

INDUSTRY REPORT 2007  
**Volume 6**

# Development of Networked Content

### **About the Cover**

*The Kuda Kepang is a highly-spirited traditional dance performance from Malaysia's southern state of Johor. Usually performed by nine dancers sitting astride two-dimensional horses, the dance forges the image of great determination with stories of historical and victorious battles told in various vigorous yet graceful movements.*

*The Kuda Kepang image is set against the background of the Istana Budaya, the icon of Malaysian traditional performances and regarded as among the 10 most sophisticated theatres in the world. Much like the dance, the SKMM identifies and weaves the spirit, synergy and story depicted by the Kuda Kepang and the grandiose of the Istana Budaya with our own commitment in bringing about the progressive development of the communications and multimedia industry.*

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# FOREWORD

On behalf of the Malaysian Communications and Multimedia Commission (SKMM), it is my pleasure to present to our readers the Report on Development of Networked Content.

The scope of this report includes a discussion on what “Networked Content” concerns. A range of consumer expectations on content is detailed. This includes various perspectives such as ease of use, increased personalisation and the trend away from traditionally broadcaster control of content to consumer centric orientation. The discussion also looks at the way consumer centricity is effected by the stakeholders such as service providers, vendors, content providers and telecommunication operators; why there is need for review or change of existing business models and market positioning to suit such consumer requirements.

The report also analyses the current market content offerings across a variety of delivery platforms from traditional non-network, current networked and future high speed network orientations. A comparison of revenue streams today and forecasts into the future are included plus a look at the market players, market size, market share in the content industry at the national, regional and global levels.

There is also a discussion of the challenges faced and opportunities available to operators and new entrants alike in the new trend of content development and its delivery across various networks.

A soft copy of this report can be obtained from the SKMM website at:

[http://mcmc.gov.my/what\\_we\\_do/Research/industry\\_studies.asp](http://mcmc.gov.my/what_we_do/Research/industry_studies.asp)

I trust this document will provide useful information to readers and indeed can serve as a catalyst to constructive business ideas and perspectives that can further propel the communications and multimedia industry development. We welcome feedback that will help us improve our industry reports in the future. Please send your comments to [webmaster@cmc.gov.my](mailto:webmaster@cmc.gov.my)

Thank you.

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the end.

**Datuk Dr. Halim Shafie**  
Chairman  
Malaysian Communications and Multimedia Commission (SKMM)

# EXECUTIVE SUMMARY



Effectively, content be it film or movie or video has always been a universal occurrence – crossing national boundaries, languages, cultures and age groups. The time it took to deliver to viewer took a bit longer though, bounded by distance, cost, modes of delivery like traditional television (TV) and radio that provided respective movie and audio content as far as technology then could. However, today in an era where distance and time no longer has relevance in the instant communications from Internet style facilities and its accompanying capabilities, the limits of “audio video online” content delivery is literally boundless. This is at least in so far as current decade of advancement in technology can take us.

For example, the traditional mode includes film, digital TV-DVD, HBO, radio, and the narrowband or limited speed broadband Internet where streaming TV is a taste of what can be. New modes go beyond the acceptable speed for legitimate video downloads of at least 4Mbps. There has been radical change over the last few years worldwide on the delivery of content through different delivery platforms and of course the types of content offered. Digitalisation of broadcast content is one of the drivers of this phenomenon – also, increased bandwidth. Industry reports data transmission has reached record of 14 Terabits per second (Tb/s) in September 2006 going to 25.6 Tb/s in 2007. Spectral efficiency and increased information transmitted within a unit bandwidth is liberating communications services to go where it has never gone before. The other driving or liberating factor is mobility. The audience not only can watch TV which is time and place shifted, but also on the go.

In view of such developments, the growth of networked content is expected to be rather explosive liberating content delivery over distance and time in a real life and “seamless” way. Networked content simply means content that can be created, manipulated, stored, retrieved and communicated through the use of network facilities and services. Yet only appropriate content or content in demand is what consumers delight in and are willing to pay for. Monetising the interest of the masses in content is a question all supply providers are asking and seeking a solution for today in order to equalize the supply and demand equation.

As consumer is king, all as in vendors, service providers, content providers, telecom operators and new entrants into the communications services arena such as broadcasters, consumer electronics suppliers and social networking website operators would therefore aim to satisfy their consumer wants as their first choice. This though is not as easy as it looks. The transition from product centric and operator or product centricity requires amongst others changes in modes of delivery, upgrades in network infrastructure, subsidised consumer premise equipment, creating consumer awareness, expanded marketing budgets, training staff on the new ways of delivery, support and customer relationship management. There are also partnerships with other parties of even rivals in competition, acquisitions to be made if expertise is absent or learning new skills such as to outsource operations that are not the company’s core business.

Consumer demand can be in the form of seamless mobility, personalised viewing experience such as Video on Demand (VoD), Personalised Video Recorder (PVR), networked Personal Video Recorder (nPVR), Karaoke On Demand (KOD), Digital Video Recording (DVR), instant channel changing and personal media sharing, and User Generated Content (UGC). These are the many consumer wants along the direction of same video content on any device, anywhere and anytime.

Consumer centric products and services in the more established music industry has gone beyond delivery of content (music) but a whole user experience to satisfy consumer desires. In 2007, there is the Apple iPhone that combines an MP3 player, mobile phone and Internet communications device. In February 2006, US Napster Mobile offered search, browse, select and option to purchase music from its three million track catalogue via next generation handsets. In essence, convenience and user control are reflected in the services.



As with the music industry, the film and movie industry is undergoing similar change to consumer centric content delivery. Film downloads are an increasing reality due to technological advancement and improved infrastructure. There is more adequate broadband speeds, relatively effective digital rights management in place and large enough customer bases of online subscribers. There is also interactivity now to enable commercial relationship with users and studios or operators, making online content download as a viable distribution method.

Indeed, many companies have made innovative and new strategies to provide and sell online content in a networked content world such as EMI Music forays into digital space; Viacom in its “games and movies mix”; Yahoo in positioning its audience around segments rather than around its products; Nokia music store, and a new network in US making content for US TV screens and mobile screen as well.

All in all, the common recurring developments so far are the fact that traditional media is going digital and online. There is user centricity in content offerings and content generation, partnerships to get content or a delivery platform working and containing ample catalogue of downloads to suit international customers. There is also the carrier agnostic stance for content providers and distributors, including review of business models ahead of anticipated changes in entertainment environment, and even the prospect of working closely with rivals.

From revenue generation perspective, global online TV and video revenues are expected to reach US\$6.3 billion in 2012 from US\$664 million in 2006. In 2012, US is expected to lead, with 63% of global market; and UK at 11.4%. In the Asia Pacific, Japan and South Korea are the leading revenue generators in this space. Nevertheless, industry thinks majority revenues are expected to be from advertising rather than subscription revenues or download fees.

In terms of supply side, new entrants and cross sector operations abound. Traditional media or broadcaster and even consumer electronics players the likes of Microsoft and Sony have gone into provision of online TV or video over broadband and offering VoD facilities. Telcos are offering content over xDSL or fibre connections. Google, Apple and BBC are already entrenched, albeit at significantly different pace, in providing online TV and video segments be it user generated or professionally generated content. Tumultuous change is happening requiring re-modeling of traditional media business amidst thinning profit margins.

Overall, industry recommends for incumbent media companies to include customer orientation first; deliver “experiences” rather than content; and develop innovative new models. Impediments are many and it is said the “devil is in the details”. The details include issues of security, ever changing consumer needs, advertisers who have yet to get mobilized and availability of sufficient capacity for much bandwidth hungry services.



## CHANGING CONTENT DELIVERY SCENE

### Content Seeping through Boundaries

As a global phenomenon, content could be defined as, having worldwide significance. The trend of today is that content is not restricted to a specified country or region but concerning and seemingly belonging to 'all'. This means that people across the world is increasingly free to access any form of content regardless of vicinity, time, and gadget and so on. This could be in the form of Korean films with Bahasa Malaysia subtitles enjoyed by Malaysian viewers. More so the Bollywood movies on Indian love triangles – the triumphs and tribulations experienced by the heroine and hero are tracked by many ardent fans; old and young alike in the Malaysian setting.

Access to many cultures or different language films or movies or videos have been available since the motion picture started, albeit it could be said as "black and white Charlie Chaplin" series; movie theatre shows; Free To Air television (FTA TV); home located VCRs; or neighbourhood store DVD to online options today. This got better, for example, as the Malaysian satellite direct to home broadcast brought viewers blockbuster movies not only available through package pay combinations, but also lately on-demand options with movies as real in time paralleled to launches in Hong Kong for Chinese movies. In Malaysia trials are on for mobile TV.

In short, over the years, there has been a radical change or evolution in delivery of content through the different modes worldwide. For example, the traditional mode includes film, digital TV-DVD, HBO, radio and Internet. Earlier modes effectively have one projector for a limited audience such as in cinema or through FTA TV where the audience is limited to usually national boundaries.

### Towards Seamless Delivery of Content

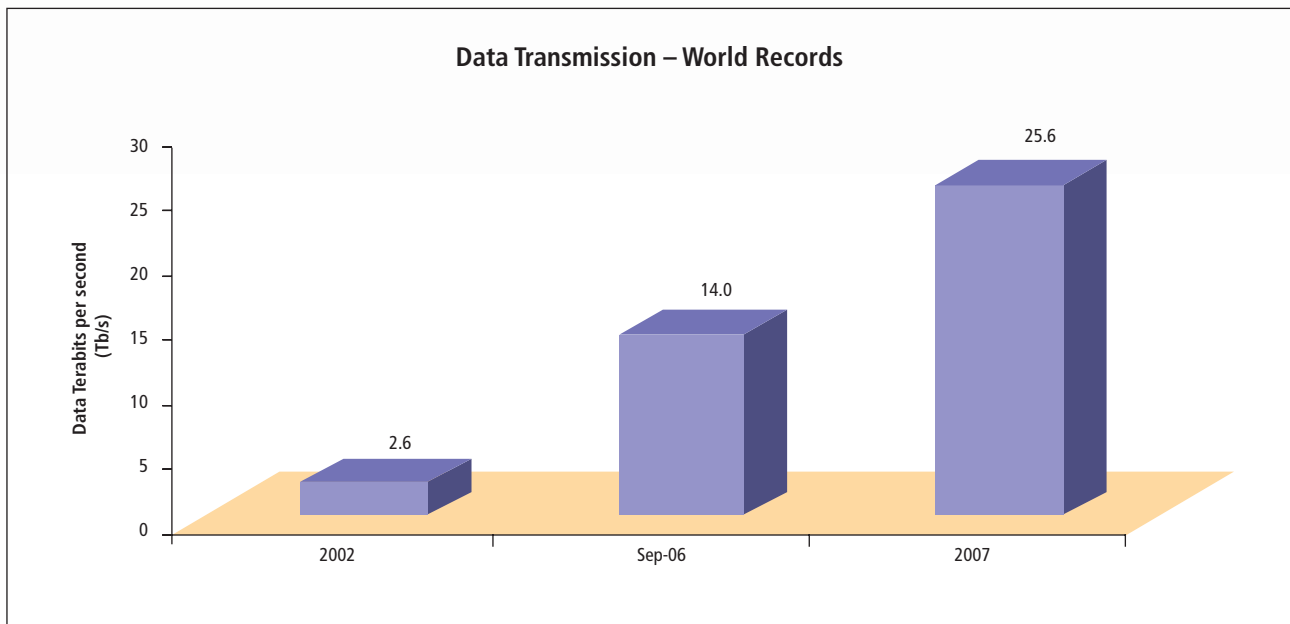
Today, traditional business model is undergoing major revamp whereby long form content of 30-60 minutes is being chopped to clips of two to three minutes or shorter form episodes. These are offered to mobile phone users to complement FTA TV or provided as a marketing tool to "advertise" for mobile audiences to watch these shows on the TV tonight or catch what they missed last night. Digitalisation of such broadcast content is the underlying factor enabling this end.

UK: Effect of 7-Day Catch-Up VOD on Viewing Habits, May 2006		
Still watch most of TV live*	35%	Remarks: Industry view so far is that pay VOD is not expected to significantly damage FTA TV audience numbers as 95% of respondent viewers still watch TV live even if they had VOD catch-up service. But, increasing popularity of 7-day catch-up service can reduce the value of pay VOD market. O&O indicated pay TV operators now offer free "all you can eat" VOD services instead of pay VOD.
Still watch some TV live	24%	
Watch most of TV catch-up	23%	
Watch all TV via catch-up	5%	
Don't know	13%	

\*Or real time TV

Source: Adapted from Oliver & Ohlbaum (O&O), Informa Telecoms & Media

Further on, this limited access is expected to not only have mobility as a "liberator", but it is said "bandwidth" availability. Alcatel/Lucent says the previous data transmission record of 14 Terabits per second (Tb/s) in September 2006 is superseded by 25.6 Tb/s in 2007. While this momentum speaks about maximization of spectral efficiency, it also states the growth on the amount of information that can be transmitted within a unit bandwidth. The advent of bandwidth "wide enough" for three second downloads of full length DVD movie rather than the hours it can take today, is expected to upturn the "content" industry and provide a quantum leap to the value chain of content producers, distributors in the traditional and new media alike.



Source: Alcatel/Lucent

## Networked Content

Networked content<sup>1</sup> simply means content that can be created, manipulated, stored, retrieved and communicated through the use of network facilities and services. This may be an increasing avenue towards delivery of content that crosses many boundaries, especially geographic location or distance and time. Yet only appropriate content or content in demand is what consumers delight in and are willing to pay for. This is the essence that would flavour the proof of delivery – monetising the mass interest in networked content is the result of demand and supply terms being met.

The table provides a schema of how networked content is delivered today and perhaps in the future.

Schema of Content Delivery Network		
Non-Network	Network	Ultra High Speed Network
Cinema	<ul style="list-style-type: none"> <li>Internet (dial-up)</li> <li>Broadband Internet               <ul style="list-style-type: none"> <li>Fixed wireless such as Wi-Fi, WiMAX (802.11n)</li> <li>Fixed DSL → Fibre</li> <li>Mobile (WiMAX 802.11e)</li> </ul> </li> <li>Digital TV               <ul style="list-style-type: none"> <li>Satellite (DTH) Pay TV</li> <li>FTA TV (Currently, may be analogue)</li> </ul> </li> <li>Cellular Mobile TV               <ul style="list-style-type: none"> <li>Broadcast (Multi Broadcast Multi Service or MBMS)</li> <li>Streamed TV</li> </ul> </li> <li>Cable TV services through cable or broadband cable</li> </ul>	<ul style="list-style-type: none"> <li>Digital Home</li> <li>Two Way Video Conferencing</li> <li>Others to come</li> </ul>
Analog FTA TV		
Radio		

Source: Various websites

<sup>1</sup> Definition adapted from the Communications and Multimedia Act, 1998





## Consumer Desired Content

Today, consumer orientation of supply of goods and services plays a vital role across many industries. This is the same for the telecommunications industry in a world that is moving towards networked content whereby the consumer is deemed as king. As far as networked content is concerned, all as in vendors, service providers, content providers and telecom operators would therefore eye on to satisfy their consumer wants as their first choice. This includes new players in the communications services arena such as broadcasters, consumer electronics providers, social networking website operators and other “new entrants”.

The aspect of consumer oriented content may not be easy as it looks. The transition from product centric and operator centricity requires amongst other changes in modes of delivery, upgrades in network infrastructure, subsidised consumer premise equipment, creating consumer awareness, expanded marketing budgets, training of staff skills to learn the new ways of delivery, support and customer relationship management, partnerships with other parties of even rivals in competition, or learning new skills such as to outsource operations not the company’s core business, if necessary.

Advancement in hardware and software technology facilitate increasing integration requirements, higher bandwidth and the interactivity mode is slowly but surely fulfilling the consumer demand for seamless mobility, personalised viewing experience which includes VOD, PVR, nPVR, KOD, DVR, instant channel changing and personal media sharing, and UGC. These are many wants also into the direction of same video content or game on any device, anywhere and anytime.

Consumer Wants	Description
Seamless mobility/ accessibility	Online content delivered across broadband, broadcast and mobile networks. Consumers want content everywhere, not just on PC or TV. Consumers also want their content in the same way on any device or platform.
Affordability	Consumers wants reasonable prices to access content.
Quality/ relevant content	Consumers want quality content which is believed to eventually raise subscriber take up.
Interoperability	Allows for interoperability between different networks and devices.
<b>Personalised Viewing</b> <ol style="list-style-type: none"> <li><b>PVR</b> records television data in digital format and encode video data in MPEG-1 or MPEG-2 formats and store the data in a hard drive. PVRs have all of the same functionality of VCRs (recording, playback, fast forwarding, rewinding, pausing) plus the ability to instantly jump to any part of the program without having to rewind or fast forward the data stream.</li> <li><b>nPVR</b>, a technology that allows a guest to record their favorite programs and play them back at their convenience. Programs are stored and streamed from a central server, which makes the service less complex and offers a wide array of added guest features.</li> <li><b>VOD</b> allows users to download movies and favourite programs. User to order digitally transmitted movies, as well as to view training videos from the comfort of home. In addition, VOD can be used with videoconferencing because videoconferencing usually consists of enhanced presentations featuring video clips. VOD can also be used to send and view video clips on mobile phones and other wireless gadgets.</li> <li><b>KOD</b> allows users to download songs with new personalisation features such as My Jukebox together with Electronic Programming Guide (EPG) and convenient online payment system.</li> <li><b>UGC</b> is any form of content such as video, blogs, discussion form posts, digital images, audio files and other forms of media that was created by consumers or end-users of an online system or service. UGC is publicly available to other consumers and end-users.</li> </ol>	

Source: [www.telecomasia.net](http://www.telecomasia.net), Various websites

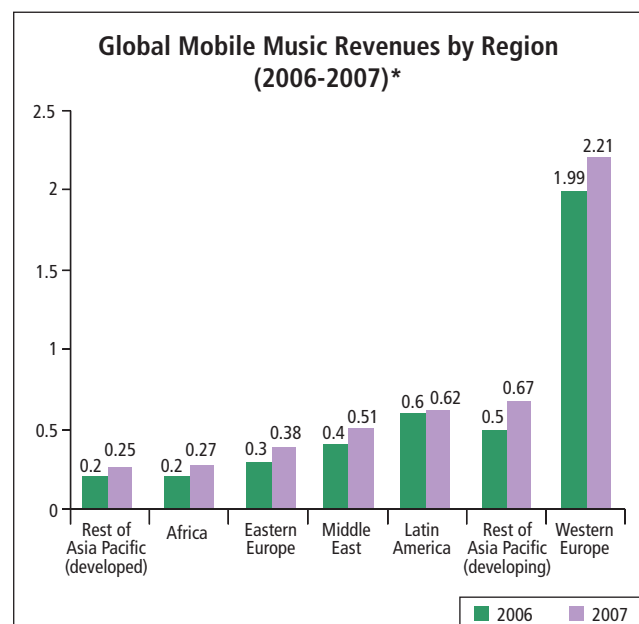
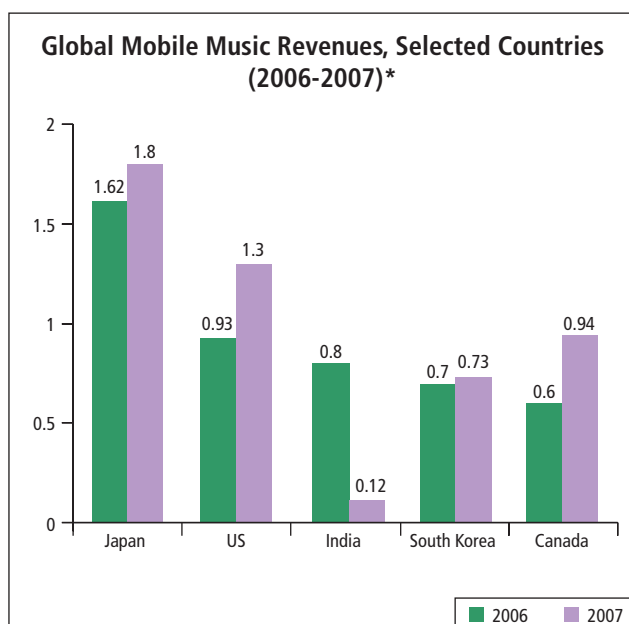
## An Example of Consumer Centricity in Music Industry

The music industry is an example of a market that has established success in content (music) industry and forced to embrace change as peer to peer networks uprooted the traditional proprietary labels. Music can be deemed as content that transcends historical time, national boundaries, cultures and age groups.

The traditional radio has offered countless generations the pleasure of listening to music in a fixed setting such as in the living room. Then, there was the walkman that took music on the go. Sony in 2005 offers Walkman MP3 players (now MP4) with 6 and 20 gigabytes storage. This comes with appealing design, outstanding ease of use and features that really deliver for an ultimate digital music player user experience. Today's music delivery potential has gone way beyond the twenty years of operated automated and packaged formats. Podcast or music (video) downloads was reported as the "hottest thing going in radio" in 2005. Audio is on the move through Apple's iTunes that has built-in support for browsing, listening to and downloading podcasts to portable iPod digital-media devices. In 2007, there is the Apple iPhone that combines an MP3 player, mobile phone and Internet communications device, featuring eight gigabytes storage. Consumer centric products and services in the music industry go beyond delivery of content (music) but a whole user experience to satisfy consumer desires.

Meanwhile, Napster, the digital-music retailer is also exploiting mobility as it debut its Napster Mobile service in February 2006 in US. Napster Mobile offers search, browse, select and purchase music from its three million track catalogue via next generation user handsets, combined with dual-delivery content for phone and PC at US\$2 per song. Convenience and user control is reflected in the service allowing the user to become his or her own disc jockey at affordable rates in US.

Napster is available in Japan (with NTT DoCoMo) and in Europe as well. Its Napster to Go is a pay PC-based online subscription business, enabling over-the-air downloads and ringtones. Users pay a monthly fee of US\$14.95 to download an unlimited number of tracks for sideloading onto portable devices, including the mobile handset. A limitation, however, is that Napster songs are not compatible for download on Apple iPods. Apple in 2005 was reported to have sold 20 million iPods worldwide.



\*Global Mobile Music Revenues US\$ (2006 = US\$7.4 billion; 2007 = US\$8.8 billion)  
Source: Informa Telecoms & Media



## NEW STRATEGIES IN CONTENT DELIVERY

### Ripe Time

As with the music industry, the film and movie industry is undergoing similar change to consumer centric content delivery. The overall view is that film downloads are becoming an increasing reality due to a number of factors. Technological advancement and infrastructure is finally in place (status varies across countries and regions though). This is in terms of adequate broadband speeds, relatively effective digital rights management in place and relevant customer bases have been overall established in terms of online subscribers, interactivity to enable commercial relationship with users and studios are finally taking the proposition of online content downloads as a viable distribution method.

Examples of innovative strategies by various companies to provide and sell online content is seen in EMI Music forays into digital space; Viacom in its "games and movies mix" stance; Yahoo in positioning its audience around segments rather than around its products; Nokia music store, and a new network in US making content for US TV screens and mobile screen as well. Various other companies as detailed in the accompanying table also have new strategies and business models adopting offerings of downloads in a networked content world.

The common recurring developments across these include the fact that traditional media is changing to digital and online, user centricity in content offerings and content generation, partnerships to get content or a delivery platform working and containing ample catalogue of downloads to suit international customers, carrier agnostic stance for content providers and distributors, review business models ahead, and even working with rivals in cooptition.

### EMI Music in Digital Space

In a music environment that is changing fast, and revenue in the recorded music division slipping, EMI Music in 2006 offered music-on-the-go via video downloads on Sony Playstation portable device and via its alliance with Microsoft's Zune player has preloaded EMI Music labels alongside tracks from other providers.

EMI – Digital Plays 2006			
Month	Partnership	Platform	Details
Dec	UK Telco BT	IPTV, online	Music video from back catalogue and long form content programs on BT Fusion IPTV service.
Nov	Sony	Playstation portable device	Music video catalogue available for download onto PSP via <a href="http://psp-playlist.com">psp-playlist.com</a>
	German digital content distributor Jamba	Mobile, online	Jamba distributes real tones and music videos across Europe, the Middle East and Africa. Also 250,000 tracks to download at Jamba Germany.
	China's Shanghai Media Group	Mobile, online, print media, TV and radio	EMI Music artists – Asian and international – distributed on multiple platforms.
	US digital media provider Gotuit Media	Broadband, cable	EMI provides free-to-view music videos on Gotuit's broadband video site, and pay-for videos for its cable VOD service.

Source: Informa Telecoms & Media, *Converging Media*, Company reports

## Games and Movies Mix

Viacom indicated that there was more opportunity to reach new people through multiplatform networks than through the traditional linear TV channels. The company has bought a variety of brands including CBS, MTV, Paramount Pictures and Turner Broadcasting for its Microsoft launch of a TV and movie download service for the Xbox games console. Xbox video is deemed an important home entertainment play and it is part of a strategy to turn its gaming gear into a digital hub and to attract mainstream users to takeup online games.

## Appropriate Positioning

The user generated content phenomena the likes of Yahoo faces direct competition with Google, YouTube and MySpace. In 2006, Yahoo repositioned its services around audience segments rather than around products, including creating communities in the Yahoo network to “participate in using and publishing information and knowledge through tagging, sharing of images and audio, and other social media activities. Nevertheless, the industry comment on such a change was that the differentiating factor did not appear strong enough. For example, Google is identified with “Search” and My Space is “social networking”.

## Nokia Music Store

A traditional handset maker, Nokia, has its finger in many pies related to the content segment. Nokia’s recent Internet strategy is to integrate some of its devices to the PC under the brand “Ovi” (meaning “door” in Finnish). The effectively combined Nokia’s gaming and music download services. Initially, other services also include N-gage games offerings and Nokia maps, which is a navigation service that delivers maps, city guides and more directly to compatible mobile devices<sup>2</sup>.

## Carrier or Delivery Platform Agnostic Content

The CM, which is the latest network to launch on US TV screens, has partnered with cellco T-Mobile to host a quiz based on Gilmore Girls, where mobile users answer questions based on pop-culture references in the show. While CW in this case is carrier specific, they also are moving into a lot of content for wireless in terms of carrier agnostic content. This is clarified as not prepackaged content for the cellcos, but CW works with the cellcos at initial stage to put together content the cellcos want. Overall, CW is attracting the 18 to 35 year old audience, who are usually technology savvy but fickle, over its multi-platform programming and user generated content.

Turning to Offer Online Content	
Traditional Going Online	Remarks
HBO set to show on the Net	HBO (owned by Time Warner) in 2006 announced partnership with AOL to launch a broadband comedy channel – Just In. Subscribers will have broadband TV and can download a range of shows from the Net.
The UK Telegraph group going video for news	From newspapers The Telegraph and Sunday Telegraph, this group is in alliance with ITN that traditional supplies news programming to broadcasters, to produce video for the flagship website Telegraph.co.uk in one of its drives to reinvent itself as a multimedia operation.
US network e-Entertainment Group takes entertainment everywhere	The group’s brand E is under an E-Everywhere initiative in a B2B proposition aimed at making its US content available on all platforms, at any time and anywhere – in a global channel market reach. The companies website E-Online is 10 years old, with three million unique visitors a month and has already 20,000 entertainment-new stories.

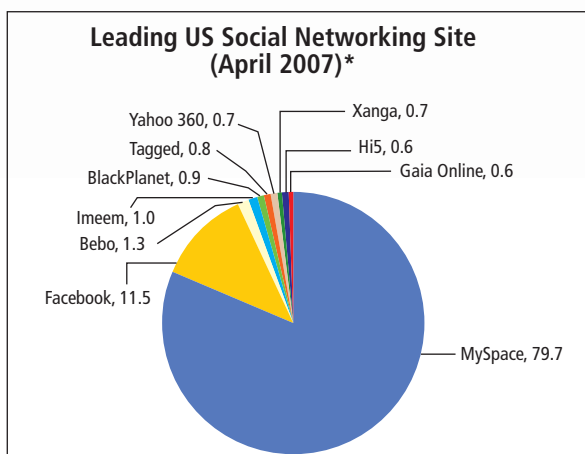
<sup>2</sup> Global Mobile, Vol 14 No. 16, 5 September 2007



SlingMedia offers a "place shifting" device where users record TV and watch it remotely	These are in both retail models and deals with pay TV operators in Europe. The SlingBox is linked between the set-top box and a home computer, and records and distributes content broadcast from TV to laptop or PDA when user is away from home.
NBC Universal (NBC) gets upbeat about film downloads	NBC is in alliance with UK online DVD distributor LoveFilm and AOL, and with VOD specialist FilmFlex in 2006. The LoveFilm download-to-own is a European first – a movie sold outright to consumer that does not expire and is accompanied by a physical DVD sale.
Warner Brothers plans electronic sell through in UK	Warner Brothers is reported as the first Hollywood studio to allow UK customers (and in Germany) to buy its top film titles through Internet downloads to PCs. This is to establish a market for legitimate downloads of films to counter illegal downloads and P2P sharing.
TM trials in IPTV	Trials are underway, with service likely available in 2008.
Media Prima offers video downloads	Offering VOD services from NTV7, TV3, 8TV and TV9 channels to 3G Maxis customers only. In second quarter next year, Media Prima will be broadcasting live programmes through handsets.
ASTRO upgrades for more channels and increased VOD offers	Launch of the MEASAT3 satellite provided extra capacity to double channel offers from 50 to 100 and increase interactivity services.
<b>User Generated Video</b>	
Disney Media Works says it has been UGC hot for 17 years	America's Funniest Home Videos and the like is the first UGC out there and delivered to a large audience across national boundaries. The biggest challenge facing traditional media companies is not keeping up with the latest online trends, but making money from them.
CWTV.com portal embraces concept of freeing up proprietary content	Allows users to play around with original material and create their own videos in "mash-up videos" similar to YouTube.
Google video platform stepping up quest for TV content from international players.	In a move to enable content providers to monetize their online content, Google is said to have a technology that will enable video ads to be carried on Google Video in Europe. Google is looking to be comprehensive across all types of videos regardless of who producer or creates it, include rivals'. Content deals are negotiated with channel operators and rights holders across Asia, Europe and North America.
Video sharing sites where YouTube is considered as king is facing more competition	In 2006, Viacom International Japan, a subsidiary of MTV, launched the Flux video sharing site in Japan. Programs are from MTV, Nickelodean and BET along with UGC. Users can create personal channels and watch channels developed by other users.
	World Media that operates Pier Impact P2P service has secured TV shows and movies from 20th Century Fox, Warner Bros. and NBC Universal. Its P2P model Peer Cash system enables users to earn 5% commission on digital entertainment files stored on their PCs if they share it with other Peer Impact visitors. Recommendations on downloads to someone earns the same rate. Earnings are redeemed against P2P purchases on the network.
	P2P file sharing outfit BitTorrent (started 2001) partnered with Warner to sell movie and TV content electronically. Its agreement with Motion Pictures Association of America links it to legitimate versions of online movies thereon.
	Newcomer Revver site's clips has ads, and the company pays its providers based on video viewing frequency and number of times ads are clicked. Ad revenue is split 50:50 between video provider and Revver. Advertisers include Universal Pictures, Warner and Microsoft said to pay US\$0.75 per click. Revver's ad matching technology is based on key words you associate with your video.
MTV on virtual worlds over the Net	MTV is a music pioneer for the TV platform has gone into the virtual world of the Internet. Its popular show Virtual Laguna Beach takes advantage of the organic nature of the Internet, allowing users to push programming back to MTV; not just MTV pushing the programming out. MTV is keeping a firm grip on content creation through its other virtual world offerings as well such as Nicktropolis – a virtual world for children based on characters from its Nickelodean channel.

Source: Informa Telecoms & Media, Company reports, Websites





\* Based on visits from a sample of 10 million users to the 20 leading social networking sites in April 2007

Source: Hitwise, Informa Telecoms & Media

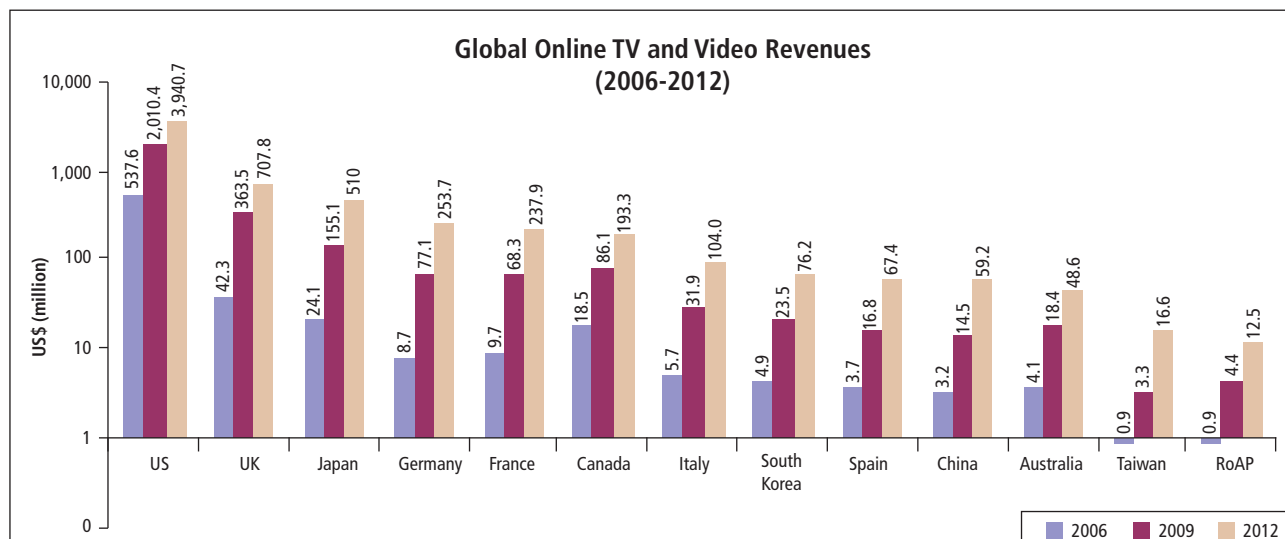
Global Ad Spend on Online Social Networks (US\$ million) 2006 to 2011			
Year	US	Rest of World	Global Total
2006	350	95	445
2007	900	335	1,235
2008	1,380	530	1,910
2009	1,810	745	2,555
2010	2,170	970	3,140
2011	2,515	1,115	3,630

Source: eMarketeer

MTV Networks on TV and Internet Offerings 2006	
Brand	Offering
MTV, VH1, Spike TV, Nickelodeon, Comedy Central	MTV 24-hour cable TV network focusing on music and fashion, lifestyle and sports for teens and young adults; VH1 – 24-hour cable TV network offering music, artist and pop culture programming for 18 to 49 year old males.
MTV.com, VH1.com, Spiketv.com, ComedyCentral.com, MTV Overdrive	Website links to TV channels, offers news, articles, video clips, schedules and features.
iFilm	Video and animation website – TV and news clips, music videos, game trailers streamed online.
GameTrailers.com	Video-game portal offering movies and trailers of PC and video games plus news and features.
Amp'd Mobile	Mobile phone package featuring bite-sized programming from brands including Comedy Central, MTV, VH1, MTV2, mtvU, TV Land, Spike TV and Logo.
Urge	Digital music store powered by Microsoft.

Sources: Company reports, Converging Media, Informa Telecoms & Media

## GLOBAL ONLINE TV AND VIDEO REVENUES



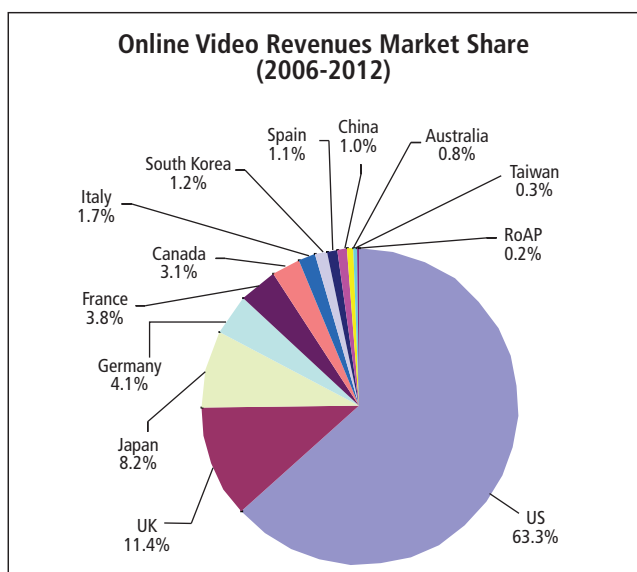
RoAP – Rest of Asia Pacific

Source: Informa Telecoms & Media

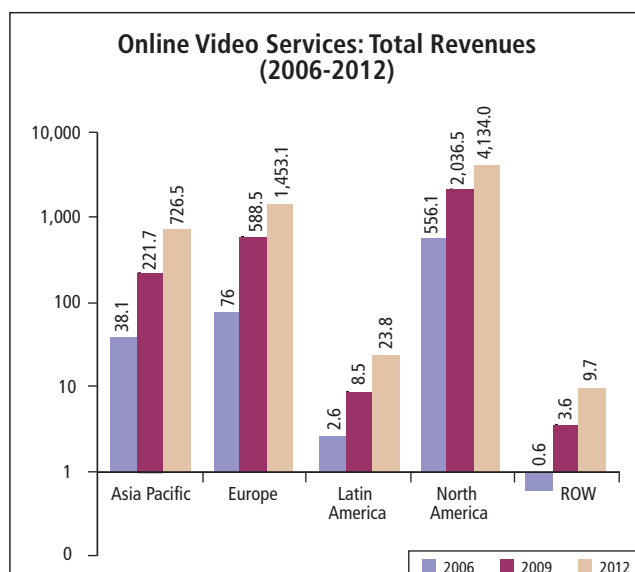


Industry analysts predicted that global online TV and video revenues will reach US\$6.3 billion in 2012 from US\$664 million in 2006, a growth rate of 837%. In 2012, US is expected to lead, taking on 63% of the global market; followed by UK at 11.4%. In Asia Pacific, Japan and South Korea are expected to generate revenue of US\$510 million and US\$76.2 million respectively in 2012, leading the pack of other Asia countries.

Meanwhile, China is forecasted to come in third in the region, with expected revenue of US\$59.2 million. Analysts predict that the majority of revenues from these countries continue to be advertising-related rather than subscription revenues or download fees.



Source: Informa Telecoms & Media

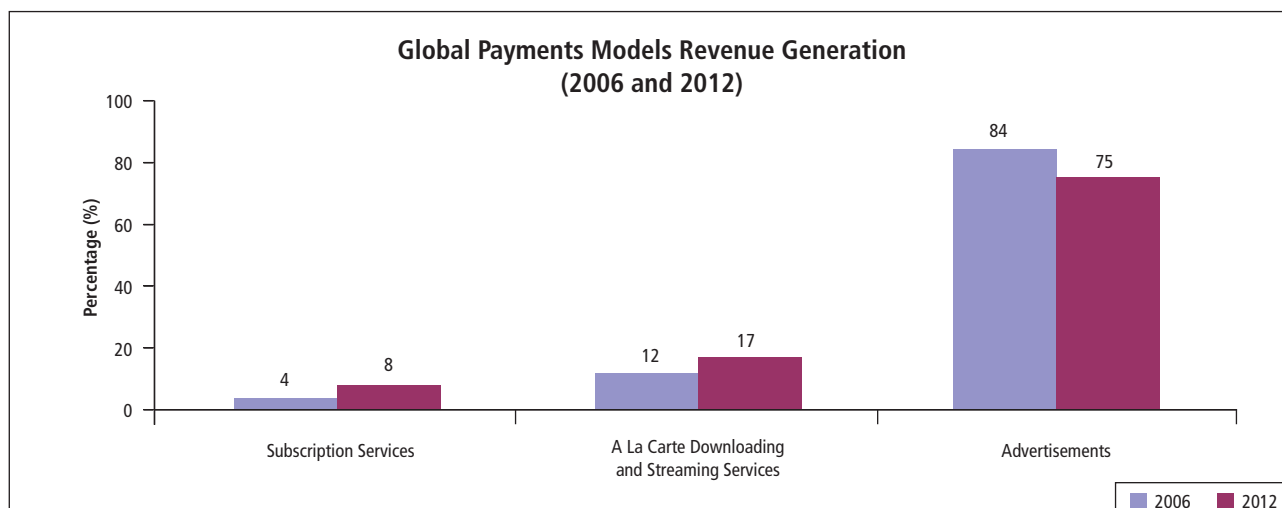


ROW – Rest of World

Source: Informa Telecoms & Media

Regionally, North America is expected to lead in online video revenues at US\$4.1 billion, with much anticipated contribution from US in 2012. Meanwhile, the European region is forecasted to be the second highest revenue generator ahead of Asia Pacific at US\$1.4 billion and US\$726 million respectively. Overall, the US leads in view of its huge established content development sector. This follows in the Internet-distributed TV and video segments as well.

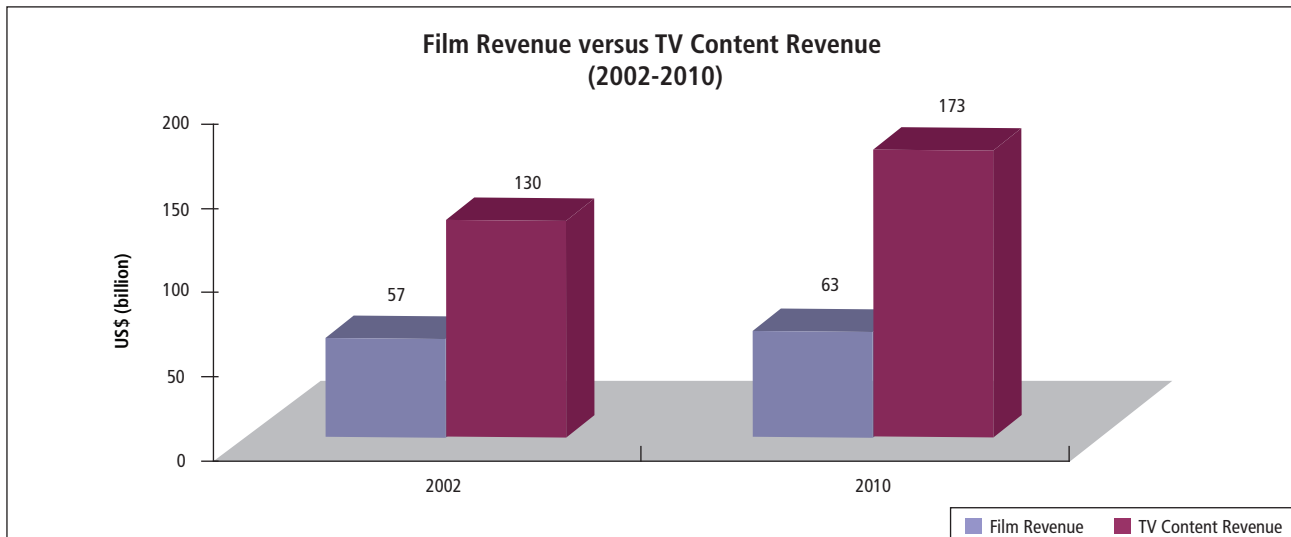
### Global Payment Models Revenue Generation



Source: Informa Telecoms & Media

Increasing broadband penetration is expected to drive revenues of all types in this arena. Home networking is also part of the reason, plus the viewer shift to a new generation that is less favourable towards the push model of traditional linear TV, but more attuned to VOD and DVRs.

### Film Revenue versus TV Content Revenue



Source: Informa Telecoms & Media

Although movie and TV downloads have been introduced for the past eight years, specifically so in the US, the business by Hollywood and tech-start up companies however have not been able to satisfy consumers' appetite. Industry analysts view that companies are overestimating the needs of consumer and no killer application has yet to come.

Three set of business models have been introduced in the market: PC-to-TV solution; Internet-enabled TV set (for example Sony's Bravia); and Internet-connected TV set-top-box. Pioneers of these services are trying very hard to stay 'in' the industry but a few unlucky ones end up in selling to another company or bankruptcy. However, hopefully the new crop of players such as Apple, TiVo and Netflix will stand firm in the market.

Sector pioneers in the US based movie download services are CinemaNow and MovieLink, which use models similar to traditional movie-rental business. When CinemaNow started in 1999, their focus was on traditional TV. Today, their focus includes online TV via PC and mobile phone.

In 2006, CinemaNow went into partnership with EchoStar Communications (owner of satellite-TV operator Dish Network) and Japan's Index Holdings (a mobile-content specialist) in a strategic move to integrate CinemaNow offerings into the next generation of Dish's Net-enabled set-top and access to Dish's 12 million household customer base. Index Holdings offers CinemaNow option to marketing through a mobile platform, for example sending text messages to customers about new films on the CinemaNow website.

Eventually CinemaNow has an eye to make short form video and ultimately long form content over the mobile phone. The innovations appear endless, the essential challenge is revenue generation from the massive interest on online content and its delivery.



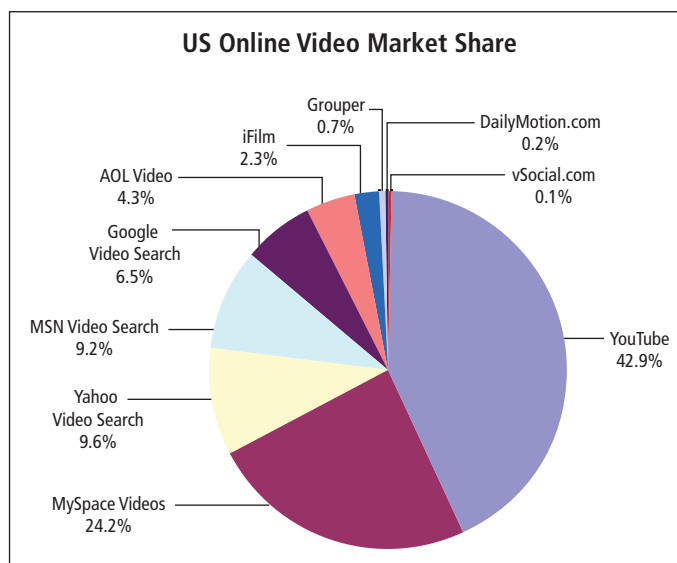
Online TV and Video Offerings	Price and Packages
CinemaNow	<u>Download-to-own:</u> Movies from US\$9.99 to US\$19.99 TV shows and music videos at US\$1.99 (Unlimited viewing on up to three devices) <u>Pay-Per-View:</u> Movies priced from US\$2.99-US\$3.99
MovieLink US\$1.9 million (First half of 2007)	<u>Rental:</u> US\$0.99 cents per movie (No subscription, membership fees or late fees); store up to 30 days <u>Purchase:</u> Starts at US\$1.99 per movie (No extra charges); Multi-PC Playback is allowed by some content providers to play purchased movie up to three PCs
Akimbo	US\$69.99 for the set-top-box; US\$9.99 a month for monthly subscription; additional pay-as-you go fees or add-on subscriptions for so-called premium programming.
Vongo (VOD service that allow users to download and view movies for a fixed price per month)	Full membership at US\$9.99 per month, onto as many as three devices (PC or handhelds); unlimited film downloads and access to the streaming version of the Starz channel; offers pay per view at a per movie price.
Apple TV	US\$200 set-top-box that delivers video form the PC, downloaded through Apple's iTunes to the TV set; Plans to sell TV shows for US\$1.99 and movies for US\$9.00
TiVo (TiVo box automatically finds and digitally records shows)	TiVo box from US\$99.99 to US\$599.99, with one year monthly plan at US\$12.95 or prepaid plans (from US\$129 to US\$299). Free shipping, 30-day money back guarantee and complimentary tech support.
Netflix (Online DVD rental service. In 2007, began offering members to watch movies instantly on their PCs.)	Plans start from only US\$4.99 (limit two per month, one DVD at-a-time) plus applicable tax. There are no late fees and no due dates, and DVD shipping is free both ways. The most popular plan will allow to rent as many DVDs (three DVDs at-a-time) for US\$16.99 a month plus applicable tax. There are no additional charges.

Source: Company websites, Informa Telecoms & Media, Various websites

## US Online Video Rankings

Rank	Outfit	Average Visit length (mins:secs)
1	YouTube	13:20
2	MySpace Videos	4:41
3	Yahoo Video Search	15:02
4	MSN Video Search	02:58
5	Google Video Search	07:44
6	AOL Video	06:41
7	iFilm	06:14
8	Grouper	05:02
9	Dailymotion.com	11:31
10	vSocial.com	07:14

Note: Metrics based on visits in the three months to 20 May 2006



Source: Hitwise, Informa Telecoms & Media

## Unique Proposition in Video Business – An Example in Brightcove

Brightcove Network is a video startup company providing web video services on open platform that lets any content owner build their own commercial Internet TV channel, launch and syndicate it, and also distribute it on Brightcove.com. It has a marketplace that would help those content owners connect with distribution opportunities. The firm's focus will be on commercial, professionally produced media rather than user-generated content.

### Business Operations Orientations

Main business	Designed as a vehicle for Net-based TV channels
Target media companies	Small, independent content producers as well as major media companies, semi-professional or serious amateur video producers but small businesses could well find Network participation valuable as well
Clients	Warner Music Group, the Wall Street Journal, the New York Times and MTV, Reuters, Sony BMG, Discovery Channel, National Geographic
Feature	Can publish video, free of charge, via the network, which the company says will enable them to reach new audiences
Revenue	<ul style="list-style-type: none"> <li>– The platform carries advertising, with revenues shared equally between Brightcove and content owners</li> <li>– Publishers can also own money by syndicating content and by selling video downloads via the AOL Video portal (owned by Time Warner, an investor in Brightcove)</li> </ul>
Content protection	Rely on the DMCA safe harbor clause in regards to copyrighted video, meaning they will remove video upon a rights holder's request but will not take pro-active measures to discover illicitly posted content with the kind of technology found at YouTube or Guba
Advertisement format	<ul style="list-style-type: none"> <li>– Pre-roll, post roll, overlays and synced banners appearing next to the video player</li> <li>– Free Brightcove Network accounts will have ad placement decided for them, premium Publisher accounts will be able to select their own ad format</li> </ul>
Competitors	Google (on the low-end), NBBC (for high-end video producers), Podshow, Blip.tv, VSocial, VideoEgg, iTunes, MySpace, Heavy.com, Revver, Vmix
Content	Music videos, movie trailers, celebrity gossip; news, food and drink; travel and health

Source: "Brightcove launches its network for small video publishers", Marshall Kirkpatrick, 29 October 2006; Converging Media, Company reports, Informa Telecoms & Media 18 December 2006





## Range of Video Service Providers Expanding

As content can increasingly be offered across network facilities or services, there are many business opportunities for new entrants (or increased need for traditional media or broadcaster to defend or expand market share accordingly) in strategic moves to catch a piece of the growing pie of online TV or video content distribution.

This can be seen from the summary in the following table, where traditional media or broadcaster and even consumer electronics players the likes of Microsoft and Sony have gone into provision of online TV or video over broadband and offering VoD facilities. Telcos are also moving cross sector, offering the same over its xDSL or fibre lines.

Google, Apple and BBC are well known in this arena, albeit at significantly different pace in getting established. Invariably as the online TV and video segment expands fast, reducing barriers to entry, the emergence of successful new entrants can cause tumultuous change in terms of the need to re-modeling traditional media business and profit margins thin out.

## Range of Video Service Providers (Content Delivery Today and Emerging)

	Hybrid TV/ Broadband operator	CE giant CE new-entrant	Hybrid BB/TV operator Broadband-only	Over-the-top old media Over-the-top new media	Over-the-top operator new-entrant	DIY
Traditional/ Established	<ul style="list-style-type: none"> <li>Builds presence in the broadband market – e.g. BSkyB acquired broadband operator Easynet in TKTK to add VoD to its UK satellite TV service</li> </ul>	<ul style="list-style-type: none"> <li>Provides TV based VoD service by enabling popular living room device to be connected to broadband</li> <li>Service not tied up any operator's service and largely sold through independent retail channels</li> <li>e.g. Microsoft's Xbox Live service for its Xbox 360 games console allows US users to download films, TV shows over any broadband connections; Sony has similar plans for its playstation (PS3) console</li> </ul>	<ul style="list-style-type: none"> <li>Uses existing TV platform for broadcast TV and broadband</li> <li>e.g. BT Vision uses UK's FTA Freeview digital terrestrial TV system for broadcast and DSL for VoD</li> </ul>	<ul style="list-style-type: none"> <li>Well-known broadcaster, studio or other content provider offering PC-based online video service</li> <li>Provides service to users "over-the-top" of the Internet and independent of broadband operators</li> <li>e.g. BBC's iPlayer, Channel 4's 4oD and variety of film download services offered by film studios</li> </ul>		
New		<ul style="list-style-type: none"> <li>Allows consumers to make control of their TV viewing, including video downloaded over broadband</li> <li>Products sold independently of broadband operators e.g. TiVo's broadband enabled Personal Video Recorder; Sling Media's Sling Catcher (allows users to watch video content stored on their PC's on a TV)</li> </ul>	<ul style="list-style-type: none"> <li>Use broadband to provide both broadcast TV and VoD</li> <li>e.g. Tiscali TV (UK), AonDigital TV (Telekom Austria), Bluewin (Swisscom Switzerland)</li> </ul>	<ul style="list-style-type: none"> <li>Well-known Internet firm offering online video service which users can watch on a TV connected to a PC, bypassing user's broadband operator</li> <li>e.g. Google's YouTube and Apple's iTunes can be viewed on a TV via the computer manufacturer's Apple TV device; Amazon's Unbox video service can watch downloads on TV using TiVo</li> </ul>	<ul style="list-style-type: none"> <li>Offers online video service hoping to extend to TV, independent of broadband operators</li> <li>e.g. Joost has hinted plans to embed its software in TV set-top boxes and other home entertainment devices; Babelgum's streaming service; BitTorrent's legal download offering</li> </ul>	<ul style="list-style-type: none"> <li>Effectively builds own TV-based broadband video service allowing them to watch video on their PCs downloaded using peer-to-peer file sharing networks.</li> <li>e.g. Users connecting their TVs to their PCs using Apple TV or SlingCatcher or burning files to a DVD</li> </ul>
	Broadcaster	CE	Telcos	Media	New-entrant	Consumer

Note: CE – Consumer Electronics; BB – Broadband; VoD – Video on Demand; PC – Personal Computer; DIY – Do-It-Yourself

## Business Models on Content Delivery

Today, traditional media firms providing branded content in walled environments make the bulk of revenue generators. The future<sup>3</sup> is expected to see media adopting business models incorporating UGC and new, open distribution channels in innovative ways.

IBM suggests media incumbents to adopt new business models as soon as possible in order to take first mover advantage of placing their brands at new consumer touch points. However, there is recommendation to move with caution as well because assets may be diluted in an environment where old-style distribution capabilities and branded content in traditional mode of delivery are losing importance. Situation of conflict are likely to arise when distributors move to incorporate more niche content and add UGC to the mix where brands can lose eyeballs. Meantime, content owners going for open channels for premium content can threaten wall garden distributors.

Today's content creators face challenges to share their content flexibly and quickly, while distributors have to be comfortable with losing control, yet maintaining revenue generation. There is expected continued tension between content owners seeking copyrights, extending their brand and cutting out the middlemen, while distributors want to bolster closed communities and encourage subscriber loyalty. The other camp is the growing popularity of UGC and the move to open distribution platforms.

Overall, IBM recommends incumbent media companies to include customer orientation first; deliver "experiences" rather than content; and develop innovative new models. For example, video game sector has developed engaging new experiences, with games easily switching across channels from one screen to another; and between "real life" and online play.

IBM: Four Divergent Business Models Coexisting through 2010			
Business Models	Details	Expected Revenue 2010 (US\$ billion)	2006-2010 CAGR
1. Traditional Media	Professionally made branded content in walled gardens on dedicated devices.	340	5%
2. Walled Communities	Essentially traditional media expanding to include non-traditional features, for example, distribution of UGC through dedicated devices.	240	10%
3. Content Hypersyndication	Professional content available in open and mobile channels, without access walls or dedicated devices.	25	33%
4. New Platform Aggregation	Delivering UGC on open platforms where there are no legacy incumbent owners or distributors.	50	16%

Source: IBM Business Services

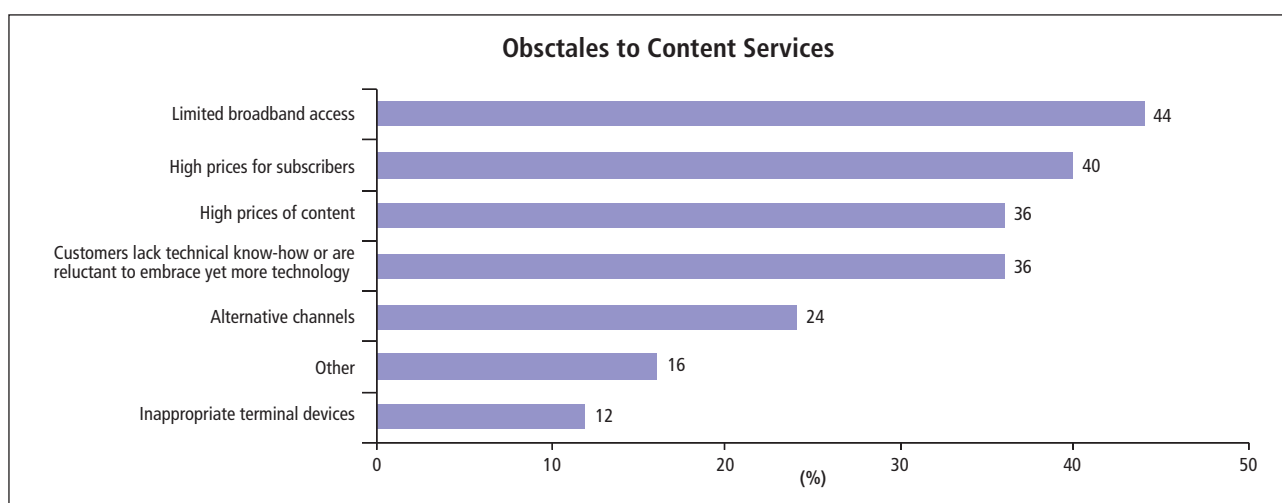
<sup>3</sup> Report on Navigating the Digital Divide from IBM Business Services, 2007



## CONTENT – FROM DEVELOPED TO DEVELOPING COUNTRIES

The development of Internet and broadband in the developing countries is not rosy. According to International Telecommunication Union (ITU), Internet penetration rates in the developing countries only cater for 17% in 2006. The findings is that as the worlds richer economies approach saturation at around 75 Internet users per 100 people, the potential of fresh Internet growth will come from the developing world instead.

If that is the case, for example in Japan as in a developed country, the question is whether Internet will exist in Japan in the Next Generation? This then focuses of ubiquitous society (U-Japan) which is expected to generate economic effects of approximately or more than one trillion by 2010. Now, U-Japan is a policy of threefold to develop seamless wired of digital subscriber line and fibre optics, encouraging adoption of ICT solutions for applicable social issues such as education, health care, public safety and environment and lastly to secure the safety and integrity of the Japanese digital environment.



Source: Total Telecom, Central and Eastern European Network

### Malaysian Efforts to Increase Networked Content

Malaysia's moves to increase broadband penetration rates in the country has increased the urgency for creation of Malaysian content for local and regional markets. Funding of RM20 million for the National Content Development Grant (NCDG) is government funded to mobilise the nation's deserving content innovators from the public, universities and others stakeholders to generate what they want as online content or networked content. This is of course done in collaboration with the relevant private sector communications and multimedia players.

Content as defined in the Commincations and Multimedia Act, 1998 concerns "any sound, text, still picture, moving picture or other audio-visual representation, tactile representation or any combination of the preceding which is capable of being created, manipulated, stored, retrieved and communicated electronically". Networked content refers to content on networks accessible to the public via text, audio, audiotext, still pictures, moving pictures and software. Among networks involved are the platforms of television, moving pictures, radio/audio and wireless. Networked content has economic significance as a high growth sector, with potential to generate more employment. Spillover effects to other sectors are also expected.

The NCDG is a conditional grant that renders assistance to develop Malaysian content for a networked environment. The focus is on mobile and TV content. The types of content which has been given priority are information based content, education, e-Commerce and entertainment<sup>4</sup>.

<sup>4</sup> SKMM website [http://www.mcmc.gov.my/what\\_we\\_do/ncdglncdg.asp](http://www.mcmc.gov.my/what_we_do/ncdglncdg.asp)

Simultaneously, the move is on to boost the current 11% household broadband penetration rate to 50% in 2010 through various infrastructure development plans towards a multi-service convergence network, paving the way for sufficient household broadband connections and expected revenue generating in the long run to create a rich media online environment. The various delivery platforms have been developed over the years, albeit in sedate pace, keeping an eye on consumer takeup and spending power.

Malaysia – Delivery Platforms Development			
Year Start	Platforms	Subscribers (million)	Penetration Rates 3Q-2007
1945	Fixed Line	4.3	15.9%
1960s	Government-owned TV channels	4.7	95.2% <sup>*1</sup>
1980s	Commercial TV channel		
Mid-1990s	– 2G/GPRS/EDGE (900MHz and 1800MHz) – Flash-OFDM (800MHz) (2000s- CDMA (450MHz and 800MHz)	22.1 <sup>*2</sup>	80.8% <sup>*2</sup>
2000s	– VSAT	n.a.	n.a.
	– xDSL	1.2	4.5% by population; 14% by household
	– WLAN (Wi-Fi at 2.4GHz, 5.4GHz and 5.8GHz) used in hotspots	1.5	n.a.
	– Direct-To-Home Satellite Pay TV	2.3 <sup>*3</sup>	35.8%
2003-2006	3G-WCDMA/HSPDA (2.1GHz)	*4	*4
2006	– iBurst (1.8GHz)	n.a.	n.a.
	– Digital TV trials	–	–
	– IPTV	Fledgling	Negligible
2007	– DVB-H trials	–	–
	– MediaFlo Trials	–	–
	– T-DMB trials	–	–
2008	– WiMAX (2.3GHz, Earlier 2.5GHz, 3.5GHz)	–	–
2009	NGN	–	–
200x	FTTx	–	–

<sup>\*1</sup>As at 2004

<sup>\*2</sup>Mobile subscribers

<sup>\*3</sup>As at 2Q 2007

<sup>\*4</sup>Refer to mobile subscribers

n.a.: not applicable

Source: Industry, SKMM

Asia Pacific Digital Content Consumption		
Rank	Country	Converging Media (CM) Index* end-3Q06
1	Hong Kong	44.0
2	South Korea	32.7
3	Japan	32.2
4	Singapore	27.2
5	Australia	27.1
6	New Zealand	21.4
7	Taiwan	20.0
8	Malaysia	13.0
9	China	3.6
10	Thailand	1.5

\*The CM Index is calculated using broadband, digital TV and mobile broadband subscriber data to produce a measure of relative advanced-digital consumption in different markets, over time. Broadband includes all Internet connections of 128Kbps and higher. Digital TV comprises pay TV, FTA TV, DTH and terrestrial platforms. Mobile broadband includes WCDMA and/or 1xEV-DO. Depending on the market.

Source: Converging Media, Informa Telecoms & Media



## OPPORTUNITIES AND CHALLENGES FOR NETWORKED CONTENT

### Putting Together the Jigsaw for Commercial Launch

Relevant, timely, accessible, language content, infrastructure, affordability are the core issues of ICT enabled content creation, usage, spread and acceptability. There is requirement for making relevant and vital stakeholders in the ICT domain conscious about the urgency of taking bold and timely measures in plugging the loopholes in the e-Content domain and thereby enabling a favorable platform for the e-Content market, transactions and exchanges. Impediments are many and the "devil is in the details", so they say.

Some opportunities and challenges are extracted in the following table for its flavour in perspective.

Opportunities	Challenges
Creating a new field of programming opportunities	Existing programmers have to re-think of products
Have blended distribution strategies	Targeting becomes critical in networked environment
Provides flexibility	Reaching consumers where they are and not where you want them to be
Comfortable with diverse context	Must chart out programs and policies for where to reach and touch consumers
Developing an 'affiliate network' for marketing content	To set new requirements for defining, segmenting, reporting on and selling available inventory in a massively distributed universe
	Requires flexibility around who/how product is sold
	Need metrics for content not just sites
	Negative end-user reaction
	Format innovation

Source: ITU News

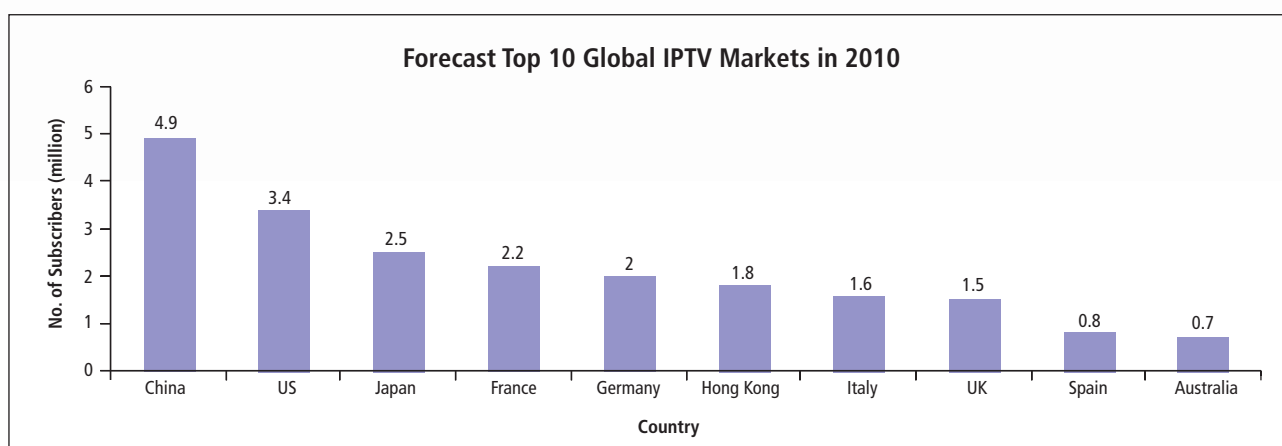
As an example, the Internet Protocol TV<sup>5</sup> (IPTV) market is developing slower than expected. So far, since 2001 with the earliest of such launches in Italy (Fastweb), the subscribers across Western Europe have yet to reach four million. Industry reports indicate that the main problem area was the technology. Swisscom Bluewin IPTV posted problems of screens freezing and long waits for customer installation. Its service operates under the Microsoft IPTV platform. "There is still a great deal of learning along the way" admits the vendor as unexpected rollout hitches delayed the service implementation.

IPTV is cited has the hottest media issues in 2006. Confidence can be high on the service, featuring VOD but only when there is compelling content and high quality of service delivery. Nevertheless, industry report are positive about IPTV in that this platform provides another sales avenue for content providers, especially in bids for exclusive content, and traditional media rivals (cable, DTH and other digital TV operators) are using IPTV platform to retransmit their content packages in extended reach or triple play offerings.

<sup>5</sup> IPTV is a converged telecommunications/broadcasting service provided by fixed operators. In contrast, mobile TV is a wireless digital broadcasting service that enables viewers to use multimedia services and data on the go. IPTV is a fixed digital broadcasting service allowing users to enjoy multimedia services and data information at home or at offices

Source: Report on Challenges for Korean IPTV Industry by Research on Asia Group

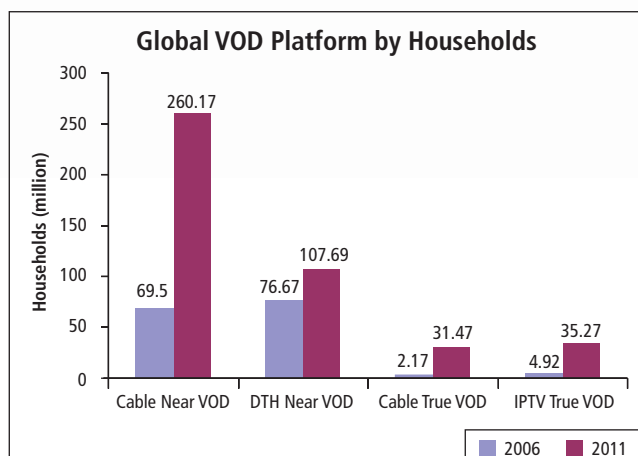




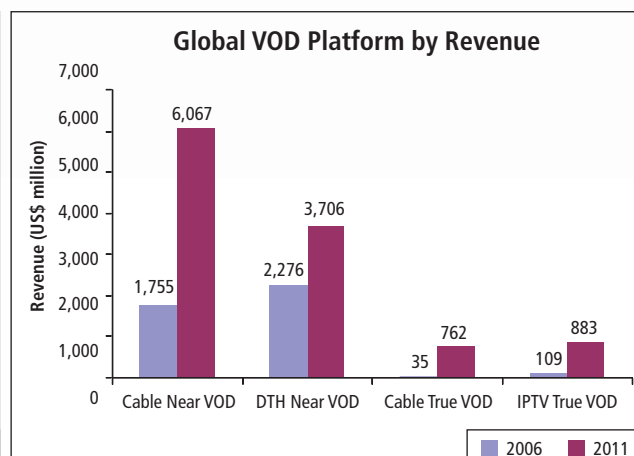
Source: Informa Telecoms & Media

Selected IPTV Deployments					
Country	Company	Launch	No. of Subscribers		Remarks
Hong Kong	PCCW ("NOW" pay TV)	Sep 2003	665,000	As at end Sep 2006	Largest TV over broadband deployment in the world. Breakeven expected in 2008/09 due to high cost for content rights.
Taiwan	Chunghwa Telecom ("Big TV")	2004	250,000	End 2006	Expects to breakeven at 1.5 million subscribers. Investment cost US\$120 million.
Malaysia	Fine TV	Soft launch in Dec 2005; nationally Nov 2006	2,2000	Oct 2006	20 channels including two telenovela and drama. A channel that looks at behind-the-scenes of movie production; MovieBuff, MusicU and Toon Tuff. Also a KTV channel dedicated to karaoke, with more than 2,000 songs; interactive games, sports events and highlights, and Tuition offering Education and Research.
	MiTV	Launch Sep 2005; closed Nov 2006	—	—	—
US	AT&T (U-verse)	Jun 2006	18,000	Apr 2007	Offers maximum broadband download speed of 6Mbps (on new fibre network). AT&T expects U-verse to pass about 19 million homes (50% of its addressable market by 2009).
Italy	Fastweb	2001	170,000	Jun 2007	First European operator to offer IPTV. Number of subscribers represents 21% of broadband customer base (Overall digital penetration in Italy is 19%).
Spain	Telefonica (Imagenio)		420,000	Early 2007	Offers 450 film titles across all categories. Niche and mainstream audience have a spread of independent movies and other video content such as documentaries and TV series. Prefers to increase ARPU by offering the extra content customer want in little bite-size chunks or a la carte such as additional channels of soccer, movie, music, Baby TV and sailing.
France	Orange (part of triple play service)	2003	745,000	Mar 2007	Reaped pent-up demand for multichannel TV due to restriction on installation of satellite dish in urban areas.

Source: Informa Telecoms & Media, News reports, Websites



Source: Informa Telecoms & Media



Source: Informa Telecoms & Media

## Security

Although IPTV can offer new revenue source, industry players in this value chain such as content providers, network operators and conditional access companies have to work hard to ensure the delivery of premium content over telephone lines to the TV set is not fraught with illegal downloading or piracy en route. So far, studios as reported to be insisting that content is encrypted as early as possible and decrypted as late as possible. For zero piracy, it is said that encryption technology at both the software and hardware, including smart cards is the way to go.

## Changing Consumer Needs

Apart from the technology push to online TV and video, there is the underlying reason of changing consumer behaviour due to wider cultural changes – a new generation of young population that grew up on online games and the mobile phone, and thus, spends less time on traditional TV. Such younger set are used to having control of their video game, talking or exchanging pictures or videos to peers on their mobile phones for social networking. The TV industry thus responded to user centricity services of VOD and digital video recording.

## Advertisers yet to Mobilise

Eyeballs are being monitored, while advertisers still prefer linear TV to the “newer” online TV. Online TV users are not governed by TV network schedules and new prime time viewing has greater difficulty in being identified to catch sufficient eyeballs to break advertiser preference.

Meanwhile, a study in the UK<sup>6</sup> indicated that there is avenue for mobile advertising to subsidise mobile content and increase the mobile content user base. The observation is that mobile advertising subsidy can lower the cost of bringing premium content in a mobile service such as mobile TV. The study also indicated the mobile platform as a potential avenue for mobile content purchases as currently the regular buyers of mobile content were those who purchase a minimum of one item of content every three months. These buyers accounted for 20% of the mobile users, whereas there is another 30% of occasional users that will purchase at least one item per year. Enticing this segment of occasional consumers to spend regularly increase current addressable mobile content market spend over a three month period by 150%.

<sup>6</sup> Informa Telecoms & Media observations from a UK Mobile Content Survey on What Consumers Want (reported in Mobile Communications International, June 2007)

## Capacity for Bandwidth Hungry Services

Industry researchers indicate that new traffic pattern in telecom and data services from bandwidth hungry applications, back-up and archiving is accelerating the growth of 10 Gigabit (10 GigE) market.

Ethernet 10 Gigabit To Accelerate			
Source	Details	2006	2010
Infonetics Research (Capacity December 2007)	Number of Ports Shipped on Enterprise and Service Provider equipment	300,000	3 million
	Worldwide 10 GigE revenue forecast	US\$2 billion	Close to US\$12 billion

## CONCLUSION

Most of the trends and developments cited in this report are overseas examples. Some early developments are seen in Malaysia, but we expect Malaysia to eventually follow its own trends in services, applications and its accompanying content development. The Malaysian market is indeed unique in its context, for example, its rich multi-racial and multi-cultural environment that would most likely spur its own unique trends in Malaysian style.

## ACRONYMS

3G	Third Generation	HBO	Home Box Office
AIMS	Applied Information Management Services	HSDPA	High Speed Downlink Packet Access
AOL	America Online	HSPA	High Speed Packet Access
ARPU	Average Revenue Per User	IP VPN	IP-enabled Virtual Private Networks
ASP	Application Service Provider	IPTV	Internet Protocol Television
BBC	British Broadcasting Corporation	ISDN	Integrated Services Digital Network
CBS	Columbia Broadcasting System	ISP	Internet Service Providers
CDMA	Code Division Multiple Access	LAN	Local Area Network
DSL	Digital Subscriber Line	Mbps	Megabits per second
DSLAMS	Digital Subscriber Line Access Multiplexers	MPEG	Moving Picture Experts Group
DTH	Direct to Home	MTV	Music Television
DVD	Digital Video Disc	PC	Personal Computer
EDGE	Evolutionarily Distinct and Globally Endangered	ROI	Return On Investment
ETTH	Ethernet To The Home Broadband	SMS	Short Message Service
EV-DO or EVDO	Evolution-Data Optimized or Evolution-Data only	TV-DVD	TV-Digital Video Disc
FTTH	Fibre To The Home Broadband	VCR	Video Cassette Recorder
FTTO	Fibre To The Office Broadband	VoIP	Voice over Internet Protocol
GPRS	General Packet Radio Service	WiMAX	World Interoperability for Microwave Access

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