iTunes for TV? IPTV in the UK

— a viable fourth Digital TV platform?

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While France and Italy, in particular, are forging ahead with Broadband TV services, it has been a different story in the UK – arguably the most mature Digital TV market in Europe. So why has the UK fallen behind some of its neighbours in the provision of Broadband TV services? And what does the future hold for a fourth Digital TV platform in the UK? This article sets out to provide some answers.

As the first country to surpass 50% take-up of Digital TV, the UK is arguably Europe's most advanced Digital TV market. It even played host to some of the earliest technical trials and commercial deployment of IPTV services.

However, following this promising start, it would appear that IPTV growth in the UK has been stunted, due in part to some of the unique characteristics of its Digital TV landscape. Over the past two years, France and Italy have to a large extent taken the mantle of the leading proponents of Broadband TV deployment and innovation in Europe.

In parallel with this, the past two years in particular have seen unprecedented growth in the adoption by UK consumers of ADSL broadband ISP offerings. The next phase of this development will see elements of the long-predicted convergence of Broadcast and Broadband move centre-stage and it is here that a renaissance of IPTV interest is likely to be increasingly in evidence.

In the longer term, fundamental changes to customers' expectations for TV delivery – fuelled by advanced broadband networks based on BT's ***21st Century Network***, and ***analogue switchoff*** – will bring about a second phase in which IPTV moves from a significant niche to a mainstream proposition.

This article – based on a presentation given at the EBU Broadband Workshop "Broadband Television Futures" in May – looks at some of the structural characteristics of the UK Digital TV and Broadband marketplaces and assesses the prospects and likely short- to medium-term development of IPTV in the UK. What will the UK's "TV for the broadband generation" look like and will IPTV play a central or a peripheral role?

Digital TV in the UK

57% of UK households now have access to some form of Digital TV via Digital Satellite (DSAT), Digital Terrestrial (DTT) or Digital Cable (DCAB) technologies.

To date, the dominant national player in the pay-TV space has been BSkyB with 7.7 million homes, 10% of which now take the Sky+ DSAT/PVR service. Lately however, most of the growth in Digital

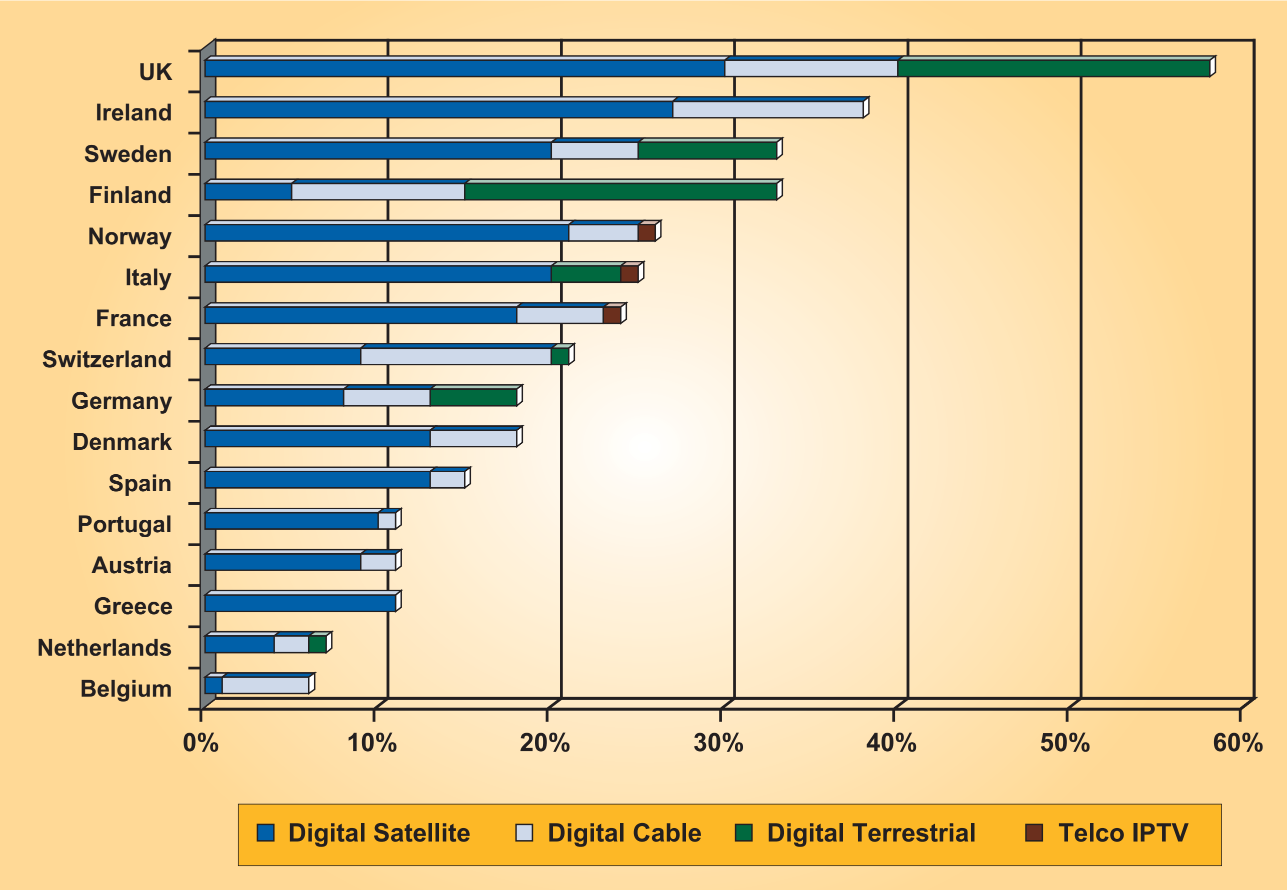

Figure 1
Digital TV in Europe (Strategy Analytics)

TV penetration is being driven by free-to-air DTT services, whose uptake during 2004 - 5 has been outpacing that of DSAT by over 500%. This in turn has been driven by the advent of subscription-free DTT "Freeview" set-top boxes (STBs) costing as low as £40.

As a result it is widely expected that the total number of DTT homes will surpass those receiving DSAT during 2006. Cable TV has also shown growth (though somewhat less spectacular) over the period, driven in part by the introduction of ***Triple-Play*** (telephone, broadband & TV) packages.

The move towards Digital TV has begun to be consolidated in the political sphere also, with the announcement of a timetable for a region-by-region analogue switchoff beginning in 2008 and expected to be completed by 2012.

Crossover and choice

A number of as-yet small-scale crossover services have been introduced in the past 18 months, notably the introduction of ***TopUpTV*** – which has added a "pay layer" to the Freeview DTT service, now with over 200,000 subscribers – and ***Freesat***, a suite of FTA satellite channels from BSkyB.

Similarly, the emergence of DTT/PVR set-top boxes by Thomson, Humax, Pace, Sony and Fusion – and the advent of Windows Media Center PCs – is likely to add further to the number of choices open to the UK TV consumer.

Enter IPTV

Despite early high-profile commercial launches by Kingston Communications with its "KIT" service, and Video Networks Limited with its "Homechoice" service in 2000, TV delivery over ADSL broadband networks in the UK has had a difficult birth. To date, less than 25,000 homes subscribe to commercial IPTV services in two geographically constrained areas of the UK.

Historically, this lack of impact to date can be ascribed to a number of factors, notably:

- the pace, process and cost profiles of Local Loop Unbundling (LLU) and Wholesale Line Rental (WLR) as offered by the dominant incumbent telco provider (BT);
- the relatively high technology setup cost for secure and scalable telco IPTV deployments, and a lack of standards and turnkey solutions;
- a downturn during 2000 - 2003 in capital markets relating to the telco sector;
- high marketing and customer acquisition costs in an extremely competitive and already crowded marketplace;
- evidence of pay-TV saturation;
- the difficulty for operators in obtaining rights to premium movie and sports content for delivery as multicast and video-on-demand (VoD) over IPTV services.

Taken together, these factors created a less than compelling business case for service deployment, rollout and sustainability between 2001 and 2004.

2005 and beyond

Despite this disappointing initial period, a number of significant developments have become evident in both broadband and Digital TV markets in the UK which show promise for the future development of IPTV and, in particular, hybrid-IPTV services in the coming months.

"iTunes for TV" and new content models

Starting in January 2005, the UK's major cable providers (Telewest and NTL) have both begun to roll out cable VoD offerings. As a result it is expected that cable VoD will be available to around one million subscribers by the end of 2005.

On the one hand this will provide a significant differentiator for the cable provider's proposition and is expected to help reduce churn and increase ARPU when coupled with the introduction of cable PVR and HDTV services during 2006.

A by-product of this however is that the arrival of a mass-market VoD platform will help ease the hitherto difficult rights acquisition process for premium sports and movie content for IPTV-based services.

It is thought likely that a new breed of "entertainment content aggregators" will emerge, many of whom will be platform-agnostic and geared towards retail-style branded entertainment packages – comprising elements of VoD, broadcast and broadband content. These packages, which will have both subscription and pay-per-view components, will become a sort of "iTunes for TV" in an on-

Abbreviations

21CN	BT's 21st Century Network	**IPTV**	Television via Internet Protocol
ADSL	Asynchronous Digital Subscriber Line	**ISP**	Internet Service Provider
ARPU	Average Return Per User / Unit	**LLU**	Local Loop Unbundling
DCAB	Digital Cable	**PVR**	Personal Video Recorder
DSAT	Digital Satellite	**STB**	Set-Top Box
DSL	Digital Subscriber Line	**VoD**	Video-on-Demand
DTT	Digital Terrestrial Television	**VoIP**	Voice-over-IP
FTA	Free-To-Air	**WLR**	Wholesale Line Rental

demand world. The services will be packaged in such a way as to be deliverable over a variety of ISP's and IP-based cable networks.

One example of these types of organizations is *Blockbuster Entertainment*, whose 2004 "Blockbuster on Demand" trial on Kingston Communications KIT service in the north of England delivered TV, Music, Factual, Children's, Movies and Sports content in a branded environment. Further examples include *Homechoice* which operates a similar service in the South East of England, and *The OnDemand Group* which offers cable VoD services on the NTL and Telewest networks. All of these organisations have secured rights to several thousand hours of VoD content which are packaged in attractive retail-style navigation interfaces.

Moreover, whereas "pure play" IPTV [1] is not technically or economically feasible on current generation ADSL networks, new models of delivery will be supported including:

- drip-feed of content to a PVR using IP networks;
- hybrid services with DTT/DSAT providing the mainstream broadcast channels, supported by an IP backchannel for VoD and enhanced interactive services and content.

It remains to be seen what role the dominant UK broadcast players of the past five years (BBC, BSkyB, ITV) will hold in such a scenario. New suppliers from disparate environments (ISPs, Video Rental Chains, Broadband Portals) are likely to converge upon this space but it is very difficult to imagine the incumbent players not continuing to play a significant role in delivering "TV to the Broadband Generation".

If one looks at recent statements and activity from key players, it is clear that the delivery potential of these new paradigms is not being overlooked:

- **BSkyB:** *"... evaluating whether it would be appropriate to integrate Broadband/DSL into our next generation STBs"* (Alun Webber)*;*
- **BT Entertainment:** *"... by the end of this year we will be worrying not about bandwidth but about content propositions."* (Andrew Burke, MediaGuardian, Feb 05);
- **BBC:** *"... scheduled broadcasting is dying. The idea of the seven 'til nine peak schedule time is no longer relevant – technologies such as TiVo are now driving the market and we must provide content for users to watch whenever they want. The Internet will enable that"* (Keith Little, Head of IT).

And, from a regulatory context:

- **OFCOM:** *"We need to recognize that conventional linear broadcasting is not the future. It will be completely broken by 2010. We need a new model."* (David Harrison, Head of Broadcasting & New Media).

Broadband Triple-Play and hybrid services – a future model?

In parallel with the rapid development of Digital TV in the UK, the past 18 months have seen a dramatic expansion in the uptake of consumer Broadband services for PC users. Driven initially by cable, and subsequently by ADSL rollout, the total number of broadband households is now over 8 million, or 31% of UK total households.

Aggressive price-based competition has seen broadband access move rapidly from an early adopter niche market to a mass-market phenomenon. As this market becomes commoditised, ISPs are increasingly looking at ways in which they can differentiate their propositions.

Initially, this differentiation is likely to be through such things as download limits, bandwidth availability and free connection/service offers. In the medium term though, it is likely that ISPs will seek to

1. Services in which all of the broadcast elements are delivered via the ADSL / IP network.

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use TV content as a differentiator and seek to offer IPTV services, and especially VoD as a means of unlocking new revenues and reducing churn.

Furthermore, as Carrier Preselect, Wholesale Line Rental and ultimately VoIP telephony move into the mainstream, it is likely that so-called Triple-Play bundles will become the norm.

Evidence of these likely developments is already beginning to emerge:

- BT has announced consumer trials of "Project Nevis" which will use hybrid DTT/ADSL to deliver a VoD-enhanced version of the Freeview offering, tied to a BT broadband connection.
- Major UK ISPs including Wanadoo, Tiscali, Bulldog and UK Online are expected to trial and launch IPTV-based services during 2005 - 6.

Prospects for IPTV in the UK

Whilst the short-to-medium term prospects for "standalone / pure-play" IPTV remain poor, it is likely that IPTV will play an important part in the development of a new breed of hybrid Triple-Play services. This will be driven by ISPs and telcos who see TV as a potential extra application for the local networks they intend to build and unbundle.

Existing telco ISP-class services in the UK do not yet provide either the bandwidth or Quality of Service guarantees to deliver pure-play IPTV on a national scale. However the moves by BT in developing its 21CN (21^{st} Century Network) will bring this within the medium-to-longer term envelope (2010 onwards).

In the shorter term, the key question is: *"Will there be significant consumer demand for this new breed of services and will they be differentiated sufficiently from the UK's other well-developed Digital TV offerings?"*

On the face of it the answer would seem to be a tentative yes : the UK is already the No. 1 country in the world when it comes to downloading TV content from the internet. UK residents account for 20% of all TV shows downloaded worldwide from the Web and strong evidence exists that broadband users are switching away from conventional linear TV in increasing numbers. (Research by Parks Associates indicates that homes with PCs and broadband connections are much less inclined to rank TV as important in their daily lives compared to households without PCs or an Internet connection.)

Compression technologies are maturing rapidly and the first commercial STBs supporting H.264/ MPEG-4 are starting to appear on the market. This will allow the VoD component of hybrid services to be delivered reliably and cost effectively at bandwidths below 2 Mbit/s.

So IPTV may well emerge as an important contributor to a model of "TV for the broadband generation". A March 2005 study by Insight Express showed that 81% of broadband subscribers were "interested" or "very interested" in receiving internet, TV and telephony services from a single supplier.

It should not be forgotten that TV-over-DSL presents BSkyB (the dominant UK pay-TV player) with the chance to recruit homes unable to get dish antenna reception. Additionally, it is quite possible that BSkyB will choose to adopt a hybrid approach as a means to deliver further enhanced services, in much the same way as Sky+ uses a PVR to enhance the viewer experience.

UK cable operators NTL and Telewest are actively looking at LLU as a means to recruit homes outside their existing network, offering Triple-Play services. It will then be relatively straightforward for them to migrate the content propositions already enjoyed by their cable subscribers to the high-capacity next-generation ADSL and ADSL2/2+ networks.

Conclusions

The further development of IPTV in the UK is likely to comprise two stages, predicated by two significant events – the ***analogue switchoff*** (2008-12) and the deployment of BT's ***21st Century Network*** (2009-12):

Prior to analogue switchoff / 21CN, development is likely to be characterised by a number of hybrid Triple-Play services brought to market by telcos (including BT), pay-TV incumbents and ISPs. The impact of these will create a fourth platform for TV delivery, though of limited overall scale (<2m or 10% of homes).

After analogue switchoff / 21CN, the economics and sustainability of IPTV will be assured by the widespread adoption of advanced Digital and on-demand TV services by mainstream consumers.