

# IPTV in Asia-Pacific: Opportunities for Telecom & Satellite Companies

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A little more than a year ago, few people would have thought that delivering television programming to homes via the internet could effectively compete with entrenched pay-television offerings, such as cable and satellite direct-to-home (DTH) services.

Today, internet protocol television (IPTV) is increasingly a central element in the business plans of leading telecommunication and technology companies around the world. In the United States and in Asia-Pacific, numerous factors are increasing the prospects of widespread IPTV adoption. Companies like AT&T (formerly SBC) and Verizon are now rolling out fibre-optic cables to millions of US homes, seeking to sell a “triple play” of telephony, broadband and television services to customers. In Asia, a leading Hong Kong carrier has built a base of over 500,000 subscribers for its IPTV service, while in Europe numerous phone companies have IPTV service rollouts or trials underway.

Basic forms of IPTV with limited channels and functionality have been sold by smaller telecom companies (telcos) for several years, but now major carriers are pursuing the provision of IPTV services with full-featured offers that can compete with leading pay-TV companies.

## WHAT'S DRIVING IPTV?

Leading telecom companies have traditionally had almost no presence in television, particularly in the US, but in the past couple of years, they decided to try again to break into the TV market to help retain their subscribers. Despite the risks and huge capital outlays, they could no longer stand by as mobile phone carriers captured their landline customers and cable companies sold packages of television programming, broadband access and voice over internet protocol (VoIP) services to millions of homes.

After searching for a strong response, leading telcos decided on IPTV, which was first sold internally as a defensive strategy to slow further subscriber losses. Now telecom executives view IPTV as a highly competitive alternative to cable and satellite DTH – services that today have 100 million subscribers in the US alone and generate some US\$70 billion in annual revenues<sup>1</sup>.

In Asia-Pacific, IPTV's impact will vary by market. In countries where DTH is limited

because of regulatory constraints, IPTV may play a major role in delivering content to consumers.

Executives at leading technology companies such as Microsoft, Cisco, Alcatel and Siemens are strong backers of IPTV and see tremendous opportunities for their own growth as telcos in the US, Asia and Europe invest in IPTV services. These executives also know that in most developed countries, especially the US, pay-TV markets are highly mature.<sup>2</sup>

To reach their subscriber targets, telcos will have to convince a portion of existing satellite DTH and cable customers to try something new. It will not be easy, but the telcos have big plans.

## POTENTIAL IPTV ADVANTAGES

Backers of IPTV believe its single greatest point of differentiation will be improved viewer choice in terms of both content and on-demand scheduling. An IPTV subscriber will be able to access a far greater range of programming and films than those offered by existing pay-TV providers. This is because of a fundamental difference in how leading telcos plan to distribute their IPTV content.

Satellite and cable companies make their programming constantly available to subscribers. As a viewer selects a new channel, the content is always on the network, consuming system resources or bandwidth. The IPTV offerings envisioned by AT&T and other large telcos will have programming content residing on massive servers and, as a viewer selects a channel, it will be made instantly available over a broadband connection to the home. The viewer will not notice any delay when surfing channels, although each channel selected will be a new data stream delivered to the viewer.

With this approach, IPTV will be able to offer much greater viewer choice – providing access to virtually all content on the system at any time, including any live sports event being televised, not just the ones shown locally. There will also be thousands of films and other programming available on-demand. The goal is for viewers to be able to see their TV shows at their own convenience, stop the played content and replay scenes, or sports highlights, as often as they like, and record whatever they want. It is effectively a whole new way to experience television.

If IPTV were to offer the benefit of vastly improved viewer choice at a comparable price and quality to existing pay-TV services, that alone would be a significant advantage.

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Yet the promise of IPTV is even greater. IPTV also envisions a far higher level of interactive viewing. A subscriber will be able to instantly order the jersey of a favourite athlete, or the outfit or jewellery being worn by a TV star. Viewers will also be able to offer instant comments to news stories and financial reports, and access email or the internet as easily as they can from a PC. A whole host of other possibilities are now being prioritized, such as subscription music, broadband voice and enhanced calling, along with gaming on demand and video calling/conferencing over television.

A further IPTV advantage involves improved measurement of programme viewership. Major advertising agencies have long challenged the accuracy of TV programme ratings, and rating companies like ACNielsen have been working to improve their methods. The higher level of interactivity promised by IPTV could lead to greater accuracy in viewership ratings and potentially impact the entire world of television and advertising. Similar capabilities for viewership auditing could impact programming rights fees (payment for content based on actual viewers versus total system subscribers).

All these exciting possibilities could become a reality in a short period, but IPTV service providers – particularly those seeking major IPTV deployments in the US – also face significant challenges that they will need to overcome.

## MARKET CHALLENGES

Globally, one of the primary hurdles to implementing IPTV is obtaining sufficient content to meet the promise of the technology. AT&T and other telcos were in negotiations with leading content owners like Disney, NBC, Viacom and HBO for most of 2005. According to industry analysts, big telcos will likely have to pay a 15% premium per subscriber for content compared to the amount paid by established pay-TV operators. This added cost will have to be absorbed, but it at least allows the telcos to enter the market.

Another key challenge is making all the technology work on a scale which supports millions of subscribers. Smaller telcos in US rural regions started offering a basic form of IPTV a few years ago, but this is very different from the ambitious plans of AT&T, PCCW, Chunghwa and Verizon to serve millions of subscribers in competition with satellite DTH and cable television.

AT&T is spending US\$4 billion to roll out its IPTV offering, including a US\$400 million contract to Microsoft for an IPTV software platform that will be at the heart of AT&T's entire video network. Another key vendor is Alcatel which, in the fall of 2004, won a US\$1.7

billion AT&T order for network equipment and video system integration. However, there were reports in 2005 that Microsoft was having trouble delivering on AT&T's timetable. This was supported when another carrier with IPTV ambitions, Swisscom of Switzerland, announced in mid-2005 a delay to its IPTV project because of technology problems. Swisscom is using the same vendors as AT&T, Microsoft and Alcatel.

## Implementing IPTV in Asia-Pacific and North America

### Asia-Pacific

- *Hong Kong* – PCCW has over 500,000 subscribers to its Now Broadband TV service, the largest internet protocol television (IPTV) implementation in the world. Working with Tandberg to roll out high-definition television (HDTV) in MPEG-4 coding, which could be considered the world's first HDTV IPTV rollout.
- *Japan* – Four carriers are offering IPTV services on a small scale. Programming is limited due to copyright and other restrictions.
- *Malaysia* – MiTV Corp has announced a full commercial rollout of a multi-channel IPTV service, including more than 50 live and on-demand channels. TMNet is in proof-of-concept for launching its own IPTV service, following a successful trial in 2004.
- *South Korea* – Korea Telecom began an IPTV trial in Seoul in 2005. Hanaro Telecom has plans to launch IPTV services in 2005/06, subject to regulatory approval.
- *Taiwan* – Phase two of Chunghwa Telecom's multimedia-on-demand service is said to be the biggest commercial IPTV deployment for broadcast TV and video-on-demand in Asia-Pacific to date and is expected to have signed 300,000 new subscribers in 2005.

### North America

- *United States* – In the most ambitious IPTV project worldwide to date, AT&T (SBC) has invested US\$4 billion to provide its U-Verse service over a 13-state region that covers 13 million homes by 2008. BellSouth is working with Microsoft on IPTV trials; BellSouth already serves over one million homes with a fibre-optic network, but is more cautious on IPTV than most. Verizon launched its Fios TV in Keller, Texas early in 2005; the service offering was expanded to other cities in 2005 and Verizon has plans for it to spread further in 2006. Verizon is using Microsoft middleware to develop its programme guide.
- *Canada* – Bell Canada is working with Microsoft on an IPTV service offering.

*Source: The Wall Street Journal, Loral Skynet*

Given the high stakes and the strengths of the companies involved, it appears likely that the technical challenges of large-scale IPTV implementations will be overcome. Planned commercial launches may slip further or the initial service functionality may be compromised, but an IPTV rollout of some scale can be expected in the US in the first half of 2006. However, analysts believe it is unlikely that IPTV services that are truly competitive with cable and satellite DTH will be offered before 2007 or 2008.

A challenge that may be specific to the US market is for IPTV providers to reach agreements on franchising fees with thousands of municipalities where they want to sell their services. Cable companies pay about 5% of their revenues as a fee to local governments. Dealing with the many individual municipalities could take years. The good news for IPTV providers is that most local governments support competition with cable television and they certainly support new sources of tax revenue, so if IPTV providers can demonstrate these capabilities in a few markets, it should make the process easier in a given state, or multiple states that are being targeted.

A final challenge is that existing pay-TV competitors are not standing by idly as IPTV enters the market. They are rolling out high-definition television (HDTV), along with greater content choice and enhanced services. Leading cable and satellite DTH companies are very aware of IPTV and the plans of its backers. They are actively working to improve the quality of their own offerings and make it even harder for new entrants to lure their customers away.

## ROLE OF SATELLITE COMMUNICATIONS

Satellite industry executives often say that more than 90% of global network television is distributed by their assets, and they note that this is the result of satellite's superior performance, not some regulatory requirement. Satellite's role in video distribution continues to expand, and most industry observers expect there will be growing use of satellite for both wholesale and end-user DTH television distribution in the years ahead.

Given that satellite remains the most cost effective and efficient means for video distribution worldwide to date, what are the opportunities for satellite companies in IPTV delivery? This is a question that leading fixed satellite service (FSS) operators around the world are now evaluating.

According to Northern Sky Research's *IPTV via Satellite* report, published in September 2005, "satellite technology's ability to provide cost-effective broadcast services...

would seem a perfect fit to deliver TV programming to IPTV providers. Satellites...can act as 'headends-in-the-sky' and become an infrastructure core component in enabling IPTV services. However, despite an apparent opportunity for satellites to enable IPTV on a global

## Opportunities and Challenges for IPTV

- About 20 leading telecom companies operating in the US, in Asia-Pacific and in Europe have begun internet protocol television (IPTV) service implementations in their home markets. Their goal is to compete effectively with entrenched pay-TV offerings (cable and satellite direct-to-home services).
- IPTV has huge industry backing. Most leading suppliers in global telecommunications – including Alcatel, Microsoft, Cisco, Nortel and Siemens – are actively involved in supporting IPTV rollouts.
- IPTV's main point of differentiation is improved viewer choice in terms of both content and on-demand scheduling. An IPTV subscriber will be able to access a far greater range of programming than that offered by existing pay-TV providers. Another key advantage is IPTV's much higher level of viewer interaction with the programming.
- The most ambitious IPTV project globally is that of AT&T (formerly SBC) in the US. It has invested US\$4 billion, is working with Microsoft and Alcatel, and is seeking to attract 13 million subscribers to its service by 2008. AT&T will face a number of challenges in building its subscriber base, including obtaining access to content, local licensing, and making the technology work on a massive scale so that it is competitive in features and price to existing cable and satellite DTH offerings. AT&T's initial commercial rollout is planned for 2006.
- Fixed satellite services (FSS) are the dominant means of video content distribution in the world. However, IPTV may not provide a significant boost for the global FSS industry given that its introduction is being led by major telcos seeking to use their own infrastructure.
- There are still attractive IPTV opportunities for FSS providers in certain markets that mostly involve selling end-to-end IPTV solutions to selected telcos. The FSS provider could either be the lead integrator in a full IPTV offer or provide space segment to an integrator and others as part of an IPTV solution.
- IPTV has the potential to change the way the world experiences television. It will certainly increase competition in most major markets in the next few years and will likely lead to greater functionality and improved prices for all pay-TV viewers, regardless of which system they are using.

scale, true demand... for satellite-delivered IPTV is not entirely clear at this early stage.”

Questions remain about demand for satellite services among telco companies that would naturally be seeking to first utilize their fibre and copper infrastructure. There are even questions about whether IPTV will become a mainstream pay-TV application, according to the report.

In considering the widespread efforts to develop and implement IPTV around the world, satellites almost certainly will play a role in distributing a portion of the programming content from its origination point. Distribution to the end customers, however, will probably be done over the telco's infrastructure, similar to the current cable TV model.

So where are the new business opportunities for FSS companies that want to further the ambitious growth plans of IPTV operators? It appears that satellite service opportunities are mostly to be found in enabling smaller telcos to introduce their own IPTV offerings in markets unserved by major carriers.

In the US, selling an IPTV package to rural telcos for distribution to end-customers can potentially be an attractive business. Similar opportunities could also exist in Asia and in parts of Europe. The FSS provider could either be the lead integrator in a full IPTV offer or provide space segment to an integrator as part of a full IPTV solution.

For smaller telcos in the US and potentially other markets which are considering the build-vs-buy decision for IPTV implementation, the savings of buying through an integrator could be significant. For example, instead of building a video head-end with multiple antennas that could cost millions of dollars, a telco would only need a satellite dish from an IPTV integrator that has video content, along with a rack of equipment that in total would cost several hundred thousand dollars. The rack would be connected to the telco's subscriber network, through which the telco could authorize subscriber access to its IPTV services. Local channels could be inserted and enhanced features such as video-on-demand and personal video recording could be made available. This approach could greatly accelerate the telco's time to market compared to building the full offering. Quick access to the integrator's programming rights is another key advantage for smaller telcos.

As for the question of whether IPTV will raise overall global demand for satellite transponder capacity at the wholesale level, or draw on programming content that already exists on satellites around the world, it appears that IPTV will not be a major new source of FSS demand in the near term. Most of the programming content is already available on satellites. IPTV will simply be another means of distribution for that content, at least initially.

Given this scenario, Northern Sky predicts that IPTV will result in new demand of about 40 FSS transponders globally by 2010. This is the equivalent of about one FSS satellite and little more than 1% of the total transponders expected to be used for video services at that time. Of course, much can change in a matter of months when dealing with IPTV. The service has made great strides over the past year and has huge potential. Will this potential be realized and what will be the impact on telcos, satellite service companies, and TV viewers around the world?

Industry leaders are now evaluating these very questions and developing plans to capitalize on the exciting promises and opportunities of IPTV. ■

## Endnotes

- 1 At the end of 2005, US cable companies had 73 million subscribers. Satellite DTH operators had about 27 million subscribers, consisting of DirecTV (over 15 million) and the DISH Network (EchoStar) with about 12 million. Average monthly revenue per subscriber (ARPU) exceeded US\$55.
- 2 The US, for example, has about 110 million 'television households', with 100 million pay-TV subscribers. The actual pay-TV penetration in the US is less than 90% because a number of homes subscribe to both satellite and cable services, but is probably well above 80%.