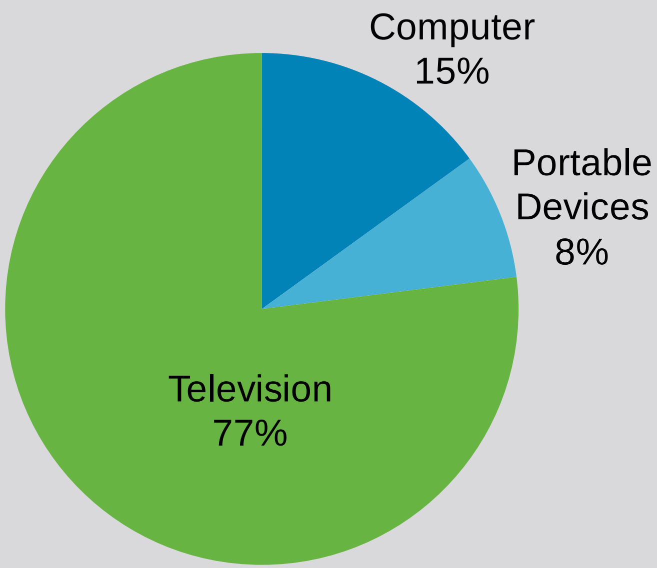
Today, Most Video Entertainment Is Via the TV . . .

TV Is Consumers' Preferred Device

- While broadband consumers in China are exploring video entertainment on other devices, they still watch most of their video on TV
- Average China broadband household has 1.8 TVs
- 71% of Chinese broadband consumers have high-definition television at home

Device Used To Watch Video Entertainment

as portion of total time spent viewing video



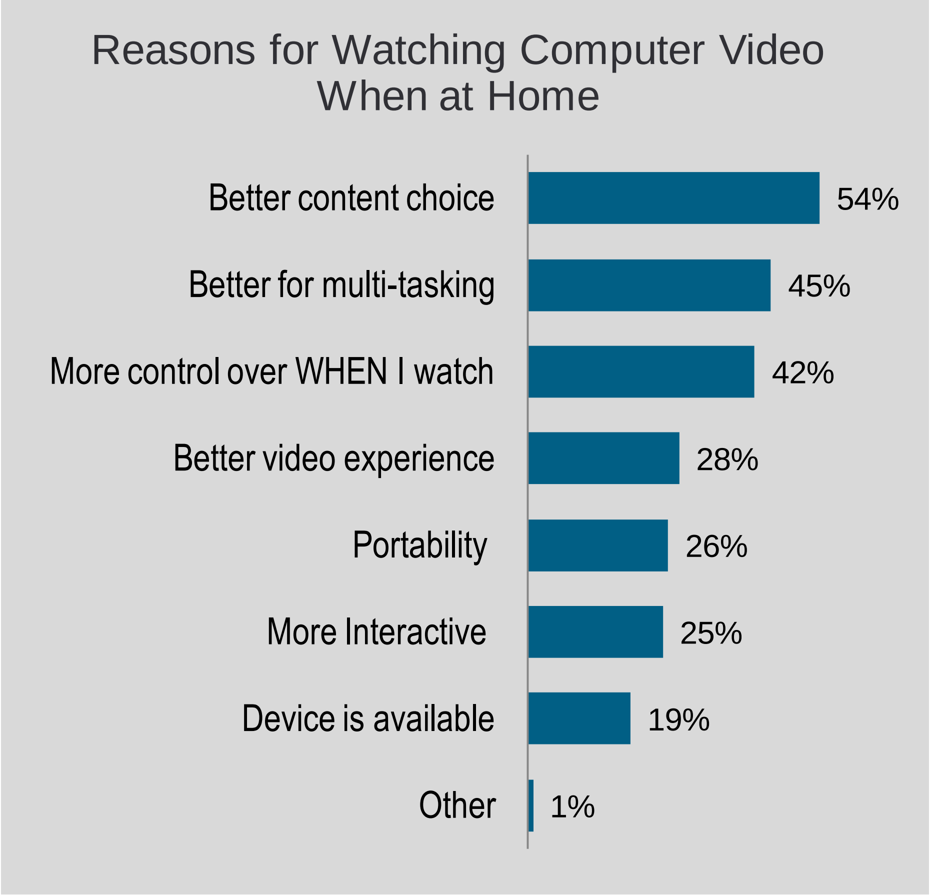
Source: Cisco IBSG Connected Life Market 2010

Base: China broadband subscribers

. . . Yet Consumers Often Choose To Watch Video on Different Device

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

- 99% of respondents watch video on computer an average of 3½ hours each week
  - 51% takes place at home
  - 100% of 18- to 24-year-olds watch video on a computer; average 4 hours and 13 minutes per week
- 88% of respondents watch video using portable devices; average nearly 2 hours per week.
  - 35% takes place at home

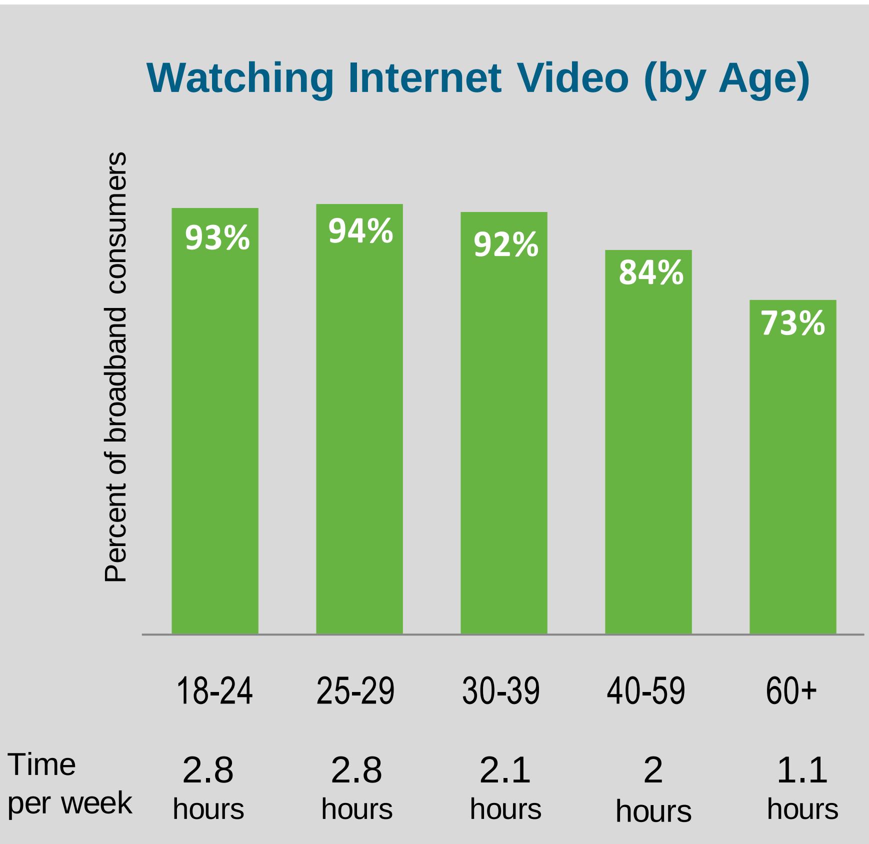


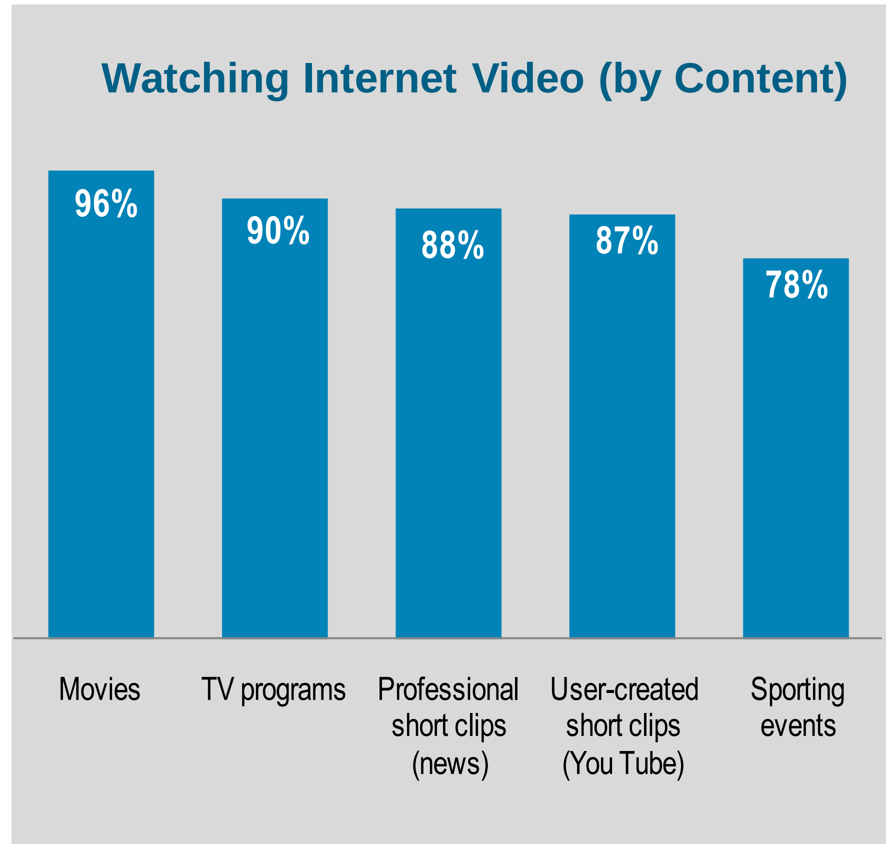
Source: IBSG Connected Life Market Watch, 2010

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





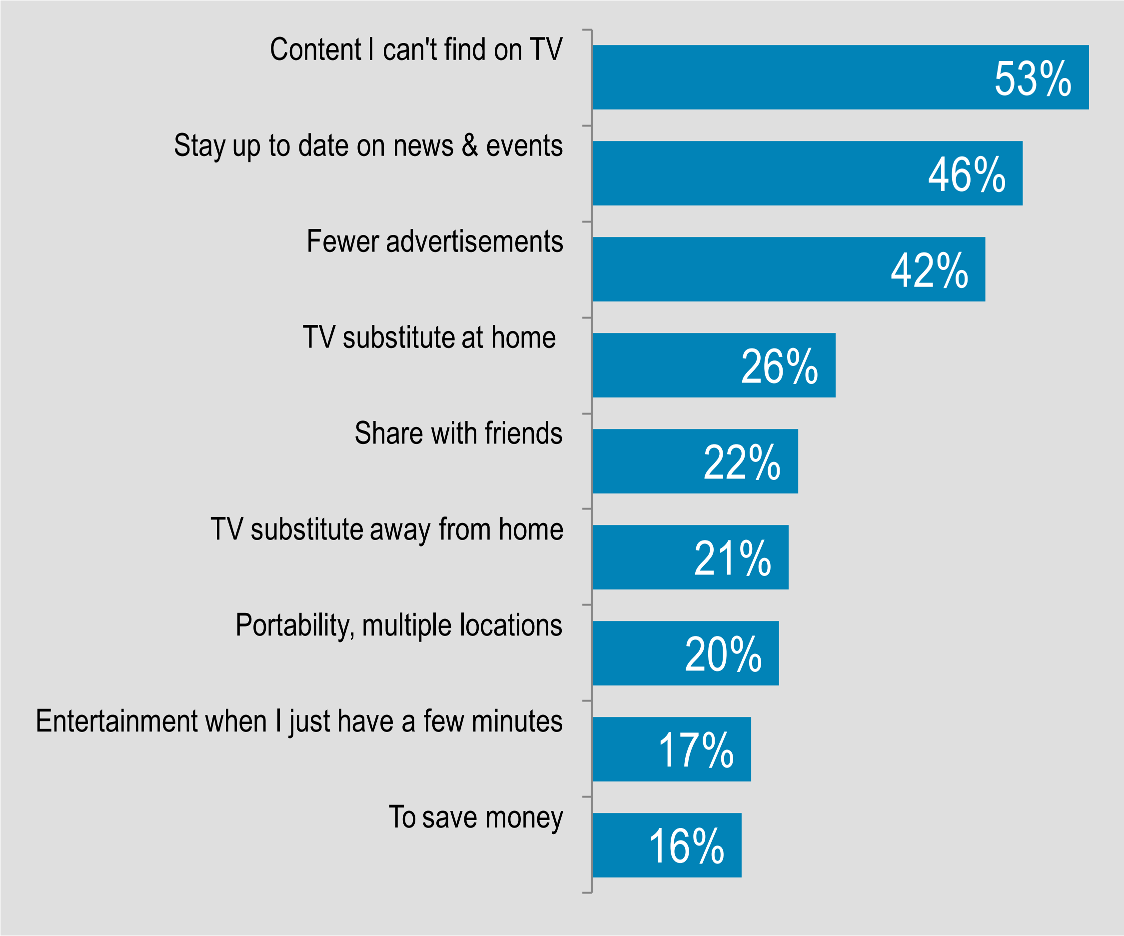
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China 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 usage
- “Snacking” and new non-TV content are key drivers

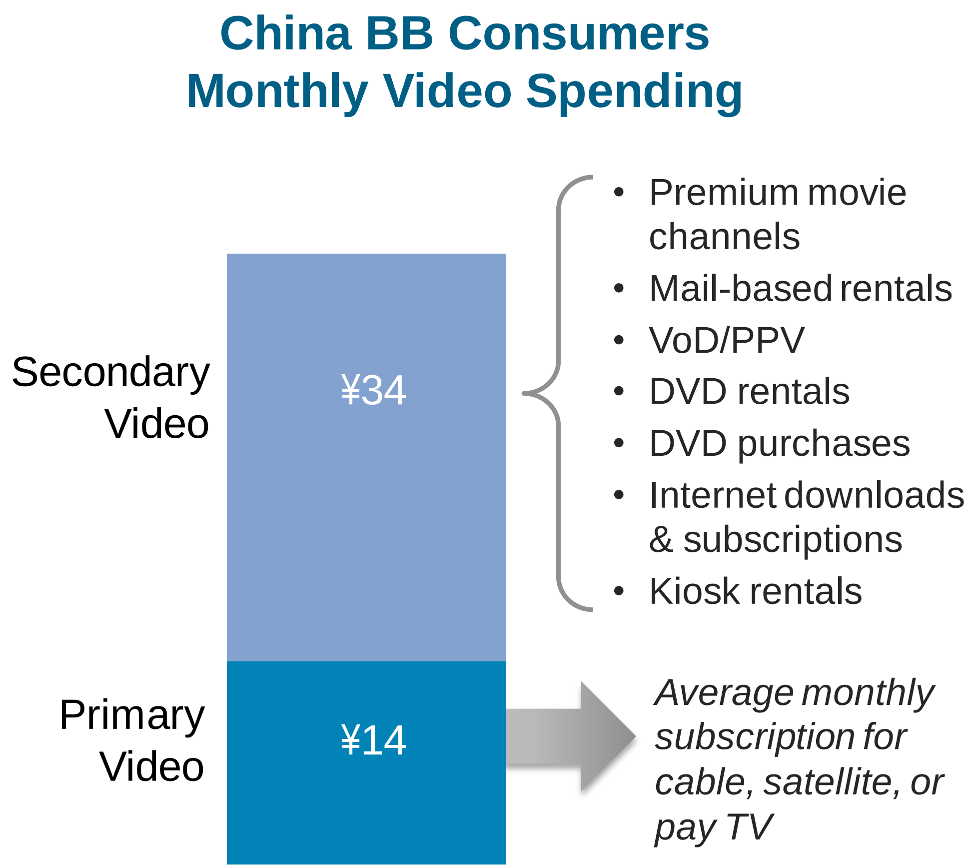


Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China broadband subscribers

About Two-Thirds of Consumer Video Spending Is for Supplemental Options

- Consumers supplement their basic TV experience with as many as 6 different 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



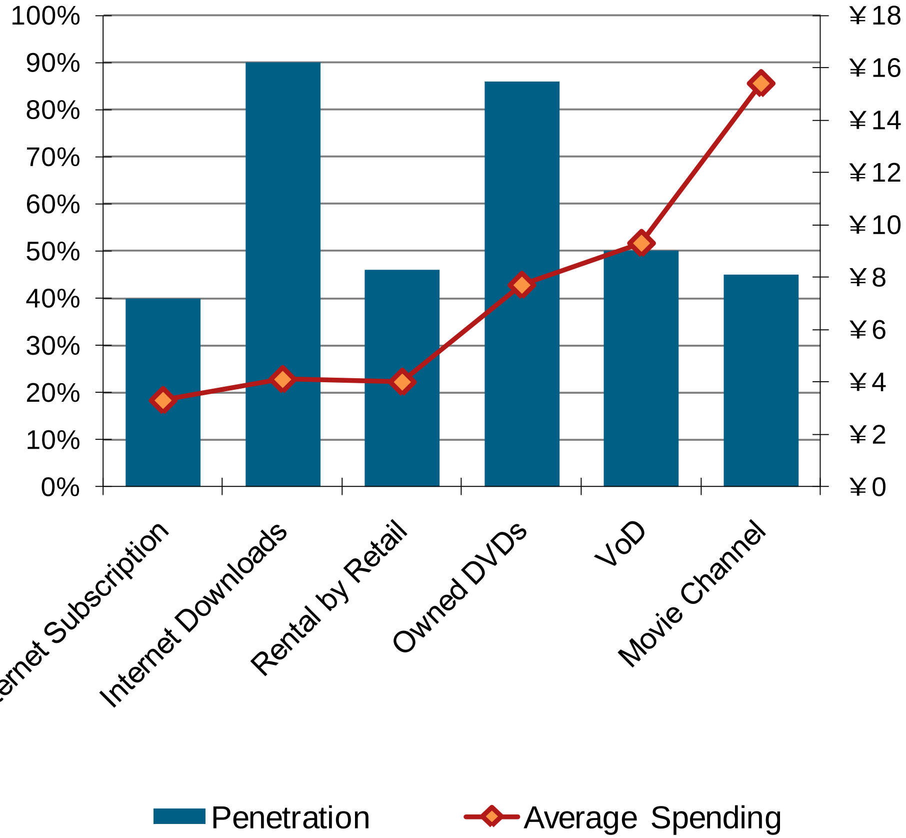
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China broadband subscribers

Secondary Video Market Is Fragmented, With Opportunity for New Entrants

- Though Internet downloads represent the highest adoption, they do not generate commensurate revenue
- Internet subscriptions have low adoption and low revenue contribution
- Consumers prefer to buyrather than rent DVDs
- Though use of VoDs and premium movie subscriptions is moderate, it has revenue impact

Penetration and Spending in Secondary Video Market, 2010



Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China. broadband subscribers

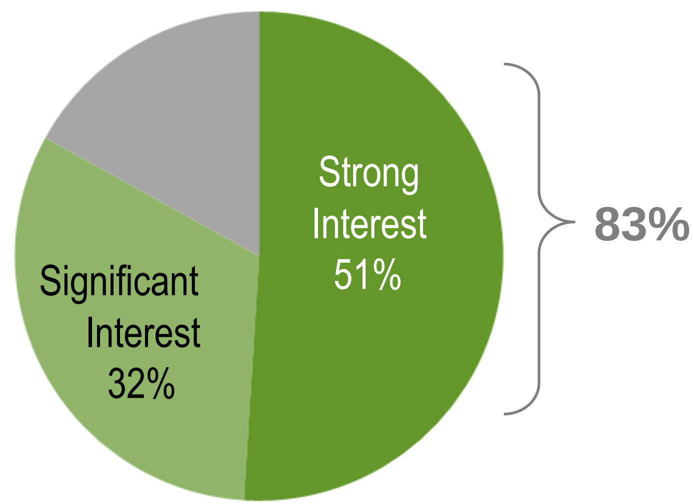
Impact of Transitions in Consumer Video

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?

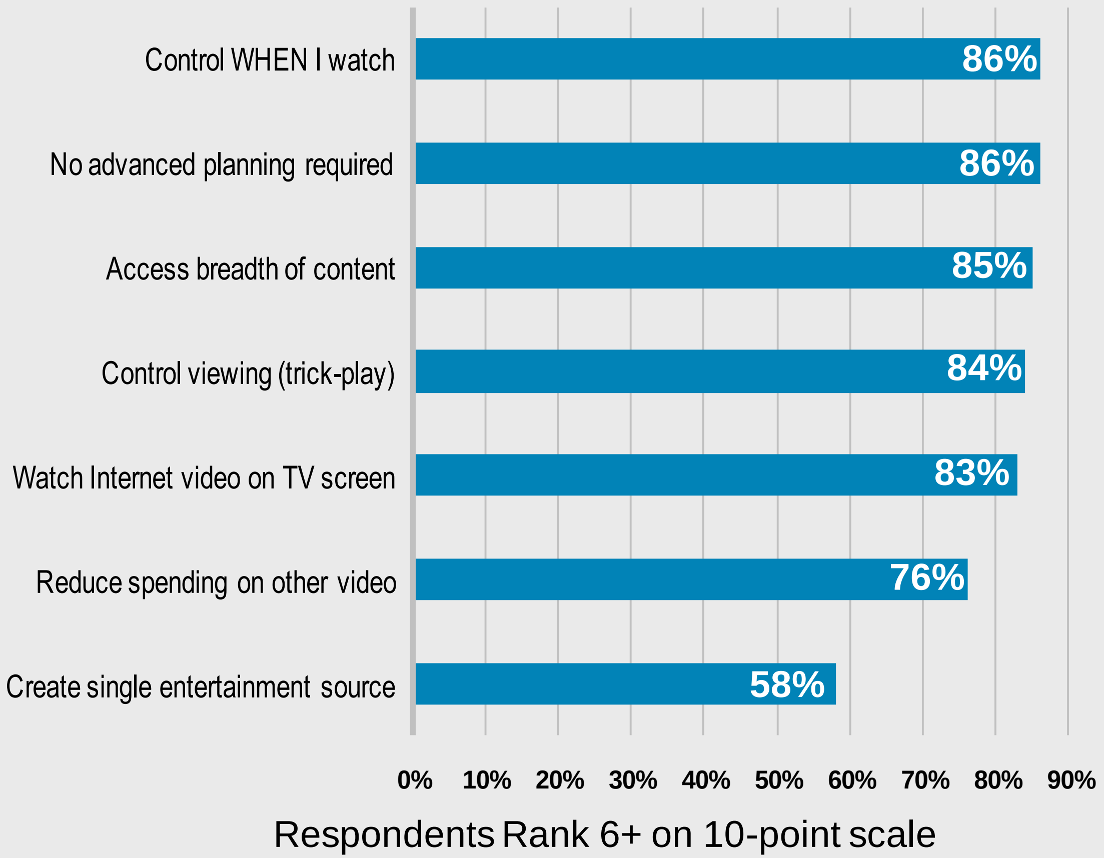
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China 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

Important Drivers of Interest in *Web Video to TV*



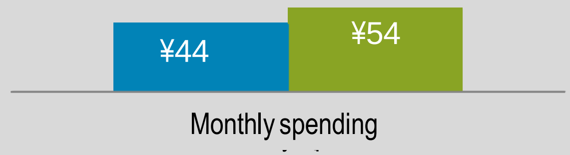
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: Any Interest in *Web Video to TV*

Concept Attracts Average Consumers Who Want To Control TV Experience

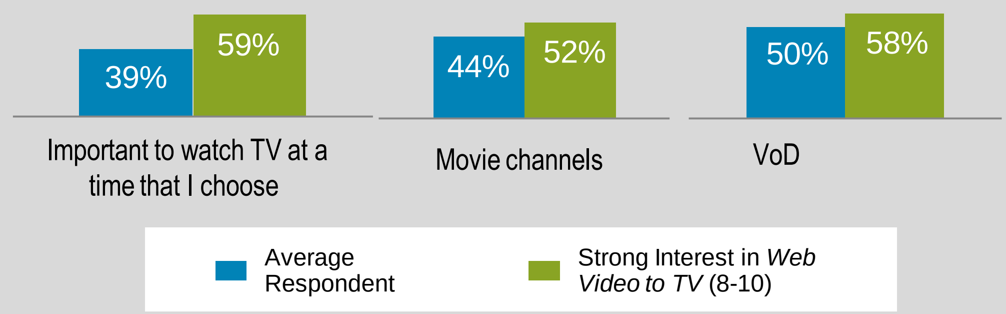
Profile of initial target segment for *Web Video to TV*

Have strong existing alternative TV behavior



Average TV usage and spending

Have strong interest in controlling their TV viewing



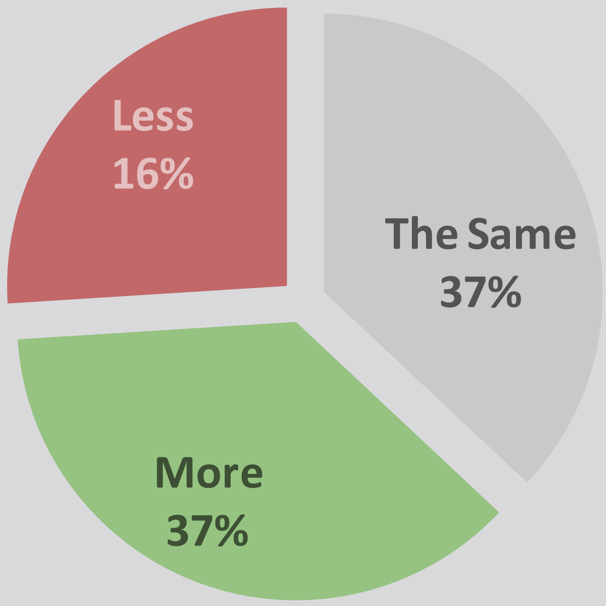
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China broadband subscribers

For Some Consumers, Internet Video Is Cannibalizing Traditional Linear TV

- 26% of consumers watch less TV since they began watching Internet TV
- 37% watch more TV programming on television, supporting theory that Internet can find new user bases and/or help keep users loyal
- There is more cannibalization among younger consumers
  - —35% of Internet TV watchers 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: China Internet TV watchers

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)

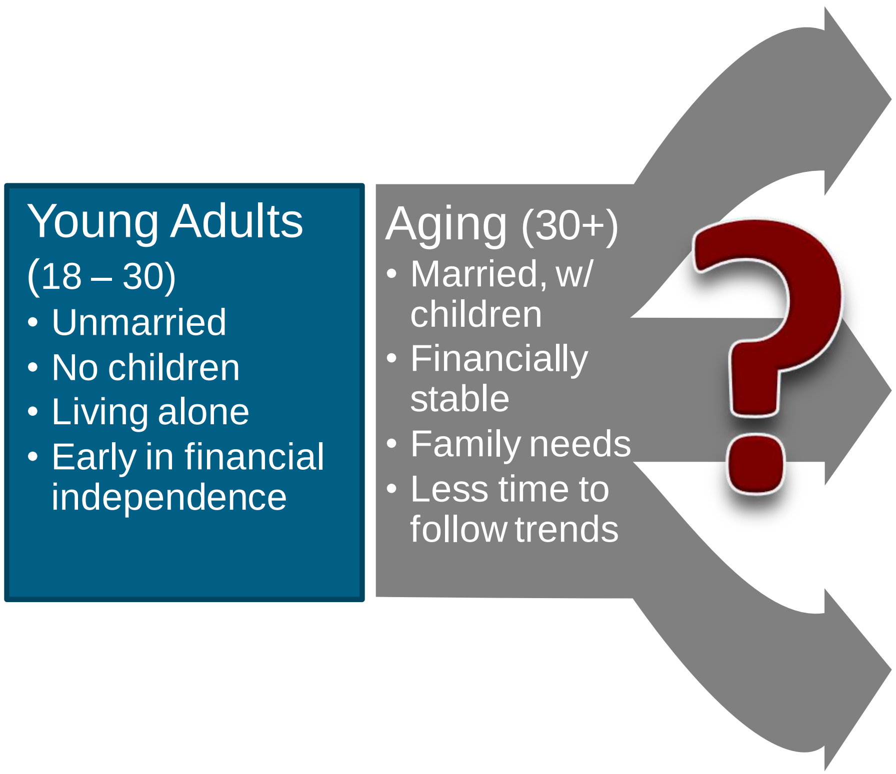
Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China broadband subscribers

Evaluating the Long-Term Threat

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

Forecasting Future TV Behavior



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

1 Trends To Watch: Moving Internet Video to the TV

Migration to TV

1 Consumer Electronics

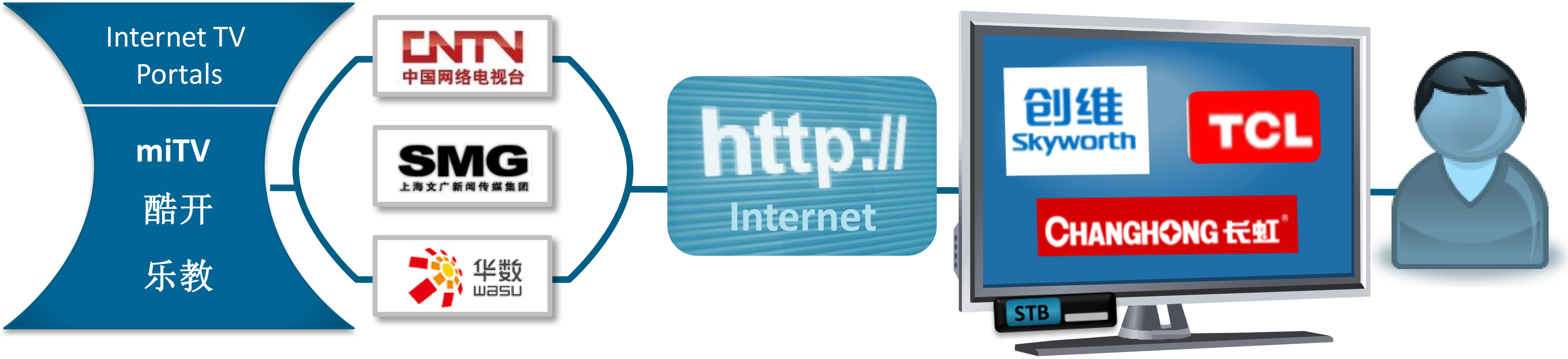
- Internet-enabled TVs will become standard (30% projected for 2010)
- TV manufacturers also have video content portals

2 Government Policy

- SARFT, Chinese regulator, issued 3 Internet TV content aggregation licenses in May 2010 to control distribution and security of content

3 Consumer Preference

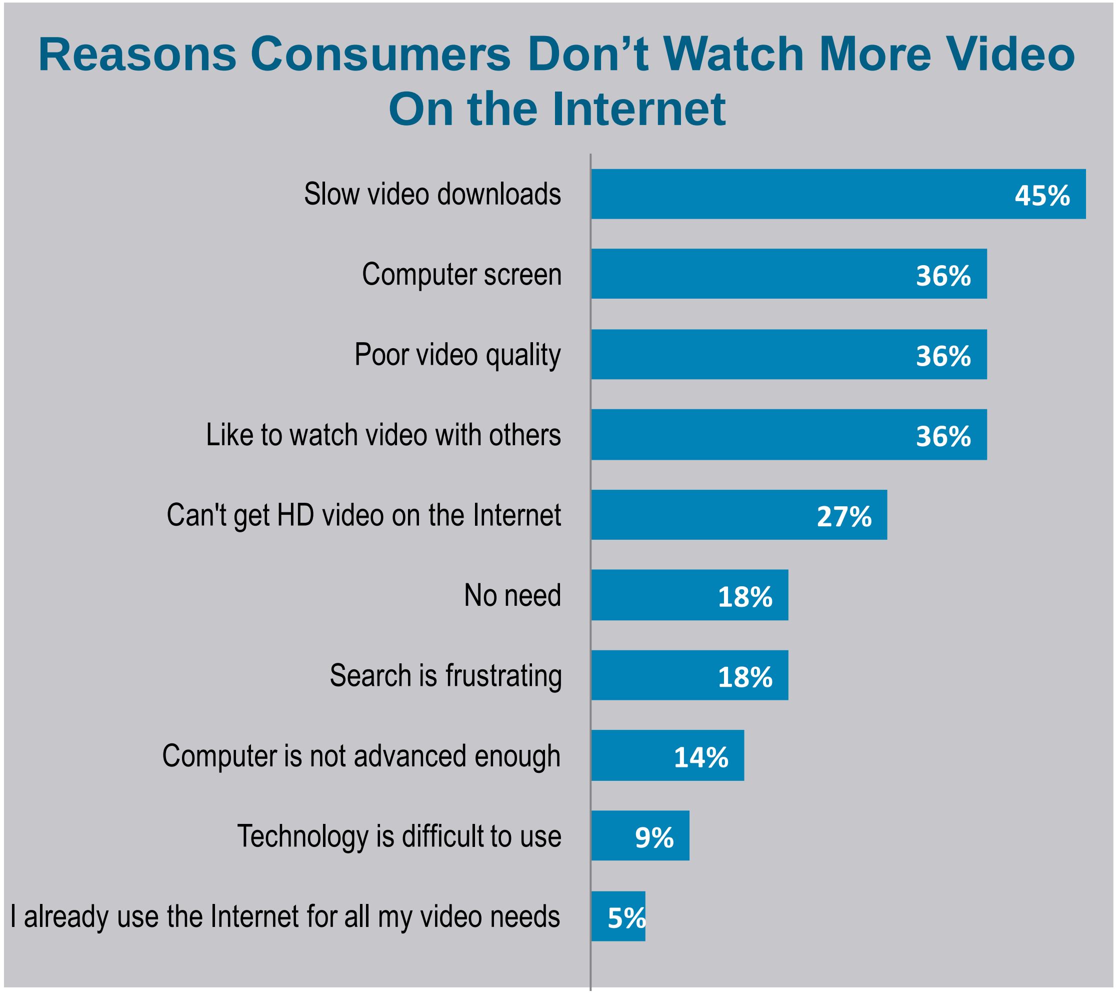
- 59% of Chinese broadband customers have connected computer to TV
- Trend will accelerate as CE offers make it easier to access Internet video on TV



Source: www.lmtw.com, 2010

Impact: Quality Improvements and TV Accessibility Could Boost Internet Video

- Major protections for traditional pay TV include broadband access quality, screen preference, 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: China broadband subscribers

2 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 Today's Consumer

- Only 5% say the desire to watch with others prevents them from watching more Internet TV
- 68% of broadband consumers, however, express interest in friend-to-friend social TV service

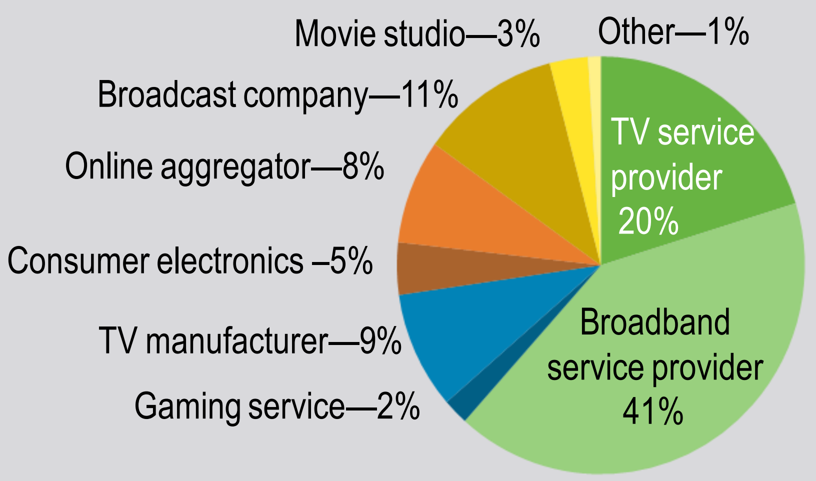
Source: Cisco IBSG Connected Life Market Watch, 2007, 2010; Forrester, 2009

Going Forward:
Service Provider Opportunities

SPs Are Strongly Positioned To Deliver Internet Video to Consumers

- 61% 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
  - —48% would buy the enabling device at a consumer electronics or Internet retailer
- This preferred position could change quickly if any manufacturer, retailer, or aggregator launches aggressively

Preferred Provider for *Web Video to TV* in China

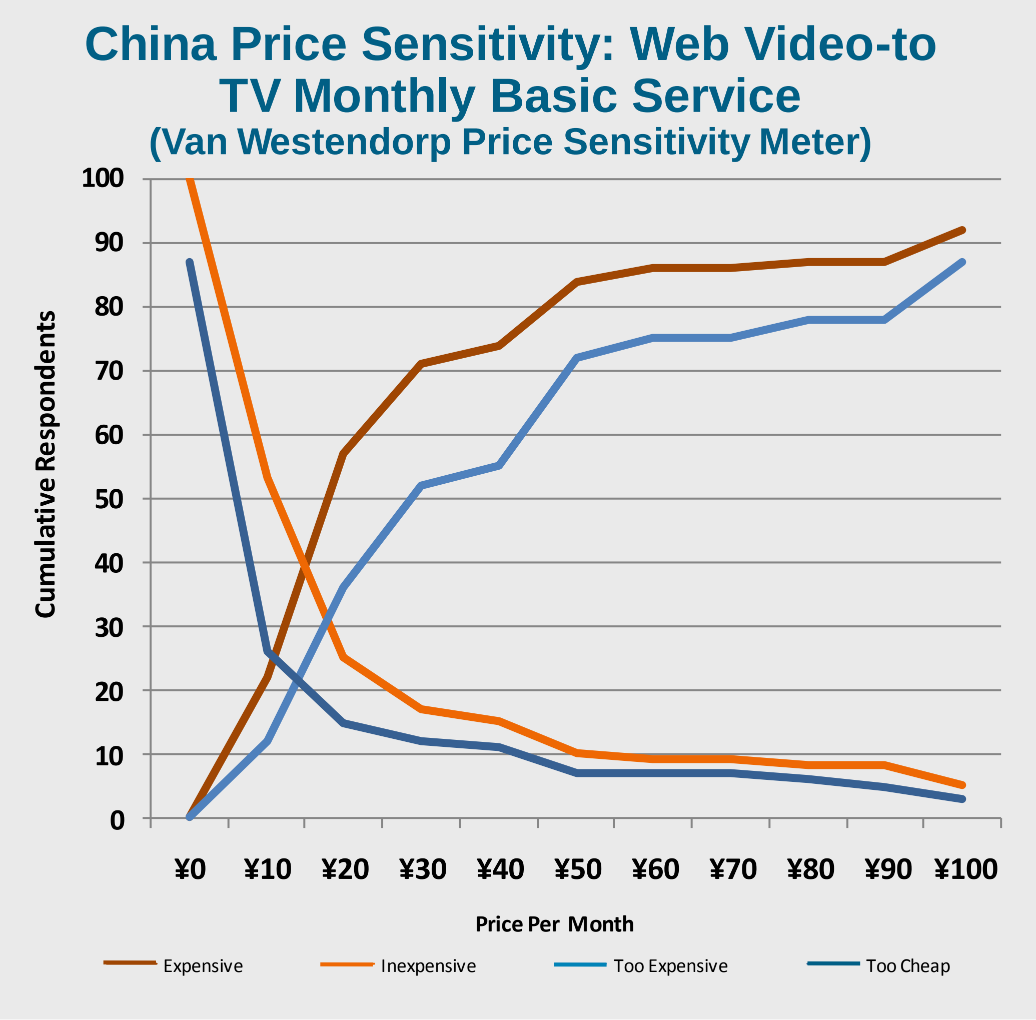


Base: Interest in *Web Video to TV*

Source: Cisco IBSG Connected Life Market Watch, 2010

Service Providers Have Multiple Ways To Monetize Web-Video-to-TV Services

- Consumers are willing to pay directly for *web video to TV*
  - —Range of acceptable pricing for interested consumers is between ¥11 - ¥18per month
- Consumers would upgrade their broadband to gain access to *web video to TV*
  - —73% of broadband consumers would upgrade their broadband service for an additional ¥30 per month, if *web video to TV* were available for free with the premium broadband

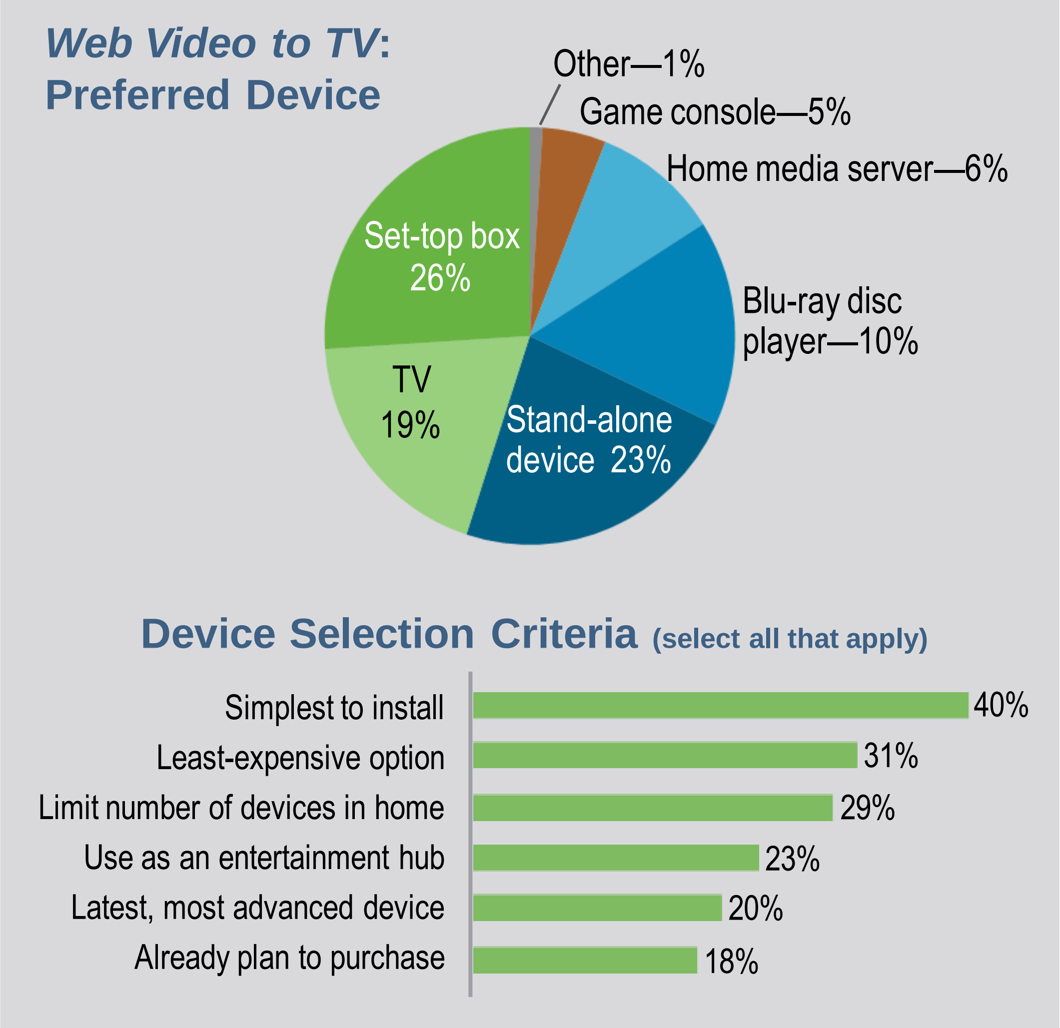


Source: Cisco IBSG Connected Life Market Watch, 2010

Base: China. broadband subscribers

CE Manufacturers Do Not Currently Have Edge in Device Choice

- Consumers prefer to enable their *web-video-to-TV* service through set-top boxes and other stand-alone service-specific devices
- Ease of installation was key, yet other factors were more important for 60% of respondents
- Cost and limiting number of devices in the home were also important



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

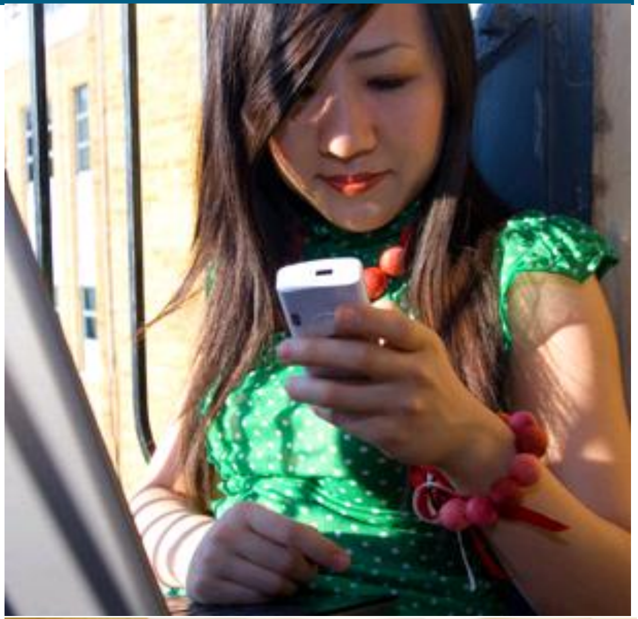
Connected Home Move Digital Content Around the Home	Service that makes it easy to move digital content such as photos, music, and videos **from** any TV or computer in the home **to** any other TV or computer in the home	75%
Interactive TV Retrieve More Info	Feature that enables you to use your TV to retrieve information and videos about the program you are watching, while you are watching it	68%
Internet Widgets	Service that provides quick access to a selection of Internet sites directly from your TV	67%
Select Camera Angles	Feature that enables you to choose from different camera angles to view your show	66%
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	61%

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
- SPs are preferred provider of video entertainment
- To capture secondary video opportunity, SPs can:
  1. Promote VoD and premium channels more aggressively
  2. Develop services, such as *web video to TV*, that provide consumers with more control
  3. Collaborate with ecosystem partners to stay ahead of changes in the video experience, such as interactivity and TV-based Internet access



Source: Cisco IBSG Connected Life Market Watch, 2010

CISCO