IPTV & VoD market analysis

Charlie Davies: charlie.davies@ovum.com
John Delaney: john.delaney@ovum.com

July 2005

IPTV & VoD market analysis

Overview

Market conditions for IPTV vary substantially

There is a great deal of variation by country in many of the factors that affect the market for TV services: the mix of terrestrial and satellite delivery platforms in use, payment (or non-payment) regimes, regulation, government policy and customer content preferences, to name a few. The complexity of the picture is compounded when we consider TV over IP broadband. Factors which add further complexity include the mix of broadband technologies in use, the competitive landscape for telecoms, and separate sets of regulation and government policy.

Rather than attempt to produce global forecasts for IPTV and VoD, we have instead focused on ten of the major markets around the world, in order to take into account the variation in market conditions. The differences apply to platform availability, potential of existing DSL networks, technology choices, content pricing structures and competitive frameworks. In some markets, incumbents are advanced in their deployment of both IPTV (broadcast) and VoD. In others, TV alone is their main focus. Some will benefit from high ARPUs for pay TV upwards of euro40 per month; others will struggle with customers used to spending less than euro10.

Pay TV has considerable room for growth in a number of markets

Both pay TV and digital penetration remain low in some of the major markets covered. We believe telcos take existing TV market share from other providers, but also help to grow the overall pay-TV market through driving digital penetration, wider content availability and better services, which should result in more consumers spending more money on TV and video as a whole.

Lessons from digital terrestrial television (DTT) rollout have proved that many consumers are looking for a second delivery channel into the home for TV in order to support multiple TV sets. The current limited ability of WiFi networks to carry video around the home will also act as a key driver for IPTV to act as a complementary platform, not a substitute platform, in a significant number of cases – at least in the short term.

DTT will play a competing and complementary role

DTT is a true broadcast technology and is much quicker, simpler and cheaper to roll out than TV over broadband. In some cases, therefore, DTT will impact negatively on IPTV growth. DTT platforms are offering a lot of free-to-air content, with just a one-off charge for the set-top box. This means some consumers will allocate spend on DTT in preference to IPTV (or other pay TV platforms) when they first go digital.

However, in the longer term, DTT will help to stimulate overall uptake of digital TV; and where DTT providers start to add paid-for elements, IPTV will then be able to compete on a more even footing. Additionally, in some cases DTT will provide a valuable platform for telcos that are launching hybrid DTT/VoD strategies.

IPTV growth will be modest over the forecast period

IPTV penetration of the broadband customer base will vary between markets, but within our forecast five-year growth period (up to the end of 2009) we are cautious in our overall view of IPTV and VoD growth. Lessons from operators who have had services running for over a year prove there are still a number of technical, competitive and cultural (brand awareness) barriers to overcome.

VoD will be a key strategy in some markets

In some markets incumbents and competing telcos will choose to include a strong focus on VoD in their strategies. This is the case, for example, where:

- existing pay -TV platforms are moving to incorporate VoD (see the UK)
- where pay-TV markets are particularly weak (see Germany).

Canada

Market analysis

Canada has a thriving and mature pay-TV market. Digitisation is progressing, though no analogue switch-off date has been set, and the regulator says there is no immediate likelihood that it will. Bell Canada owns the biggest satellite provider, ExpressVu, but needs to reduce its reliance on satellite as a TV platform going forward. For this reason, as well as the general drivers that apply to ISPs, Bell Canada (Sympatico) is developing a TV over DSL service using the Microsoft IPTV platform, with trials scheduled for Q4 2005 and launch planned in early 2006, initially in Toronto and Montreal.

There is already a significant amount of IPTV uptake in Canada. Sasktel, a small regional telco, is one of the most advanced telcos in the world in TV & video over DSL. It has been offering a service since 2003. At the end of 2004, over 10% of its 200,000 DSL customers took IPTV. In January 2005 another small regional telco, Manitoba Telecom, also launched IPTV.

The cable sector is very strong in Canada, led but not dominated by Rogers. Rogers has a VoD service, which means that DSL providers are likely to include an element of VoD in their service offerings. However, the cable operators have no short-term plans to move to IP for either voice or TV/VoD, because of the high levels of ovum

investment required. IPTV plans would only be accelerated if DSL providers start to gain ground with their services.

There is potential for IPTV service providers to gain a stronger foothold by exploiting the Canadian regulator's concern about the decline of Canadian-produced content on TV networks. There is a minimum quota for such content.

Key data

Figure 1 **Canada key data**

Total pay-TV subscribers (000s)	10,300	**DTT subscribers (000s)**	0
CATV subscribers (000s)	5,371	**IPTV subscribers (000s)**	30
DTH subscribers (000s)	2,362*	**Pay-TV ARPU (estimated)**	euro20–35

**Data from Q1 2005*

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and Pay TV market environment

Regulation

- No analogue switch-off date yet.
- Regulatory quotas apply for the percentage of Canadian-produced content that TV & video service providers include in their offerings.

Pay TV and ARPU

- Relatively high ARPU driven by premium content packages and well developed pay-TV market.
- Incumbent ownership of satellite provider Bell Vue provides different dynamics from most other markets.

Services

- Two small regional telcos currently provide IPTV services: Sasktel (Saskatchewan) and Manitoba Telecom.

Incumbent position

- The incumbent, Bell Canada, is currently running IPTV trials, in collaboration with Alcatel and Microsoft.

Competition position

- Telus is trialling IPTV in several of its operating regions, and plans to bring commercial services to market by the end of 2005.
- Rogers is in the unusual position of owning both a cable operator and a mobile operator (Rogers Wireless). In Q3 2005 it launched VoIP in the consumer market, initially in the Toronto region, and it is also planning a ‘quad-play’ package (TV, Internet, fixed telephony and mobile telephony). Other cable companies launched consumer VoIP earlier, including Videotron, Shaw and Cogeco – although unlike Rogers, they do not own mobile operators.

US

Market analysis

Pay TV in the US is a highly developed market. Cable has been the main driving force of market growth and many households now have multiple TV sets. The US is also home to many of the premium content channels and content distributed to other markets around the world.

Major telcos have recognised the urgency in entering the TV market to compete against strong triple-play offerings from cable operators. However, DSL bandwidth is generally constrained by long line lengths. TV/video-capable DSL will probably not go much higher than 50%, because high-speed access investment will increasingly be concentrated on fibre.

We therefore forecast that fibre will connect a significant number of video subscribers. However, we include fibre to the node (FTTN) in the DSL broadband numbers, and SBC’s ‘Project Lightspeed’ is based on FTTN (unlike Verizon’s FiOS, which is based on FTTP) – so this will boost the DSL availability figures.

Our interview with Time Warner indicated that cable operators will adopt a follower strategy on IPTV and VoD. The company is evaluating the technology, and accepts that IP delivery will be inevitable in the long term. However, it does not believe that a rapid move to IPTV is either necessary or feasible. It will therefore monitor progress of telco IPTV services, and if they take off quickly will step up the pace.

IPTV availability over cable will lag DSL at first, but will start to catch up in the mid period, and will be on course to exceed DSL by the end of the period – in other words, we assume that cable operators will be upgrading their TV & video delivery systems to IP as a matter of general strategy by then. This scenario is consistent with the likely evolution of the DOCSIS standard to version 3 (which supports IPTV).

We assume the same curve for TV penetration among capable broadband subscribers for both DSL and cable. The penetration percentages are consistent with an ‘S’ curve which levels out somewhere around 75% in 2015.

We assume a higher and more rapid rise in penetration for FTTH subscribers, since FTTH providers are likely to market IPTV and VoD as the principal benefit of FTTH-based Internet access. The curve is static at 50% for 2004–2006, when little FTTH will be commercially available in North America.

We also believe that the main US ISPs are unlikely to offer VoD as a standalone service; it will only be available as an add-on to IPTV, at least in the early years of the forecast, and our penetration figures are based on that assumption. We do allow for the possibility of some standalone VoD in 2008 and 2009. The VoD penetration assumptions are the same for all three access technologies.

Key data

Figure 2 **US key data**

Total pay-TV subscribers (000s)	96,000	**DTT subscribers (000s)**	0
CATV subscribers (000s)	65,294	**IPTV subscribers (000s)**	72
DTH subscribers (000s)	34,000	**Pay TV ARPU (estimated)**	euro20–35

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- The FCC plans analogue switch-off for the end of 2006. However, contrary to the situation in Europe, the vast majority of digital uptake is expected to be provided by cable operators and satellite providers.
- There is currently some uncertainty over whether the telcos will be able to apply centrally for licences to provide TV in their regions, or whether they will be forced to do so on a franchise-by-franchise basis. Clearly, the latter would add considerably to the time and cost involved in rolling out IPTV services.

Pay-TV and ARPU

- A powerful cable sector, which has been aggressively pushing triple play for a number of years. Also benefits from a high degree of standardisation spearheaded by CableLabs.
- The premium pay-TV market is well developed in the US. The relatively high ARPU is driven by wide availability of premium content.

Services

- Several small rural telcos are pioneering IPTV services in the US – examples include SureWest (California), All West (Utah, Wyoming) and Consolidate (Illinois).
- SBC launched the 'Dish' service in 2004, re-broadcasting satellite TV programming from Echostar.
- Aggressive launch of VoD from cable operators consisting of a mixture of paid-for premium content and free TV on-demand functionality in some cases.

Incumbent position

- Major network upgrade projects with a focus on fibre in a number of cases; for example, Verizon's launch of fibre broadband. However, no actual TV/VoD launches as at Q3 2005.
- SBC Communications has a partnership with Direct TV.

Competition position

- Cable multi-service operators (MSOs) are developing both VoD and IP telephony services.
- None of the non-telco DSL providers are known to be developing IPTV at present.

France

Market analysis

France is the most 'advanced' IPTV market in Europe in terms of subscribers numbers, with over 300,000 IPTV users. This is partly because the French market has been heavily affected by newcomer Free, which offers bundled voice, TV and broadband for a flat monthly fee – basic TV channels are provided automatically as part of a triple-play strategy (there is a caveat with these numbers: not all are paying extra for TV in the case of Free, so there are actually around 200,000 paying subscribers). Both Free and to a lesser extent Neuf Telecom are exploiting favourable unbundled local loop (ULL) conditions.

Such competition has seen a quick reaction from France Telecom (which has had an IPTV service up and running now for over a year) and Neuf Telecom (which launched TV services in 2004). The French TV market also has particular idiosyncracies which make it more feasible for IPTV deployment. Major factors are the existence of two satellite players (which share key soccer rights), limited satellite coverage, weak cable competition and better ULL conditions, including lower pricing.

Digital penetration stands at only 23%, so there is considerable room for growth and a vested interest in seeing aggressive digital rollouts from a variety of players. France has experienced a more aggressive rollout of local loop unbundling (LLU) and ADSL2+, which has fuelled higher network capacity for TV broadcast. The French market also benefits from a good supply of French-language content, strongly supported by the French government: for example, 38% of films shown nationwide are local content films.

However, France will be affected by the recent launch of DTT on a similar model to that of Freeview in the UK. This will increase competition for the IPTV telcos and may slow growth in the short term, although in the longer term it will help to increase overall digital-TV uptake and all that it entails (multiple channels, more individual content viewing and so on).

Key data

Figure 3 **France key data**

Total pay-TV subscribers (000s)	8,561	**DTT subscribers (000s)**	300
CATV subscribers (000s)	3,782	**IPTV subscribers (000s)**	226
DTH subscribers (000s)	4,553	**Pay-TV ARPU (estimated)**	euro25-45

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- Analogue switch-off date is 2010. Separate regulation of broadcast TV and telecoms; TV is regulated by the CSA (Conseil Superieur de l'audiovisuel) and telecoms by ARTE.
- Strong emphasis on encouraging locally produced content. Percentage of box-office revenues used to fund film industry, VAT breaks for 'cultural' services including IPTV.

Pay TV and ARPU

- Only market in Europe to have two satellite operators, TPS and Canal Plus, which have proved much more open to using IP as an alternative delivery platform (both resell packages through telcos). Players have limited coverage due to restrictive planning laws affecting placement of satellite dishes on buildings.
- Consolidating cable sector with less than 40% network coverage, recent acquisition of Noos by UGC and sale of France Telecom Cable
- Medium level of ARPU with wide range of content packages. Rich selection of premium movie, sports and channels.

DTT

- France is the latest country to come to market with a DTT launch, called Television Numerique pour Tous (TNT). The initial service consists of 14 free-to-air channels with additional pay-TV channels added in 2006. TNT aims to sell between 700,000 and 1 million set-top boxes by year-end and achieve 85% coverage by 2007.

Services

- VoD development is still nascent (i.e no VoD as of yet from cable, although UGC is likely to launch soon) and the only IP VoD offering so far is from France Telecom.

Incumbent position

- Aggressive push from incumbent on IPTV with services now running for over one year. MaLigne IPTV service was launched over a year ago and has been rolled out to cover the main urban areas.
- France Telecom has quickly developed an ambitious content programme through the formation of a new content division. This handles both IPTV and Wanadoo's portal content. A large degree of direct involvement in aggregation, content service development and new content acquistion.

Competition position

- Strong push on IPTV from Free, leading Europe in terms of actual numbers of IPTV users. Neuf Telecom is the third major player to have deployed IPTV.

Germany

Market analysis

It will prove difficult for IPTV to find a place in the unwieldy German TV market; the most unique in Europe. Germany has a large and complex legacy cable-TV market, with 40 free-to-air channels available, very low ARPU (most subscribers pay only a few euros per month) and an underdeveloped premium content market. These have all been key factors in the struggle of satellite operator Premiere, which despite having a large customer base (currently 13.5 million subscribers) nearly went bankrupt three years ago.

Advertising revenues have slumped over the past few years, with providers facing an uphill struggle to change consumer expectations of pricing. The cable industry remains financially weak and fragmented (Germany has a complex cable infrastructure, with a split between network layers operated by different companies). Approximately 7 million households are tied into local CATV subscriptions through landlord deals and pay particularly low charges.

There is, however, considerable room for growth in terms of digital and more premium content, which should provide an opportunity for telcos. Digital penetration hovers at 9%, but the analogue signal has actually been turned off in Berlin, where there has been a very high uptake of DTT. This situation reflects the challenges facing any kind of dynamic TV strategy in Germany: conditions for entry varying between each of the country’s 15 regions, which are regulated by 15 different federal authorities.

In this context, Deutsche Telekom has taken a significantly different approach from other incumbents. Its focus has been on VoD services (it claims 70,000 film purchases per month of mostly adult content), which are more lightly regulated, and no other competitors have as of yet entered the IPTV market. It continues to face little competition from cable operators in terms of broadband market share, although Kabel Deutschland is continuing to upgrade its network in major cities.

Our view is that VoD will continue to dominate provision of IP-based video delivery in the short term. However, we believe Deutsche Telekom will increase its portfolio of premium TV-based content (it has recently linked up with the Internet subsidiary of broadcaster ProSiebenSat) and may launch broadcast TV at a later date. The current set-up for consumers is a hybrid set-top box, which enables them to switch between broadcast and Internet content on the TV. We also believe that ARPU will remain lower than the European average for broadcast TV packages, but prices paid for VoD premium content will be in line with other markets.

Key data

Figure 4 **Germany key data**

Total pay subscribers (000s)	35,500	**DTT subscribers (000s)**	650
CATV subscribers (000s)	22,000	**VoD (estimated) subscribers (000s)**	70
DTH subscribers (000s)	13,500	**Pay-TV ARPU (estimated)**	euro8-15

Al data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- Analogue switch-off scheduled for 2010. Separate regulation of TV and telecoms. Anti-trust comission plays a large role in shaping development of pay-TV sector
- Complex system due to regulation being split between 15 different federal authorities.

Pay TV

- Complex pay-TV market dominated by cable operators split into larger and multiple local small operators. Some consolidation occuring, but less than 15% of cable networks upgraded to support broadband. Main providers are Kabel Deutschland (over 10 million homes), Ish and Iesy (currently in the process of merging) and KBW
- Satellite provider Premiere has struggled against strong free-to-air competition despite a large subscriber base, after overspending on soccer and other content rights. New management has seen it start to grow again.

DTT

- Analogue signal has already been switched off in Berlin, after a very high uptake of DTT, with over 1.5 million set-top boxes sold. However, a large number of STBs are being used as secondary supply of TV into the home, limiting the impact of growth for other platforms.

ARPU

- Higher than average number of free-to-air channels means less room for pay-TV providers to raise ARPU. The launch of digital channels has made little difference. The digital ARPU for one cable provider last year remained at around euro9 per month.

Services

- T-Vision's VoD service is proving successful, with high uptake of adult and sports content.
- Premiere has plans to launch HDTV.

Incumbent position

- Deutsche Telekom's content is delivered via ISP T-Online's multimedia portal, T-Vision. The ISP has a wide catalogue of content available on an on-demand basis which can be viewed on both the PC and the TV
- No plans yet for broadcast content, but it is strengthening and beginning partnerships with broadcasters.

Competition position

- Hansenet has announced plans to launch DTT/VoD services.

Italy

Market analysis

Italy is the market leader in terms of IPTV development. This is purely down to Fastweb, which launched VoD in March 2003 and IPTV in August 2003, well ahead of other European countries. The company has developed an advanced service and content offering to match that of satellite competitor, Sky. Sky's presence in the market, with its relatively rigid pricing structure and the high prominence of football also means pay-TV ARPU is relatively high (although still less than the UK). There are still only 3.3 million pay-TV subscribers in the country, meaning considerable room for further development of IPTV in the wider context of growing the pay-TV market.

Competition between different digital platforms is increasing. The presence in the market of conglomerate Mediaset, which is owned by Italian president Berlusconi, raises the stakes for all operators, and the company is also pushing strongly on its own rollout of DTT. Telecom Italia's activities have so far been limited to on-demand content via its broadband portal Alice Rosso. It offers music, movies and popular content and has inked a deal with Mediaset for distribution of premier league football on a pay-per-view basis. The incumbent also owns broadcaster La7. We expect the company to announce an IPTV offering later this year, linked to its strong push on the networked home. The operator is also including DTT reception within its STB. It is clear that it will leverage both DTT and IP for broadcast and on-demand content. Another entrant into the IPTV market is Digital TV, which be launching a pay-TV offering via an IP network later this year.

We believe there will be continued growth in IPTV as Telecom Italia's TV strategy gathers pace (reported rollout to 17 cities by the end of 2005) and as digital rollout from all parties fuels consumer desire for greater and varied content. However, the recent slow-down in Fastweb's ARPU makes us cautious in predicting aggressive growth in the forecast period: DTT will take an increasing slice of the market in the short term and Sky will continue to act aggressively and push for market share.

Key data

Figure 5 **Italy key data**

Total pay-TV subscribers (000s)	3,384	**DTT subscribers (000s)**	2,000
CATV subscribers (000s)	80	**IPTV subscribers (000s)**	184
DTH subscribers (000s)	3,200	**Pay-TV ARPU (estimated)**	euro25–40

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- Italy has a target of 2006 for its analogue switch-off date, which is ambitious bearing in mind that digital TV penetration is less than 15%.
- Italy is more advanced than most European markets in taking a proactive stance towards convergence. There is a single regulator, Agcom, responsible for telecoms, audiovisual and publishing.
- The Italian media industry continues to suffer from a disruptive political influence due to President Berlusconi's ownership of media company Mediaset.

Pay TV

- Italy has no cable operators or infrastructure; pay TV is dominated by satellite provider Sky, which in the past has had a monopoly on premium content rights, although this is starting to change.
- The IPTV market is dominated by aggressive IP entrant, Fastweb. It has spearheaded IPTV activity in Europe, although still has less than 300,000 pay-TV subscribers.

DTT

- The Italian government has been substantially subsidising set-top boxes. In 2003, this sum was euro150; in 2004 it was reduced to euro70.
- DTT offerings have been launched by both Mediaset and Telecom Italia.

ARPU

- Relatively high ARPU driven by premium content packages and soccer. Mediaset and Telecom Italia each control a portion of the digital terrestrial rights for Italian Serie-A football, with satellite rights held by Sky Italia.

Services

- VoD from Fastweb, Telecom Italia and Wind (the latter two currently deliver via their Internet portals).
- Relatively strong uptake of PVR from Sky and network PVR from Fastweb.

Incumbent position

- Strong development of multmedia portal Alice Rosso with VoD as a core offering.
- Telecom Italia is rolling out pay-per-view soccer on a DTT platform and an IPTV launch is scheduled for 2005.

Competition position

- Aggressive rollout of IPTV from Fastweb – it has the highest number of pay-TV subscribers in Europe.
- VoD from number two fixed operator, Wind.
- Launch of IPTV service from newcomer Digital TV later this year (IPTV only, no broadband access).

Spain

Market analysis

Spain's pay-TV market is still immature, with only 24% of households taking any kind of paid-for TV offering. The market is split between newly merged satellite operator Telepiu, major cable operators Ono and Auna, and some smaller, local cable operators. Although it has developed rapidly, Spain's young market is in a state of flux. Pay-TV platform Quiero collapsed in 2002 and consolidation is occurring in cable, with the proposed merger of Ono and Auna opening the possibility of a landscape dominated by a major players on each of the three platforms: satellite, cable and IPTV.

Telefonica launched its Imagenio IPTV offering this year and is implementing an aggressive expansion strategy. It's likely that Wanadoo and other ISPs will also enter the IPTV market, but their efforts will be dwarfed by Telefonica. It is targeting over 1 million subscribers for its Imagenio service at the end of 2008 and is aiming to have passed 7.5 million homes by this time. The company is matching network investment with that into content. It will build up its portfolio to offer more of Spain's local and provincial channels and has also acquired rights to Spanish Primera League soccer until the end of the 2006 season. Tellingly, the set-top box provided for Imagenio is also equipped to receive DTT signals – an indication that Telefonica is ensuring it has the potential to deploy DTT if so required.

We believe that in the context of Spain's immature pay-TV market, there is considerable room for growth for pay TV across all platforms in the medium term. As elsewhere in Europe, fibre deployment is limited. ADSL2+ is the major technology choice for telcos and it is also likely that Ono/Auna will deploy DSL for video services at a later stage in order to both increase their footprint and benefit from reduced opex as IP delivery costs come down. However, sluggish figures for TV subscriber growth from cable operators makes us cautious in the short term. A strong satellite player will remain a key barrier to IPTV providers; the barriers for entry into VoD are lower.

Key data

Figure 6 **Spain key data**

Total pay TV subscribers (000s)	2,940	**DTT subscribers (000s)**	905
CATV subscribers (000s)	1,150	**IPTV subscribers (000s)**	40
DTH subscribers (000s)	1,790	**Pay TV ARPU (estimated)**	euro20-30

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- The Spanish government plans to amalgamate up to 11 separate laws governing TV into one in order to create a framework for 'independent, plural and quality television'. It also intends to create an independent Audiovisual Council.
- With analogue switch-off scheduled for 2010, the Spanish regulator CMT regards Telefonica's investment in IPTV as a positive move. This is demonstrated by the CMT's reversal of a ban on Telefonica launching any triple-play offering.

Pay TV and ARPU

- ARPU for pay TV in Spain is around the European average. It has a relatively innovative content market with exploitation of strong Latin American links i.e Spanish language content.
- Telepiu, Spain's satellite provider, holds most of the rights to premium content.

DTT

- DTT rollout is still in its early stages in Spain following a number of changes and actions at the regulatory level as the CMT formulates a clearer and more aggressive strategy for rolling out digital TV.
- A number of DTT channels have been assigned to state broadcaster RTVE and several new DTT licences will be auctioned before the end of 2005.

Services

- Telefonica claims high uptake of its pay-per-view soccer (25%) and that it is generating up to euro35,000 per game.
- VoD is available via Imagenio; cable operators will launch VoD within the next year.

Incumbent position

- Telefonica is implementing an aggressive IPTV strategy, as outlined above. It also has plans to expand its Imagenio service into Latin America and is currently testing services in Chile. It claims that four-fifths of broadband connected homes in Latin America will be capable of receiving video signals within four years.

Competition position

- It is highly likely that Wanadoo and possibly Jazztel will also enter the market, initially with VoD and possibly IPTV.

UK

Market analysis

The UK market has high barriers for telcos looking to deploy broadcast IPTV. Networks are constrained by long loop lengths, making investment in TV and VoD more costly and technically more difficult due to bandwidth limitations. Additionally, we believe that within the forecast period there will be little deployment of fibre; most investment is going into ADSL2+.

There is less room for offering broadcast IPTV in the UK due to the above factors, a highly competitive pay-TV market, and the ongoing success of free-to-view digital TV. By March 2005, Digital TV penetration was 62% and just over 5 million connections were free-to-view digital households using Freeview's offering.

BT announced plans to launch a hybrid DTT/VoD offering in mid-2005 using a dual-tuner STB. It is currently conducting trials in 150 homes and working on an electronic programme guide (EPG) which will mean subscribers will not realise they are switching between DTT and VoD feeds.

However, other broadband players are more bullish and are entering the IPTV and VoD market and exploiting a more favourable LLU environment. France Telecom is seeking to emulate its IPTV success in France by launching IPTV in the UK. Homechoice relaunched its service in 2004 with one of the most advanced service portfolios in the world yet it is struggling to build up a subscriber base. Other ISPs such as Tiscali have plans to enter the VoD market.

We believe that there is a potential opportunity for telcos in the increasing spread of multi-TV provision. For example, around 25% of Freeview connections are to households that already have digital TV from either Sky, cable or Freeview. Market drivers for VoD, time-shifted TV and more use of niche content are stronger than for broadcast TV, hence VoD will make up a more significant percentage of total subscribers in the forecast period compared to other markets.

Key data

Figure 7 **UK key data**

Total pay TV subscribers (000s)	10,584	**DTT subscribers (000s)**	5,001
CATV subscribers (000s)	3,302	**IPTV subscribers (000s)**	40
DTH subscribers (000s)	7,349	**Pay TV ARPU (estimated)**	euro45–65

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- Analogue switch-off is planned for 2014. Recently merged regulator Ofcom is seeking to ensure more transparency in converging communications and media environments and encouraging multi-platform delivery.
- High level of subsidy for monopoly state broadcaster BBC, funded through TV licence, which will remain in place within forecast period. Some funding opened up to other content providers on a competitive tender basis.

DTT

- At 62%, the UK is one of most highly penetrated digital TV markets in the world. Limited free-to-air satellite (500,000 subscribers) and dominant free-to-air provider Freeview account for one-third of the market. The success of Freeview is a threat to the value of subscription-based pay-TV services.

Pay TV and ARPU

- Strong and established pay-TV market with dominant satellite provider, Sky. Duopoly cable market of NTL and Telewest, with a merger likely in the short-term.

- One of the highest ARPUs for pay TV in Europe due to legacy pricing from Sky and high prices for premium content (augmented primarily by Premier League football). For linguistic and cultural reasons, UK pay TV content is also more highly dominated than other markets by major US studios, commanding high prices.

Services

- Established pay-per-view market and strong DVD rental market (retail and online). Aggressive launch of VoD from cable operators in 2005 (NTL's VoD service now covers 250,000 subscribers and claims 1 million movies viewed since launch).
- Strong uptake of PVR service from Sky. Sky is also looking to launch a movie and music download service via PC.

Incumbent position

- Creation of new Entertainment and Media Division for BT in 2004, with recruitment of new CEO from media background.
- Launch of 'Freeview Plus' with VoD scheduled for August 2005. Hybrid use of DTT and VoD over IP.
- BT has developed a long-term content/portal partnership with Yahoo! for its Internet broadband content. It is the only incumbent in Europe to do so.

Competitor position

- A highly developed IPTV and VoD offering from Homechoice, owned by VideoNetworks has so far made little impact (coverage is so far limited to London). Competitive triple-play bundle including voice and advanced interactive services, but weak brand competing against both cable and satellite.
- Wanadoo, AOL and Tiscali have all announced plans for IP-based video delivery.

Hong Kong

Market analysis

In terms of pentration of its broadband subscribers, PCCW is the world's leading leading provider of IPTV over DSL. By the end of 2004, it had over 400,000 subscribers for its Now Broadband TV services, launched 15 months earlier. This is not only the majority of PCCW's 550,000 DSL subscribers; it is also a substantial percentage (18%) of Hong Kong's estimated 2.2 million pay-TV households. Thus, TV over DSL is already starting to move towards saturation for PCCW. PCCW has about 75% of the DSL broadband market in Hong Kong.

In contrast to PCCW, the leading cable MSO, iCable, is seen as lacking in innovative drive. The company has still to complete the digitalisation of its network. It has a large but slow-growing subscriber base: 663,000 pay-TV subscribers in Q1 2004, up 7% from the previous year. Perhaps as a consequence, iCable has an unusually loose relationship with TV content providers – it lost the highly sought-after ESPN sports channel to PCCW, for instance. We therefore assume that availability of IPTV over cable will start late and grow slowly in Hong Kong.

FTTH is unusually strong in the Hong Kong broadband market, at about 580,000 subscriptions at the end of 2004. The unusually dense population, highly concentrated in multi-occupancy units, makes fibre a more economical way to deliver broadband than in most markets. Some IPTV content is offered, but take-up is low so far: City Telecom had about 30,000 subscribers at the end of 2004. We believe that this is largely due to content: sports is huge on TV in Hong Kong, and City doesn't have much of it yet. Since FTTH is relatively mature, we believe that the pressure on fibre providers to move to value-added services like TV & video will increase sharply, especially in view of PCCW's success. We therefore expect strong growth in both availability and uptake of TV & video over FTTH over the forecast period.

Overall, therefore, Hong Kong starts with a high penetration of IPTV at the start of our forecast period, but one which grows relatively slowly. It is heavily weighted in favour of DSL at the start of the forecast period, with FTTH increasing in importance fairly quickly; cable more slowly. We also factor in more short-term price erosion than for most other markets – the pay-TV market is highly competitive and a price war is already under way.

On the other hand, PCCW has already tried and failed with VoD over broadband. It is unlikely to be in any hurry to try again. Our scenario for VoD reflects this.

ovum

Key data

Figure 8 **Hong Kong key data**

Total pay TV	1,123	**DTT**	0
CATV	733	**IPTV**	448
DTH	N/A	**Pay TV ARPU (estimated)**	euro15–25

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- Analogue switch-off planned for 2012.

DTT

- Service introduction planned in 2007. The two terrestrial broadcasters, Asia Television (ATV) and Television Broadcasts (TVB), are required to cover 75% of the area with a digital network by 2008.

Pay TV and ARPU

- Highly developed pay-TV market with a variety of premium content packages.
- PCCW reports ARPU of HK$105 for its pay-TV subscribers.

Services

- PCCW offers Now Broadband TV IPTV service over its DSL lines. In December 2004, PCCW reported 416,000 IPTV subscribers. This is 53% of PCCW's DSL broadband customer base, and about 20% of the whole pay TV market in Hong Kong.
- City Telecom also offers IPTV over FTTH, claiming around 40,000 subscribers in Q1 2005.

Incumbent position

- Highly developed IPTV offering, which is taken up by more than 60% of PCCW's broadband subscriber base.
- It has been reported that PCCW plans a speed upgrade to 25Mbit/s, in order to provide new services including high-definition TV, PVR functions and interactive gaming.

Competition position

- iCable has a highly developed traditional pay-TV offering over a cable network. It has over 50% of the pay-TV market with 702,000 subscribers at the end of 2004.
- There are two smaller players. They have had limited success so far due to market dominance of PCCW in IPTV and lack of compelling content. CTI HK has taken a price competition approach. It offers cheap to acquire, local content at approximately one-third of the price of its competitors. So far, take-up has been limited with only 42,000 subscribers at the end of 2004. The satellite pay-TV provider, Galaxy, will soon also offer IPTV over the HGC broadband network. This will greatly improve Galaxy's coverage, as it had problems with its satellite coverage resulting in only 40,000 subscribers at the end of 2004.

Japan

Market analysis

Japan has a moderately developed pay-TV market and IPTV was launched last year. However, uptake has been fairly modest so far. For example, Softbank had 10,000 subscribers for its TV-over-DSL service in October 2004, which is only 0.2% of its DSL subscriber base.

NTT is barred by regulation from providing broadcast TV over DSL. We have no reason to assume that this will change over the next five years. The parameter for availability of TV over DSL is set on the basis that it will never be available to NTT's DSL customers. According to iDate in February 2005, NTT has 18% of the retail DSL market in Japan.

As a corollary of this, we expect NTT to be especially aggressive in its rollout of value-added broadband content, including broadcast TV and VoD, over FTTH. In April 2005 NTT announced development of an IPTV offering for its FTTH infrastructure, in conjunction with SkyStream.

Our overall scenario for Japan is:

- DSL: moderate growth in availability & uptake of IPTV and VoD, but with NTT's customers excluded from the total addressable market for the forecast period.
- Cable: moderate-to-low growth in availability & uptake of IPTV and VoD.
- FTTH: strong availability, starting from late 2005/early 2006. Moderate-to-strong uptake (since access to video content will be one of the reasons why people will want to pay for fibre access bandwdith).

Key data

Figure 9 **Japan key data**

Total pay-TV subscribers (000s)	21,165	**DTT subscribers (000s)**	1,300
CATV subscribers (000s)	1,622	**IPTV subscribers (000s)**	16
DTH subscribers (000s)	3,310*	**Pay-TV ARPU (estimated)**	euro15–25

All data for December 2004 unless otherwise stated

* Data from Q1 2005

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- The government aims to achieve digital broadcast penetration of 47 million homes and 100 million TV units by July 2011. Analogue broadcasts are to be closed down on 24 July 2011.
- The Japanese government does not subsidise set-top boxes and there are no plans to do so.
- Regulatory structure that requires pay-TV platforms to be merely carriers of programming and prevents packaging. All services must be offered à la carte.
- DTT providers are required to provide at least 50% of their programming in HDTV format.
- Telcos are currently barred from providing TV services over copper telephone lines. Video on-demand is permitted, however. Fibre access is not covered by this regulation.

Pay TV

- Fairly well developed market, with pay-TV services in all formats available in at least some areas. Pay-TV penetration was 17% as at September 2004.

DTT

- Penetration of DTT receivers by February 2005 reached 2.4 million units. Japan has adopted a unique DTT system named ISDB-T.
- Initiated in limited metropolitan areas of Japan in December 2003. By December 2004 DTV coverage reached 18 million households (35% of Japan's TV

households). Coverage is forecast to increase to 27 million households by the end of 2005.

Services

- Softbank has been offering IPTV and VoD over DSL since early 2004
- NTT is developing an IPTV service over its FTTH infrastructure.

Incumbent position

- NTT's plans for IPTV are coupled with its plans for FTTH, owing to the regulation barring telcos from providing TV over DSL.

Competition position

- KDDI's position is the same as NTT's in terms of TV over DSL.
- Softbank is a fairly new entrant offering IPTV and VoD over broadband. Take-up has been fairly limited to date.
- TV players include J-com (cable), with 1.7 million TV subscribers, and SkyPerfect (satellite) with over 3 million subscribers.

Korea

Market analysis

Korea is one of the world's most advanced broadband markets. Availability and uptake of high-speed DSL broadband are at world-leading levels. The Korean DSL providers have both the technical conditions (very fast access lines) and the motivation to move into IPTV – indeed, Hanaro and KT have been trialling IPTV. KT, for example, planned to launch a service called Mega-TV over VDSL in H2 2005.

However, there currently exists a serious obstacle to IPTV over DSL or fibre. The Korean regulator, MIC (Ministry of Information and Communications) has ruled that telcos should not launch TV services in the near term, a ruling widely seen as a means to protect Korea's financially weak cable-TV providers. The MIC has explicitly stated that it wants telcos' IP offerings limited to video on-demand:

> *'Telecommunications operators should not be allowed to offer web TV services until technical and regulatory problems (arising from) the convergence of the telecom and broadcasting sectors are resolved. Before such problems are settled, it is desirable for financially strong telecom operators to provide only on-demand video services.'*

The ruling is not absolutely binding: broadband operators are currently obliged only to report their intention to offer IPTV before launching it. However, MIC has consistently played a highly interventionist role in the Korean market, and so long as the current policy remains, it is likely to inhibit IPTV over DSL and FTTH. This will also stifle the availability of IPTV over cable modem, since the cable operators' networks are not yet technically capable, and there will be no competitive pressure to change that quickly. Lee June-Young of CJ Cablenet was quoted in March 2005 as saying: 'We need at least three years of growing our digital services and converting subs from analog... By that stage, we might be ready to compete with IPTV by telco giants like KT.'

The desire to be a world leader in ICT is one of the strongest forces driving MIC policy. If IPTV takes off in the rest of the world, as we believe it will, then MIC will not want Korea to be left behind in this area. It is therefore likely that the bar on telcos providing IPTV will be at least partially lifted in the future; for the purposes of modelling, we assume that this will happen in early 2007.

This leads to the following scenario:

- DSL and FTTH – no availability of IPTV before 2007. Thereafter, strong growth in availability and moderate growth in uptake. IP VoD available from 2005, with moderate growth in both availability and uptake.
- Cable modem – moderate growth in availability and uptake of IPTV and VoD from 2005 onwards.

Key data

Figure 10 **Korea key data**

Total pay-TV subscribers (000s)	14,420	**DTT subscribers (000s)**	0
CATV subscribers (000s)	12,770	**IPTV subscribers (000s)**	0
DTH subscribers (000s)	1,650	**Pay-TV ARPU (estimated)**	euro5-12

All data for December 2004 unless otherwise stated

Source: operators, Ovum, regulator, ECCA, TV International

Digital and pay-TV market environment

Regulation

- At present, the Korean government prohibits fixed telcos from providing TV services.
- Separate regulation on broadcasting and telecommunication, though there are moves towards a convergent regulatory body.
- Aiming to provide nationwide coverage of digital broadcasting by the end of 2005.

ARPU

- Cable-TV ARPU in Korea is relatively low. There is also a wide spread of reported ARPU, ranging from euro1.56 to around euro12 per month (reported by the satellite broadcasting provider, Skylife).

DTT

- DTT was introduced in 2002 using ATSC, as mandated by the regulator. Broadcasters want to switch to DVB-H, but the regulator has so far refused to agree. DTT expansion is on hold, pending resolution of the dispute. Current services are not subscription based, comprising 20 hours of trial HDTV programming per week.
- The rollout of DTT is in an early stage in Korea. Despite the initial digital broadcasting in the capital area in December 2002, there were debates over the digital transmission method. By resolving the debate in July 2004, more powerful digital transformation is expected. Several DSL providers have been trialling IPTV, and would be in a position to launch fairly soon if the current prohibition on telco TV were to be lifted.
- Mobile TV is a more immediate focus for both the Korean telcos and the Korean regulator. Several services have been launched in 2005, and early uptake has been encouraging: TU Media (30% owned by SK Telecom) claimed 50,000 subscribers in June 2005.

Incumbent position

- KT is currently barred by regulation from providing IPTV over DSL. However, it is very active in home networking services, including VoD.

Competition position

- Competitive telcos are restrained by the same regulation as KT.
- The Korean cable-TV sector is financially weak, and is likely to be slow to innovate owing to lack of investment funds.
- Lots of consolidation is under way among satellite and relay operators.