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Media and Entertainment

The end of television as we know it

A future industry perspective

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Executive summary

Television (TV) has an inspiring past, ripe with milestones back to 1831, when British physicist and chemist Michael Faraday discovered electromagnetic induction.[1] The medium came of age in the 1950s, with popular shows like *I Love Lucy*, the 1954 World Soccer Championship, color broadcasting and the beloved remote control. For several generations, the TV audience happily embraced scheduled programming. For the industry, making a connection with consumers was a pretty straightforward, one-to-many experience…until recently.

Today, audiences are becoming increasingly fragmented, splicing their time among myriad media choices, channels and platforms. For the last few decades, consumers have migrated to more specialized, niche content via cable and multichannel offerings. Now, with the growing availability of on demand, self-programming and search features, some experiencers are moving beyond niche to individualized viewing. With increasing competition from convergence players in TV, telecommunications and the Internet, the industry is confronting unparalleled levels of complexity, dynamic change and pressure to innovate.

"The industry is confronting unparalleled levels of complexity, dynamic change and pressure to innovate."

To hone our point-of-view of the mid-term future circa 2012, from both a demand and supply perspective, IBM conducted extensive industry interviews across the value chain and commissioned Economist Intelligence Unit (EIU) primary research in the U.S., Europe and Asia.

Our analysis indicates that market evolution hinges on two key market drivers: openness of access channels and levels of consumer involvement with media. For the next five to seven years, there will be movement on both of these fronts – but not uniformly. The industry instead will be stamped by consumer bimodality, a coexistence of two types of users with disparate channel requirements. While one consumer segment remains largely passive in the living room, the other will force radical change in business models in a search for anytime, anywhere content through multiple channels. The tech- and fashion-forward consumer segment will lead us to a world of platform-agnostic content, fluid mobility of media experiences, individualized pricing schemes and an end to the traditional concept of release windows.

"Companies must get in front of change…or consumers threaten to leave them behind."

Given the influence of both segments in the 2012 forecast period, strategists must today work amid fragmentation, divergence and opposition in the market to optimize across nascent and long-standing business models; across new and traditional release windows; with old and new content programmers; and with both Internet Protocol (IP) and traditional supply chains. Given new market imperatives and heightened operating complexities, we expect value to shift throughout the industry, creating new winners and losers.

Today is the beginning of "the end of TV as we know it" and the future will only favor those who prepare now. Here, we enumerate six priority actions for executives: Segment, Innovate, Experiment, Mobilize, Open and Reorganize.

- *Segment:* Invest in divergent strategies and supply chains for bimodal consumer types. Identify, develop and continually refine data-driven user profiles in order to optimize product and service development, distribution, marketing messaging and service

migration. Dynamically tailor content, advertising, pricing and reach.

- *Innovate:* Innovate business models, pricing, windows, distribution and packaging by creating – not resisting – wider consumer choice. Take risks today to avoid losing position over the long term.
- *Experiment:* Develop, trial, refine, roll-out. Repeat. Conduct ongoing market experiments, alone and with partners, to study "real life" consumer preferences. Invest in new measurement systems and metrics for the on demand world of tomorrow.
- *Mobilize:* Create seamless content mobility for users who require on-the-go experiences. Help ensure easy synchronization across devices and without required user modification.
- *Open:* Drive open and standards-based content delivery platforms to optimize content and revenue exploitation, and to create high business flexibility and network cost-efficiency. Position open capabilities to bolster digital content protection with consumer flexibility, and for plug-and-play business upgrades necessary in the fast-changing marketplace.
- *Reorganize:* Reassess your business composition against future requirements. Identify core competencies needed for future competitive advantage. Isolate non-core business components for outsourcing, consolidation or partnering. From an external perspective, reconfigure the business to leverage market and financial levers to buy, build or team for future competitiveness.

Research methodology

IBM conducted more than 65 one-hour interviews with "C-level" and senior industry executives, Wall Street analysts, economists and technology visionaries inside and outside IBM. Further, IBM commissioned primary research by the Economist Intelligence Unit (EIU). The EIU surveyed 108 industry executives from three constituencies: 1) cable, broadcast and Pay TV networks, 2) multiple system operators (MSO) and direct broadcast satellite (DBS) providers, and 3) new entrant video telecommunications companies. Respondents were evenly split among three geographical regions: Europe, Asia and North America.

A future scenario

This executive brief begins with a glance at a future consumer experience. For an advanced user in 2012, the TV experience will go far beyond traditional "lean back" behavior and constrained content access channels. Here we provide a look ahead…

My gadget-lover's dream realized

I am in digital-electronics-gadget nirvana. And, I am not afraid to boast. My home sports a fully wireless broadband (WIMAX) Internet environment, where content moves freely among the home server, several multiple high definition (HD) screens, the office PC and the mobile devices that I continually upgrade.

I regularly acquire favorite TV shows (new and old) either from Internet search engines such as Google Video, the video/telecommunications provider's on demand archive or fully-loaded Internet video destinations. I can't remember the last time I made "appointment TV," since I download or watch on replay from my multi-room digital video recorder (DVR) every important program or episode. A Bluetooth-like signal on my cell phone triggers the logon for my media center system. When ready to watch TV, I am greeted with a mosaic screen with tiles of favorite TV channels, suggested programs from the last 24 hours, season's passes and tailored on demand choices.

My home network offers different on demand pricing packages, dependent on the number of times I plan to watch, copy or download – and whether the content is a preview. When not skipping through, I am more amused than ever by advertising, particularly since it is tailored for me and comes with relevant links, add-ons and a variety of purchase options within the commercial itself. While all of these options can feel overwhelming to some, I view them as a challenge with a large pay-off. I will continue to put in the energy to be first on the block with the latest "gadget-lover's dream realized."

This scenario represents one key group of consumers who lead the market. While the future will deliver these gadget-lovers' dreams and more, it will be some time before leading-edge users inspire the mass audience. Suppliers are laying the foundation of change with infra-structure upgrades and service experimentation, but ultimately consumers will drive the multifaceted adoption schedule. At this important industry juncture, this paper profiles a TV industry whose relationships with both consumers and suppliers are undergoing significant and complex change.

Unparalleled levels of complexity and dynamic change

Significant changes in both demand and supply are driving the industry to unparalleled levels of complexity and dynamic change. This section of the paper explores current trends and challenges impacting the future prospects for participants within the TV industry. Key issues to appraise include strong consumer demand; audience fragmentation; misaligned business models; converged competition; and burgeoning market experiments.

The picture is bright for consumers

TV content is more popular than ever with consumers despite the availability of myriad alternatives, including digital music subscriptions, film DVD rental services, satellite radio and massively multi-player video games. Total TV consumption hours have continued to grow, with the average U.S. household estimated to spend 1826 hours with its TV in 2005 (the equivalent of more than five hours per day).[2] Hours viewed from content downloads and TV DVDs can be added to this traditionally measured consumption.

"TV consumption is expected to rise, in part due to the appeal of new technologies which allow increased control over when, how and where content is viewed."

Many once predicted that broadband media platforms would be the greatest risk to TV viewership, but thus far, broadband seem to be without significant cannibalization effects. For example, before broadband reached mass adoption in the U.S. – defined as 25 percent of U.S. households – TV consumption grew at a 1.6 percent compound annual growth rate (CAGR) for the period 1996 – 2003.[3] Even after the point of mass broadband adoption, viewership increased year-to-year in 2005 by 2.5 percent.[4] Going forward, analysts predict TV usage to grow by an average of 1.7 percent per annum through 2008.[5]

Even the youth audience, ever experimental with new forms of media, continues to log in 3 hours and 51 minutes of TV hours per day.[6] A 2005 survey by the Kaiser Family Foundation reported that TV garners three to four times as many minutes per day as either computers (at one hour and two minutes, on average) or video games (boys at one hour and thirty-four minutes; girls at forty minutes, on average).[7] While there will surely be some movement to video games and other media, overall TV consumption is expected to rise, in part due to the appeal of new technologies which allow increased control over when, how and where content is viewed.

Audiences become finer and finer

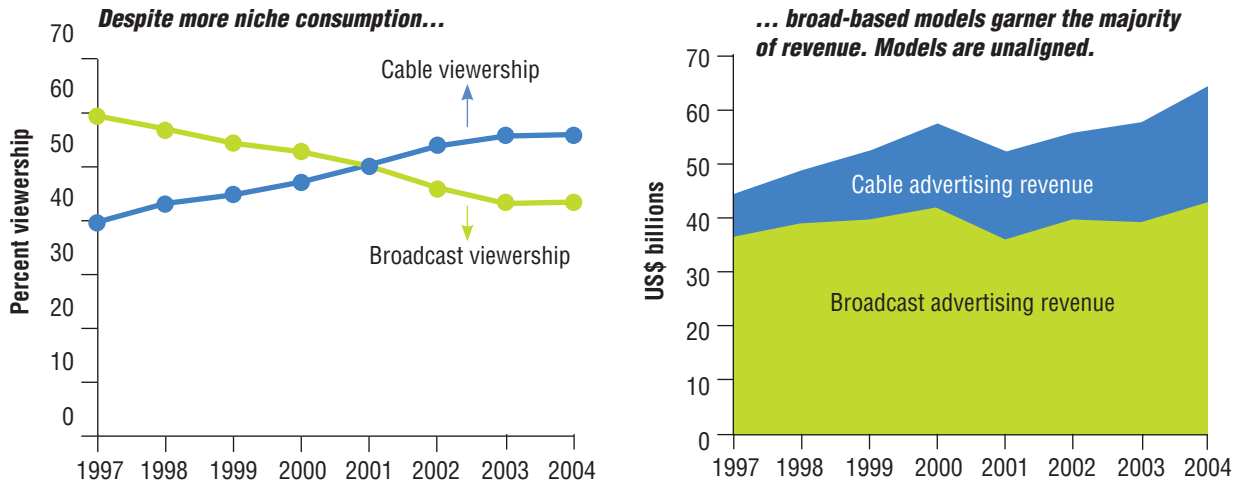
Consumers love content, but are having their attention more finely fragmented by over-choice and evermore proliferating channels and platforms. In days of yore, a consumer had only a few broadcast channels from which to choose. Today, the average U.S. household has 91 TV channels[8] and, in both the U.S. and abroad, the number of offered channels ranks in the hundreds.[9]

In the face of explosively expanding choices across all media (for example, tens of thousands of podcasts,[10] more than 43,000 magazines worldwide,[11] over 350 million Internet domains[12] and multicasting TV streams), viewers have trended toward targeted, niche content and messages. In 2005, 57 percent of U.S. TV viewership was on cable content networks versus broadcast.[13] Similarly, viewership in other countries has tracked away from broadcast, free-to-air channels to more specialized, targeted content. Demand is going niche and beyond, yet business models lag.

Consumers change…models lag

One of the key revenue sources in TV, advertising (which funds approximately 50 percent of the market[14]), should theoretically be most elastic to audience changes. And to some degree, revenues have adjusted. From 2000 to 2004, niche advertising CAGRs for U.S. and European cable/multichannel networks were 7.4 percent and 6.2 percent respectively, compared to a 2 percent CAGR for broadcast/terrestrial advertising.[15] Yet, cable in the U.S. collects only 30 percent of advertising revenues today, despite garnering almost double that percentage of viewership (see Figure 1).[16]

Figure 1. U.S. broadcast and cable viewership and advertising revenues, 1997-2004.



Source: CSFB Media & Entertainment Stock Source, March 2005, PwC Global Entertainment & Media Outlook: 2005–2009.

"Misalignment between performance and revenues primes the market for correction."

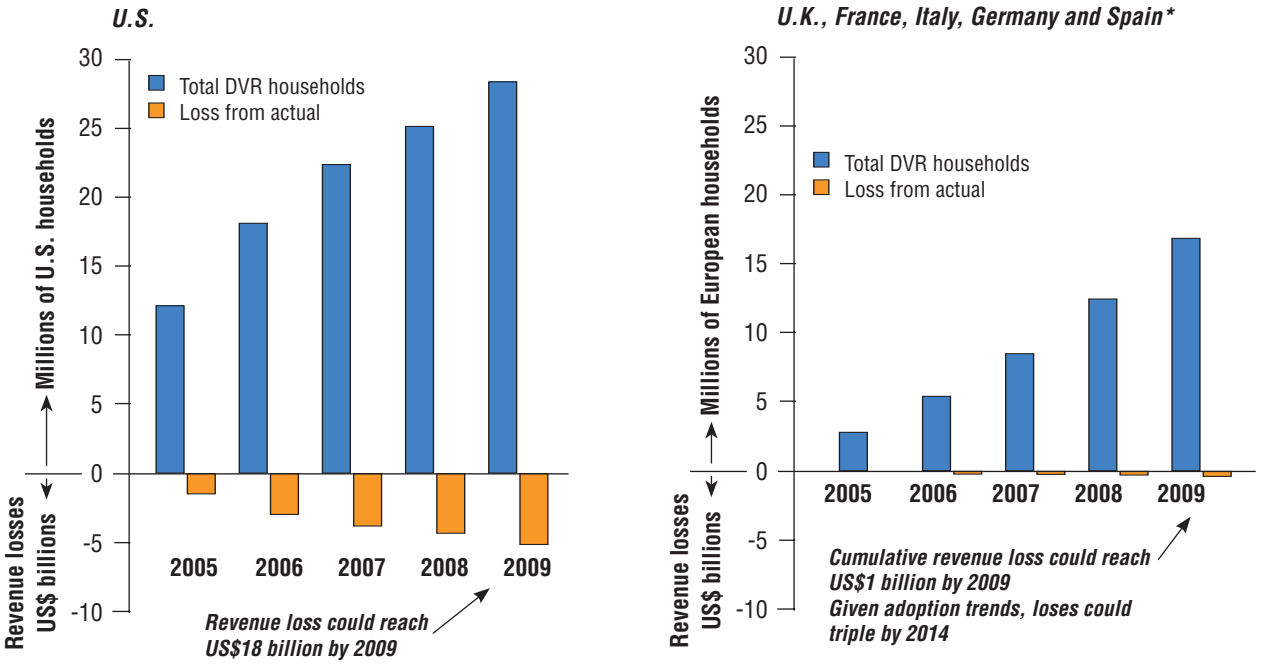
This may be due to lagging perceptions about the reach and effectiveness of broadcast messages, or the complexity involved with any alternative, non-broadcast media placement. Regardless of the causes, today's misalignment between performance and revenues primes the market for correction.

Further, with today's growing availability of self-programming, search and on demand, some users are moving from a niche orientation (targeted content on cable and multichannel networks) to individualized services. Increasingly, viewers are becoming audiences of one, with individual power to determine specifically when, how and what they watch.

"The IBM/ EIU survey revealed that 70 percent of MSO, DBS and Telco executives said 'on demand content' is a chief motivation in consumer purchase decisions, next to price."[17]

As the DVR makes advances – not just in the U.S., but also the U.K., Germany, France, Spain and Italy – ad-skipping is also taking off as, one by one, viewers opt out of advertising content. Ad-skipping is expected to lead to losses of 6 percent in U.S. TV annual advertising revenues in 2009.[18] Even with a slower roll-out in other regions, DVRs are still expected to have a material impact on advertising, with depressed annual revenues ranging from 2.4 percent in Germany to 6 percent in the U.K. in 2012 (see Figure 2).[19]

Figure 2. Forecasted DVR adoption and lost advertising revenues, 2005-2009.



*Note: *Households are total for U.K., France, Italy, Germany and Spain; Ad revenue loss is averaged for these territories. These territories represent over 64 percent of ad revenues for Europe/Middle East/Africa region.*
Source: U.S. chart: Sanford C. Bernstein Research, "Pipe Dreams," May 2004; IBM Institute for Business Value analysis. European chart: UBS Investment Research, "DVR – Broadcasters' nemesis?" October, 2004; PwC, "Global Entertainment and Media Outlook: 2005-2009," June, 2005; IBM Institute for Business Value analysis.

Overall advertising is expected to rise (in part because DVRs inspire more content consumption), but its potential will be mitigated by the DVR impact. It is noteworthy that in addition to the DVR, there might also be a negative impact on the advertisement model from on demand TV. Consumers may opt to buy episodes without advertising or skip through on demand content where allowable. Unlike the DVR, the on demand model is being heavily managed by content owners and networks. The bottom line is that as these new technologies move from the early adopter stage to the mass audience, we expect continued downward pressure on TV advertising (and the traditional 30-second spot), as even the most passive viewer enjoys ad-skipping and time-shifting (choosing *when* a TV program is viewed).

As consumers continue to move away from broad-based experiences, broad-based business models will be challenged as never before. And, advertising is merely the first revenue category to adjust to this trend. Content models, today sold in bulk or bundles among major institutional players, will also go in search of more user-driven, on demand opportunities on a widespread basis.

Industry perspectives:

"In ten years, mass market will stop always trumping niche market."

– Global Software Executive[20]

The IBM and EIU research with executives across the TV value chain confirm this trend to individualized services from broad-based models. Most surveyed executives, regardless of company origin, placed the least confidence in TV advertising compared to user-driven, on demand revenue streams (see Figure 3).

While there is industry consensus about impending revenue transition, the EIU survey revealed a lack of agreement regarding replacement revenues. With uncertain return on investment in TV and lagging metrics, advertisers may simply move dollars to the Internet, where metrics are individualized. Arguably, this – a double-whammy coupled with the DVR – is happening already. Though Internet revenues start with a smaller base, its advertising growth rate is forecast to be almost triple that of TV advertising by 2009.[21]

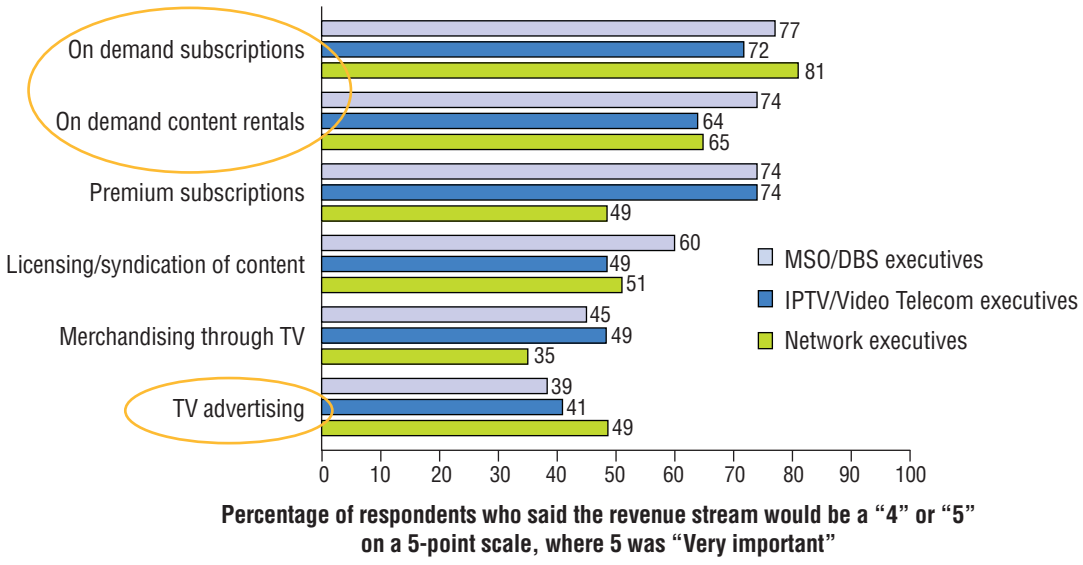
Convergence has finally arrived

Convergence in TV, telecommunications and the Internet is pitting the giants of industry against one another. Two key aspects of converged competition are video distribution and content aggregation.

"Convergence pits industry giants against one another."

First, we look to convergence in distribution and assess how the "triple play" (offering video, voice and high-speed data) and "quad play" bundles (triple play plus mobile) may evolve. In the video distribution marketplace, incumbents and new entrants alike are battling to provide TV and other services to the living room. In doing so, players have been engaged in a network upgrade cycle to win consumer loyalty and higher average revenues per unit. Between 1996 and 2004, the U.S. cable industry spent over US$95 billion on upgrades to move to two-way plant, with its potential for High Definition television (HDTV), digital cable, video on demand and digital phone.[22] With more than 90 percent of U.S. households passed by activated two-way infrastructure by the end of 2004,[23] the foundation was laid to convert 28.5 million households to digital cable and 23.9 million for video on demand by year-end 2005.[24] In Europe, while digital TV is estimated to be in 52 million homes (37 percent of total TV households),[25] video on demand is slower to be offered.[26]

Figure 3. EIU/IBM global survey: Significant revenue streams of the future.



Source: IBM Institute for Business Value survey conducted by the Economist Intelligence Unit.

Internet Protocol Television (IPTV) reroutes competition

Internet Protocol (IP) for video distribution. IPTV is the use of an IP broadband network to deliver quality TV content. IPTV is not open Web TV, as it is commonly mistaken. Most IPTV systems involve conditional access and set-top box equipment, similar to current services provided by digital satellite or cable companies. However, as broadband speeds to the home increase, consumers may begin receiving quality TV directly over the Internet – without the need for designated "pipes." For now, however, delivering even standard definition TV is challenged over residential high-speed data connections.

IPTV and the changing competitive landscape. IPTV is the moniker often used to connote the entry of telecommunications providers into video distribution. However, even within the telecom community, the term is often ill-fitting. In the U.S., for example, AT&T (formerly SBC Communications) is introducing video service over IP, while competitor Verizon Communications is not – instead using cable's quadrature amplitude modulation (QAM) scheme over fiber. Both AT&T and Verizon Communications, like their peers around the globe, are using new proprietary fiber networks to compete directly with traditional cable and digital satellite companies.

New entrant telecommunications providers around the world are also doing network upgrades in order to move into the video distribution business. With their core voice businesses under attack, telecom providers are investing heavily in fiber-to-the-home or curb and next generation networks for video services. Often, the roll-outs are pure IP-based distribution of video, though some more closely resemble cable's QAM scheme over fiber. Whatever the technical transport mechanism, the borders of competition are falling between telecommunications companies and traditional video providers.

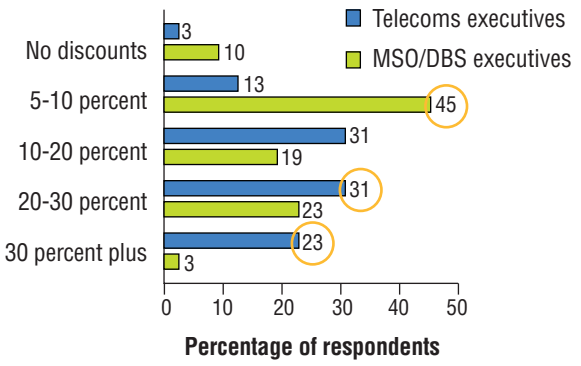
Most advanced IPTV roll-outs to date are found in Europe and Asia: China Netcom Group, Hong Kong's PCCW, Taiwan's Chungwa Telecom and Italy's FastWeb are all global examples of functioning, pilot IPTV networks. In select countries, like China and France, partnerships with municipalities are helping to speed upgrades and usage. In the U.S., Verizon Communications, Bell South Corporation and AT&T (formerly SBC Communications) have announced plans to pass more than 34 million homes by 2009 with fiber.[27] Accordingly, these three major U.S. entrants aim to convert up to 5 million video households by 2009, taking share equally from DBS and cable incumbents.[28]

"If upgraded TV features don't prove new value to consumers, competition will devolve to price alone, placing pressure across the value chain."

With triple play or quad play bundles, competition is expected to be fierce in the forecast period of this paper. As the EIU research shows, the new entrant telecom providers seem poised to buy share (see Figure 4).

The growing popularity of triple and quad play bundles brings the possibility of a protracted price war. If upgraded features cannot prove new value to consumers, competition may devolve to price alone – placing pressure not just on distribution players downstream, but other value chain players as well. Greater profitability is expected to lie with those competitors who can manage the value-added play and not fall prey to discussions of price alone.

Figure 4. EIU/IBM global survey: Triple play pricing strategies.

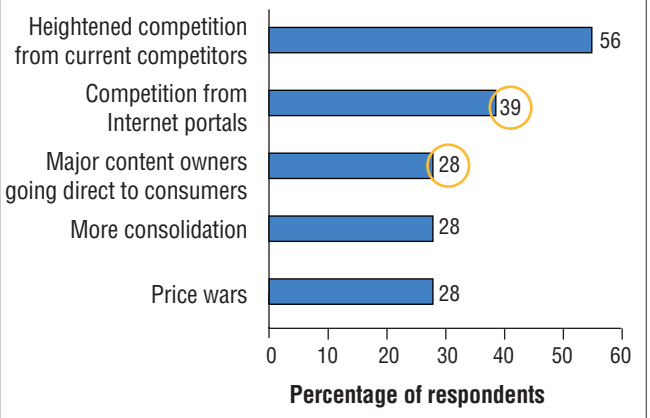


Source: IBM Institute for Business Value survey conducted by the Economist Intelligence Unit.

Besides convergence pressures in distribution, there is a second dilemma: Will Internet content aggregators circumvent traditional programmers? The Internet channel creates a potential bypass to traditional content packaging and programming, a function previously owned by networks for program line-up and scheduling. The EIU research indicates that today's programmers – the TV content networks – rank Internet services among the top areas of concern (see Figure 5).

When asked which competitive challenges they expect to be most significant in five to seven years, network executives worldwide cited nontraditional threats like Internet portals (such as Google, Yahoo! and AOL), and content owners going direct. While the degree to which mainstream users will watch Internet TV is debatable, it is clear that more "lost eyeballs" translates into further weakening of the traditional media network model. It is feasible that networks without consumer brand identities will effectively be squeezed from the market.

Figure 5. EIU/IBM global survey: Network executives' response to "What are the most significant competitive challenges your company will face in 5-7 years?"



Source: IBM Institute for Business Value survey conducted by the Economist Intelligence Unit.

Industry perspectives:

"Networks will be extinct in fifteen years."

– European Public Broadcaster [29]

The beginning…but not nearly the end…of market experimentation

Market changes in supply and demand are triggering trials of new business models (see Figure 6). As Entertainment economist Harold Vogel explained, TV networks and content owners are "trying to find a model that enables them to recapture some of the profitability that goes away when people watch television differently than they have historically."[30]

In 2005, public broadcaster the British Broadcast Corporation (BBC) began piloting "My BBC Player," a technology that allows consumers to use broadband to download and share programs. With a public charter to "drive the market for free-to-air digital TV, digital radio and new media, focusing on improvements in awareness, availability and take-up,"[31] the BBC has launched a trial to make content freely available for seven days with peer-to-peer (P2P) software. Without conflicts from affiliates or network advertisers (that constrain its commercial counterparts), the BBC has experimented farther than most others in the global marketplace.

In November 2005, the Walt Disney Company, Disney ABC Television Group and Apple created another on demand landmark with their partnership to enable access to day-old episodes of popular shows via iTunes Music Store. In the first nineteen days, this major, first-of-kind launch tracked over 1 million downloads, purchased at US$1.99 per episode.[32] Content does not expire and is portable on the Apple Video iPod. Soon thereafter, competitors such as NBC, CBS and Warner Bros. released similar on demand announcements of their own.

Figure 6. Examples of emerging business models.

	Akimbo	BBC "My BBC Player"	CBS and Comcast	Disney and Apple	MTV "Overdrive"	NBC-Universal and DIRECTV	Time Warner Cable "Start Over"	Warner Bros. and AOL "In2TV"	Yahoo and TiVo
Consumer device	TV	PC	TV	iPod	PC	TV	TV	PC	TV, PC
Revenues at launch	Monthly user fee of $9.99	No user fee	$0.99/episode Advertisements (but can be skipped)	$1.99/episode No advertisements	Skip-resistant advertisements	$0.99/episode No advertisements	Free access with TV cable subscription Skip-resistant advertisements	No user fee Skip-resistant advertisements	Access with TiVo sub-scription
Attributes	• Proprietary set top box required for on demand • Content includes Turner Classic Movies, BBC and Discovery	• P2P media player for BBC content • Most shows available for seven days after first run • To launch 2006	• CBS owned content to Comcast subscribers in markets with CBS owned and operated stations • To launch 2006	• Episodes of select ABC content one day after airdate on video iPod • PC playback with QuickTime	• Five genre-driven video channels • Music videos, trailers, news, behind-the-scenes footage	• NBC owned shows on demand to DIRECTV subscribers • To launch 2006	• Program restart anytime during its broadcast window • No ability to save programs	• 14,000 episodes available • Six thematic channels • One minute of advertising inserted into show • To launch 2006	• TiVo functionality for Yahoo media content (Launch) and video search • To launch 2006

Source: Company Websites; IBM Institute for Business Value analysis.

Much like the various alliances in the early online forays of the music industry, these solutions are only the beginning – "placeholders" which do not yet allow for the ubiquitous access to content anytime, anywhere. The TV market will continue to evolve literally day-by-day, as industry participants keep seeking new, profitable models that serve consumer needs. As all of this activity leads to greater industry learning, as well as disruption, the riskiest option now seems to be that of inaction.

Music industry experience offers lesson for TV

At the turn of the 21st century, the music industry had seen five years of relatively stable CD sales growth.[33] However, as Napster gained momentum and CD sales started to slip, the industry was slow to react.

Napster quickly swelled and at its peak had 80 million users who traded over 15 billion songs.[34] In two years, the percentage of North American online households downloading music illegally had jumped from practically nonexistent, to just under 30 percent.[35] With downloads skyrocketing and artists crying foul, the music industry's lawsuit shut down the P2P Napster service in early 2001.[36] However, this effort did not stop copycat global networks which launched with new technology impervious to worldwide court or regulatory oversight. The U.S. music industry saw unit sales fall 21 percent between 2000 and 2003, the largest technology related revenue loss of any media business in the last two decades.[37]

The release of the iPod, followed by the iTunes launch in 2003, finally proved that embracing new technology could bolster revenue. With hip design and fluid user interfaces, iTunes dominated the market and enticed users back from P2P file sharing. Apple has now sold half a billion songs online and digital music accounts for 4 percent of the US$13.4 billion global music market.[38] Following four consecutive years of declines, the music industry experienced solid growth in 2004, up 5.7 percent globally, fueled by digital distribution and mobile music.[39]

The key lesson from Music is to *get out in front of a changing marketplace.*

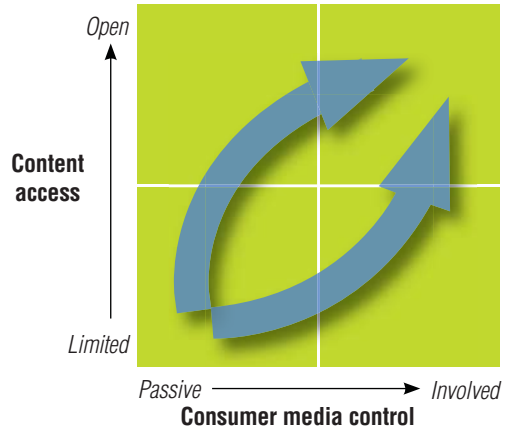
Views of the future

Given the trends in motion, great disruption to the value chain appears nearly inevitable for the long-term. However, analysis shows that radical upheaval may be outside the forecast period of this paper, as the mainstream user takes time to catch up to the tech-optimists and fashion-forward users. This section of the paper outlines our view of the long-term future, as well as assumptions on the evolutionary mid-term and impending value shifts for 2012.

The next great "earthquake" is coming (but not today)

Looking beyond the year 2012, we believe two key drivers will define long-term TV industry disruption: Open *content access* and highly involved *media consumers* (see Figure 7). The blue arrows show the expected movement to the upper right quadrant over time, as many mainstream users become more involved with their TV experiences and enjoy greater access to content through new platforms and channels.

Figure 7. Drivers of change for the long-term future state of the TV industry.



Source: IBM Institute for Business Value.

The spectrum for consumer media control ranges from *Passive* to *Involved*. At one end, the historical and still predominant passive experience represents a "lean back" mode in which consumers do little more than flip on the remote and scan programming. At the other end are consumers who want to "lean forward," for a PC-like experience. Involved users will self-navigate, toggle, search and self-author content – and, this interactive group is willing to invest heavily in its TV and media experiences.

"We believe two key variables will define long-term disruption: Open content access and highly involved media consumers."

The content access axis describes the channels for obtaining content, whether limited by a service provider in a safe haven or accessible through a more open, Internet-like state. The *Limited* end of the spectrum represents the predominant current state – a controlled environment like a "walled garden." Here, just a few distributors (namely MSOs, DBS and telecommunications providers) clear conditional access hurdles and aggregate content. By contrast, the *Open* end depicts a model where both protected and unprotected content is readily available through multiple platforms, channels and distributors (including mobile and Internet).

The matrix framework predicts disruptions across the market. While some tech-forward consumers can immediately force change, the tipping point will not be reached until the mass audience adopts behavioral shifts. Changes might include:

- Content bundles are "de-bundled" by consumer demand
- Internet content distributors take significant share from broadcast, cable or satellite networks
- Media networks without a consumer brand identity suffer the consequences of consumers "going around" them
- Search and self-programming reduce the value of content adjacencies (the time slot before or after a hit show), fundamentally changing marketing and promotions.

Media consumers: A "Generational Chasm"

Massive Passives. Just beginning retirement, Sharon, age 61, and Ken, age 65, plan certain types of entertainment into their daily routine. Along with Ken's regular golf and bridge outings and Sharon's various social clubs, they both look forward to certain favorite prime-time and news magazine programs. Like many of their friends, they splurged last year on a large flat-screen TV, where Ken especially loves to watch live Dallas Cowboys football and golf tournaments. Sharon checks the TV Guide to stay informed about the movies-of-the-week and network specials. Her grandson is trying to teach her to use the built-in DVR, though she often forgets about the device's live-pausing or ad-skipping potential. Definitely part of the "lean back" category, Ken and Sharon haven't greatly modified their TV viewing habits in the last twenty years.

Two distinct sub-groups, Gadgetiers and Kool Kids, comprise the more involved, "lean forward" consumer segment:

Gadgetiers. Helene, age 29, is married to Franz, age 33. These on-the-move, working parents have set up a surround-sound home theater, enjoy downloads on the hottest portable devices, and transfer content and data via their WiMAX Internet connection. Helene and Franz have no preferred service provider for video service (cable, satellite or telecommunications provider), as long as they get top quality bundles at a value. Given their schedules for work-related travel, neither minds paying for certain content or services to accommodate their lifestyle. They have a particular fondness for convenience-oriented services like TiVoToGo and iTunes, which make their portable lives more flexible and fun. They also selectively use P2P resources for missed programming that is not available through on demand systems. Feeling great ownership over their media experiences, Helene and Franz enjoy showing friends and family their Gadgetier ways – even sharing information with other technophiles on various video blogs.

Kool Kids. Marcus, age 13, and Semana, age 15, are brother and sister. Both were exposed to high bandwidth networks as very young children and they experiment unflinchingly with media and platforms. While they have little disposable income, they follow all the latest gadget crazes. The mobile device is the centerpiece of their lives and they text message while doing one, two or three other tasks. Though their parents refuse to allow it in their presence, Semana and Marcus even do instant messaging on the TV set while watching favorite shows. Marcus uses his tech-savvy to try to bypass network blocks and content encryption in order to rip and share content. Likewise, Semana doesn't worry about piracy warnings as she trades copies of CDs with her friends. Without thinking about it, both are heavily invested in media experiences and spend much time seeking TV episodes, current films and hard-to-find, cool niche content. Like practically all their friends, these teenagers have posted detailed profiles to several social networking sites, relying on those connections for media recommendations and most other aspects of their lives.

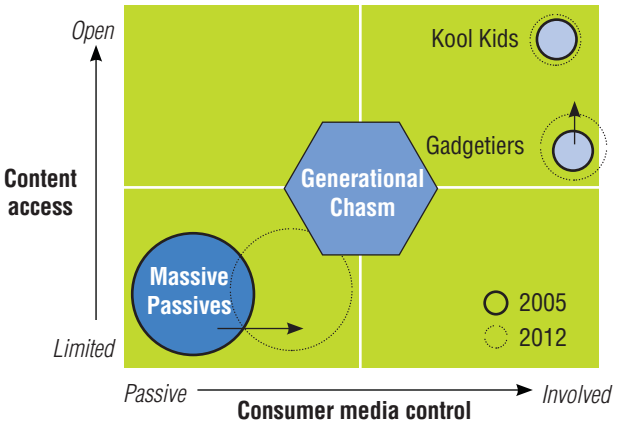
Bimodal consumers until 2012: It's all in how they lean

Suppliers lay the foundation of change with network upgrades and converged service roll-outs. However, the industry tipping point ultimately depends on the mix of users and their acceptance of new services and pricing. For the short- and mid-term future, the TV industry will be marked by a bimodality among consumers: those who are mainly passive viewers and those who demand a more interactive media experience. This future state is described as the "Generational Chasm" because there is a rough correlation between a consumer's age and whether that person is more likely to be a passive or active viewer of TV content.

Today, the Massive Passives far outnumber the influential, fashion-forward, early adopters personified by the Gadgetiers and Kool Kids. Though the mass audience is indeed dwindling, it will take time for technology fluidity, education and customer service to take hold. As a result, the Generational Chasm is the expected state of the TV industry for the coming five to seven years, featuring the coexistence of these two distinct audience types (see figure 8).

"The Massive Passives, the largest group today, represent the annuity to fund the industry's future growth."

Figure 8. Bimodal consumers and the Generational Chasm.



Source: IBM Institute for Business Value.

Massive Passives are generally content with their traditional TV experiences and uninspired to change viewing habits drastically in our forecast period. These device followers are expected to keep the TV as the media centerpiece for the near term and watch scheduled programming, with growing time-shifting.

By contrast, the Gadgetiers and Kool Kids seek more experiential interactive video experiences, with heightened control of aggregation, content sources, space-shifting (choosing *where* video content is viewed), time-shifting, user contribution of content and device interoperability. These early adopters are leading the way toward open distribution models.

Gadgetiers spend as much time with their PCs for media experiences as their TVs, often time-shifting and space-shifting with PCs and other devices. As this group grows over time, it can represent revenue growth opportunity for industry incumbents – if compelling content and device/platform extensions can be offered.

"If you don't get in front of Gadgetiers, they will leave you behind."

Kool Kids are distinct in their reliance on content sharing. This group has more time available than other groups, but fewer funds. As a result, they are device aspirants, using mobile devices as the centerpiece of their social and media experiences. Time-shifting and space-shifting are both prevalent with mobile, physical copies. Kool Kids represent revenue cultivation opportunities as the industry works to mitigate or prevent Napster-like propensities.

Analog switch-off will most affect the Massive Passives

Digital TV switch-over hits mid-forecast period. Within a few years – the exact date is still being determined by the FCC and Congress for 2008/2009 – broadcasters in the U.S. will suspend traditional analog transmissions and switch over to all-digital signals. The transition will free up valuable spectrum which the FCC will reallocate, some to public services, such as fire and police bands. Furthermore, when inevitably combined with HDTV, digital TV offers better picture quality, richer digital sound and available digital data for many interactive purposes. Similar transitions are going forward in most major markets, with Japan, South Korea and the U.K. leading the way for transformations between 2008 and 2012.

Complex transition for consumers and companies alike. The analog-to-digital transition will be complex for several reasons. The analog shut-off is unique, in that past industry transformations (such as the start of FM radio) have typically been additive, not substitutive, and have been backward compatible. When the analog signal is ceased in the U.S., analysts predict that 200 million of the 300 million sets will not be digital-ready.[40] With cost upgrades estimated at approximately US$50-60 per TV set, the total cost is monumental and no full payer has been identified.[41] In Europe, even fewer households are digital than the U.S., illustrating the immense cost to be borne out in each global region for the transition. Any way you split the spectrum, digital TV is going to offer consumers more choice and greater interactivity – but it will entail transitional discomfort (particularly for Massive Passives, who are likely to be less comfortable with environmental change) in combination with vast industry expense.

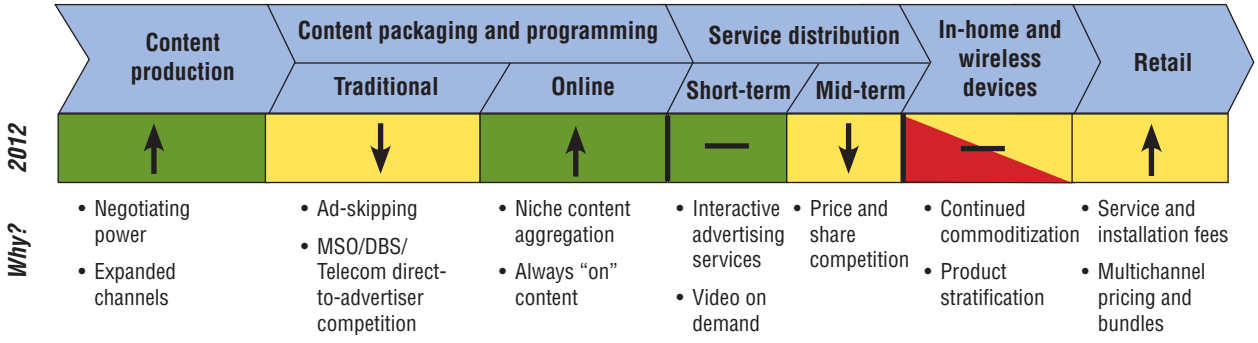
Value shifts in a bimodal world

Due to the growing complexity and bimodality of the market, we expect value shifts in the industry as new and old participants fight for new relevance and prominence. In Figure 9, we have outlined possible scenarios for winners and losers in 2012 (as an extension of trends afoot in 2005).

For example, given the move of some advanced users to new screens, such as PC and mobile, and away from traditional broadcast schedules and advertising, it is conceivable that traditional programmers will weaken in the years ahead. Hence, the graph shows a downward arrow for that group, indicating loss of position from 2005. Furthermore, as Gadgetiers and Kool Kids actively seek new IP-based video experiences, it is fathomable that online packaging and programming providers – such as Internet portals or search engines – will extend their position with users by adding TV and video offerings. In doing so, they can capture advertising and service revenues. The marriage of consumers and content aggregation may place the portals into a high-margin, high-value position within the TV business. An arrow pointing upward indicates that strengthening position between 2005 and 2012.

While the scenarios discussed above are only speculative, what is certain is that new winner and losers will rise up in the next five to seven years, given the degree of change ahead. Competing and maintaining value in the marketplace will be at least partially dependent on each company's ability to adapt, reset strategies proactively and prioritize action steps.

Figure 9. Speculative value shifts 2005 - 2012.



Note: Arrows indicate change in value position from 2005. Dashes indicate no significant change expected.
Source: IBM Institute for Business Value analysis.

Premier value position
Moderate value position
Non-differentiated profitability

Priority actions for future success

Providers of content creation, packaging, programming and distribution must act quickly to develop and implement complex strategies for a complex marketplace. Six key priority actions are essential to prepare for success in the TV industry of the future: Segment, Innovate, Experiment, Mobilize, Open and Reorganize.

1. Segment: Invest in divergent strategies and supply chains for bimodal consumers.

Successful companies of the future will segment the market to serve both the "lean back" Massive Passives and the "lean forward" Gadgetiers and Kool Kids. To both protect current and grow future revenues, leading companies will need to:

- Dynamically profile consumer groups
- Tailor services and products by segment
- Cost-effectively operate tandem channels
- End the "one size fits all" marketing approach.

The first step is to perfect a process for acquiring and analyzing consumer data. Data will be crucial to profitably discriminating among user groups on pricing, bundles, technology integration, content form and function, release windows and advertising formats, among others. By constantly honing data-driven psychographic segmentation, a company will be armed with necessary information to pre-empt and meet market needs. To systematize information flow, continuous data mining and predictive modeling, technologies like customer relationship management systems are in order.

Just as product and service development must be reoriented by segment, so too must delivery supply chains. To deliver to bimodal demand, providers will need to develop and operate tandem supply chains and channels. In other words, while preserving status quo processes and systems for the Massive Passives, there must be initiatives to develop and upgrade nontraditional channels on behalf of the demanding Gadgetiers and Kool Kids.

To maintain the bottom line in this complex environment, executives will have to achieve significant cost savings from the traditional supply chain in order to invest in new delivery channels. While each company along the value chain targets users from a different vantage point, none will be exempt from the tremendous cost pressures arising from bimodal demand – and its associated requirements for multifaceted supply.

"To maintain the bottom line, a company will have to achieve significant cost savings from the traditional supply chain in order to fund new delivery channels."

In addition to developing divergent product and delivery strategies, each company must also differentiate communications and sales strategies. Providers must offer to each consumer segment unique marketing messages, migration up-sell strategies and sales outreach plans. This will be crucial in moving all segments – at different rates and speeds – along the future path. Asymmetrical strategies will be required in service packaging, marketing reach and communication integration, among other things (see Figure 10).

Figure 10. Suppliers will need divergent strategies for divergent consumers.

	Lean back consumers	*Lean forward consumers*	
	Massive Passives	**Gadgetiers**	**Kool Kids**
Screens	• TV	• HDTV • TV on PC	• TV on cell phone, PSP
Content preferences	• *BBC World News* • *Good Morning America* • *World Cup Soccer* • *Monday Night Football*	• *The Office* preview episodes • *Daily Show* interactive • CNET news segments	• Ring tones of *Alias* • *Lost* video blog • GameTap
Content consumption	• Appointment TV • Prime-time	• On demand • On replay via DVR • On own time	• P2P download • On replay via DVR • On demand to mobile device
Advertising	• 30-second spots • Program-integrated messages	• Click-throughs • Long-form/short-form content • Program-integrated messages	• Social networking links • Instant Message (IM) advertisements • Short-form content
Communication applications	• Traditional applications for each device	• Multi-purpose devices • Cell phone programming of DVRs and other convenience-oriented services	• Constant social connection across devices • Instant messaging and communities on TV screen
Service packages	• Bundled TV channels • Bundled "triple plays"	• *A la carte* niche channels • On demand season's pass by program	• Bundled channels (parents) • *A la carte* mobile VOD
Marketing outlets	• Best Buy • Reitangruppen • Wal-Mart	• BitTorrent • Google • Del.icio.us • Bic-Camera Yurakucho	• My Space • Facebook • Hi5

Sources: IBM Institute for Business Value analysis.

"One-size-fits-all" no longer works in our heterogeneous marketplace. Simply put, to segment is to succeed.

2. Innovate: Take risks today with business models, pricing, windows and packaging.

To avoid losing market position in the long term, you must be willing to risk aspects of your business today in the name of future success. To optimize uptake and profitability, companies across the TV landscape should:

- Create new innovative content, delivery models, pricing and packages
- Go to market with a dynamic schedule
- Calibrate pricing across all new and old windows of opportunity.

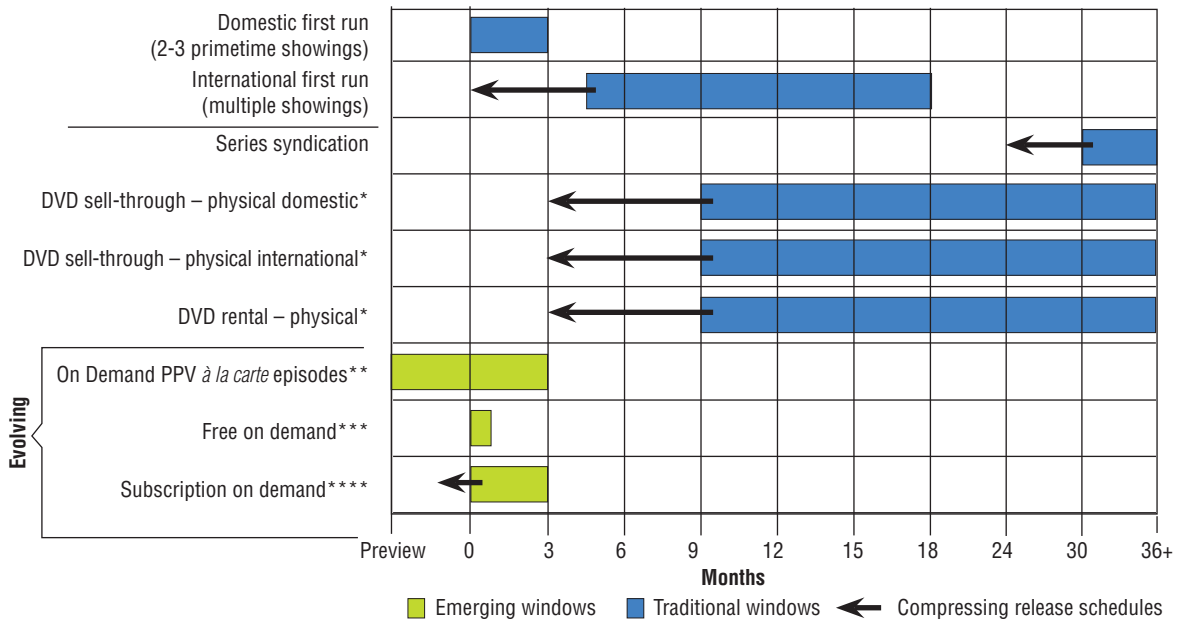
What does this mean? To start, companies will need a balanced, yet aggressive, stance toward new content bundles and packaging. For an executive upstream on the value chain, this will mean embracing new content form functions, as well as new delivery models such as subscription content on demand, free on demand, and *à la carte* pay-per-view (PPV); for an executive downstream, these necessary risks may span from *à la carte* channel rate cards to "quad play" mass bundling.

The economic pie will increase with more consumer choice. But, managing the right content (bundle, de-bundle or splice of content) *at the right time with the right price* will be critical for profits (see Figure 11).

Content will have to be divorced from its traditional platform or schedule in order to open new revenue sources. Illustrations include:

- Paid user content on demand (subscriptions or pay-per-view): Best suited for first-run shows or valuable branded archival programs with long commercial

Figure 11. Evolving TV content release windows.



*Notes: *DVDs assumed to contain one (or more) season of TV content. **PPV on STB, iPod, media center, disc, etc. ***Primetime available after first airing free of charge. ****Subscription pay TV "on-demand" after first airing.*
Sources: IBM Institute for Business Value analysis.

lifecycles. Includes "season passes," *à la carte* purchases and "long-tail,"[42] niche acquisitions. Strategy capitalizes on user willingness to fund content directly; opens another revenue source.

- Free user content on demand: Best suited for content that is untethered to long commercial lifecycles. Includes perishable content (nightly news, weekly commentary, and late-night comedy), back-catalog, non-branded niche content or that funded by public license. Strategy extends loyalty, viewership and/or advertising reach.

At the same time, executives are charged with studying and reassessing pricing strategies. To optimize income, providers need to weigh the price consumers will bear (with each package and offering, new and old) against all associated delivery and opportunity costs. For example, cost analysis for new digital downloads and on demand models will have to include physical transport, licensing costs and partner revenue-sharing, as well as lost revenues from traditional sources, like advertising. Further, strategists must face the ultimate question for the bottom line: "What pricing strategy forestalls the next illegal P2P forum, and keeps consumers in the fold?"

To fully leverage the complex demands from consumers, savvy providers need to commit to the ongoing innovation of business models, release windows and pricing strategy. Doing nothing is almost certainly the costliest option of all.

3. Experiment: Develop, trial, refine, roll-out. Repeat.
Innovation only comes to life through experimentation and trial. In this age of complexity and uncertainty, ongoing experiments need to test uncharted territory. To win in the future, companies should:

- Conduct market trials *now* to gauge consumer behavior "in action"
- Constantly refine products
- Invest in underlining new metrics for new models.

At industry pivot points, user feedback arguably has its greatest impact. As such, companies must repeatedly test consumers on service options, product attributes, brand perception, pricing schemes and user-friendliness, to name only a few.

For illustration, consider next generation advertising models. With advertisers funding half the industry[43] and the DVR threatening revenue stability, it is paramount to surface and test models which augment (or replace) the 30-second spot. To invest most astutely in tomorrow, companies will need to be guided by demonstrated user acceptance, attention, retention, click-throughs and buy-rates associated with each new possible advertising model. In this case, options will range from short- or long-form advertising, interactive merchandising or time-sensitive overlays for archived on demand (see Figure 12). While advertising is the highlighted example, emerging content models and delivery channels all need to pass through similar rigorous trials and experimentation. And, experimentation cannot be a static exercise…it is a continual process with ongoing results, which contribute to the dynamic refinement and distillation of the right end-user product.

To bolster new business models (advertising and far beyond), companies must invest in new metrics to monitor progress and success. Traditional metrics, like audience ratings, have not been based on realtime, individualized data. Instead, sampling methods were used to generalize consumer behavior.

In order to deliver segmented and tailored media experiences, it is imperative to capture more granular measurements and metrics. From individualized audience-tracking to click-stream analysis in the living room, companies will need new tracking systems to support more on demand and pseudo-individualized products, services and models.

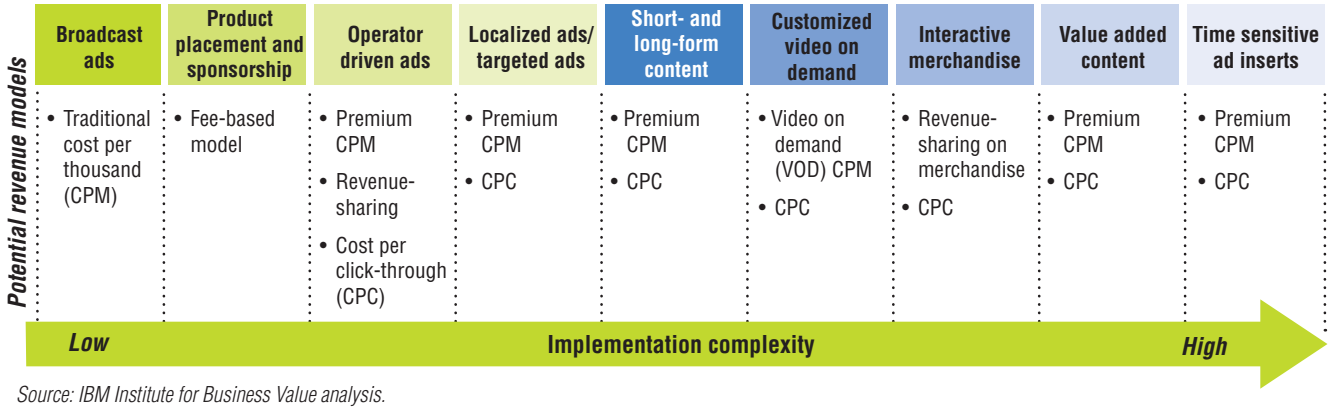
As the industry transitions from a broadcast environment to its next manifestation, companies must be dedicated not only to ongoing trials and experiments, but also to a culture and mantra of experimentation.

4. Mobilize: Create seamless content mobility.

Companies have to strive to take content mobile for tech-forward users like Gadgetiers who want their entertainment and content "on the go." These users have steep requirements for portability of their devices, media and experiences, and keeping apace of user demand will require companies to:

- Deliver easy synchronization among devices
- Provide consumer-friendly services without required user modification.

Figure 12. The spectrum of possible future advertising models.



Source: IBM Institute for Business Value analysis.

Two early market examples illustrate an evolutionary trek for mobile content. TiVoToGo, a service extension offered by U.S.-based TiVo, enables users to move recorded TV programs from their home TiVo DVR to PCs, MS Windows-based portable devices or DVD-Rs. As of September 2000, TiVoToGo had an install base of 1.1 million users with the requisite physical hardware.[44]

Another company, Porto Media, leverages retail space to introduce and assist in mobile experiences. This Irish service provider and technology developer has launched a flash memory module that enables fast, secure, digital content downloads via in-store kiosks to secure digital (SD) cards. With Porto Media technology, a DVD quality movie can be burned to an SD card in less than 20 seconds.[45]

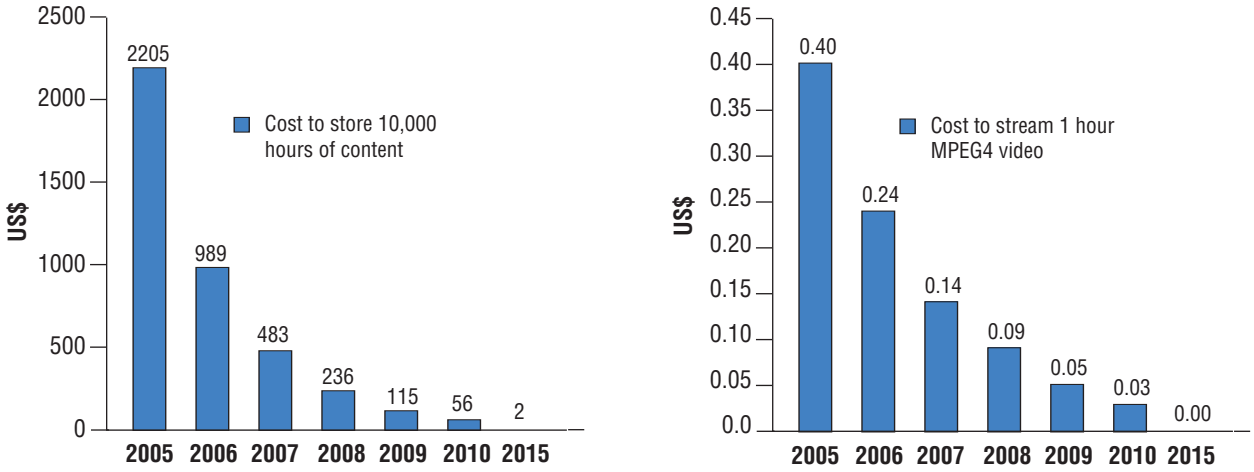
Industry perspectives:

"Customers want content across platforms. This is the three-screen future."

– North American IPTV Telecom Executive[46]

Industry players need to act or consumers will simply find low-cost solutions of their own. For example, two key components of do-it-yourself services – video streaming and video storage costs – are tumbling downward, *à la* Moore's Law. Total costs of 10,000 hours of video storage are projected to shrink from US$2205 in 2005 to US$56 by 2010, and significant cost declines are also forecasted for streaming video (see Figure 13).[47] If providers do not act quickly, self-sufficient, high-value consumers (namely those of the Gadgetier ilk) will likely choose to create their own mobile services rather than pay TV value chain players to play.

Figure 13. Projected costs to stream and store video content, 2005-2015.



Source: Sanford C. Bernstein Research, "Media Time Running Out," February 25, 2005.

5. Open: Open and standards-based content delivery platforms.

Companies up and down the TV value chain need open and standards-based delivery networks to optimize content development and distribution – as well as to enable continuous improvements in business flexibility and network cost-efficiency. Forward-thinking companies can leverage these capabilities to bolster content protection (with enhanced consumer flexibility) and for essential plug-and-play upgrades necessary in the ever-changing marketplace. This includes standards-based or open:

- Interfaces
- Content ingestion/indexing
- Encryption/decryption
- Encoding/decoding
- Middleware
- Storage
- Home networking, and much more.

By moving to such optimized delivery platforms, companies have reported positive movement along performance metrics: faster time-to-market with new products, improved agility in reacting to production needs, reduced cost structure, improved asset use, better integration of third-party content, improved procurement leverage, greater responsiveness to market demands, reallocation of resources to value-added activities and much more. Several companies have begun large-scale initiatives in this area:

- The National Football League (NFL), the body which oversees the most popular U.S. sport, as well as its NFL Films division, implemented an open digital workflow in order to optimize content collection, management and use. Its network is "architected" as the digital foundation for content creation and distribution. The NFL enables on demand access to its films division for every play from every game on a weekly basis, allowing editors, producers and analysts to access any game content for near-realtime repurposing and distribution in new programming.
- China Central Television or CCTV, China's largest national TV network with fifteen content channels and international coverage, launched an all-digital TV solution with centralized storage across the enterprise. The all-digital supply chain allows consumer services such as viewing archived video or live broadcasts over a standard IP network. On an open platform, CCTV is able to upgrade features and services as needed.
- Singapore telecommunications carrier MobileOne Ltd. moved to an open delivery solution to manage, provision and bill for delivery of downloadable content services to a variety of mobile devices. With its open delivery solution, MobileOne Ltd. can deliver multiple content types to different devices using different protocols.

High Definition (HD) and standards-based initiatives

Consumers go for it. HDTV is ready to take off around the world. HDTV sets boast four times as much picture information on the screen as "regular" TV, creating a higher resolution picture and richer viewing experience. With a widescreen aspect ratio (16:9), better sound quality (often Dolby 5.1 or better), and ready content for sports fans and cinephiles, consumers are trading up current TV sets as prices drop. Five years ago, an HDTV 32-inch set might have cost US$5000, but today average prices are dropping below US$1000 in major Asian, U.S. and U.K. retail outlets. As a result, by 2009, the HDTV market is expected to grow to US$65 billion in the U.S. alone.[48]

Industry promotes content management standards. As HDTV rolls out, content owners, technology and electronics companies are working together on next generation content management for HD optical media in Advanced Access Content System Licensing Administrator – (AACS LA). The major studios and consumer electronics firms have been enmeshed in a "format war" between Blu-ray and HD-DVD. Whichever format is chosen, the content owners and electronics companies are dedicated to using the HD technology inflection point to industry advantage by introducing more compelling entertainment experiences, with more secure formats and greater storage for additional value-added content. HD with robust content management technology will create opportunities for new business models for content owners, distributors, content aggregators and electronics companies.

6. Reorganize: Assess assets and company "make up" against future requirements.

In planning for future competitiveness, forward-thinking executives must conduct inward and outward examinations of their business. To compete amid growing market complexity, companies must:

- Harness differentiated skills and competencies
- Leverage financial markets to buy, build or team to future success.

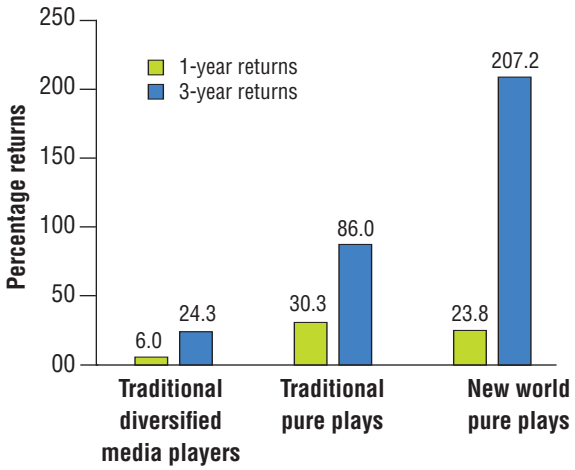
First, companies must turn the analytic microscope inwardly and identify the array of differentiated skills and competencies needed for future competitiveness and advantage. Concurrently, executives should also assess the aspects of business which are basic and, therefore ripe for consolidation, outsourcing or partnering. Through this process of "componentizing" the business, companies can focus on components – or groups of business activities – that move the enterprise toward greater future specialization in comparison to competitors. In doing so, a leaner, stronger company of tomorrow can be built by securing differentiated and competitive assets, while the rest are delivered most cost-efficiently and without disproportionate management attention.

Companies also need to understand how best to optimize and leverage worldwide financial markets to buy, build or team to future competitiveness. The market itself has indicated favor for less diversified or pure-play media and entertainment companies. Financial markets have valued pure-play media organizations manifold over traditionally diversified companies (see Figure 14).

This recognition prompts another avenue for strategic analysis and decision-making. Within the next five to seven years, large TV/media companies should strategically capitalize on financial market trends with divestitures, vertical mergers and acquisitions, or company business unit spin-offs. We believe this period will be marked by concurrent disaggregation and reaggregation.

Reorganization is critical for market resilience and repositioning. Savvy executives must consider this lever – as well as those mentioned in the other recommendations – in the battle for future stronghold.

Figure 14. Global total shareholder returns, 2002-2005.



Note: Traditional diversified media majors include The Walt Disney Group, News Corp., Viacom, Time Warner and Liberty Media. New world pure plays include eBay, Yahoo!, NetFlix, Napster, Real Networks, Sirus, XM Satellite, NTT Docomo, Telefonica Moviles. Traditional pure plays include Pixar, Dreamworks, Grey Television, Warner Music Group, Electronic Arts, Atari, Nintendo, Activision, THQ, Jamdat, Blockbuster, Echo, Cablevision, LionsGate, Univision, EMI Group, Asian Satellite Television Network.
Sources: Bloomberg, July 2005; IBM Institute for Business Value analysis.

Conclusion: The beginning of the end… adapt or succumb

"The end of TV as we know it" describes an industry facing changing consumer demand, misaligned traditional business models, converged competition and burgeoning IP services. Players within the TV industry sit on the precipice of an impending upheaval that promises to be no less dramatic than that experienced by the music industry.

Given the bimodal demand predicted through 2012, strategists must work amid fragmentation, divergence and opposition in the market to optimize across nascent and long-standing business models; across new and traditional release windows; with old and new content programmers and aggregators; and with both IP and traditional supply chains.

At a time of exquisite change in both demand and supply, immediate action is required. The six recommended priority actions offer a blueprint for proactive strategy. While each tenet is universal, it is incumbent upon each TV industry competitor to view the recommendations through the prism of its own particular business circumstances and uniquely prepare for the disruptiveness – and opportunity – ahead.

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