‘Show me the money’
Strategies for success in IPTV*

*connectedthinking
Internet Protocol Television (IPTV) is a term that many people use but few can define. Consumers are confused about what it means. And IPTV services themselves are divided into two forms: one distributed via the PC (‘web-TV’); the other via the TV using a set-top-box on a closed broadband connection (IPTV). What’s more, IPTV services are entering an already crowded and competitive TV market characterised by established players and ongoing innovations such as HDTV. It is an issue that embraces everyone from telcos, to advertisers, to content providers and to broadcasters.

If telecoms operators’ investment in high-bandwidth networks is to create the hoped-for returns from IPTV, they first need to convince consumers of its benefits.

In fact, the most viable IPTV strategy may be a hybrid approach, delivering broadcast TV over platforms such as DTT, satellite or cable, and on-demand and interactive content over broadband.

Whatever approach they choose, any operator delivering IPTV will need to focus on a marketing led solution, and closely look at the organisational and cultural changes that need to accompany a successful IPTV business. Core to this is partnering - possibly including outsourcing - and investment in content and advertising expertise. Once they get the technology to work, they still face the daunting hurdle of knowing what content to offer to customers. This requires thinking beyond exclusive premium sports rights and exploiting the ‘long tail’ of content.

For IPTV services that launch and operate successfully, the ‘ace in the hole’ is that IPTV offers a new, more compelling model for advertisers to reach and influence consumers. To exploit this opportunity, operators need to seize the initiative by proactively providing the feedback mechanisms that will support new commercial models.
A snapshot of the State of Play…the year: 2007

Ask consumers today what they know about IPTV, and most of them will look blankly back at you. This is despite the fact that industry statistics say more than a third of people have watched some form of video over broadband.

While consumers may not know what IPTV is, they know what they want: a TV service that offers greater choice and interactivity combined with the content they want. What they don’t understand is why they should have to move from TV to PC to get this.

Video on demand (VoD) is a step forward towards satisfying these needs. Yet VoD is only part of the answer. The proliferation of distribution platforms and content has driven several shifts: the fragmentation of TV channels and advertising into more targeted segments; growing personalisation of consumption through Personal (Digital) Video Recording (P(D)VR) devices such as TiVo and Sky+; and increased interaction between consumers and providers, through applications such as voting, online gaming and user-generated content, to name a few.

Navigating through this tangle of content requires increasingly sophisticated search capabilities, if people are to feel that their TV choices really are personalised rather than just segmented.

So, how are the various industry players responding?

Telecoms Operators
Take the archetypal incumbent telecommunications operator, ZY Telecom. It has been investing heavily in developing its next generation IP-enabled network, while watching much of its traditional fixed-line voice and broadband business being taken away by local loop unbundlers, cable and mobile operators, handset retailers (e.g. Skype-enabled devices), and even satellite TV businesses that are moving into communications. ZY Telecom can see that what used to be separate telecoms and entertainment services in the home are now fusing into a single multi-play bundle, with communications no longer being the sole domain of the telecoms operators.

It can also see that content distribution is a crowded market. And since speed is of the essence, it is following many others by outsourcing the implementation of its new broadcast and on-demand services over its new IP network. To date, however, take-up of this new service is negligible – and ZY Telecom still faces the challenges of integration, service delivery, and customer service/installations, let alone the problems that scale or success may bring.

Broadcasters
The traditional free-to-air broadcaster, Channel NNN, is responding to fragmentation and P(D)VRs by launching segmented digital channels aimed at increasingly specific groups of consumers. It is also offering a ‘catch-up’ service over the internet, enabling viewers to use their PC to see programmes they have missed on the linear channels, and to pay to get an early sight of programmes not yet broadcast such as next week’s teen soap-opera. At the same time, realising it is getting ever harder to reach its increasingly elusive consumers, Channel NNN has struck deals with joint venture partners who tap into the youth market over mobile and the internet.

Meanwhile, the satellite broadcaster BlueCloudSat is taking a similar route, as well as making an aggressive drive to win broadband subscribers through a bundled communications and entertainment package by offering fixed line voice, broadband, satellite TV and potentially a mobile service (as a Mobile Virtual Network Operator) on a single bill. Cable operator Cable ZX is doing the same, but is still struggling to find a commercial return to drive digitisation, network build-out, further content acquisitions and customer service enhancement.

Content Owners
Finally, the media company NewContentX an owner and developer of branded content is enjoying the party. It regards IPTV as merely another platform for distributing its content, and is happy to sell its content through this new route on the basis of minimum guarantees and cost-per-subscriber for broadcast, or revenue share for VoD content. VoD brings enhanced clarity on the distinction between the most and least popular content; as IPTV and Mobile TV beckon, NewContentX wonders when the point will come where it should “go direct” and bypass the distribution networks and aggregators it has dealt with up to now. The opportunity to move away from the 30-60 second ad spot, and provide direct consumer feedback is exciting NewContentX almost as much as the advertisers. As a result, questions are being raised at Board level over whether its poorer-performing shows should be produced at all, and whether NewContentX should take a more prominent role in cross/up-selling its own content on all platforms to fully leverage its “long tail” of content.
The Digital Switch-Over of terrestrial TV has largely finished, so everyone has become used to having a set top box under their TV and a large number of people have gone out and bought new (largely HD flat-screen) TVs. However, two significant shifts in viewing habits have also occurred. Back in 2007, over 95% of consumers’ viewing was via broadcast TV or related P(D)VR devices, and the remaining 5% through interactive and on-demand channels. By 2012, this proportion has shifted towards on-demand, with about 70% of viewing taking place through broadcast (including P(D)VRs) and 30% through on-demand.

The second and more significant shift is the rise of online TV and video search capabilities. Just as Google and others revolutionised internet search in the previous decade, so video search in 2012 has become several magnitudes more elaborate, powerful, intuitive and personalised than it was five years before. It also encompasses both scheduled broadcast and on-demand services, and applies Amazon-style analysis of individual consumption and spending to give personalised search guidance and suggestions.

To capitalise on this development, the media industry has become more astute about leveraging its “long tail” and refining related content in a much more personal way to the individual and household consumer(s). Despite this, we have not reached a point where consumers only watch their favourite shows on demand. But what the rise of online TV search has done is make the regulation and rights management much more complicated, cutting across the old model of national or regional rights and forcing it towards regional (if not global) platform rights.

So, how are the various industry players responding?

Telecoms Operators
The IPTV offering from our incumbent telecommunications operator, ZY Telecom, is suffering as its subscriber base increases. Having tackled the cable operators at their own game by buying premium sports content rights and offering consumers a good value proposition with additional interactivity, and then outsourcing much of its IPTV implementation to get to market quickly, it found its subscriber base started to grow strongly from launch. However, the huge capex requirement has saddled the operator with a heavy peak funding burden, as it is unable to resell the spare daytime capacity on its network before everyone comes home in the evening and watches TV on several sets around the house, fully stretching the network. The CEO is also worried about funding a further roll-out to cover the rest of the country when he cannot yet see a return on the previous investment. Worse, cable and satellite operators have upgraded and are able to launch products much faster in response to consumer demand than ZY Telecom can with its outsource partners.

Broadcasters
Meanwhile, the free-to-air broadcaster Channel NNN is running its DTT channels alongside broadband-based services offering VoD and early releases. However, the proliferation and rising sophistication of P(D)VRs has effectively removed the demand for ‘catch-up’ channels, since the vast majority of viewers are recording their favourite content locally. This has the effect of freeing up more space for HD channels on DTT. Commissions from click-through sales via interactive ads are beginning to take off, and advertising-funded programming is now accepted as mainstream. The satellite broadcaster BlueCloudSat has also found that its hybrid approach of satellite and broadband has paid dividends. The company is successfully exploiting its large base of bundled triple and quad-play subscribers via cross-channel interactive promotional and sales campaigns, creating a combination of subscriber, advert and click-through/commission revenues across all three of its screens (TV, PC and Mobile). The cable operator Cable ZX has been forced to cut costs and minimise margins as the product differentiation they once enjoyed over ZY Telecom has disappeared.

Content Owners
Finally, our media company, NewContentX, now concentrates on selling programme rights to broadcasters on a platform basis, and on selling its hit series on a packaged basis across all three screens and direct to consumers via broadband download. The development of made-for-mobile and repurposing of content for Mobile TV is a further major thrust. By 2012 it has also become increasingly focused on leveraging a smaller portfolio of global big sellers across all content forms including film, TV, interactive and games, dispensing with less commercially successful productions.

Scenario…the year: 2012

Five years further on in the digital revolution, most consumers in 2012 are still viewing TV content predominantly on a TV rather than a multipurpose device such as a PC or handset.
How to change the 2012 scenario

As we explain in the box below, the term 'IPTV' means different things to different people, and is commonly applied both to IPTV delivered to the television set and 'web TV' to the PC. We believe that web TV will remain a niche proposition as a means of growing programme brands and communities over the next five years, with the vast majority of mass-market consumption being via the TV.

In mid-2006, we prepared a research study for the UK regulator, Ofcom, which showed that new media rights would expand the overall ‘size of the cake’ for the TV industry. They will do this by increasing the total revenues produced by a TV programme, although we estimated that the impact will still be relatively limited in 2012. The recent PricewaterhouseCoopers Global Entertainment and Media Outlook 2007-2011 forecasts that spending on “convergent platforms” will exceed 50% of global entertainment and media spending by 2011. So there is money to be made in content but both incumbents and new entrants face a number of tough choices before they can claim their share.

This paper sets out five Points of View on how companies ranging from telecoms operators to advertisers and content providers can navigate a profitable route through the complexities of IPTV.

Any company considering launching or becoming commercially involved in an IPTV proposition, whether telco, broadcaster, content provider, advertiser or disintermediator should first ask itself a number of searching questions about IPTV in general and the specific proposition in particular.

Defining IPTV: a divided landscape

The fragmentation in TV distribution and consumption has led to the emergence of two distinct forms of IPTV one centred around distribution via the PC (termed ‘web-TV’), and the other via the TV using a set-top-box (STB) on a closed network broadband connection (IPTV).

The TV-via-STB model is in line with traditional pay-TV distribution to the home model. However, distribution to a PC involves a different commercial and technical model, and moves strongly away from traditional broadcast TV towards a pure VoD approach. Commercial broadcasters such as Channel 4 in the UK, or NBC in the US have launched their own VoD portals as extensions to their linear digital spin-off channels, leveraging existing content from digital channels, funded through a combination of revenue sources including advertising, pay-per-view, subscription, and download-to-own.

The rise of web-TV has driven a rapid increase in media viewing via a PC, focusing both on user-generated content from portals such as YouTube and MySpace, and on video - (and music-) on-demand through portals such as iTunes and Joost. In our view, web-TV (even streaming from a PC to TV) is likely to remain a relatively niche proposition for the medium-term, since mass-market media consumption will continue to be via the broadcast TV model, which will increasingly address consumers’ demand for greater personalisation, and deliver the next generation of HD on-demand and interactive services directly to the TV set.
The Problem

Fixed line telcos have spent the past decade watching their revenues and subscribers migrate to mobile in growing numbers. As a result, their core voice revenues have evaporated amid a steady buzz of fixed-to-mobile substitution. Yet throughout this time, fixed line operators were being stalked by the satellite broadcasters and cable operators: the former through their moves into telecoms enabled by regulatory encouragement of Local Loop Unbundling (LLU) or wholesale Bitstream services; the latter through the digitisation of their networks. The result? Both competitors offered converged triple play entertainment and communication solutions, in which TV forms the heart of the household package, not the voice line.

The incumbent fixed line operators knew that securing or winning back these customers would require something new and the increasing bandwidth provided by new compression technologies meant that IPTV was (and is) seen as the answer. PwC agree with the view of most industry participants that the telco has to move into media and provide these triple and quad-play services in order to compete with the products already in market from “traditional” pay-TV providers. However, we also believe the questions lie not in the principle of the strategic decision to enter this converged market, but in the approach and execution to ensuring the best solution for the customer, and the best return for the company. In our experience the method by which this solution is reached is entirely dependent on the individual market and company concerned, whether it is a global mobile operator moving into broadband and entertainment through a combination of wholesale and infrastructure deals, or a national fixed line incumbent buying exclusive content to compete with the existing pay-TV operators.

More importantly, the success of IPTV may well lie in a greater orientation of the business towards the consumer and a marketing-led approach, rather than the historic technology-led decisions that have tended to drive most telecoms operators in the past. Whilst key technology strategies remain at the heart of effective IPTV delivery, many telcos still have a long way to go in understanding their customer and accessing the ability of their own organisational capabilities/structure to enable them to deliver IPTV.

However, what is required in every case is a focused approach under which the prospective IPTV operator assesses the incremental profits that the IPTV service will generate, and its contribution to the company’s overall portfolio. In many cases, this could involve using specific consumer research to model the potential take-up of the IPTV service, the knock-on benefits to other services in the portfolio, and the impact on take-up of retaliatory measures from competitors.

Point of View 1:

A strong focus on delivering and communicating the incremental benefits to consumers is vital for any organisation trying to make a success of IPTV.

Berit Svendsen, Vice President and Head of Nordic Fixed, Telenor

“[With] fibre, you have to sell it first and then roll it out. So, it’s a totally different ball game for [a telecoms operator]... if not, you are going to have a huge risk.”

Source: PwC Communications Forum 2007
If the operator decides that the future lies in a mass market, converged communications - entertainment solution, then what technology options can they follow to enact this plan?

The Investment

Many incumbent fixed line operators today are in the midst of overhauling their networks to move to a Next Generation Network (NGN) architecture. These NGNs typically have the characteristics of an all-IP network, with shortened local loops to enable high bandwidth to the home (typically over technologies such as ADSL2+ in the access network). In some cases this also involves upgrading parts of the network infrastructure from the old copper lines to fibre optics, whether in the core or by Fibre To The Node/Kerb (FTTN/FTTK).

Other operators, such as Verizon in the US are choosing to rollout Fibre To The Home/Premises (FTTH/FTTP). This requires significantly more capital expenditure and time to build out. This investment is founded on a strategy of future differentiation by the extra bandwidth that FTTH is capable of delivering compared with the option of following ADSL2+ with FTTN. However, this strategy also brings additional benefits in the form of a cheaper network to maintain when compared to the traditional copper network as well providing Verizon with the bandwidth to provide a linear broadcast until IPTV becomes more mainstream and cost effective. In the interim, Verizon also uses its relationship with satellite provider DIRECTV to provide a video bundle for areas where its FiOS (fibre-optic service) isn’t available yet.

NGNs are not the only answer to IPTV by any means and the case for NGN is rarely, if ever, built solely on a service such as IPTV anyway. Nevertheless, while there are various regulatory schemes that may (or may not) incentivise operators to invest in NGNs and access network upgrades, the investment arguments and strategies bears some resemblance to the widespread deployment of cable operations in the 1990’s.
The financial figures shown in Figure A above are illustrative of some of the larger cable companies that entered highly competitive pay-TV markets during the 1980s and 1990s, and largely as a result ended up undergoing significant financial restructuring in the early 2000s.

As the figure shows, the trend was one of significant network deployment and investment ahead of an anticipated upsurge in subscriber numbers as the network rolled out. In most of its chosen markets NTL lacked the advantage of mass market scale, and had to follow a “grow as you rollout” approach necessitated by the amount of time taken to deploy the cable infrastructure. This took place at a time when terrestrial and satellite TV were already offering consumers viable alternatives with national coverage.

The result for international cable operator NTL was that the growth in their subscribers and revenues never matched the capex demanded by their network roll-outs. While many companies in this position sought to acquire smaller cable operators to consolidate the markets, debt levels were continuing to mount. Eventually the financial markets gave up on the investment and the businesses were restructured.

Clearly today’s telecoms operators have already deployed networks, so for them the effect experienced by the cable companies in the early 2000s may be nowhere near as pronounced. However, there are strong similarities with some approaches to IPTV - not least in the significant capital investment needed for roll-out, and the need to capture evolutionary growth in penetration on their networks as they become IPTV-enabled, all against a background of established incumbent and competitive pay-TV markets.
The Consumer

IPTV has the potential to deliver a number of benefits to consumers: it allows a greater degree of interactivity (from pay-per-view services to “hotspotting”) and facilitates 3-screen convergence. However, the mass-market adoption of IPTV may not happen as quickly as that of other innovations such as mobile phones or iPods. This is because the value proposition to consumers may not appear as compelling as with those products, so people are unlikely to rush to substitute their current cable or satellite TV set top boxes to subscribe to IPTV.

With this in mind, the main barriers to adoption include:

- **Bandwidth requirements**: As described earlier, viable IPTV services need reliable bandwidth (with high Quality of Service) into homes. The issue is not the amount of bandwidth required for a single stream (whether multicast or not), but the scalability of the bandwidth given the prospect of HD channels, multiple TVs per household and a growing subscriber base on the local loop.

- **Lack of available content**: Issues over content rights have meant that the amount of quality content historically available on most IPTV services has been limited. Whilst this is beginning to change, rights are still often issued on a strict territorial (regional) and platform basis. True cross-border and platform rights could flourish with IPTV, although content margin pressure is likely to come with this increased competition and distribution.

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**Sol Trujilo**, CEO, Telstra

“People are using these new forms of social media, social connections, communicating in many different ways. And that’s putting pressures on how we all should think about our business. But how consumer behaviour changes is really what should be driving us and how consumers are going to use many of the services that we deliver.”

Source: PwC Communications Forum 2007
In our view, the best way to sell these benefits is by highlighting the \textbf{practical impact for consumers}: show them a future world in which they can access content in the same way they shop for goods and services on the web, with minimal restrictions, and at prices that reflect the quality, scarcity and timeliness of the goods and services being supplied. So, if they want something earlier than others then they can pay extra for it, like special delivery; they can choose the content they want when they want or, if they prefer, can let others choose for them (a bit like ordering a basket of organic fruit and vegetables in season).

In such a world, release windows disappear, or at least shorten, and brands and search become key differentiators in a world teeming with content, complete with Amazon-style ‘if you liked that... then you’ll like this’ marketing targeted at individuals on the basis of their consumption and spending patterns. Plus there will be more interaction and involvement, including user generated content shared across communities.

It goes without saying that the IPTV provider will have to master the trick of finding the right market segments where consumers actually want these services, and then position (or potentially reorganise) their business to be able to deliver them in a rapid, flexible, and truly personalised manner. Whilst not often embraced by those outside of the media industry, these are likely to be core skills of the most successful IPTV providers in the long run.

\textbf{Maciej Witucki,}\n\textit{CEO, Telekomunikacja Polska Group}

“We are offering IPTV and we are enlarging [our TV] packages... I organised the company within this convergence model. But when you have these matrices [of commercial and organisation] where you think about your business model, it is important to always think about whether your country and your customer is ready for it?”

Source: PwC Communications Forum 2007
As with all telecoms networks, the first principle of designing an IPTV service delivery network is meeting (or exceeding) the anticipated peak demand (busy hour period). So any operator wishing to deliver linear broadcast TV and on-demand and interactive (non-linear) services must design the network to cope with this peak demand. In the case of broadcast TV, this demand characteristic currently occurs during the evening between about 7pm and 11pm (see Figure B), when most of the family comes in from work/school and slumps in front of the TV.

The advent of the P(D)VR enabling time-shifted viewing, and the increasing growth in on-demand content, will arguably change the duration, timing, and size of this peak. However, we believe that linear broadcast TV albeit with P(D)VRs, will remain the predominant form of viewing for at least the next five years as people continue to seek out and consume the variety and packaging that the already-fragmented linear channels provide.

The obvious consequence of this peak is that telecoms operators, like our ZY Telecom example, are required to invest in significant capacity along with multicast services to minimise the number of simultaneous video streams (channels) delivered to each home. Nevertheless, even multicast cannot solve the congestion at the local loop that occurs with the increase in:

- The number of TVs per household (watching different channels);
- The increase in HD channels (each of which requires almost double the bandwidth of the equivalent non-HD channel); and
- (Hopefully) the compound effect of the growth in subscribers on the network.

As we mentioned previously, we believe that operators that follow the route of investing heavily in network capacity and multicast will struggle to make a return on this investment, not least because of the intensifying competition in triple and quad-play. Communications and entertainment providers are no longer splitting household income between them. Instead, participants (fixed and mobile telecoms, cable companies, and pay-TV companies) are heading for the converged world with the intention of being the complete entertainment-communications provider for the customer.
One solution that could improve ZY Telecom’s Return On Investment (ROI) prospects is to invest in hybrid IPTV, and deliver the bandwidth-intensive linear broadcast TV over a subscriber-agnostic broadcast technology such as DTH Satellite, or Digital Terrestrial Television, whereby the number of incremental subscribers has no effect on the scale of the main transmission/distribution systems. This removes the primary driver of the daily peak in network demand and the associated capacity challenges resulting from growth in subscribers, HD channels and household TVs. Whilst ZY Telecom will have to continue to upgrade its network to cope with the delivery of on-demand and interactive content over the broadband path (an integral part of IPTV), its investment need not be anywhere near as significant as it originally planned to achieve mass-market. However, although there may be some partial offset from the increased Customer Premises Equipment (CPE) such as the satellite dish, hybrid STB etc.

So what does hybrid IPTV look like? The simple answer is no different from “pure” IPTV, as shown in Figure C. The set top box simply acts as the integration point in the home of the broadcast and on-demand/interactive worlds. As a result, if hybrid IPTV is implemented properly and effectively, the customer will not notice any difference in the user interface or experience when moving between linear and non-linear content.

This approach not only allows the operator to reduce the load on the network, but also (typically) enables national coverage from launch for a standard broadcast TV business while the IPTV broadband rollout continues. There are various choices the IPTV provider has to make regarding set top boxes, middleware, commercial business models, pricing and profitability, and the approach to migrating customers from “standard” to IPTV. There is no “one size fits all” approach in any of these areas, as they are heavily driven by the market and competitive dynamics but there are a number of approaches that PwC has previously taken with our clients to ensure an effective balance of these (sometimes conflicting) pressures to result in a timely, cost effective, and mass-market implementation.
Delivering and implementing IPTV will involve telcos partnering and investing substantially in content and advertising expertise. Outsourcing could be part of the solution, but is not necessarily the final answer, as the telco should first assess the strengths and gaps in their own organisational and cultural structure.

While our satellite broadcaster BlueCloudSat is getting to grips with rolling out its broadband network, either through Local Loop Unbundling or through wholesale (Bitstream) access from the incumbent telecoms provider, operators like ZY Telecom are struggling to understand what they need to do to get into the hybrid IPTV world. More and more often they are turning to outsourcers or turnkey providers to get their TV business to launch via an “end-to-end” outsource approach. As they examine this option, the likes of Microsoft’s “Mediaroom” TV are potential delivery solutions.

Outsourcing of everything from customer service through to applications (and more recently even networks) has become an increasingly popular option both for telecoms and media operators alike and often with good reason. When it comes to moving the telecoms business into the new world of content, outsourcing enables management to continue to focus on business as usual, and has also brought many operators significant financial and operational efficiency gains, often through offshoring. As a result of this trend, managing outsourced relationships has become a new core competency for operators, which has sometimes been learnt the hard way due to insufficient commercial, technical and contractual rigour in the rush to migrate. As outsourcing has taken off, equipment suppliers and IP software companies such as Alcatel-Lucent, Motorola and Microsoft have positioned themselves to seize the IPTV opportunity.

Whichever approach operators take, the question remains: what is the future business of the converged telecoms-media operator, and where does the value lie for the company and customer? Is outsourcing likely to leave ZY Telecom with all the vital TV knowledge and flexibility located outside its business, in an industry where responding to the latest customer fad or programme brands demands rapid responsiveness?

PwC believes the answer is not black and white. ZY Telecom does face significant challenges in the need to transform its legacy telecoms culture into one that embraces, if not becomes, a creative content maker. Furthermore, no matter how good the operator’s contractual and operational relationships, the outsourcer could effectively control the vital “last mile” involved in getting (and changing) the product to the customer. The (multi) million-dollar question is whether this point has a material impact on the future of the operator.

That said, PwC’s Global Outsourcing Study 2007, ‘Outsourcing Comes of Age: The Rise of Collaborative Partnering’, shows that outsourcing remains a critical element of the corporate strategic mix. The research which included interviews with 226 senior executives in private sector outsourcing customers worldwide found that 87% of respondents said outsourcing had delivered the benefits projected in the original business plan. In fact, outsourcing was perceived as such an essential business practice that 91% of customers, whether completely happy or not, said they will outsource again.
But for telecoms operators, concerns over future control and internal know-how can offset the proven business and cost benefits achievable through outsourcing. So how does the CEO of ZY Telecom get to market with a robust TV product as quickly as possible, without relying on a full outsourcing model? Although the distinction from outsourcing can be subtle, partnering and turnkey implementations have a major role to play in getting the IPTV product to launch, provided it is implemented with a ZY Telecom team (albeit perhaps new hires) to ensure that on day one of operation the ZY Telecom team can not only take control but intimately understand the technology, processes, and operations.

TV is an industry that has been around for a long time. In PwC’s hands-on experience of the strategy and operational execution of IPTV, getting it up and running does not mean entering a “brave new world” - but is simply an evolution of technologies enabling the operator to reach the customer in many more ways than before. As in any TV venture, there are key decisions, strategies and tactics to be adopted, together with a requirement for well-executed programme management, all delivered with operational excellence since one second of blank screen may be enough to turn the customer off the service for good. Such an adverse experience may tarnish the operator’s brand as a whole, a risk to be guarded against at all cost.

So the choice should not be whether to outsource or not. Instead, the real choices are about the targets/goals of the business, and mix/diversity of partners required to help the operator not only to reach the market quickly, but to enable them to change as a company to become more flexible and customer-focused as a communications/entertainment provider.
Point of View 4:

We believe that IPTV owners need to think beyond acquiring exclusive premium rights (typically sports), which are not necessarily the only answer to capturing market share.

It will be critical to focus on assessing the fundamental value of content, when attempting to leverage the “long tail” on a more personalised basis to the consumer, which means a more extensive content portfolio and a strong sense of “sweating” these assets.

As we highlighted earlier, the point where telcos and media companies come head-to-head is in the battle for the living room (and to a lesser degree on mobile devices through the launch of Mobile TV). Satellite and cable operators are competing to offer the best triple or quad-play proposition, while linear broadcasters are looking to web-based TV and Mobile TV to provide new revenues streams as their old ones become cannibalised.

Meanwhile the likes of Google have another opportunity to disintermediate all of the existing players. As a result, all these players are fighting for the best content, scarce spectrum and advertising spend. Points of differentiation will focus on customer service, consumer experience (particularly from the viewpoint of relevance/personalisation) and a trust in the brand.

Like any other distribution platform, IPTV needs a compelling content offer to attract and retain consumers. However, the attributes that make content ‘compelling’ go beyond the content itself, to include its timing, pricing, availability and ‘community relevance’, alongside its quality and personal interest value. For most operators, securing the right content offer is the most daunting challenge they face in entering the IPTV marketplace.

Currently, most IPTV operators use acquired and/or reformatted content from the networks - hence the headache over acquiring it. It remains to be seen when or if the tipping point will arrive at which IPTV providers start to operate their own commissioning teams, or whether content aggregation is the sole remit of the IPTV provider. We may see NewContentX providers looking to establish, or at least control, their own distribution platforms, such as web-based TV. Again, the choice will come down to money: is it more attractive commercially for NewContentX to partner with an IPTV provider and/or distribute their own content? But whether they are acquiring or commissioning content, IPTV operators will have to be clear on the fundamental value that the content delivers to them: the net present value of the incremental benefits minus costs.
In most cases, operators weighing up the value of content find they are entering a highly competitive and sophisticated bidding market. The more that IPTV providers extol the virtues and benefits of higher quality customer and advertising data (from real time consumer feedback via the broadband line), the more their investors will expect them to specify why they are buying certain content, what they expect the pay-offs to be, and how the content integrates into their overall portfolio of channels and VoD content. Our approach to assessing fundamental value informed by benchmarking other rights costs and undertaking rigorous consumer analysis in preparation for bidding for content is set out in the figure below.

Figure D: Approach to Establishing Fundamental Value of Content

1. Content benchmarking
   • Collating data from comparable content deals - adjusting for differences in type of right, quality, viewer demand and revenue per viewer
   • Producing: historic guide to actual bidding outcomes

2. Assessment of fundamental values
   • Types of content (e.g. clips, news, matches)
   • Uses of the content (e.g. TV channel proposition (basic/premium), mobile, internet)
   • Demand for content (willingness to pay, geographical distribution)
   • Production costs and potential synergies
   • Mapping of demand to supply
   • Alternative broadcasting opportunities - to estimate incremental value - and saturation risk
   • Risk (e.g. regulatory and performance risk)
   • Producing: Range of fundamental values for content package

3. Primary research into consumer preferences
   • Conduct conjoint analysis of consumer preferences to determine their willingness to pay for content.
   • Also capture potential impact of competitor pricing strategies in response to market entry

4. Assessment of potential bidder strategies
   • Identification of bidders through analysis of the value chain and criteria for bidder assessment
   • Key performance indicators that determine whether or not a bidder proceeds with bidding
   • Outline of potential strategies and partnerships
   • Competitive response of incumbent broadcasters to new potential bidders
   • Producing: Observations on possible bidding strategies

5. Development of market scenarios
   • Development of market scenarios with implications for content usage and maximum bid ranges per bidder
Whilst often harder to quantify than direct benefits, 'halo' effects can have a material impact on overall rights value.

An IPTV operator (and indeed content suppliers) should assess the overall value of content through the following components:

- **Direct benefits** - which include the incremental increase in subscription revenues, advertising and transactional revenues that arise from exploitation of the content, taking into account any cannibalisation of other audiences (which could be within the channel and across distribution platforms) such as soccer rights being shown simultaneously across the three screens of TV, PC, and mobile. It is important to create a clear and accurate definition of the ‘counter-factual’ scenario in which the content in question or other substitute content is not purchased, since this allows the incremental benefits of the rights to be estimated properly. Further the on-demand driven revenues, whether directly from content (VoD) and interactive services (such as gaming) or transactions/merchandising, need to be valued within the overall rights portfolio;

- **Indirect benefits** - which include ‘halo’ effects where content improves the IPTV provider’s brand image, raises audiences for the service in general (e.g. by capturing new subscribers to a package of products) and opens up possible options in future content negotiations (obtaining one set of content may create more opportunities for content acquisition in the future). The value of content needs to be understood within the context of the wider strategy of the IPTV provider, and the degree to which the content dovetails with other content held, to help build a brand both in the linear broadcast and the on-demand/interactive arenas;

- **Production costs** - which may vary by quality of production and may be reduced by synergies across differing uses of the content (e.g. shared presenters, studios) and across the “three screens”, with the goal of achieving greater personalisation and hence better cross- and up-sell; and

- **Risk** - which relates to potential regulatory interference (e.g. investigations into the term and scope of the contract) and performance (e.g. for sports rights, the risk of relegation of popular teams for viewers).

When acquiring content, understanding the revenue potential of, and interaction between, each rights package will be critical. Gaining insights into the potential for cannibalisation of traditional broadcast TV, including Public Service Broadcasters (PSBs), was one of the main objectives behind our recent research into the top-line projection of the effects caused by the two main types of new media rights VoD and Mobile TV - on existing rights. In this study, we considered IPTV as another distribution platform for content exploitation, alongside terrestrial, satellite and cable.
Increased flexibility and choice do not necessarily increase total viewing hours.

### Figure E: PwC’s view of cannibalisation patterns resulting from new media rights

<table>
<thead>
<tr>
<th>Degree of cannibalisation</th>
<th>Impact</th>
</tr>
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<tbody>
<tr>
<td>High cannibalisation</td>
<td>• Pre-main VoD (PPV) on Main transmission</td>
</tr>
<tr>
<td></td>
<td>• Non-PSB TV (Holdback) on PSB repeats</td>
</tr>
<tr>
<td></td>
<td>• PPV VoD on DVD sales</td>
</tr>
<tr>
<td></td>
<td>• Catch-up / Holdback VoD on Catch-up / Holdback TV repeats</td>
</tr>
<tr>
<td>Medium cannibalisation</td>
<td>• Pre-main VoD (PPV) on Catch-up and Holdback repeats</td>
</tr>
<tr>
<td></td>
<td>• Catch-up VoD on Main transmission and Catch-up</td>
</tr>
<tr>
<td></td>
<td>• Non-PSB TV (Holdback) on PSB Main transmission and Catch-up</td>
</tr>
<tr>
<td></td>
<td>• Holdback VoD on Main transmission and Catch-up</td>
</tr>
<tr>
<td></td>
<td>• Mobile (full programme) on Main transmission</td>
</tr>
<tr>
<td>Low cannibalisation</td>
<td>• Catch-up VoD on Holdback repeats and DVD sales</td>
</tr>
<tr>
<td></td>
<td>• Holdback Secondary channel repeats on DVD</td>
</tr>
<tr>
<td></td>
<td>• Mobile VoD on Main transmission or Catch-up</td>
</tr>
<tr>
<td>Incremental</td>
<td>• Mobile clips (pre or post main transmission) on TV broadcast</td>
</tr>
</tbody>
</table>

As Figure E shows, our analysis suggests that VoD cannibalises TV audiences to a relatively higher degree, while mobile audiences are more likely to be incremental to overall viewing. There are a number of reasons for this distinction.

On the VoD front, it is clear that VoD provides audiences with greater flexibility and choice over the televisual content they consume. However, to date the usage data on PVRs and catch-up TV suggests that increased flexibility and choice do not necessarily increase total viewing hours. As a result, cannibalisation of other primarily linear broadcast audiences is relatively high. Furthermore, while Pay-Per-View VoD cannibalises other TV audiences, it is also likely to boost revenues by delivering higher revenue per viewer hour than TV funded by advertising or subscriptions. This particularly applies to ‘pre-main transmission’ VoD. That said, VoD revenue per viewer hour is likely to be lower than that of DVD, and VoD audiences can also cannibalise DVD sales.

As for Mobile TV, the potential incremental as opposed to substitutional nature of the audience for these services arises principally from the nature of the platform itself, which enables customers to consume TV content at times when they would otherwise be unable to do so, such as on a train. A further factor helping to make Mobile TV audiences incremental is the nature of the content, much of which in the medium-term is likely to be re-purposed clips and additional “made-for-mobile” material rather than a re-versioned form of the entire original content.

Building upon this categorisation of cannibalisation effects, we conducted an analysis of a selection of industry scenarios, focusing on the resulting revenue flows for various types of rights. This type of analysis is a critical step for an IPTV owner to undertake in order to understand, at the very least, which other packages of content have the ability to grow or cannibalise the content it wishes to bid for. Figure F illustrates the approach in relation to an assessment of revenue flows by windows and category of rights: this illustration shows that the vast majority of revenue is generated in the main transmission window; after the holdback period, there is little value for exploitation on further distribution platforms. In practice of course, each “revenue waterfall” will vary by the type of content, the category of right, the distribution platforms used and the geographic market.
Currently the primary window is the main revenue window. However, we believe this may change. In future, it may shrink to become more of an awareness-building window. Given this potential shift, the challenge of building a content franchise should not be underestimated, although neither should the implicit costs.

To date, audience cannibalisation has been primarily a fear rather than a quantifiable fact. That status will change as distribution platforms expand and new competitors bid for the same content more intensely than before. IPTV owners should recognise that the potential and future development of their platform will be heavily influenced by the decisions taken by content owners. Their responses to date have shown that they are concerned about the risk of cannibalising existing rights windows, and we see no reason why this concern should fade away in the short or medium term.

So with all this opportunity, is the pursuit of premium sports rights the answer to delivering value to the IPTV customer and/or the business? Sometimes the answer may be “yes” because of the resulting brand value and association, but in most cases we believe these rights are not the utopian solution that operators perceive them to be. These rights can cost a lot of money, and with more and more potential business models coming to the fore, not everyone needs to own a slice of the same pie. In our experience most operators are not adequately evaluating (as outlined previously) the fundamental value that this content can bring them, taking account of the impact of the exploitation of other content packages on their target package.

Subscriber acquisition and market growth are important goals for new entrants to the TV world, but even these can be based on well-balanced portfolios and rights acquisition. Our key messages are “big is not always better” and “look before you leap” into big content purchases.

Figure F: An Illustrative Breakdown of Revenues by Time Window

![Graph showing revenues by time window]

Source: PwC Analysis
IPTV offers a new, more compelling model for advertisers to reach and influence consumers. The key to exploiting this opportunity is for operators to seize the initiative and proactively provide the feedback mechanisms that will enable new commercial models to flourish. So don’t try to monetise community TV directly from the customer; instead, use it as a means of really engaging them with relevant content.

So is IPTV an advertiser’s dream? Whether hybrid or “pure” IPTV, both variants certainly allow operators to control where the adverts go to, target the large or small groups or even individual sets within a household, and obtain direct feedback on consumers’ responses over the broadband path. The adverts can also be fine-tuned to those people within a household who are most likely to be watching a particular set at a certain time. So, in short, the answer is: possibly, but a lot depends on the operators (for systems and customer information), content providers (for relevance), and advertisers (for making it compelling).

More generally, the effect of IPTV is to move advertising away from the traditional linear advertising model, which has brought with it a number of potential disadvantages: the challenges of measuring the impact and effectiveness of advertising; the restrictions placed on the advertisers from using a fixed schedule (apart from the benefits of large events such as sport which can generate reach very effectively); and wastage due to advertisers’ need to pay for a large audience even if they just want to reach a small target segment. IPTV offers several features and advantages for advertisers:

- Measurement of click-through rate and impressions by capturing the activity of the user interacting with adverts. IPTV facilitates real-time data capture, enabling measurement to be very effective, precise and instantaneous.
- Maximisation of campaign efficiency and brand positioning, including preventing irrelevance and over-exposure that may alienate consumers.
- Ability for users to freeze the programming to request further information and make interactive product sales, opening up opportunities for payment models geared to the amount of viewers watching, the number of red button presses, or percentage of sales.
- Ability to target adverts more accurately by time viewed, by programme, and by viewer profile (including any transactions made).
Since linear broadcasters have their own sales houses, it seems logical that IPTV providers may also sell advertising themselves. Telcos are arguably well-placed to take advantage of this opportunity, since they already collect vast quantities of customer data and use it to develop profiles of their subscribers. They can use these insights and their ability to identify where individual users are based and to offer highly targeted, localised promotions.

The key success factor will lie in the approach operators take to embracing the advertising world, specifically by ensuring they have mechanisms in place to enable advertisers to reach and impact the consumer communities they are targeting, on a risk-and-reward basis. Given the right feedback, advertisers and Chief Marketing Officers can directly measure the effectiveness of their campaigns in real time, and pay the operator accordingly. The commercial model opportunities that this presents for all concerned are wide-ranging and can lead the way into a multi-screen and interactive future for the consumer.

In the context of IPTV, the issue of advertising cannot be treated on a stand-alone basis, either by the operators or by the content providers, who have other commercial challenges of their own. Content producers now face the attractions of a growing network of distributors, but also the danger that this network will not want or be able to invest to the same degree as distributors did in the past. At the same time, more and more users in the ‘YouTube generation’ are generating their own content.

In PwC’s view, the most effective future for IPTV content and advertising lies in treating both of them in a single holistic way, as opposed to the traditional approach of a programme interspersed or sponsored with adverts. In general, IPTV services offer far greater scope to deliver on-demand and interactive content to consumers with adverts forming a key component of the content. However, there is also the opportunity to develop communities of interest where individuals can contribute to and consume information about their locality or special interest subjects. This could go above and beyond the existing (and fast-growing) supply of user-generated broadcast content. Both the on-demand options and communities of interest underpin a key revenue opportunity within IPTV models: access, and targeting of, niche audiences with tailored content is a capability which gives advertisers a glimmer of hope, certainty and identity in a fragmenting media market.

An opportunity for future TV platforms lies in exploiting the personalisation that community TV can provide. This ranges from enabling consumers to upload family photos for viewing by a relative on the other side of the country, through to the likes of channels such as Current TV and Bedroom TV, where user generated content meets mass-market broadcast TV consumption with advertising thrown into the mix at the same time. And these offerings are just the beginning, as big corporations make similar moves such as NewsCorp’s acquisition of MySpace and Sony’s Crackle.com.

At the moment, many operators are still seeking to understand how to monetise this community approach by tapping into the consumer’s wallet. However, we believe what providers are really facing is a virtually unprecedented opportunity to create “stickiness” among consumers by offering them a community-based platform, with a feedback path adequate enough to attract advertisers to fund the investment. It may not replace YouTube but it can provide a strong complement to it in the heart of household.

The IPTV platform presents the basis on which to build that advertising-driven community hub, both for the household as a whole and for the individuals within that household. The PC may well remain an integral part of the delivering/interactive platform. But giving the consumer powerful social networking tools through IPTV can only increase the opportunities for ZY Telecom or BlueCloudSat to grow market share and loyalty, Channel NNN and NewContentX to cross-sell and upsell content (in the broadest sense), and the consumer to get the best of all worlds.

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**Ben Verwaayen, CEO, British Telecom**

“If you say to the consumer you want your service to be an integral part of their life, then social networking becomes a part of [making the service] live.”

Source: PwC Communications Forum 2007

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**Lord Puttnam, Oscar-winning film producer and Chairman of Interactive Advertising Agency Profero**

“One of the most significant and I think under-discussed opportunities presented by digital technology is the ability to deliver truly local audio visual media: Television, be it on your set in the living room, on your computer or even on your mobile PDA, which meets the needs of each citizen wherever they live around the world.”

Source: PwC Communications Forum 2007
The IPTV Quick 15 Point Checklist

Customers

1. Do I know who they are, what they watch, and what they want to do in the future?

2. Have I established the systems and data mining that means either I or my partners can truly provide a personalised offering, or am I simply adding more channels in an attempt to reach my customers?

3. Do I have the right organisation structure, people, and culture in place to have a customer-and-marketing-centric approach?

4. How am I going to leverage the community TV effect?

Content

5. Am I sure I understand the ROI of all of my content portfolio (whether a subscriber driver or not) across all forms of exploitation?

6. If I am pursuing exclusive and/or premium content, do I understand the value of live vs delayed rights, and have I accounted for the halo effect?

7. Am I consistently buying rights across all three screens?

8. How do I fully leverage my long tail of content (no matter how “short” the tail may be now) and to cross-sell and upsell other services?

Products and Marketing

9. Will my current brand and positioning fit with IPTV, and if not, how do I ensure it at least leverages synergies with my current brand?

10. Have I accurately understood the pricing and profitability of each component of my IPTV product, from broadcast, to on-demand, to interactive and transaction services?

11. If I am taking a bundling approach, have I ensured that I have an ex-ante regulatory defence and that my portfolio will pass scrutiny from regulators and competition commission investigations?

Partners

12. Am I establishing true partnerships across content provision, advertising and delivery or am I tending to adopt a supplier-purchaser relationship? If the latter, will this give me the flexibility and responsiveness I need to differentiate and compete?

13. Do I understand my relationships with my technical partners, and any outsource providers, commercially, technically and financially, and the multiple impacts these have now (and in the future) on my business?

Technology

14. Am I optimising my investment in networks, and if I’m following a hybrid route, have I effectively ensured that I have optimised solutions across all aspects of IPTV delivery (from headend to customer premises equipment)?

15. Have I allowed myself sufficient flexibility to migrate/replace key technology solutions (set top boxes, middleware, online transaction platforms etc) in the future given the rate of change and differentiation I may need?
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>DTH</td>
<td>Direct To Home</td>
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<tr>
<td>DTT</td>
<td>Digital Terrestrial Television</td>
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<tr>
<td>FTTH/FTTP</td>
<td>Fibre To The Home/Premises</td>
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<tr>
<td>FTTN/FTTK</td>
<td>Fibre To The Node/Kerb</td>
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<tr>
<td>HD</td>
<td>High Definition</td>
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<tr>
<td>IPTV</td>
<td>Internet Protocol Television</td>
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<tr>
<td>MVNO</td>
<td>Mobile Virtual Network Operator</td>
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<tr>
<td>NGN</td>
<td>Next Generation Networks</td>
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<tr>
<td>Non-PSB</td>
<td>Non-public service broadcasting linear channels (funded by advertising and subscriptions)</td>
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<tr>
<td>(Ads + Subs)</td>
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<tr>
<td>P(D)V R</td>
<td>Personal (Digital) Video Recorder</td>
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<td>PPV</td>
<td>Pay Per View</td>
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<td>PSB</td>
<td>Public Service Broadcaster</td>
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<td>ROI</td>
<td>Return On Investment</td>
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<td>VoD Subs</td>
<td>Video on Demand subscriptions</td>
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The PricewaterhouseCoopers team has extensive experience advising and assisting these clients with:

- Strategy and business planning
- Valuations
- Transaction and investment decisions
- Market analysis
- Contract negotiations
- Partnership and outsourcing strategies/implementation
- Project management and operational improvement

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Research by Robert Sullivan, PricewaterhouseCoopers LLP, UK

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