

# Chapter 1

## Executive summary

By 2012, 909 million homes will have the potential to access VOD or NVOD services. These services will generate revenues of US\$10.1 billion. This compares with 635 million homes and US\$4.8 billion in revenues for 2007.

The increasing number, and type, of platforms offering VOD brings with it a range of challenges to content providers. Cable continues to dominate in terms of content delivered but the vast majority of this has, until recently at least, been without charge, with revenues dominated by advertising.

But while true VOD still values a 'free-content' model to promote high customer awareness of the service, there are now signs that these services are successfully converting users into revenue-generators. This is often at the expense of near-VOD (NVOD) services, which are either being phased out, or reduced in size. Informa's forecasts reflect this changing situation and assume true VOD revenues will surpass NVOD revenues in 2012.

In the US, Comcast led the way in giving away much of its VOD content for free, while HBO On-Demand, for example, uses a different model, which employs VOD services as an add-on to its TV or movie subscription packages. This helps to retain customers and margins by keeping customers satisfied with their overall packages. In the UK, Virgin Media effectively gives away its subscription VOD service to everyone who buys the biggest TV bundle, but charges its other subscribers.

In recent years the number of operators offering content on-demand has increased significantly. Many have shifted from test phases to full launches while others have firmed up launch plans. In addition to this, service numbers are being further augmented by an increasing number of platforms entering VOD. IPTV has seen rapid subscriber growth in some territories, while mobile operators have published high usage figures for their nascent TV offerings. Most of the platforms differ due to technical limitations. Each has both advantages and disadvantages. The delivery methods for on-demand services include:

- Cable
- DSL/IPTV
- Fibre – FTTH/FTTC
- Satellite/DTH
- Digital Terrestrial TV
- Wireless Local Loop
- 3G/Mobile
- Internet

Cable operators in all parts of the world are heavily engaged in migrating subscribers away from analogue services to digital. Shifting subscribers to digital opens the way for a host of new service offerings, one of which is VOD.

The offer of new, more personalised, services is increasingly important for cable operators as the overall level of subscription growth slows. In some heavily cabled territories such as The Netherlands and Belgium, subscriber growth has stagnated. In addition, the launch of competing services, most notably IPTV, has injected a greater sense of urgency into the shift to digital and the revenue advantages its added-value services can bring.

As consumers look for more flexible ways to watch TV, operators are considering network digital video recording (NDVR) as a future on-demand service. NDVR is being developed on the back of the popularity in DVR recorders. NDVR offers the same benefits as traditional DVR (digitally recording programmes and providing trick-play functionality) but it reduces the costs for operators involved in sourcing and installing DVR boxes, as the content is stored on operators' servers. It can also allow operators to update the DVR network relatively easily, taking advantage of new technology without needing to upgrade consumer premises equipment. NDVR can store more content for consumers too.

Before the market sees the introduction of a full NDVR service, operators will need to overcome rights issues with content owners. Current rights deals are generally for regular broadcasting and do not cover time-shifting. For the time being, operators are more likely to offer a service that allows subscribers to restart a programme while it is being broadcast, which is a little easier to introduce from a rights perspective, rather than a full time-shifted offering.

The potential control that operators and content owners can have over content stored on NDVR, as opposed to DVRs, for example, means that there are various ways of preventing consumers from skipping ads. Time Warner Cable offers its customers a free recording service called Look Back that allows customers to watch programmes after they have initially been broadcast. Crucially, though, users will not be able to fast-forward through the ads.

Although there have been some successes with monetisation, within the cable sector the VOD business model most commonly employed is based around free content and the subsequent migration of users to transactional or subscription based offerings. Although most operators using this strategy report a greater understanding of VOD amongst their subscribers, there remains a significant client base which does not use the service.

For the larger cable operators, greater economies of scale mean they are able to support a business model that offers little in the way of immediate financial returns. However, this places smaller operators in a more difficult position. An ability to offer on-demand services is crucial to remain competitive, particularly as many telcos are also ploughing money into competitor video services.

Where initial on-demand experience has been lacklustre, operators are looking at new ways to improve the performance of on-demand services. In Europe some new pricing mechanisms are being tried as operators move away from transactional on-demand purchasing to put more focus on subscription-based offerings.

There have also been some concerns that the massive content choice offered by true VOD makes it difficult for the public to 'find what they want'. To counteract this there is a growing trend towards the 'linearisation' of on-demand content, with programmes from specific studios or broadcasters housed in dedicated 'channels' within VOD services. e.g. Italian service Fastweb has introduced branded subscription video-on-demand (SVOD) channels such as ESPN and Cartoon Network on demand.

A significant bonus for operators is the warming to VOD by the Hollywood studios. While there have been experiments with shortened windows in the US and parts of Europe already, the studios are tentatively preparing to roll out more extensive 'day and date' VOD trials during 2008 to test the effect of merging their DVD and VOD release windows. The trials will involve the UK for the first time, although films will be selected on a title-by-title basis, with the most successful box-office blockbusters likely to be excluded.

This represents the latest step by the major studios towards shrinking the gap between DVD and VOD release dates, which varies from market to market, but stands at 60 days for most films released in the UK. It was originally six months, so has already shifted considerably.

Although most Hollywood studios are re-evaluating their approach to release windows, Warner Bros is the acknowledged leader on the day and date front. In 2007 it became the first US film studio to conduct day and date tests in Europe, when it initiated trials in Belgium and the Netherlands with IPTV operators KPN Interactive-TV and Belgacom TV, cable companies UPC Netherlands and Telenet and in Sweden with IPTV provider Telia. It previously participated in two US trials run by cable operators Comcast and sister company Time Warner Cable.

The key question that the studios are looking to answer through the trials is what effect earlier VOD release windows has on VOD usage and DVD sales. Following the first six months of its day and date trial with Comcast, Warner Bros. reported that there had been a 50% increase in VOD buy-rates and a 10% rise in DVD sales. At the same time, DVD rental figures fell marginally.

In addition to windows, operators are also putting pressure on the studios to offer greater flexibility in their content supply terms for on-demand distribution. Operators complain that the pricing structure of a flat fee plus a minimum guarantee means that some 25% of movies have a negative margin. If this continues, operators will reduce the size of the library, potentially damaging VOD's USP.

For telcos, in most cases their on-demand services over DSL (IP-VOD) form part of a wider full-service Internet Protocol Television (IPTV) offering. Such services operate using a digital settop box and in many cases will be a household's primary TV source. IPTV should not therefore be confused with Internet TV, which is accessed via the open internet often to a PC. The end-user device for IPTV is overwhelmingly the TV set.

Extra capacity fostered more diversity in cable programming. By mid-2007 there were more than 7,000 cable systems serving some 65 million households in more than 30,000 communities. Digital cable subscribers numbered 35.2 million in June 2007 according to the NCTA.

However, US cable's share of total pay TV subscriptions has fallen. In 2000, some 80% of pay TV subscribers were cable clients. This share had fallen to below 60% by June 2007. Strong competition comes from satellite, but telcos are also investing heavily to attract video subscribers.

All of the leading cable operators continue to push their digital offerings and have seen penetration increase. Cablevision has maintained its impressive conversion rate, ending June 2007 with 81.2% of total subscribers taking a digital package compared with 78.3% at the beginning of the year.

**Leading MSOs by TV subscribers (000)**

MSO	End-2006			End-1H07		
	Total	Digital	% digital	Total	Digital	% digital
Comcast	24,161	12,666	52.4	24,141	14,133	58.5
Time Warner	13,402	7,270	54.2	13,391	7,732	57.7
Cox	5,430	2,675	49.3	5,420	2,960	54.6
Charter	5,433	2,808	51.7	5,377	2,866	53.3
Cablevision	3,127	2,447	78.3	3,139	2,550	81.2

*Source: Informa Telecoms & Media*

Although the bundling of video, voice and data services has become a core competitive practice for cable companies to try and stem the decline, of all the services on offer true VOD remains cables' most striking advantage over satellite, which has led to the widespread deployment of the service.

As the level of content available continues to increase in the US, so does the sophistication of the service offerings. For example, Time Warner Cable (TWC) offers a Start Over service that allows consumers to rewind to the beginning of a TV programme that they join half way through. This service was expected to be available to at least half of TWC's footprint by the end of 2007.

But as sophistication improves, this puts pressure on cable bandwidth. With the number of channels available continuing to rise and many shifting to HD, bandwidth problems could escalate. To alleviate this several cable operators in the US are installing or experimenting with 'switched' digital. Instead of delivering all the available channels, a switched digital system delivers a continual feed of the main channels but responds to a request for a less popular channel by adding it to the feed.

Time Warner Cable is considered as the industry leader for switched digital video (SDV) and has rolled out the technology in several areas including South Carolina and Austin, Texas. According to the operator more than 100 channels form part of the switch system. As a

From the head-end, the video streams are delivered to a local office near to the subscriber. At this point the middleware acts to identify each user and deals with VOD requests. The selections are then delivered via the local loop to the subscriber.

The bandwidth of the local loop is limited. Even following upgrades to ADSL2+ the capacity is only 25Mbps. This compares with more than 4Gbps for cable. Also for DSL, the delivery speed falls the further the customer is from a DSL Access Multiplier (DSLAM).

For VOD, the delivery procedure is fairly simple. The local office generates a unicast stream following a request from a subscriber. It draws the content from a local server and delivers this to the home through the control of a Real Time Streaming Protocol (RTSP). It is this that provides the DVD-style controls such as play, pause, fast-forward and rewind.

For any accompanying channel selections, the procedure is a little more complicated. Bandwidth problems limit channel delivery to a few at any one time. When a viewer makes a channel selection, the request is sent to the local office, which then verifies the subscriber has access to the selected channel. Once approved, the channel is then added to the router dealing with that channel and is delivered to the subscriber.

The compression technology used also has a bearing on how the content is delivered. For example, a standard-definition TV (SDTV) stream encoded in Windows Media needs up to 1.5Mbps. Over ADSL2+, this would allow for around 10 channels delivered simultaneously with space left for voice and data. However, if a channel is to be delivered in high-definition (HD), then the available capacity is greatly reduced. Again using Windows Media as an example, an HDTV stream needs as much as 8Mbps. No more than two channels can be simultaneously supported using ADSL2+.

Improved compression technologies are important for IPTV, as the delivery of more than one video stream is required in even the most basic of services. For example, PVR services must be able to operate without affecting broadcast TV viewing. Also, the viewing of channels in different rooms, which has become popular with rival broadcast platforms, will also require several simultaneous video streams.

Some IPTV operators are bypassing these problems by launching hybrid services that combine DTT with IP-based VOD. MiTV in Malaysia and BT in the UK are two examples of operators using such models.

## **IP-VOD business models**

Most IP-VOD services are similar to rival VOD offerings available via cable. Like cable, IP-VOD programming is provided either on a pay-per-item basis or as part of a monthly subscription giving unlimited access to content (SVOD). In territories that have experienced

The UK research found that the word “digital” had “positive associations with quality, usability and modernity”. The focus groups said that DVR acronym engendered words and terms like “reliable”, “future proof”, “high tech”, “user friendly”, “choice”, “memory” and “small”. However, consumers also associated expense with such products. The research did acknowledge that the word “video” could lead to confusion about hard disk recorders, as there is no video tape. But Philips believes that this could help consumers in the transition from the VCR.

The research carried out in France found more confusion among focus groups. According to Philips there were some issues with the French translation of PVR. The French name to describe the PVR is Recepteur Enregistreur. The term PVR was generally met with confusion, and French focus groups associated the term with “a computer or some sort of hybrid”, a “central unit”, “pre-select” and even a fine for drivers caught speeding in traffic. Recepteur Enregistreur resonated more, with connotations such as “personal”, “flexible”, and “interactive”. Consumers also associated the term with the replacement of the VHS.

The Philips study for the UK and France reported that ‘digital’ is an important word to communicate because it invokes a sense of quality, performance in picture and sound, the latest product, accessibility and greater control. It noted that the use of the word ‘personal’ however makes the device sound portable and was generally more confusing. It concluded that the education of consumers was needed to help them better understand the benefits of the devices.

## PVR/DVR activity

Encouraged by the success of early DVR service launches in the US, an increasing number of operators around the world have introduced the facility for their subscribers. Leading Spanish pay TV platform Digital+, which is operated by Sogecable, launched a DVR in August 2007. The iPlus hybrid settop has a 160GB hard drive and four tuners. It retails for €395.

Australia’s second largest pay TV platform Austar was preparing to launch its long awaited MyStar DVR in late-2007. The 160GB hybrid unit uses technology supplied by Thompson. Also in Australia, free-to-air broadcaster Network Seven is planning to launch its TiVo-branded DVR, with HD capability, in 2008. Consumers will need to subscribe to an Internet service if they want to access the service. The DVR prevents users from skipping commercial breaks.

UPC Ireland launched a DVR to rival BSkyB’s Sky+ service in August 2007. The 160GB settop is being offered with free installation and no upfront equipment costs. Subscription costs €7.50 per month. The service was initially available to all cable and MMDS homes in Dublin, Waterford and Galway, with national rollout to follow.