

**Feasibility Study of a Digital Platform
for the delivery of
UK Independent and Specialised films
to the Home**

by Screen Digest/Magic Lantern

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1 Executive Summary

Key Objectives

This feasibility study into the UK video-on-demand (VoD) market for UK independent and specialised film was conducted by Screen Digest and Magic Lantern for the UK Film Council with the following key objectives:

- Assessing the necessary steps to be taken to increase public access to UK independent and specialised films
- Recommending a process to maximise public value of such titles within an on-demand multi-platform environment
- Providing a credible model for commercialisation of such content over digital distribution platforms

Summary

Current performance analysis of UK independent and specialised films

- With a diverse range of content and a subscription-based business model, online DVD rental platforms serve as an excellent 'proxy' for assessing the potential demand for UK and specialised films on a new digital platform.
- Of the 521 UK and specialised titles released theatrically in 2003 and 2004, only 100 were able to monetise the traditional video rental windows, compared to over 400 in online DVD rental.
- Eight per cent of online transactions in the UK and specialised sector were for films that achieved no 'bricks and mortar' video exposure, generating revenues in neither the offline rental nor retail (sell-through) sectors.
- Online rental 'opens up' the market to films outside the top 100 titles --- these films take between 86-90 per cent of revenues in theatrical, video retail and traditional video rental, but only 70 per cent of revenues in online rental.
- Demand in the online DVD rental market for UK and specialised films has equalled the demand for the top 25 mainstream films (in terms of total transactions). But demand for these films was six times smaller in cinema and seven times smaller in bricks and mortar retail than for the mainstream titles.

- Comparing the relative performance of the top 25 mainstream titles and the top 25 UK/specialised films, online DVD rental enables an 'uplift' in demand for UK and specialised titles of around four to five times compared with cinema, around two and a half times compared with traditional video rental, and over 10 times compared with video retail.
- Evidence from the online DVD rental companies shows that the rental rate of an individual film can be increased three-fold by virtue of its positioning within the consumer site, for example as part of an offering from a featured director, or featured genre.
- The scope for specialised films ever reaching pay-per-view (PPV) television or VoD is at best remote and offer little financial reward at present given 'shelf space' issues (analysed in Screen Digest's May 2004 report for the UK Film Council).

Key trends and issues facing rights holders in the television and Internet environment

- Distributors are at the mercy of limited range of buyers
- Buyers are frequently purchasing only a limited range of more 'commercial' titles
- UK independent and specialised films are not maximising their commercial potential by exploiting all windows
- There is a 'distribution gap' where titles are not available at all to the public (or only for a very limited period of time in select regions)
- There is confusion as to Internet/on-demand rights ownership and terms of trade is a significant barrier to development of specialised services in the market
- There is confusion and/or ignorance from rights holders as to the development and potential of Internet technologies and digital rights management (DRM) solutions that could help their business models

Opportunities and obstacles in the on-demand environment from the platform operator's perspective

- The near Video-on-Demand (NVoD) market remains limited by 'shelf space' for content and is not currently serving demand for specialised and independent film.
- Operators in the true Video-on-Demand environment see diversity of content and breadth of choice as a unique selling point for the technology and their services.

- UK VoD operators in the cable, IPTV and Internet space are universally open to bringing specialised content on to their services.
- Operators are generally flexible regarding branding and marketing within the on-demand space and willing to explore a range of options.
- Prior exposure of content in other broadcast exploitation windows is an issue for operators and impacts the value they put on content deals.
- A degree of exclusivity is also considered important and impacts value and willingness to work with particular content providers.
- A number of operators are open to the idea of an on-demand channel that could be exploited across multiple platforms.

Proposals and Recommendations

We have divided our discussion of strategic options for the UK Film Council into two sections:

- options related to rights issues
- options related to distribution.

It is important to stress that these two areas are highly interdependent and also that the options presented here are not mutually exclusive. Thus, for example, it is likely that prior to intervention in the distribution market, significant issues surrounding rights and content access would have to be resolved. Likewise, some of the interventions that alone could be seen as easing friction in the rights market may also be necessary prior to launch embarking on one of the distribution options described below. Our proposals and recommendations are fully outlined in chapter 6, and take the following structure.

Strategic options in relation to rights

Within the area of rights issues, we have divided potential kinds of intervention by the UK Film Council into three broad categories:

1. Clarifying Rights

Our research indicates that there is general confusion and inconsistency surrounding access and ownership of rights within the Internet and Video-on-Demand space, both from the perspective of the window of exploitation and the technological platform on which content is distributed. A process of clarification is urgently needed, and the following options are given consideration:

- Development of a 'rights portal'
- A rights audit
- Creation of a public rights database
- Education initiatives

2. Easing friction in the market

We believe that there could be an opportunity for the UKFC to ease friction in the emerging digital film market without necessarily getting directly involved in the set-up and running of a service or platform. Most of the options here would require that the issues surrounding rights had already been clarified, so discussions under this section to some extent complement the strategic options discussed above.

- Facilitate brokerage role on behalf of rights holders
- Establish a royalty collection facility for rights holders

3. Intervention in the market

The next level of options refers to some kind of intervention in the market through the aggregation of rights.

- Content aggregation

Strategic options in relation to distribution

As indicated above, the options discussed here on distribution must be considered in conjunction with those on rights.

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- Promotion of standards and interoperability
- Facilitate mastering (encoding), tagging and storage of content
- Enable marketing support (“digital P&A”) for on-demand distribution
- Partner with one or a restricted number of distribution partners with access to a platform
- Partner with a range of distribution players based on shared standards for delivery and a content commitment
- Set up a ‘white label’ B2B publishing platform supporting content which is “sold” on to distribution/marketing partners
- Set up and manage an independent film platform on the open Internet
- Make available a branded cross-platform ‘channel’ of on-demand UK/specialised film

2. Demand for independently produced UK film and specialised titles

Key findings

- With a diverse range of content and a subscription-based business model, online DVD rental platforms serve as an excellent 'proxy' for assessing the potential demand for UK and specialised films on a new digital platform.
- Of the 521 UK and specialised titles released theatrically in 2003 and 2004, only 100 were able to monetize the traditional video rental windows, compared to over 400 in online DVD rental.
- Eight per cent of online transactions in the UK and specialised sector were for films that achieved no 'bricks and mortar' video exposure, generating revenues in neither the offline rental, nor retail (sell-through) sectors.
- Online rental 'opens up' the market to films outside the top 100 titles --- these films take between 86-90 per cent of revenues in theatrical, video retail and traditional video rental, but only 70 per cent of revenues in online rental.
- Demand in the online DVD rental market for UK and specialised films has equalled the demand for the top 25 mainstream films (in terms of total transactions). But demand for these films was six times smaller in cinema and seven times smaller in bricks and mortar retail than for the mainstream titles.
- Comparing the relative performance of the top 25 mainstream titles and the top 25 UK/specialised films, online DVD rental enables an 'uplift' in demand for UK and specialised titles of around four to five times compared with cinema, around two and a half times compared with traditional video rental, and over 10 times compared with video retail.
- Evidence from the online DVD rental companies shows that the rental rate of an individual film can be increased three-fold by virtue of its positioning within the consumer site, for example as part of an offering from a featured director, or featured genre.

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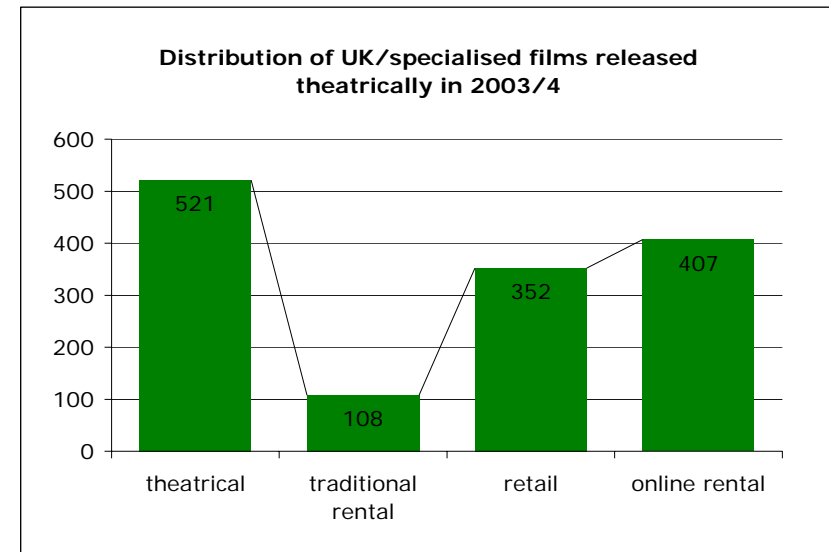
In this section we will assess the underlying demand for UK and specialised film, and attempt to quantify the degree to which this demand has been left unfulfilled by the limitations on traditional forms of distribution. We are particularly focussed on those factors which limit the number of films readily available to the film consuming public at any given point in time. These limitations are not only physical (e.g. shelf space and screens) but commercial.

We will examine the statistical evidence for an increased demand for this type of films in an environment where these constraints have been minimised, or even removed, and try to quantify the resulting 'uplift' in consumption, if any, for the UK and specialised film sector. In this way, the potential demand for a new distribution platform with a diverse range of UK and specialised films can be assessed.

The best example of this environment is the kind of online DVD rental service that has been launched in the UK by the likes of Video Island and LoveFilm in recent years. These services offer an extremely diverse range of content (including a wide variety of specialised films), and moreover deploy a business model which is subscription based. We believe that the online DVD rental market is an excellent proxy for a future digital platform, and that an analysis of the patterns of consumption through this market gives valuable insight into the likely demand for UK and specialised films on such a platform.

Opening up the market

There were 521 UK and specialised films released theatrically in the UK during 2003 and 2004. Of these films, just 108 (21 per cent) followed up with a traditional video rental release¹, and 352 (68 per cent) were available through mainstream retail outlets². Neither window offered as much consumer choice as the online rental platform, which carried 407 of these titles. Although smaller than its bricks and mortar cousin, the online DVD rental market generated business for almost four times as many UK and specialised films.



¹ This is the number of UK and specialised films that have generated video rental transactions according to MRIB's Rental Monitor as at the beginning of September 2005.

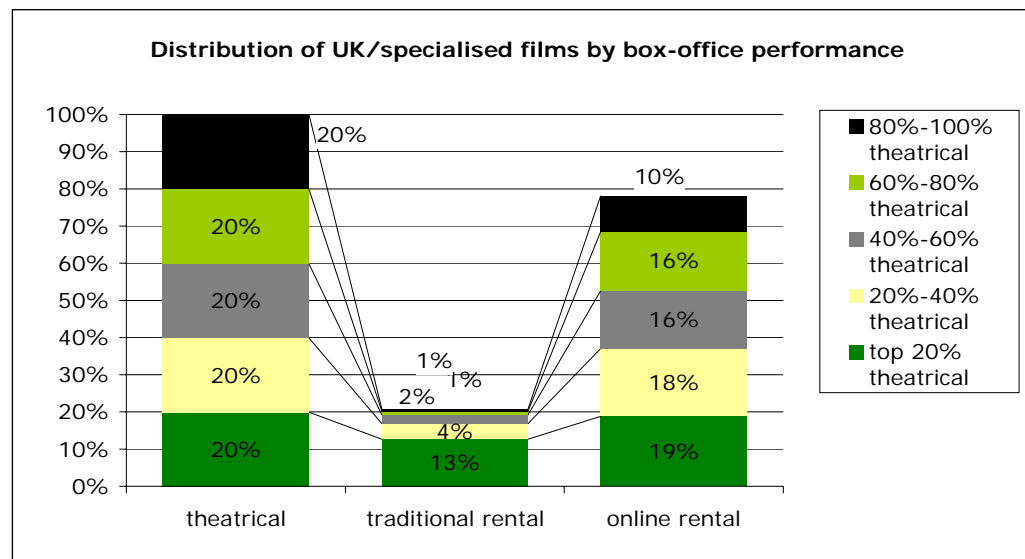
² This is the number of UK and specialised films for which retail sales have been tracked by the Official UK Charts Company's (OCC) as at the beginning of September 2005. We believe that there were additional films sold through via online platforms and/or independent retailers that did not appear in the sales database.

Missing opportunities?

Of course, given the limitations on shelf space in the traditional video rental market, it is not surprising to see the poorer performing theatrical titles disproportionately failing to secure traditional video rental releases. But it is significant that many of the top performing UK and specialised films are also failing to make it to the traditional offline rental space.

The chart below indicates what proportion of the UK/specialised films having a theatrical release in 2003/04 made it through to both the traditional and online rental markets. These titles have been subdivided into five categories according to their success at the box office (the dark green bars refer to the highest earning 20 per cent of these films, the black bars refer to the lowest earning 20 per cent).

Whilst almost all of the top two fifths of UK and specialised films are revenue generating in the online rental market, well over half have had no traditional rental release at all. These are high earning films with proven demand, but capacity issues are excluding them from the shelves of rental stores.



Only a handful of films in the second group (i.e. films which appeared in the second 20 per cent of the UK/specialised box office ranking) actually had a release in traditional rental stores. While issues of shelf space are certainly removing a distribution outlet at the bottom end of the market, the fact that these constraints also have such a strong impact on reasonably well performing films is significant.

Not surprisingly, of the bottom 60 per cent of titles, only one or two made it to bricks and mortar rental in each group.

Online rental transactions for selected UK and specialised films released in 2004 that subsequently did not get a traditional video rental release³

Title	UK	sp	Distributor	online rental transactions ⁴	online rental rank ⁵	box office rank ⁶
Bride And Prejudice	•		Pathe Distribution	46,245	7	3
Beyond The Sea	•		Entertainment	40,323	8	38
Garden State		•	Buena Vista Intl.	37,372	9	21
Inside I'm Dancing	•		Momentum Pictures	35,761	11	23
The Merchant Of Venice	•		Optimum Rel.	29,384	14	200
The Cooler		•	Tartan Films	29,344	15	70
5 Children & It	•		Pathe Distribution	25,855	19	14
The Football Factory	•		Vertigo Distribution	25,610	20	73
Oldboy		•	Tartan Films	23,852	22	46
Laws Of Attraction	•		Entertainment	23,124	24	18
Code 46	•		Verve Pictures	22,909	25	77
Churchill: The Hollywood Years	•		Pathe Distribution	22,846	26	55
School For Seduction	•		Redbus	16,399	29	102
Freeze Frame	•	•	Verve Pictures	13,792	32	129
Look At Me		•	Pathe Distribution	10,900	34	33
I'm Not Scared		•	Buena Vista Intl.	9,876	38	56
Shaolin Soccer		•	Optimum Rel.	9,674	39	66
Infernal Affairs 2		•	Tartan Films	9,148	41	121
The Fog Of War		•	Columbia Tristar	8,656	43	244

The table above is a list of all films released theatrically in 2004 for which no traditional video rental transactions have been recorded, and their subsequent estimated online rental performance. These films are shown to have generated no rental income according to the MRIB database as at the end of August 2005, despite having been rented online during that period.

³ Films for which MRIB's Rental Monitor shows zero transactions as at end August 2005.

⁴ Our online rental transaction numbers are based on actual figures from one of the main UK online rental companies, and grossed up according to Screen Digest's estimates of that company's share of the overall UK online rental market for 2004

⁵ Ranking within UK and specialised films only

⁶ Ranking within UK and specialised films only

It is worth noting here that the MRIB data supplied by UKFC for this analysis returned zero rental transactions for a number of titles which are known to have received a traditional rental release. Perhaps the most high-profile such title is Pathe's *Bride and Prejudice* which was released in spring 2005, and yet returns a zero transactions figure in the MRIB data.

According to the available data, the number of online transactions for films that could not find shelf space in traditional stores is not insignificant. We identified around 15 films that recorded more than 10,000 online rental transactions, and 80 such films that recorded more than 1,000 transactions. These are not trivial numbers. The top grossing blockbusters of 2004 averaged slightly over 50,000 online rental transactions⁷ over the past year.

In other words, there is a handful of UK and specialised films which apparently failed to make an impression in traditional rental stores, but in the online rental space are up there competing with the top 30 most successful mainstream films of the year.

It is also worth noting that our estimates for online rental above are only transactions for the past 12 months. Films have an extremely long shelf-life in the online rental market compared with the traditional forms of exploitation. Typically a film will be earning well up to the end of the third year of release in this space, with its revenue lifecycle characterised by a very long and extended 'tail'. So the figures above can be said to represent the initial phase, rather than the totality of these titles' earning potential in the online rental market. By contrast, the offline rental sector is very polarised around the big new releases, resulting in a relatively rapid 'burnout' for all titles.

Levelling the playing field

Of course it is not just the number of films achieving wider exposure alone that should be a measure of the value of new distribution platforms to the UK and specialised sector, but also the performance of these films on these new platforms. Certainly one characteristic of the online rental market which distinguishes itself from the traditional markets is the degree of revenue concentration in a handful of top performing films within the sector.

The chart below shows the breakdown of admissions, sales and rental transactions of the five groups of specialised and UK films released theatrically in 2003 and 2004 --- the top 20 per cent of films in the box office ranking, the second 20 per cent of films in the ranking, and so on, through to the worst performing 20 per cent. Each of these five categories represents 104 film releases, and the chart shows how much of the total market these categories of film account for in each distribution channel.

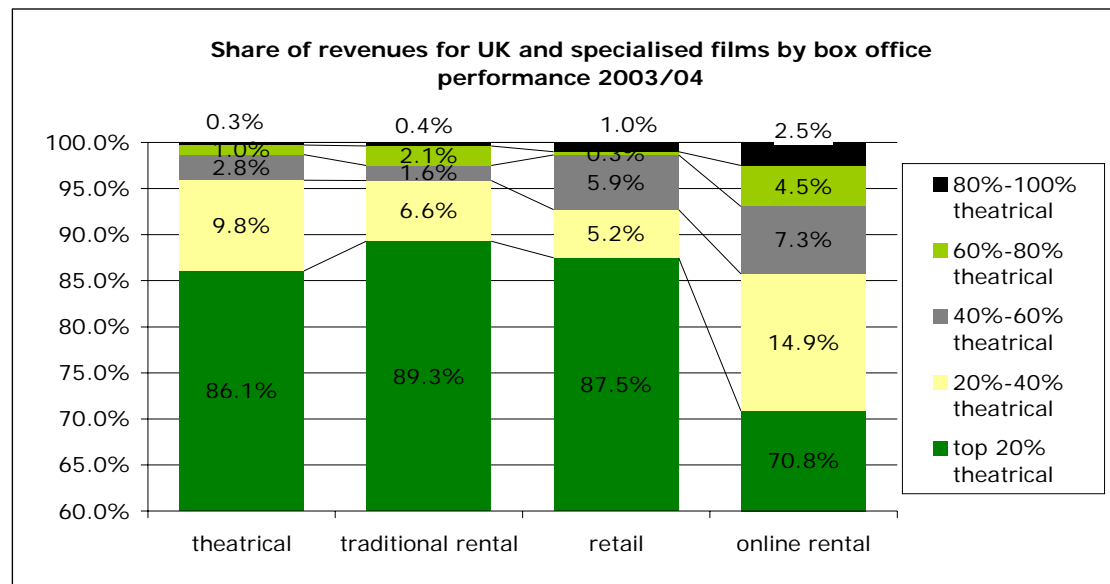
⁷ This figure is again grossed up from actual figures from one online rental company by Screen Digest's estimate of that company's market share for the year

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While the theatrical market provides the widest possible platform for specialised and UK films in terms of numbers of films released, the performance of all but the most successful films can be profoundly affected by both the breadth of the release and the length of its run. The theatrical sector has its own 'shelf-space issues' of course, and unlike the online rental sector with its three year long revenue 'tail', it is not uncommon for a theatrical release to be over in just a few short weeks.

As a consequence, there is a high degree of concentration in the theatrical market for UK and specialised films, with the top 20 per cent in the box office raking in 86 per cent of the total revenues generated by this sector of the market. Just 14 per cent of box office takings are left for the remaining 80 per cent of UK and specialised films getting a theatrical release, but the lion's share of this is taken by the second highest 20 per cent of earners. The remaining three fifths of all UK and specialised films may have had their night of glory with a big screen opening, but in reality their combined earnings from this sector is practically negligible.

With so few films from the bottom half of the ranking actually achieving a viable video rental release, the same is true in the traditional video rental space. The bottom three fifths of all UK/specialised box office earners are scrambling for a measly four per cent of market share.



Meanwhile, the greater 'shelf space' (in relative terms) in the video retail sector means that the bottom three fifths of the market is chasing a greater share (around seven per cent) of the pie. But the top end is also highly concentrated. The top 20 per cent account for around 87.5 per cent of retail sales --- an even higher share than at the box office.

Although shelf space is less of an issue than in the traditional rental sector, competition is much fiercer since UK and specialist films released to the retail market are competing against a vast range of titles, not only other films but also non-film titles. Our analysis shows that once again all but 10-15 per cent of revenues are going to the top 20 per cent of films, just as in the rental and theatrical markets.

However in the online rental space (and indeed in the online retail sector), shelf space is not an issue.

As a result, our analysis shows that the bottom four fifths of the market share between them 30 per cent of the total accruing to the UK and specialised sector as a whole. About 15 per cent goes to the second highest group of films, and another 15 per cent is shared between the third, fourth and fifth groups. In the online rental market, films at all levels of box-office appeal outside the top 20 per cent have significantly increased market share. In crude terms, their share of the overall pie has increased by a factor of two to three times compared with traditional forms of exploitation.

It would certainly be an exaggeration to say that the advent of the online rental business has created 'a level playing field' within the UK and specialised film segment, but what it has done is facilitate a market for those films which are all but excluded from cinemas and traditional rental and retail stores because of their in-built limitations on distribution, heavily biased to the top end of the market.

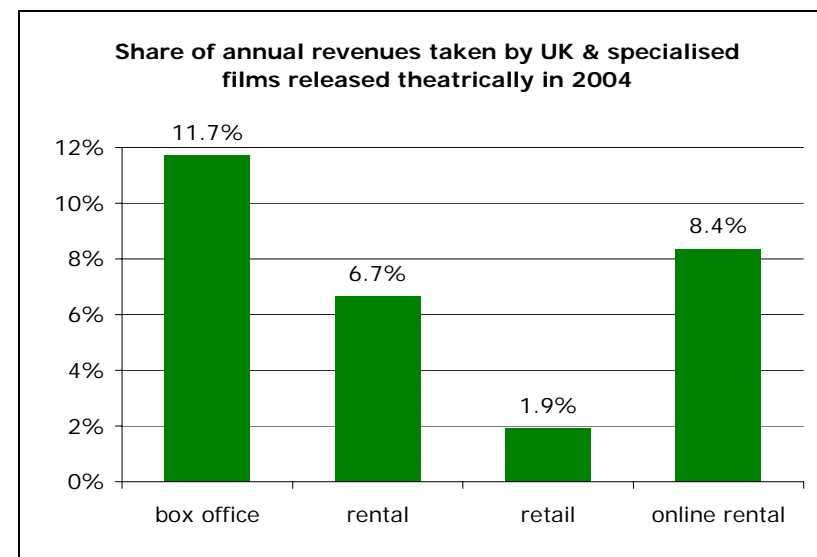
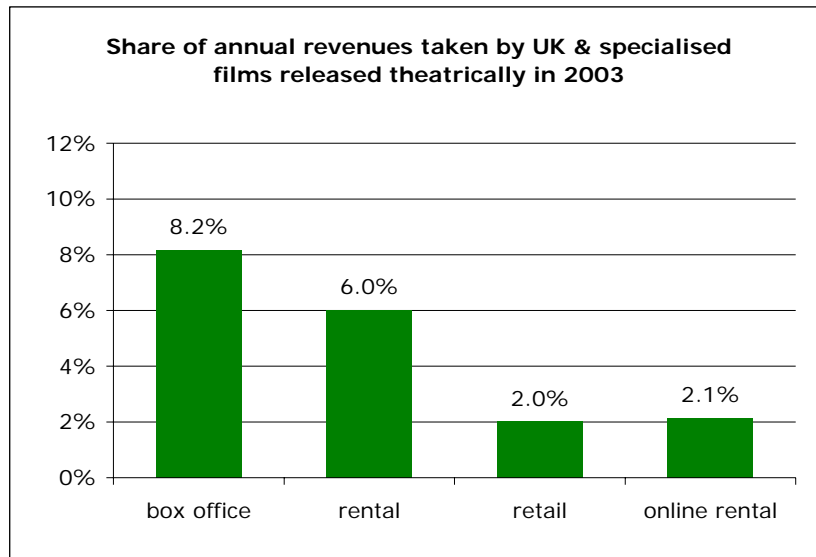
The concept of the Internet as a democratising and equalising medium for information applies equally to consumers' access to entertainment content --- specifically film content as a packaged medium. The evolution of online rental (and indeed retail) services has allowed consumers who are interested in viewing UK or specialised films, but who do not live in an area where there is sufficient demand for such titles to be stocked in local stores, to access them. We believe that this will continue to be the case for platforms with an extremely wide range of content and choice (as per the online rental model) delivering digitally distributed films.

Increasing the market for the UK and specialised film sector?

We have shown that the advent of new distribution platforms has redressed some bias against those films that are not the top performing titles within the UK and specialised film segment itself. But do these outlets increase the share taken by this segment as a whole?

To measure this we have split the UK and specialised films into two groups --- those distributed theatrically in the UK during 2003 and 2004 respectively --- and analysed their share of the total market over a 12 month period in each of the four distribution conduits. As a basis for comparison with the wider market, we have compared this with the equivalent metrics for the top 25 mainstream titles for both 2003 and 2004. The results are shown below.

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It is not appropriate to make any comparison between individual categories within each chart, because although the graphics reflect the business done by that year's theatrical releases, the total number of UK and specialised films available through the rental and retail channels at any point in time is much greater than the number released theatrically in any given year. These films are just a subset of a much wider group, the size of which varies between the different distribution outlets.

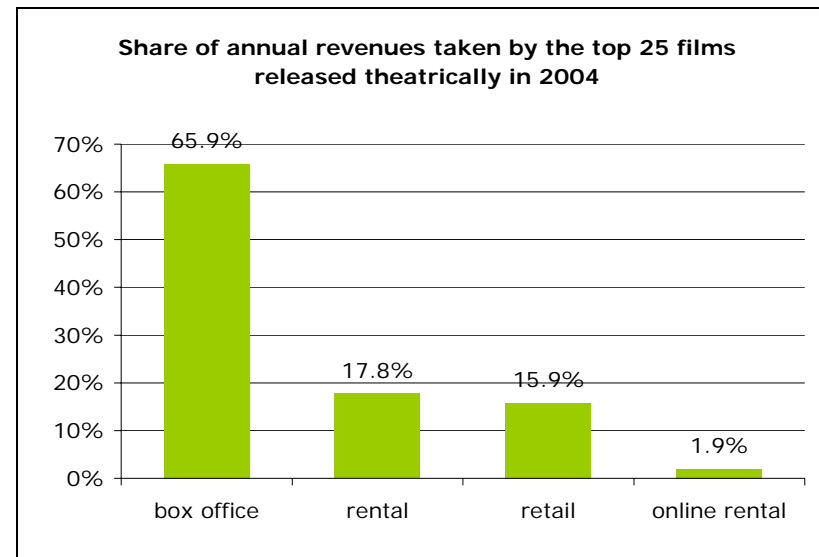
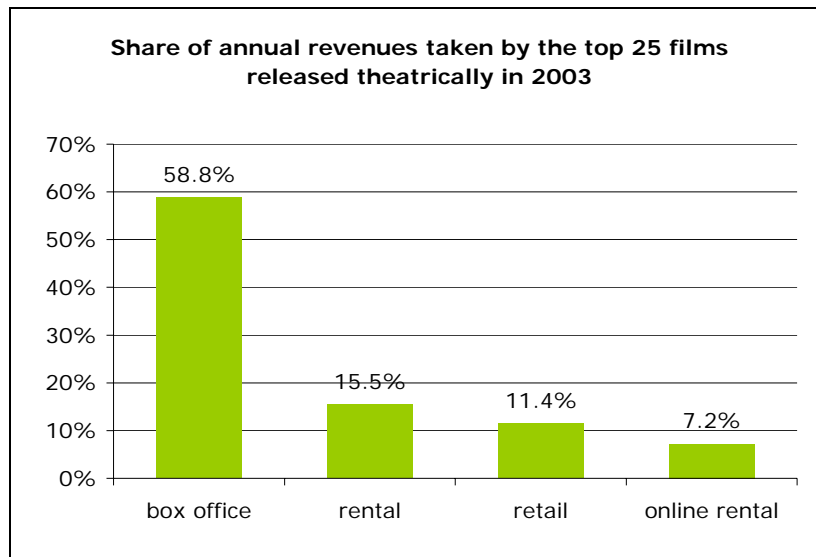
In the theatrical market, the lifecycle of revenue generation can be short if not always sweet. However, in the video retail and the online rental businesses, a large number of these UK and specialised films are in the market at any given time, and many more such titles besides. As we have noted above, the revenue earning lifecycle of an online rental release has an extremely long tail.

Thus the only market in which the figures above are close to being an accurate reflection of the actual share for UK and specialised film in a give year is the box office (it is a year's worth of theatrical distribution which defined the selection of the films). So the figure for box office is a reasonable estimate of actual market share for UK/specialised films, whereas the figures for the other windows of exploitation represent only the share of that year's theatrical UK and specialised film releases.

However, although we cannot compare market shares between the different distribution windows for the same group of films, we can compare the *relative* performance of *different* groups of films through these windows. This is because all groups of films are similarly

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affected by the 'earning lifecycle' issue. All groups of films have market shares in the non-theatrical windows diminished by virtue of a much greater number of distributed titles than the annual theatrical release slate, and all groups of films are affected to roughly the same extent.



As can be expected from a list of films that has been selected on box office success alone, this group of films did particularly well in the theatrical segment, taking in the region of 60 and 65 per cent of total UK revenues in 2003 and 2004 respectively. Therefore the top grossing 25 films took around six times as much revenue as the UK and specialised films during these two years. At eight and 12 per cent, this latter group averaged around a 10 per cent market share for the two years.

But in the online rental segment, the share of annual transactions accounted for by top 25 films is not at all dissimilar to the share taken by the UK and specialised films. The top films of 2004 accounted for around two per cent of transactions from the previous 12 months, which is the same share of transactions that UK and specialised films from 2003 generated. Meanwhile the top films of 2003 took a seven per cent share, slightly lower than the UK and specialised films from the following year.

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So while our group of UK and specialised films are matching the top 25 films of the year in terms of share of transactions in the online rental space, they are taking about one sixth of their revenues in theatrical. Crudely speaking, UK and specialised films are generating six times as many transactions in the online rental space as could be expected from their box office performance, relative to the top titles of the year. The online rental space enables 'uplift' for UK and specialised films of around six times.

We must emphasise that this is a very crude analysis, which encompasses a wide range of titles with very different patterns of achievement in these windows. Also worth emphasising is that this comparison is made with a selection of the top performing films, rather than a selection of non-specialised, non-UK films from across the spectrum of box office achievement.

Does this uplift for UK and specialised films also occur when the comparison is made with a distribution platform less constrained by its ability to make large numbers of titles available? Our top 25 titles from 2003 and 2005 have taken on average about 14 per cent of the sales made in the video retail sector during a single year, a much reduced share compared with theatrical thanks to the much wider availability of other film titles and of course the presence of a significant non-film element.

Our UK and specialised films on the other hand have generated sales of just two per cent of the annual UK total, fairly consistently for films release in both 2003 and 2004. This means that the 'uplift' factor for UK and specialised films in the online rental market is crudely seven times what might be expected from video retail sales --- slightly greater than the uplift on theatrical.

However, the concerns we have about the top 25 films in the theatrical window also hold true for video retail, since box office performance is a very good predictor of retail performance for this kind of film⁸. Unlike the retail window, our analysis there is almost no correlation at all between video rental transactions and box office⁹, so will the elimination of this bias to the top films diminish or even eliminate this when comparing online rental to traditional rental?

Our top 25 films from 2003 and 2004 together represented about 16 to 17 per cent of a single year's total video rental transactions; our UK and specialised films represented about six to seven per cent. So indeed the uplift, while still a very significant two and a half to three times what might be expected given traditional rental performance, is less than the uplift on both theatrical and retail exploitation.

In summary, when taken as a whole, UK and specialised films perform significantly better in new online distribution platforms (compared with the top films of the year) than they do in all traditional forms of exploitation. However, the degree to which they perform better is

⁸ We have analysed box office and video retail sales for all 50 films in the 2003/04 groups, and found a very high correlation between the performance of these films in these two windows. This correlation has been measured at 66 per cent.

⁹ The correlation between box office and video rental performance is less than one per cent.

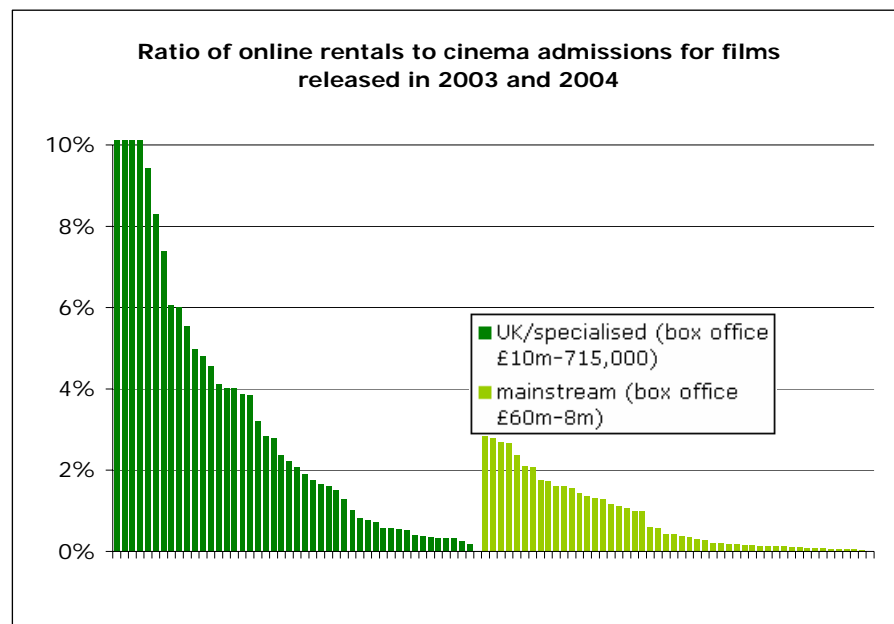
hard to quantify in precise terms, and may be exaggerated by the fact that we are comparing with only the top mainstream titles of the year.

Title by title comparisons

Theatrical

One valuable metric for quantifying the relative performance of different types of films through different windows is to simply compare the number of people who consumed individual titles through window A with the number of people who consumed them through window B. This can be shown as a simple ratio A/B. So if five times as many people saw a film at the cinema than bought it at the DVD store, then the simple ratio of retail to theatrical consumption is 20 per cent.

For this analysis we have ignored the vast majority of UK and specialised film releases and concentrated only on the top 25 of these releases in each of 2003 and 2004 (50 films in total). Not only does this substantially remove the bias that we had for the comparative mainstream films towards the top end of the market only, but it also removes a whole raft of films from the analysis for which the numbers were so low in certain windows that the ratios with other windows became meaninglessly large.



Each of the bars in the chart on the left represents one release, the darker bars represent the top UK and specialised films from 2003 and 2004, and the lighter bars represent the top mainstream titles.

The chart shows that a handful of top UK and specialised films generated online rental transactions that numbered at least a tenth of the admissions that they attracted in the cinemas. For these films, the audience was increased by at least 10 per cent on theatrical as a result of the online rental release. One film attracted 22 per cent the number of theatrical admissions in the online space.

About a fifth of the UK and specialised films attracted transactions that numbered at least five per cent of their cinema admissions

figure, and for more than half of them the ratio was greater than two per cent.

This compares extremely favourably with the mainstream film segment, for which no film achieved more than five per cent in its ratio online transactions to admissions, and only 14 per cent of them achieved over two per cent.

So the online rental market has opened up an opportunity for the top grossing UK and specialised films to outperform the top mainstream films relative to their box office success. Again it is not easy to quantify this opportunity except in crude terms, by comparing the average ratios for online rental/admissions across all films within each group.

ratio online rental/admissions	top UK & spec	top 25 mainstream
>5%	21%	0%
2-5%	30%	14%
1-2%	15%	24%
0.5-1%	15%	8%
0.2-0.5%	15%	16%
0.1-0.2%	2%	20%
<0.1%	2%	18%

The average top 25 film in the UK and specialised sector achieved online rental transaction numbers that were equivalent to 3.9 per cent of the average admissions figure for these films. The ratio for the average top 25 mainstream film was 0.9 per cent. The online rental platform has enabled an uplift of between four to five times for the top UK and specialised films, compared to what would be expected of the top mainstream titles.

But does this uplift on a title-by-title basis hold in the video rental and retail markets?

Video rental and retail

As might be expected, given that the top mainstream films have been selected on box office alone (and remembering that there is no correlation between box office and video rental for these films), the top 25 mainstream films do rather better in online rental in relation to traditional rental than they do in relation to theatrical.

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Several of the mainstream films add 10 per cent to their traditional rental transaction by virtue of the online marketplace, and around 40 per cent of them add at least five per cent through the new distribution outlets. The average ratio between online rental and traditional rental for this group of films is 3.9 per cent, significantly higher than the theatrical ratio.

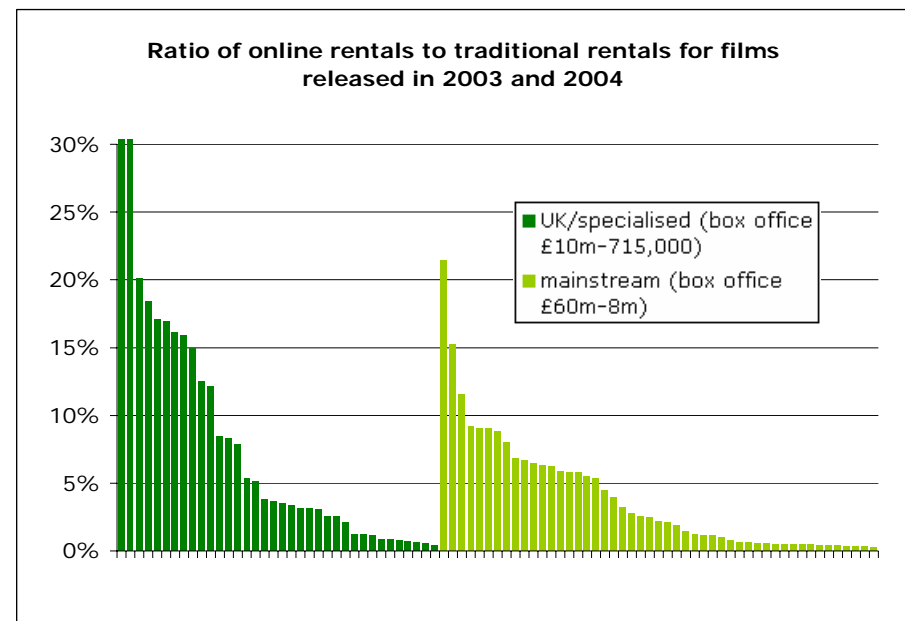
However, the top 25 UK and specialised films are still performing better than them in relative terms. Around 30 per cent of this group have passed the 10 per cent mark, and one even achieved higher transaction numbers in online rental than it did in traditional (a ratio of over 100 per cent). The average ratio of online to traditional transaction for this group of films is 10.5 per cent. The crude measure of 'uplift' compared with the traditional rental performance is around 2.5.

But this ratio has been understated by one very important characteristic of the traditional rental market discussed earlier in this chapter. Many of the UK and specialised films are not getting a viable bricks and mortar rental release, and these films have been omitted from the chart. About a third of the top 25 films in 2003 and 2004 do not have any revenue in the rental window according to the MRIB data, and yet are generating income in the online platforms. For these films, the ratio is infinity, as is the notional uplift. Although they are generating additional revenue for the UK and specialised sector, this revenue is effectively ignored by this form of analysis.

The issue of titles failing to generate any revenues is far less important in the video retail market, where only four of the 50 top UK and specialised titles did not generate sales according to OCC data. The ratios for the top mainstream films look remarkably similar in retail as in rental, with three or four titles breaking through the 10 per cent mark. And indeed, the average ratio itself is also very similar at 3.6 per cent (3.9 per cent in rental). The performance of these films in online rental is the same whichever traditional video window you compare it with.

But the UK and specialised film group are showing a spectacular uplift in the online rental market compared with video retail (see graphic on next page). Five films have scored higher transactions in the online rental space than they sold units in bricks and mortar shops, three of which transacted two or three times the number. Only a handful of these films transacted less than five per cent of the number of units sold through to consumers.

The average ratio between online rental and retail for the UK and



Other evidence

The scope for specialised films ever reaching pay-per-view (PPV) television or VoD is at best remote (as discussed below). Performances of such titles on PPV platforms were analysed in depth in Screen Digest's May 2004 report for the UK Film Council, and demonstrate little financial return for the rights holder given the 'shelf space' issue of the technology.

Titles that have typically made it to Sky PPV recently have included Pathe's 'Motorcycle Diaries', 'Bad Education', and Artificial Eye's 'Barbarian Invasions' --- again, theatrical exposure having a considerable part to play in the selection process. Typical buy-rates are around 10,000 buys on Sky PPV for a title that has generated £2m at the box office. At £3.50 per purchase, and a 50/50 revenue share, this would translate into around £15,000 of PPV revenues for the distributor.

In the VoD environment, the situation is not much different, although it is still early days. As an example, the BFI has a rolling annual deal with VideoNetworks to make content available to the latter's Subscription VoD (SVoD) service over the Homechoice platform. At present, fifteen titles have been selected --- mostly higher profile titles such as Isaac Julien's 'Young Soul Rebels'. But the returns have been negligible (Homechoice's SVoD service Movies Express only has around 2,000 customers -- of whom about 20-25 per cent have accessed the BFI titles). Pathe, which also has a deal in place with VideoNetworks, has had a similar experience with its content --- with returns of around 20p per viewing per title. Other distributors who have had previous dealings with VideoNetworks include Tartan Films and Artificial Eye, although this was when the service provider's platform was still trying to find a foothold in the market and the deals have since lapsed.

Few companies involved in the VoD space had access to internal research demonstrating demand for specialised films, not least because specialised titles currently make up only a very small portion of on-demand libraries. However, Homechoice and FilmFlex both indicated that they felt World and Independent film performed well in an on-demand environment.

Homechoice said it offers a lot of World Cinema content which does 'OK for the platform', but added that this was 'not the whole story': the studios dump so much low-grade content in the rights deals that it affects overall performance of the Studio content in a negative way. FilmFlex separately claims that its cable VOD service is seeing a greater consumption of library and independent film than expected at 40 per cent of buys. Indie product outperforms that of the big Studios on value versus time on the network basis.

3. The supply of independently produced UK films and specialised films

Key rights holder issues and summary

The following is a summation of what Screen Digest considers to be key issues in the current UK on-demand market for UK independent and specialised films:

- Distributors are at the mercy of limited range of buyers
- Buyers are frequently purchasing only a limited range of more 'commercial' titles
- UK independent and specialised films are not maximising their commercial potential by exploiting all windows
- There is a 'distribution gap' where titles are not available at all to the public (or only for a very limited period of time in select regions)
- There is confusion as to Internet/on-demand rights ownership and terms of trade is a significant barrier to development of specialised services in the market
- There is confusion and/or ignorance from rights holders as to the development and potential of Internet technologies and digital rights management (DRM) solutions that could help their business models

Exploitation of rights via on-demand platforms: current trends

The 'on-demand' video delivery market in the UK, whether in a walled garden environment or over the open Internet, is still in its infancy. However, the development of the sector is very much a reflection of deals already in place in the PPV and pay-TV windows --- a situation that can vary considerably from distributor to distributor.

According to the UK Film Council's statistics, there were 521 films falling into the UK independent and specialised film category that obtained a theatrical release in 2003 and 2004 combined. The total box office take for these films combined was £150m over the two years. In 2003, there were 244 films released, taking £60.5m, equivalent to 8.2 per cent share of total UK box office for that year. In 2004, though the total number of films released rose slightly to 277 titles, revenue generated at the box office increased by 50 per cent to £90m, equivalent to an 11.7 per cent share of total UK box office in 2004.

Despite this trend, most UK independent and specialised titles still have not been able to exploit their rights in the pay-per-view (PPV) window. At the upper end, the largest distributor of UK independent and specialised titles has had 40 per cent of its library so far picked up for PPV. In contrast, one of the newer, smaller distributors, with a consolidated library of around 30 titles as of end 2005, had yet to strike a single PPV deal. For most distributors --- those with accumulated libraries c. 100-150 titles in 2005 --- the reality is that the PPV window is exploited in an estimated 20 per cent of cases.

If a hypothetical 15 per cent average is applied to all 521 titles in the UK independent and specialised film category that obtained a theatrical UK release in 2003 and 2004, the result would be that only 79 would have monetized the PPV window in that timeframe.

Needless to say, however, not only are platform revenues from PPV and VoD services very limited but the titles offered are at the mercy of platform operators' 'cherry picking'. In the PPV environment, for example, where 'shelf-space' is an issue, Sky Box Office had dedicated eight of its 53 PPV movie channels in the week beginning 7th November 2005 to what could be categorised as UK independent and specialised titles. All were high profile and had significant recognition value following theatrical and DVD releases ('9 Songs', 'House of Flying Daggers', 'The Machinist', 'Melinda and Melinda' and 'Creep'). This was compared to 18 studio titles being screened on the remaining 45 channels.

Homechoice, in the same week of 7th November 2005, was screening 54 unique films on its Film 1st new release channel (as distinct from its catalogue 'a la carte' VoD channel Movies Now and the subscription VoD (SVoD) channel Movies Express). Of the 54, approximately 15

would have fallen into the UK independent and specialised film category (equivalent to 27 per cent). Predominantly all had either had a theatrical release, or had a star attached.

The pay-TV and free-TV scenario is somewhat different. These deals are far more important than on-demand deals to independent and specialised content owners in terms of their monetary value. For some of the larger independent distributors, 80 per cent (and sometimes more) of libraries have been exploited in either the pay-TV window or for free TV. In terms of the traditional free TV windows, with the advent of digital multichannel television, there are now more buyers than ever before. As a sign of the times, channels such as BBC4 and More4, are using independent and specialised movies as part of their more 'adult-orientated' remit. More4 notably used a series of high profile independent titles in late 2005 to drive its launch campaign --- including 'Touching the Void', 'Super Size Me', 'Spellbound', 'Downfall' and 'Gosford Park'.

TV channels that do not benefit from the backing of a major UK broadcaster tend to benefit from sub-licensing deals struck by the primary buyers of a title in the free TV window (such as the BBC). The resulting revenue is then split between the broadcaster and the distributor. As an example of this, Pathe's 'Chicken Run' and 'Two Brothers' --- two animal related movies --- were recently sub-licensed to the Discovery Channel's Animal Planet.

Importantly, many of the pay-TV and broadcast deals signed by independent distributors have an unwritten exclusivity that effectively constrains or completely rules out prior PPV and/or VoD exploitation. The net effect is that if some content owners --- even those with a certain degree of clout in negotiations --- choose to exploit their content elsewhere in the prior on-demand window, then the value of their broadcast deal will be directly compromised (although it may not be a 'deal-breaker' as such). From what Screen Digest understands, this is the case in Sky's pay-TV deals with a number of independent distributors, as well as a strategy adopted by both BBC and Channel 4. This is not an area that can be easily regulated as the restrictions imposed generally take the form of an unwritten 'general understanding' and not something that is directly written into supply contracts. The BBC's situation is more clearly an issue given its role also as a financier and its ability therefore to tie up TV rights in advance for very little outlay --- which it chooses to do --- a scenario that puts independent producers between a rock and a hard place when trying to get their film made and fully exploit their content at the same time.

In Sky's case, the position goes a step further, following the recent announcement of the satellite operator's plans to move ahead into the on-demand sphere (see below). As a result, Sky is now focussing a great deal of attention on not only clarifying its on-demand rights position in the PPV (a la carte VoD) and the pay-TV window (subscription VoD), but also aggressively acquiring Internet rights. According to a number of distributors however, there is now more interest from both Sky in independent titles than ever before --- as the operator seeks to build a library for its VoD platform. It also appears the case that some terrestrial broadcasters may be following a similar pattern of behaviour --- though not as aggressively --- in trying to acquire Internet rights within their Free TV window.

Sky's negotiating power and ability to control the market is a vital consideration. The general response from the rights holders interviewed definitely indicates that there is a clear hierarchy in place amongst the existing platforms in the on-demand space -- with Sky, which can offer the greatest financial incentive and the widest access to an audience in the PPV and pay-TV environment, at the top of the tree. Other services, such as Front Row and FilmFlex, which offer PPV and VoD respectively over the NTL/Telewest cable platforms, and VideoNetworks' Homechoice VoD platform in London, tend to be less dominant in the role that they play.

However, some distributors are seeking alternative routes. Pathe has made five titles available for download to a broadband Internet trial operated by a company called KeyCom --- which is offering its service to 25,000 users in student halls of residence. Metrodome, meanwhile, has been experimenting with a hotel VoD service.

One of the emerging issues, however, is a continued discrepancy in where distributors believe on-demand rights should be situated and defined. Although the general trend seems to be that on-demand rights fall within the TV windows, it appears that some rights holders have tried to argue with broadcasters that they are more akin to video rights and should therefore contractually be treated as such. So far, this line of argument has been unsuccessful and the view remains that on-demand rights are a further development of existing television windows.

The problem of Internet Rights

The most significant obstacle to the development of VoD over the Internet in the UK for independent and specialised titles is the major ambiguity surrounding Internet rights.

Currently, UK distributors tend to generally take all rights (with some exceptions) for any length of time between 1 year and 25 years (depending on the title and the position of the distributor in question). However, most film licensing deals struck by domestic independent distributors prior to 2005 have been silent or vague on who specifically holds Internet rights during this timeframe. This has been largely because deals were struck before the Internet was seen as a viable medium for commercialising and exploiting entertainment content. Although some of the more cavalier distributors view this as an anomaly and are prepared to take a 'publish and be damned' attitude, the general sentiment seems to be that where contracts are silent, then the rights remain with the original filmmakers and will have to be renegotiated.

Although the proportions vary considerably, we estimate that independent UK distributors at present hold approximately 25-30 per cent of the Internet rights of their libraries. If this 30 per cent ceiling is applied to all UK independent and specialised titles released in 2003 in the UK, this would mean that of the 243 titles released, Internet rights on only 73 titles would be held by the relevant distributors. More

importantly, it would mean that such rights on 173 titles released in 2003 are still unexploited and still in the possession of the original filmmakers.

To clear up this issue, there seems to be a need for some kind of retrospective negotiating with the original rights holders (the filmmakers) and a reopening of contracts on many library titles. The message from some of the distributors interviewed was that in many cases sales agents are starting to realise the potential value of Internet rights and are minded to advise filmmakers to 'stockpile' rights in an effort to hedge bets on future successful services appearing.

Interestingly, this strategy does not appear to be restricted to just sales agents alone. UK distributors seem to be viewing exploitation of Internet rights in a very similar way --- taking advantage of the ambiguity surrounding Internet business models to await the development of services. One such service is BSkyB's Sky Movies Broadband platform, for which the satellite operator is now actively acquiring rights for Internet distribution in the pay-TV window alongside its existing TV rights. According to studio sources, as well as some leading independents such as Artificial Eye, BSkyB is now implementing new deals to take into account the potential of the Internet (although some of the studio deals are simply being extended and construed to include Internet rights also). BSkyB is also seeking to extend the scope of its PPV rights deals in the same vein.

What this does not change, however, is the largely untapped base of Internet VoD rights held by the original filmmakers in the independent sector. Not only is BSkyB unlikely to change its cherry-picking approach, it also does not deal with filmmakers directly (at least not yet). As such, anything the distributors do not hold the rights to, then neither will, by definition, BSkyB. This in many ways creates a gap in the market. There seems to be a clear need for an on-demand aggregator of Internet rights, dealing directly with filmmakers (or through their sales agents), on many library titles picked up by distributors already for all other media, as well as titles that cannot find a distributor in the first place.

The issue of Internet rights is further complicated by the nature of some of the films themselves --- which highlight the vagaries of the independent film sector overall. In the case of one high profile title, archive news footage was used in the background of a scene, for which the rights holder was a major US broadcasting network. According to the UK distributor, the producers did not initially clear the footage rights with the network because of time and financial restraints. When the distributor subsequently returned to the network to retrospectively clear the rights, they were refused because the network has a blanket policy of controlling Internet rights to all of its content worldwide. It is suspected this may not be an unusual occurrence where independent filmmaking is concerned. What is apparent however is that a greater level of clarification is urgently needed into the availability of Internet rights in the independent sector.

Rights holder perspectives on the potential for new platforms

The response was in principle very positive from the UK distributors and sales agents interviewed as to the potential for a new on-demand platform promoting UK independent and specialised films.

The general belief is that on-demand technologies—and the Internet in particular—offer a great opportunity to provide greater access to films that would not be available to the public other than in a limited manner. At the root of this is an argument for greater access to content and a democratisation of film in general. However, it should be added that any support for new technologies comes from a desire to maximise the commercial value of rights held, as opposed to an argument based on cultural diversity. At its core, rights holders are looking to the Internet as a great leveller that may allow further exploitation of their library content that (outside of DVD) could be lying dormant.

Despite this generally positive position, there is a great deal of cynicism and apprehension as to the pitfalls of Internet delivery. The single most significant barrier to entry for the content owners is that of digital rights management (DRM) --- essentially determining who has access to what, where and when. Unsurprisingly, a proportion of the views expressed came from a position of apparent ignorance, leading to the conclusion that there needs to be an education process for many rights holders as to the advance of Internet technology and the range of options now open to them to protect and control their content online. For example, the two main DRM issues that arose – security and ‘geo-blocking’ (the prevention of Internet users outside of a specific territory accessing content within that territory) – have been addressed by the technology sector comprehensively enough to persuade the Hollywood studios to offer content online. Yet some leading UK independent distributors seem unaware of this development and continue to view the Internet as a ‘wild west’ where content cannot be effectively protected and monetized.

These issues aside, there were several other requirements from rights holders to ensure their involvement.

First, getting content onto the service must be at no extra cost to the rights holder --- this would mean the service provider would bear the cost of collecting the clone master copy (usually a Beta master tape), encoding, DRM wrapping and performing all associated technical work to get the content up onto the service.

Second, there would have to be at least a parity of terms with existing PPV and VoD platforms. Currently, most deals signed by independent distributors with service providers tend to be on a 50-50 revenue share agreement (which is different to the position of the studios who tend to operate on a 60-40 or better in the studio’s favour). The service provider in many cases takes encoding, DRM and other technical charges out of the 50 per cent being returned to the distributor, although in some situations, such as Internet VoD platform CinemaNow, the service provider will foot the technical bill out of their own 50 per cent share.

Third, the definition of 'independent' and 'specialised' must be construed as widely as possible, not only to encompass all UK independent rights holders, but also to give the service a commercial edge by offering better known titles to drive traffic. This view was supported significantly by the bigger labels, such as Entertainment, Pathe and Tartan. However, in contrast, the smaller labels interviewed raised the concern that a wider definition of studio titles would lead to the inclusion of too many major studio titles at the expense of the smaller independents. The concern seemed to appear from the definitions used in the Digital Screen Network and the anecdotal practices adopted by the cinemas with digital projectors favouring better-known titles such as 'Sideways' to drive audiences.

In reality, this is unlikely to be an issue in an on-demand environment (and even less so over the Internet) given that there is almost no limitation on 'shelf-space'. Moreover, of the UK independent and specialised films lists for 2003 and 2004, only 36 of the 521 total titles were released by the Hollywood studios --- equivalent to 7 per cent of all releases. However, the studio titles accounted for 12 per cent of all theatrical revenues from specialised films in the two years combined (most of which was generated in 2003 when the studio share of the independent and specialised market revenue was almost 20 per cent from 8 per cent of releases).

A greater concern from almost every single rights holder interviewed seemed to be that a platform was needed to support the UK film industry. That is, there needs to be a greater emphasis on a 'UK independent film' platform than just a 'specialised film' platform. The prospect of a somewhat guaranteed distribution mechanism in one window and showcasing on a dedicated platform/channel --- whether being offered for on-demand rental or digital sell-through over the Internet --- seems to be considered an opportunity to increase the commercial viability of some content (and as such to a relative degree to drive investment).

4. Existing digital on-demand platforms

Platform issues and summary

- The near Video-on-Demand (NVoD) market remains limited by 'shelf space' for content and is not currently serving demand for specialised and independent film.
- Operators in the true Video-on-Demand environment see diversity of content and breadth of choice as a unique selling point for the technology and their services.
- UK VoD operators in the cable, IPTV and Internet space are universally open to bringing specialised content on to their services.
- Operators are generally flexible regarding branding and marketing within the on-demand space and willing to explore a range of options.
- Prior exposure of content in other broadcast exploitation windows is an issue for operators and impacts the value they put on content deals.
- A degree of exclusivity is also considered important and impacts value and willingness to work with particular content providers.
- A number of operators are open to the idea of an on-demand channel that could be exploited across multiple platforms.

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UK on-demand market overview

The UK has a highly developed on-demand market and is currently the only country in Europe in which there is a cable VoD platform. It was also the first market to introduce PVR set-tops for satellite subscribers, and the first in which an IPTV service offering true VoD was launched. The overall market is still dominated by BSkyB and its NVoD satellite service and NVoD homes will continue to out number true VoD homes for the foreseeable future. By 2009, the number of true VoD homes will at least be approaching the number of NVoD, driven by cable and the BT Freeview Plus service.

UK on-demand market: enabled homes by platform

Total enabled homes	2001	2002	2003	2004	2005	2006	2007	2008	2009
nVOD	7,409	10,314	13,191	13,519	11,214	10,428	8,737	6,889	6,533
nVOD+PVR	11	65	250	642	1,277	1,700	2,053	2,408	2,896
<i>nVOD subtotal</i>	7,420	10,379	13,441	14,161	12,491	12,128	10,791	9,296	9,429
VOD	25	12	9	17	2,327	3,261	5,085	6,982	7,228
VOD +PVR	0	0	0	0	69	105	225	371	499
VOD + SVOD	0	0	0	3	23	64	116	162	181
VOD+SVOD+PVR	0	0	0	0	8	24	33	43	43
<i>VOD subtotal</i>	25	12	9	20	2,426	3,454	5,459	7,557	7,952
<i>PVR sub-total</i>	11	65	250	642	1,354	1,830	2,311	2,821	3,438
Total On-Demand	7,445	10,391	13,450	14,181	14,917	15,583	16,250	16,854	17,380

Source: Screen Digest

Pricing

All of the on-demand platforms in the UK, whether in the NVoD or VoD space, operate within a very narrow range of pricing. The current rates for on-demand movies range between £2.00 and £2.99 for library content and £2.99 and £3.50 for newer content. Adult movies command a slight premium.

On-demand movie costs by operator

	Movie cost (£)
Sky	2.99
NTL/Telewest nVoD	3.50
NTL/Telewest VOD	2.00 to 3.50
Homechoice VOD	2.00 to 3.50

Source: Screen Digest

UK: major on-demand platforms

Platform	type	content	distribution	launch date	ownership
Sky Box Office	PPV/NVoD	movies, sport, adult	DTH	1997	BSkyB (100%)
Front Row	PPV/NVoD	movies	Cable	1998	Telewest, NTL
Homechoice	VoD	movies, series	ADSL	2000	VideoNetworks
KIT	VoD	BBC programmes	ADSL	1999	Kingston Communications
BT Freeview Plus	VoD	movies	ADSL	2006	British Telecom
BBC IMP	downlaod	BBC programmes	broadband	2006	BBC

Source: Screen Digest

Revenue

Revenue from on-demand services is relatively small and accounts for just a few per cent of the total subscriber-level revenue in the UK pay television market. We believe that there will be 36.2m on-demand movie transactions (not counting adult) in the UK during 2005 generating £103.7m in revenue. This represents a per transaction value of £2.86, of which about 40 per cent goes to the content owner. The total value of the UK on-demand market for content owners is thus just £41,500. We forecast that the market for on-demand movie content will grow to 59.9m transactions in 2009 generating £180.6m or £3.00 per transaction. The revenue earned from on-demand television by content owners in 2009 will be around £72,000.

UK: Total on-demand movie transactions

Company	Content type	2001 000s	2002 000s	2003 000s	2004 000s	2005 000s	2006 000s	2007 000s	2008 000s	2009 000s	2010 000s
BSkyB	Movie	10,522	11,604	14,372	16,001	17,167	18,678	20,195	20,820	21,331	21,693
	Adult	1,037	1,514	2,113	1,829	3,121	3,502	4,966	5,120	5,245	5,334
NTL/Telewest	Movie	3,290	6,634	13,013	15,033	18,459	28,819	36,924	45,952	37,455	30,715
	Adult	954	1,980	4,067	6,370	7,541	13,483	24,532	31,431	25,866	21,043
Homechoice	Movie	45	36	21	46	558	1,015	1,240	1,382	1,573	1,636
	Adult	0	0	0	0	0	113	169	244	278	289
BT Freeview +	Movie	0	0	0	0	0	94	816	3,294	4,612	5,856
	Adult	0	0	0	0	0	9	120	648	907	1,152
TOTAL	Movie	13,856	18,275	27,405	31,080	36,183	48,606	59,175	71,448	64,971	59,900
	Adult	1,991	3,494	6,180	8,198	10,662	17,107	29,787	37,442	32,296	27,818

Source: Screen Digest

UK: On-demand movie revenue by operator

Company		2001 £000s	2002 £000s	2003 £000s	2004 £000s	2005 £000s	2006 £000s	2007 £000s	2008 £000s	2009 £000s	2010 £000s
BSkyB	Movie	27,983	32,097	41,280	47,663	51,136	58,020	65,312	69,106	72,616	73,849
	Adult	2,649	3,865	5,846	5,642	9,961	11,549	16,906	18,518	20,088	20,429
NTL/Telewest	Movie	8,420	18,108	36,940	42,813	51,343	80,281	102,220	126,842	103,285	84,770
	Adult	2,840	6,320	13,844	25,750	35,299	65,980	135,709	187,248	154,096	125,363
Homechoice	Movie	95	78	46	101	1,252	2,352	3,023	3,608	4,348	4,520
	Adult	0	0	0	0	0	360	540	778	886	921
BT Freeview +	Movie	0	0	0	0	0	277	2,423	9,835	13,769	17,484
	Adult	0	0	0	0	0	30	409	2,344	3,474	4,412
TOTAL	Movie	36,498	50,283	78,266	90,578	103,731	140,930	172,978	209,391	194,017	180,623
	Adult	5,489	10,185	19,689	31,392	45,260	77,919	153,562	208,888	178,545	151,126

Source: Screen Digest

Range of content

Size of movie on-demand libraries by operator

Movie on-demand library	# movies
Homechoice	1,000
BSkyB	210
NTL/Telewest (Front Row)	200
NTL/Telewest (VoD)	600

Source: Screen Digest

A far wider range of content is available through true VoD services than in the older NVoD platforms. Both Frontrow and Sky Box Office offer a selection of around 200 movies. Homechoice currently offers the widest range of on-demand movies in the UK with a library of 1,000 titles. The Filmflex VoD service currently offers a library of 600 titles, although this number likely to expand fairly quickly. NTL, Telewest and Homechoice also offer television content from the main terrestrial broadcasters on-demand.

TV-based (walled garden) platforms

Video Networks

On-demand offering

Homechoice operates its own Video-on-demand movie service independent from the operations of BSkyB and the UK cable companies NTL and Telwest. It claims to offer the widest selection of on-demand movies in the UK. Its on-demand library stands at 1,000 titles. This compares to the 600 movies currently in the FilmFlex cable VoD service, 200 on offer through the Frontrow cable NVoD service and 210 made available by Sky through its Sky Box Office NVoD offer. Movies are priced at between £2.00 and £3.50, identical to the pricing range of the FilmFlex cable VoD service. The Homechoice service operates in the same window as Sky Box Office.

Homechoice also offers on-demand movie content in two additional windows, both of which are after the Sky pay television window. It provides SVoD access to 50 movies a month for a subscription fee of £5. In addition, it provides access to library movie content on a SVoD basis. Library content costs £2 per title.

Homechoice offers its on-demand movie content under a series of branded streams. The Film 1ST stream contains the latest release content, while archive and classic movies are offered under the Must-See Movies brand. The £5 a month SVoD channel is branded Movies Now Express. There is also a kids movies on-demand service called Screenies and a Bollywood on-demand movie and music channel. All on-demand movies are purchased for a 24 hour rental period.

Homechoice relies heavily on major studio deals to fuel its on-demand service. The amount of independent content offered by Homechoice is limited, although the company does have on-demand deals with the BFI, Momentum and Pathe. Homechoice also said it offered a lot of World Cinema which performs relatively well on the platform.

Video Networks subscriber forecasts

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	000s	000s	000s	000s	000s	000s	000s	000s	000s	000s
Homechoice	10	15	5.1	3.6	13.9	42	90	140	190	235

Source: Screen Digest

Strategic options

- 1/ Providing content to the Homechoice VOD service

Homechoice is open to the idea of providing access to a wider selection of independent and specialised content. At the most basic level, one way in which this could be achieved would be through the provision of UK Film Council supported content to the Homechoice on-demand library. There are two potential pit-falls to this approach. The first is that Homechoice is likely to want to limit the number and types of film made available directly via this outlet. It would likely object to the 'dumping' of large amounts of content into a 1,000-title library as this may overwhelm the other content provided on this basis. It would also certainly want to practice some form of quality control over the content it allowed into this library which would limit the range of titles that the UK Film Council could distribute via this route.

- 2/ A branded on-demand section within the Homechoice VOD service

Reaching agreement with Homechoice on the provision of branded on-demand section within the overall on-demand movie offering would go some way to solving the issue of content dilution by UK Film Council content. Clear branding would allow some separation of the specialised and independent film provided by UKFC from the Homechoice branded movie on-demand content. It would also give the UKFC content a distinct character and begin to brand build a service that could evolve into a stand-alone offer or SVoD channel. However, it is likely to be seen by Homechoice as a half-way house to a fully fledged stand alone SVoD channel. It would also still raise issues for the film council in terms of getting the widest range of content on to the service as, while the dilution effect is de-lined, it is not necessarily removed.

- 3/ A branded on-demand SVoD channel

Homechoice has launched a number of SVoD channels with content partners which could provide a model for a UKFC specialised film VoD channel. Homechoice works on this basis with Cartoon Network, Disney and Discovery Communications, providing their content through a number of own-branded on-demand television channels. Homechoice also aggregates content for its own on-demand entertainment channels. Its C2 channel offers factual and documentary programming, C1 is the on-demand entertainment channel offering content from the main terrestrial TV channels, as well as Paramount Television and Hallmark. Cartoon Network, Disney Treasures and Scamp also provide kids content through on-demand channels.

Homechoice was generally open to the idea of operating a similar branded on-demand channel with the UKFC. In such a partnership, Homechoice handles branding, scheduling and day-to-day running of the channel. Homechoice claims to be unique in its experience of running such on-demand channels. It describes a VoD channel as 'like having a puppy rather than a dog' and says the skill-set to make the best of a VoD channel is unique.

This approach would entail a marketing commitment to maintain viewer interest in the UKFC content made available.

Practicalities

Homechoice can handle content ingest, scheduling, play-out and marketing. It can also re-version content for output to multiple devices. Homechoice could also distribute the multi-version digital content to other platforms.

Access costs

It is possible to buy television-only access from Homechoice, but most packages are sold bundled with broadband at either 1, 2 or 8 Mbits/s. The Big Pack and Max Pack come with full access to Homechoice's VoD services. With 1 Mbit/s Internet access, the Big Pack costs £27.99 a month and the Max Pack costs £37.99 a month. Additional SVoD channels are also available at between £5 and £6 a month. Homechoice charges £2 for older movies and £3.50 for newer titles. Fifty older movies are also made available through the Movies Now SVoD channel for £5 a month.

Homechoice package pricing

	1 Mbps	2Mbps	Max speed	Content
Basic pack	17.99	22.99	29.99	35 channel, VoD sample
Big pack	27.99	32.99	39.99	55 channels + VoD
Max pack	37.99	42.99	49.99	80 channels + VoD
TV Only	17.99			

Source: Screen Digest

Notes:

1/ All costs are incremental to basic

Homechoice: VoD pricing

New releases	£3.50
All other films	£2.00
Bollywood	£2.00-£2.50

Source: Screen Digest

Homechoice: SVoD pricing

Kids TV	£6 per month
V:MX Music TV	£6 per month
Chelsea TV	£6 per month
Bollywood	£6 per month
Movies Now	£5 per month
Express	

Source: Screen Digest

Partnership potential

Homechoice expressed interest in working with the UKFC and in the type of content that may be available within the specialised film category. To set-up such a service there would likely be an upfront payment for EPG listing of the new channel and then the channel would be operated on a revenue share basis. For the UKFC, this therefore provides a relatively low cost means of launching a VoD channel within the IPTV space. The downside is the limited reach of the Homechoice service which currently has just 34,000 subscribers and is only now beginning to expand outside the London area.

NTL-Telewest/Filmflex

On-demand offering

Filmflex is the true VoD portion of NTL and Telewest's on-demand offering and is gradually replacing the Nvod Frontrow service. Both are managed by On Demand Management, the content aggregator and on-demand service provider recently acquired by VOD server maker Seachange. The roll out of VOD services across the networks of NTL and Telewest should be completed by end 2006. Filmflex is a joint venture between On Demand Management, Sony Pictures Entertainment and Disney. It offers older movies for £2 for a 24 hour rental and newer titles for £3.50. Initially most of the content is bigger blockbuster movies and adult content as was provided in the nVod service. Filmflex has VoD deals in place with all the Majors (including Dreamworks) except Fox and Universal.

The range of movies on offer is larger than in the Nvod environment, however. Through Frontrow, 200 movies a year are on offer. Through Filmflex, the number has been expanded to 600, of which about 200 are older titles. Filmflex is also open to accepting a range of other content and claims to operate a 'farmers market' approach to welcoming content providers. In the case of Filmflex, this applies both to the claimed open approach to the type of content it wants to attract and the financial terms on which revenue shares are worked out. Revenue streams and contracts are reckoned to be equal for all, regardless of the size of the supplier.

Filmflex claims to be experiencing greater than expected demand for library and independent product at around 40 per cent of buys. Currently the independent film content available on Filmflex tends to come in a later window than larger studio movies as the operator believes there is a tendency among independent distributors to hold product in the video window for longer.

Strategic options

- 1/ Providing branded content to Filmflex

Filmflex expressed interest in providing on-demand access to specialised film content from the UKFC. The most likely way in which this would be done would be through the addition of UKFC content to the existing on-demand service. Filmflex claims that it is currently taking content from any supplier that has product available for the VoD window, although it is dealing with the larger suppliers first. Filmflex considers a UK theatrical release an essential measure of a film's value and applies this as minimum threshold criteria for inclusion in the service. Any other content would be taken on a discretionary basis.

Filmflex also believes that its contracts give it VoD window rights rather than cable VoD rights, meaning its understanding is that it can exploit those rights on other technical distribution platforms. Thus if cable companies were to distribute their content on IPTV or over the Internet, the rights would be in place to do so.

UK cable subscriber forecasts

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>
NTL	2,292	2,275	2,055	2,024	1,980	3,313	3,373	3,429	3,480	3,527
Telewest	1,202	1,341	1,294	1,272	1,313	0	0	0	0	0
Total cable	3,494	3,616	3,349	3,296	3,292	3,313	3,373	3,429	3,480	3,527

Source: *Screen Digest*

Practicalities

On Demand Management generally handles the ingest and play-out of content and considers this a form of quality control over the material played out on the service. Content is ingested at ODG and converted at 40Mbits/s. It is then held as a master for extracting in different formats.

From the ODG studio it is sent to a storage server at NTL or Telewest. The server is managed remotely by ODG. From the storage server it is fed out to the cable headends. An element of the costs involved in this process is passed on to content suppliers. As well as the cost inherent in processing the programme, it costs \$200 to \$400 just to 'get a tape in the building', that is producing the tape and shipping from LA (or wherever) and a dubbing component.

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The quality control stage initially involves spooling—simply a technician going through each tape to ensure it is of suitable quality. All tapes are received as DigiBeta, but the original must be good as the content is going to be compressed.

The next step is to dub through to create an encoded asset. That is then paired with metadata including the content's commercial parameters, physical information, price, revenue splits, and time-related changes in content utilisation (e.g. there may be a promotional element that only runs until content is made available such as a 'coming soon' tag). The metadata also needs to specify the time at which the content becomes 'library' product and thus commands a lower price. At the end of the process, ODG looks at how many views content has had within the system and extracts the buy-information. A split of the revenue share is taken by Filmflex to cover processing fees; this is then passed on to ODG.

As far as the content owner is concerned, there is no upfront cost. All the costs come out of the transactional revenue made further down the line. However, the content owner generally has to invest in some form of marketing. Although content owners could simply leave product on the platform without marketing, it might detract from other buys on other media.

Access costs

NTL customers receive their set-top box as part of their monthly subscription fee. Only digital customers can access on-demand services. NTL offers a selection of basic packages and Sky movies and sports channels at a slightly higher incremental cost than BSkyB. Internet and telephony can also be bundled with the service.

NTL package pricing

		Sky Movies 1	Sky Movies 2	Sky Movies Collection	Sky Sports & Movies
Select Pack	5.50	19.50	19.50	25.50	32.50
Base Pack	11.00				
Mid Pack	16.50				
Family Pack	19.50				

Source: Screen Digest

Notes:

1/ All costs are incremental to basic

Partnership potential

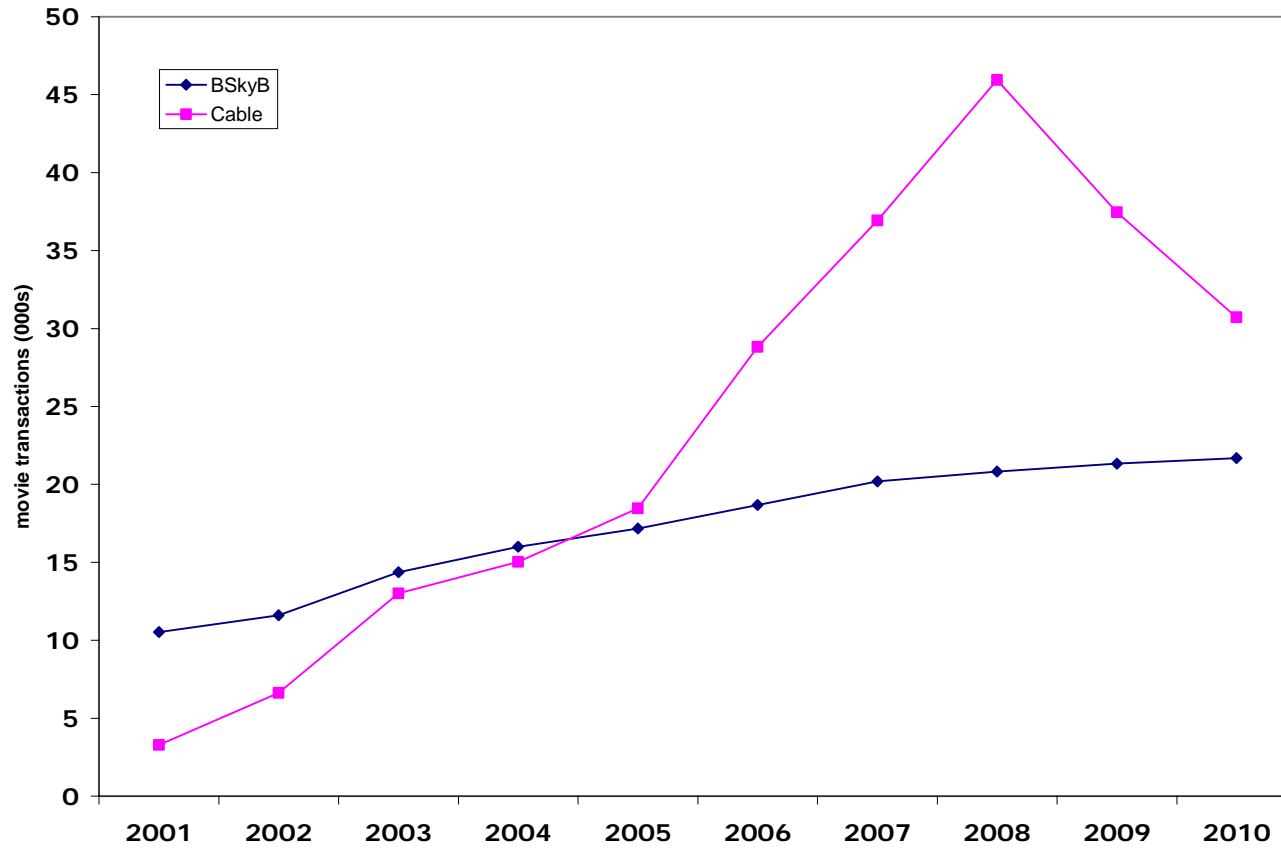
In the UK market, On Demand Management/Filmflex is a strong potential partner. Although the household reach of cable is far lower than that of BSkyB, the buy-rate of on-demand movies on cable has traditionally been higher than on Sky's satellite NVoD Sky Box Office service.

We believe that the volume of content sold on-demand on cable will exceed the amount shown on Sky from next year (2006), driven by the continued rollout of the true VoD service and the correspondingly higher buy-rate. That NVoD is less important for Sky is illustrated by the gradual reduction in the number of Sky Box Office channels operated on the platform. The number has dropped from 85 to just 60 in recent years.

On Demand Management has a great deal of experience of both the rights management and acquisition side of the business and the knowledge to run an on-demand service from ingest through to content tagging and management, to play out and reporting. Although it operates on a smaller access platform than Sky (namely UK cable), the higher buy rates within the cable on-demand space mean that from a content owner's perspective, cable could actually be a better partner to achieve the widest distribution of movies within the on-demand space.

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Total on-demand movie transactions (Sky vs. cable)



Source: Screen Digest

BSkyB

On-demand offering

BSkyB's primary on-demand offering is currently the Sky Box Office NVoD service delivered via satellite. The service has gradually reduced the number of channels offered, from 85 to 60, doubtless because the revenue generated by on-demand transactions (£58m on movies in 2005) could not justify the costs of transponders to service it.

Sky offers 210 movies a year on the Sky Box Office service, each priced at £2.99. Being NVoD, there is no rewind or pause functions, but in combination with the Sky Plus PVR set-top, a virtual VoD experience is achievable. Sky Plus viewers can download movies to their hard-disks to watch at their leisure with full video-on-demand functionality during the 24-hour viewing window. The 'rental' period for a stored movie begins only when the viewer starts to watch.

In addition to its PVR strategy, Sky is also getting heavily involved in the broadband space. Later this year, it is to launch a Sky Movies broadband download service operating initially in the pay TV window as a no-cost extra for Sky movies premium service. Sky has made clear its intention to ultimately operate in the VoD window as well. Sky claims to have re-negotiated three of its movie deals on terms which allow it 'greater flexibility in the way it sells movies', content owners have confirmed that Sky is attempting to acquire all electronic rights to its movies. The three studios that have re-negotiated—Fox and two others—are likely to be joined by the other majors in the near future. Warner Bros has confirmed that it has not yet joined the Sky Broadband service due to window and cost issues, but added that it expects to do so in the next six to nine months.

The current offer by BSkyB to acquire unbundled broadband service provider Easynet points to an even greater involvement in the broadband space in the near future which could ultimately see a hybrid satellite/DSL set-top or PVR providing true video-on-demand capabilities combined with a home media server functionality. More support is given to the home media server theory by the fact that BSkyB has now brought the price of its larger 160Gbyte PVR in line with the smaller model, dropping the price from £399 to £199.

BSkyB subscriber forecasts and Sky Plus homes

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>	<i>000s</i>
DTH subscribers	5,051	5,716	6,562	7,208	7,609	8,005	8,325	8,591	8,797	8,947
Sky Plus PVR subscribers		11	65	250	642	1,201	1,582	1,890	2,199	2,684

Source: *Screen Digest*

Strategic options

- 1/ Provide content to the Sky Box Office Service

The UKFC could consider providing content to the Sky Box Office nVoD service. However, with 'shelf space' for just 210 movies a year, this route is unlikely to provide wide distribution for the full range of specialised content that the UKFC would wish to make available. It would also be an unlikely fit with the blockbuster ethos of the Sky Box Office offer.

- 2/ Work with Sky to develop a presence on the Sky Broadband movie download service

Sky's soon-to-launch (January 2006) Sky Movies Broadband service is expected to ultimately offer all of the movies on the Sky Movies channels in a download format as a free bonus to Sky movies subscribers. But Sky has further plans for the service that include adding an extensive array of library and archive content and pay tiers for access to a greatest choice of content. Sky claims it will try to replicate the on-line DVD rental model in its range of choice, but unlike the on-line DVD market, customers will of course, always get the movies they want rather than only the ones on a list of choices that happen to be available.

The UKFC could consider adding its content to this service and could explore provision of a branded stream within the download service that may or may not include a subscription element. Sky Movies Broadband will allow users to download the content and keep it for 30 days. The application uses Windows Media DRM and content cannot be distributed beyond the application into which it is downloaded, which in turn is tied to a single machine.

- 3/ Launch a specialised movie channel, possibly in partnership with Sky

Sky expressed interest in a stand-alone UKFC specialised film channel which could be operated either as an entirely independent entity or in partnership with Sky. Sky estimates that the annual cost of running such a service would be less than £1m – not including any content costs. A channel developed in this way could also be made available to other platforms in the UK, including cable operators NTL and Telewest and Homechoice. A channel developed and retailed by Sky in joint-venture with the UKFC would not be available to Freesat viewers due to the encryption required to place the channel in the Sky retail space. The UKFC could, however, choose to launch an unencrypted specialised movie channel that could be made available to both Sky and to the Freesat platforms. However, it would lose the marketing support of Sky if this latter route was taken.

Practicalities

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Sky was open to a variety of ways of working and, while it is able to digitise and ingest assets, was also perfectly open to accepting pre-digitised content that may have come from a centralised source, providing standardised codecs and DRMs were in use.

From a practical point of view, the value of the content is impacted if it has had prior exposure in other TV windows or if it is made available 'everywhere'. However, for on-demand content in the broadband space, Sky was surprisingly open to the fairly wide distribution of the content on other platforms and said it would 'expect' the content to also be made available on the service of major players like cable, British Telecom, Homechoice, Wanadoo, AOL and Orange. Nonetheless, the greater the exclusivity, the greater support Sky would give to the content, particularly as regards content and promotion within the broadband movie application itself.

Access costs

BSkyB recently simplified its package structure launching six mini basic tiers that can be combined in twos. The incremental cost of movies, sports and movies plus sports declines the more basic tiers are taken. Sky subscribers receive their set-top box as part of their subscription. Sky Plus subscribers pay towards the cost of the PVR set-top which is sold for £199 for either the 40Gbyte model or the 160Gbyte model. VoD content is sold for £2.99 a title for 24 hour rental.

BSkyB: package pricing

	# Basic packs	Cost basic £	Movies £	Sports £	Movies and Sports £
Basic Mixes:	2	15.00	19.00	19.00	25.50
	4	18.00	17.00	17.00	23.50
	6	21.00	15.00	15.00	21.50

Source: Screen Digest

BSkyB: Movie on-demand costs

	cost (£)
Films	2.99

Source: Screen Digest

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Partnership potential

Sky is a dominating presence in the UK pay television business and has by far the largest reach of any pay TV provider. As a developer and programmer of linear television channels, Sky has wide experience both of wholly-owned and operated movie services and of joint-venture channels with content providers. Sky also has an established wholesale model in place for wider distribution of the channels on UK cable and IPTV platforms. Wide distribution of channels across all available UK platforms is an established practice for Sky, including distribution of some channels on free to air DTT service Freeview.

Sky is a powerful force in the UK market, but this is also seen by many as a threat and a downside to working with Sky. There is indeed a negative attitude from a number of platform operators to Sky's domineering position.

BT Freeview Plus

On-demand offering

British Telecom's Freeview Plus on-demand add-on to the UK digital terrestrial platform has yet to launch, but is currently in trial. A full commercial launch is likely in the first half of 2006. British Telecom plans to offer a range of content on the service including movies, adult and television content. Pricing will be similar to the existing UK on-demand platforms.

British Telecom sees wide choice as a key selling point of the service which will require users to buy relatively expensive (by Freeview standards) set-top boxes. These boxes, which will include a DSL modem and a hard disk, are likely to retail for around £120.

BT is in negotiations with content suppliers and is known to be talking to all of the major studios and television content providers like the BBC, ITV, Discovery, Channel Four and Channel Five.

BT Freeview Plus forecast subscriber take-up

	2,000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	000s	000s	000s	000s	000s	000s	000s	000s	000s	000s
BT Freeview Plus	0	0	0	0	0	0	50	200	400	650

Source: Screen Digest

Strategic options

Provide content to the BT on-demand service

BT says it wants to have a large archive of material on the service and that 'diversity of content' is critical. The company is open to the idea of getting some of that diverse content in the form of specialised film from the UK Film Council. Deals would be done on a case by case basis.

Practicalities

BT has experience of handling content ingest, digitisation and storage in the broadband space through its Rich Media division, the unit responsible for facilitating content 'delivery over broadband networks. Rich Media fulfils a similar roll to BT Broadcast in the traditional television space and is part of the same division within BT.

The company said its starting point for doing content deals would be to look at the value of the content and then 'do a deal around that'. Older and more specialised content could also be offered on a SVoD basis.

Access costs

From a consumer cost perspective, accessing the Freeview Plus service will be relatively low-cost. Consumers will have to buy a high-end set-top box costing around £120. This will have full PVR functionality as well as a broadband return path for accessing the BT VoD content. We expect there will be no monthly access fee for the service; just a charge for each piece of content consumed.

Partnership potential

Until the platform has launched, it is difficult to gauge how successful the BT Freeview Plus service will be. British Telecom is committed to the launch and will be putting a significant marketing spend behind it. We currently forecast that the BT Freeview Plus service will have 650,000 subscribers by end 2009.

The cross promotion opportunities across all BT product offerings are also substantial. Our understanding is that users will have to be BT Broadband customers, at least initially, which could have some limiting impact on reach of the service. However, if the content and product are compelling enough, this is likely to become an insignificant problem. The pricing of the box (with PVR functionality) and the

fact that BT will not charge a monthly fee to access or use the service could make for a compelling product, especially if BT is able to replicate or better the breadth of content on offer from on-line DVD rental outlets.

As a partner, BT also has the facilities and experience in handling broadcast content, both within a traditional satellite and cable television space and in a broadband environment. Clearly BT also has access to a national network and will be riding on the back of the UK's fastest growing digital platform, Freeview. However, BT will be building its service from scratch and entering a space that is non-traditional for the company in the eye of the consumer. Initial uptake is therefore likely to be slow.

BBC

On-demand offering

The BBC already makes its content available on-demand over the VoD services of UK cable companies NTL and Telewest and the IPTV services of Kingston and Homechoice. Its 'in-house' plans for on-demand delivery centre on the Interactive Media Player (iMP).

The iMP is an application that brings functionality similar to the BBC radio re-play service, but for TV content. Users of the iMP player (currently in trial) can download via the Internet programmes broadcast during the previous seven days for viewing through the iMP player. The content is locked on the computer's hard disk and disappears after the seven day window has expired. The technology is also portable to other devices, including mobile phones.

During trial and the early days of the service, only the previous week's programming will be made available. But the BBC has said it plans to also make its archive available, possibly on a pay-per-view or subscription basis. In addition, the iMP will be open to other content providers, each of whom can operate within the application using their own business model and branding. The BBC is also talking to all the other major UK broadcasters to bring their content within the iMP application.

In addition, the BBC is already working with short and independent film in a broadband environment with a streaming movie service. The Film Network is a short film site offering short film content for free to stream to the PC. The BBC is currently assessing the future of its strategy regarding provision of film content online.

Strategic options

- 1/ Make content available to the BBC for play-out on the iMP

Choosing to make UKFC content available within the iMP would be an equivalent to operating a branded stream within a traditional cable or satellite on-demand service. This would involve coming to an arrangement with the BBC to provide content that would become part of the iMP on-demand library, but differs from using the iMP simply as the delivery mechanism of choice in that the BBC would in this case manage the ingest and playout of the material.

- 2/ Make use of the iMP technology to launch a branded on-demand service

The BBC sees the iMP player as an open platform which can be used by others to bring their content into an online on-demand environment. The corporation compares the development of the iMP to the development of colour television; that is the development of a technology that the BBC will make available to the television industry as a whole as part of its public service remit. In this respect, other content providers could make use of the iMP technology to launch their own on-demand offering with their own branding. While this would provide a mechanism to distribute already digitised and encoded content to the consumer, it would still require development of all the other aspects needed to run an on-line service.

- 3/ Practicalities

Choosing to work with the iMP offers a full range of options, from simply using the iMP player as a facilitating technology in a broadband download service otherwise managed and operated by the UKFC or another party, through to acting as a content provider to the BBC in order to broaden the breadth of content within the iMP environment. If the iMP is used simply as an enabling technology, then the UKFC would have to manage all other aspects of running an on-line download channel, or farm out those aspects of the operation to a third party. In a model where the UKFC acted only as a content supplier, the BBC would be in a position to handle all the practicalities of content ingest and play-out.

Partnership potential

As a broadcaster with a developed online and on-demand presence, the BBC is a well positioned partner. It would also be a useful partner if the UKFC chose to explore provision of content in a public service window towards the end of the traditional content exploitation chain.

Film Four

On-demand offering

Film Four does not currently have an on-demand offering, although it is almost certainly working towards launch of such a service within the next 18 months to two years. Its parent company Channel Four does provide TV content to other on-demand platforms, including the Homechoice IPTV service. Film Four has yet to secure on-demand rights for its content, but says it 'assumes it won't be a problem'.

Strategic options

- 1/ UKFC programming block on Film four

Film Four does not release subscriber numbers, but claims to be the third largest a la carte channel in the UK after Sky Movies and Sky Sports. We estimate that the channel probably has in the region of 300,000 to 500,000 subscribers. The Film Four ethos is: 'great films you know, and great films you don't', a standard which could provide a good fit with specialised film content shown in a branded programming strand. This issue with a programming block, however, is that the 'shelf space' available for content is extremely limited. In addition, Film Four would want to apply its own editorial standards to the content and would thus likely cherry pick the more commercial or notorious titles within the UKFC block.

- 2/ Launch of a dedicated UKFC specialised film channel

Film Four was enthusiastic about working with the UKFC to launch a dedicated specialised film channel. Film Four contends that the elements required to create demand for a niche movie channel are: brand, market know-how and the ability to target consumers of film. Film Four believes it has all the necessary experience and market knowledge to launch a specialised film channel into the UK multichannel market.

Practicalities

Film Four operates a bouquet of three 'a la carte' pay television channels that are distributed on UK cable and satellite and marketed directly by the company. Film Four's three channels cost £7 a month on Sky Digital and £6 a month on cable. The main channel is Film Four and there is also a Film Four +1 time-shifted channel and a Film Four weekly channel, which shows three movies a week at 8, 10 and 12 every day.

Any new channel for specialised film, however, would probably have to carve out its own market from scratch, unless an agreement could be reached to bundle the channel with the existing Film Four bouquet.

Film Four: monthly subscription costs

Film Four bouquet (Sky)	£7
Film Four bouquet (cable)	£6

Source: Screen Digest

Partnership potential

Film Four is arguably well placed to act as launch partner for a specialised movie channel. As well as the experience of launching similarly targeted channels, the company has the distribution model in place to gain channel carriage across cable and satellite pay television in the UK. Film Four brings marketing and cross-promotion opportunities to the table. In addition, the division will certainly enter the on-demand space within the next two years.

On the less positive side, the channel has yet to develop an on-demand presence and has not even addressed the rights issues surrounding licensing of its content within the on-demand space. It is very much a traditional multichannel operator and would best be seen as a strong partner to develop this aspect of the distribution chain should that prove to be of interest to the UKFC.

Access costs

Minimum access costs to buy on-Demand movies by platform

Operator	service	hardware cost (£)	minimum monthly access fee (£)	cost year one (£)	cost year two (£)
BSkyB	nVoD Sky Box Office	0.00	15.00	180.00	180.00
BSkyB	PVR On-Demand	199.00	25.00	499.00	300.00
BSkyB	Movie download	400.00	48.99	987.88	587.88
Cable	nVoD Frontrow	0.00	5.50	66.00	66.00
	VoD	0.00	5.50	66.00	66.00
Homechoice	VoD	0.00	17.99	215.88	215.88
British Telecom	Freeview Plus (VoD)	120.00	14.99	299.88	179.88

Source: *Screen Digest*

Notes

1. Cost of Sky Plus is £199 for 40Gbyte or 160Gbyte model. Install is additional £60 or free with multiroom subscription (£10 a month).
2. Sky Plus additional subscription fee of £10 a month is waived if customer takes two or more premium channels.
3. Sky movie download service requires PC and broadband connection which we have added in the costs above based on a minimum £400 for a PC and £14.99 a month for a broadband subscription.
4. The cost of a BT telephone line or equivalent is not included in any of the above figures but is required for all accept cable VoD. Cable phone line rental has also not been included.
5. All costs are based on 2005 pricing.

While pricing for on-demand movie transactions is fairly standardised, the up-front and on-going investment required in order to gain access to transactional on-demand services varies greatly. The table above shows the minimum outlay required to access on-demand movie services (the per-view cost of each movie is an additional cost on top of this). By far the most expensive is the new Sky Movies Broadband service for which a computer and broadband connection are required as well as a subscription to the Sky Movies pay TV tier. The minimum first year cost would therefore be just under £1,000 falling to £587 in following years. Cable has the lowest year-one up-front cost at £66, even beating yet-to launch Freeview Plus for which a high priced Freeview set-top box purchase is required as well as a broadband Internet connection. However, this cable fee is based on taking the minimum entry-level TV only basic pack with no bundled

phone line which is not a service level promoted heavily by the cable companies and most customers will be paying at least £16 a month for this tier plus £10.50 a month line rental.

Internet-based (open gateway) Platforms

Overview

As of mid November 2005, there was an absence of an Internet movie platforms offering premium movie downloads (or streaming) to UK broadband users. This was notable given that the total number of UK broadband households is nearing 10m, and set to outstrip households subscribing to pay-TV in 2006. Moreover, both an increase in bandwidth and a decline in cost is making the market ever more competitive – by end 2005, the highest available downstream speed in London was 24 Mbits/s for £24 from Be, whilst UK Online was offering unlimited 1 Mbit/s for as little as £9.99. Screen Digest predicts that total broadband homes in the UK will pass 18.5m by 2010.

UK Broadband households		2003	2004	2005	2006	2007	2008	2009
access technology								
DSL	000s	1,774.4	4,159.9	7,203.6	9,669.6	11,712.0	13,141.3	14,268.8
Cable	000s	1,363.8	1,943.2	2,653.7	3,078.3	3,386.1	3,623.1	3,822.4
other	000s	13.0	18.0	23.8	29.7	37.3	43.2	49.5
total	000s	3,151.2	6,121.1	9,881.1	12,777.6	15,135.4	16,807.7	18,140.8

Source: Screen Digest

Currently, the only meaningful online movie services available to UK broadband customers are delivered out of the US by CinemaNow and Movieflix, both offering public domain and budget titles for stream or download. The former is an a la carte service, whilst the latter is a subscription platform and is excluded from this survey since it does not have a UK-specific strategy. Neither offers any titles in the UK from the major studios or their subsidiaries – even though CinemaNow rivals the studio-backed Movielink in the US in terms of its offer of studios releases. There is currently no service specialising in UK independent and specialised titles (as much due to a fear from distributors to get involved as to a disinclination from platform operators to enter the market without the support of studio titles to prop up their business models).

Nevertheless, with studios becoming more pro-active in striking video-on-demand (VoD) deals in Europe, several UK-centric services offering premium and specialised titles are expected over the coming months from a broad range of companies, including online DVD

rental firms, third party operators (CinemaNow being one), ISPs and even Apple (whose iTunes is now offering video downloads, albeit only on short form and TV content).

Service providers tend to fall into two broad categories:

- Third party service providers -- such as online DVD rental companies, pay-TV operators and technology companies;
- ISPs -- such as AOL, Yahoo! and Tiscali -- who are acquiring content and rights as a means of using 'value-added' entertainment services to attract more broadband customers.

Importantly, these two categories of service provider are not mutually exclusive. For example, it is perfectly feasible for an ISP to strike an alliance with a third party service provider on a co-marketing basis (as Tiscali has so far chosen to do with CinemaNow in the UK). Also, services take two forms. They are either available via web-based browsers, as CinemaNow is, or require an application to be downloaded to the user's computer (as is the case for Apple's iTunes or the upcoming Sky Movies Broadband service).

The result is that as pay-TV operator Sky plans to launch its movie download service in the fourth quarter of 2005 on a free basis to Sky Movies subscribers (profiled above), DVD rent-by-post specialists LoveFilm and Video Island have been strengthening their online positions. Indeed, both have agreed strategic partnerships with ISPs (LoveFilm with Tiscali, Video Island with Wanadoo), and are already offering short form video content alongside their core business. LoveFilm has gone a step further and has expanded its business portfolio with a full VoD service.

Meanwhile, US-based service provider CinemaNow is due to set up a UK site in 2006. Yet, even if Internet VoD services are able to establish a marketplace in the UK, Sky Movies Broadband could stifle the competition. The development of a PPV VoD market is not necessarily under threat because – for now at least – such services would have a release window advantage but services could find it difficult to rival Sky's value-added offering which is effectively free for subscribers to Sky's premium movie channels package. Also, despite the fact that Sky's proposition will initially be within the standard pay TV window (12 months after theatrical release), Sky plans to offer movie content in the earlier pay-per-view and video-on-demand windows (eight months after theatrical release) and – although there is no guarantee that the studios will consent – Sky is attempting to renegotiate some of its rights deals accordingly.

The most notable consequence of Sky's foray into Internet delivery is the fact that it will overnight switch on the Sky Movies subscriber base (of whom there are currently 5m) to Internet VoD. The key aspect of the service is that all titles will be offered within the pay-TV window, given that BSkyB in some of its new deals is now gaining control of the subscription SVoD rights by virtue of its existing pay-TV contracts with the studios (although there are some momentary hold outs, such as Warner Bros, this is unlikely to last long).

The impact of BSkyB's approach is likely to have a stifling effect on the immediate development of the a la carte Internet VoD market in the UK – given the platform's scope and access to content. However, with studios now proactively encouraging the open Internet as a viable distribution platform, there will be a replication of existing TV models by 2006 – that is, titles with the earlier PPV window finding an audience seeking newer titles, but not quite reaching the value of the pay-TV deals.

Added to the equation are Apple and Sony, who are currently offering video downloads via iTunes to the iPod (worldwide) and SonyConnect to PSPs (in Japan only). Apple is likely to quickly expand its premium content offering out of the US, whilst Sony is planning to translate its model to the UK and Europe in 2006, offering approximately 500 titles for PPV download, and, as suspected, for 'digital sell-through'. The latter is a model which a number of other studios, including Disney and Warner Bros, are also seeking to exploit in the longer term. The digital retail model might eventually debut simultaneously with DVD retail, and, as such, marry the profitable margins of retail and on-demand delivery in one proposition. The key technical issue to be resolved yet is how to allow for download-to-burn rights whilst retaining copy protection on the home-made DVD. Other service providers to watch include ISPs AOL (which is expected to launch services independently with Warner Bros and possibly in conjunction with an online DVD rentailer), and search engines Yahoo! and Google – both of which are in the early years of ambitious content distribution plans. As the situation stands, the first digital sell-through offers should appear in the UK in 2006 and are likely to drive the market into 2010.

UK: A la carte movie download and streaming forecast¹

		2003	2004	2005	2006	2007	2008	2009	2010
Downloads/streams per year	000s	0.9	0.9	9.5	775.9	2,205.7	7,348.0	19,826.9	48,505.6
Annual change in downloads/streams	%		108.7	529.2	6,851.2	280.2	245.5	191.7	160.8
Share of European total	%	0.8	0.2	0.9	16.7	13.6	18.6	24.4	31.2
Buy rate ²		0.00	0.00	0.00	0.06	0.15	0.44	1.09	2.51

Source: Screen Digest

Notes

¹ does not include content downloaded or streamed within a subscription service

² buy rate is average number of downloads per broadband household during the year

To this end, Screen Digest predicts that by 2009, the equivalent of every UK broadband household will have downloaded or streamed at least one paid-for movie from the Internet, whether a la carte rental or a digital purchase. Adding subscription revenues, this would generate just under £80m per year in mostly additional revenues for the movie industry, surpassing £200m by 2010 – although some

cannibalisation of the video/DVD rental market is likely. This figure could conceivably be higher, but at present Sky Movies Broadband's free downloads offering is likely to have some detrimental effect (though this may change heading into 2010), as will on-going bandwidth issues, download times and the general prevalence of TV-based VoD – such as cable's Filmflex, BT Freeview Plus, Homechoice and the hybrid Sky Movies Broadband/Sky Plus platform.

Third party service providers

Lovefilm

On-Demand offering

DVD-by-post specialist LoveFilm currently has 120,000 subscribers at present, of which 80 per cent are full members (the remaining on trial). The platform is growing at an average of 800-1000 new customers a day, though in some seasonal adjustments this can drop to 400 a day. The service provider's net revenue is now around £20m per year across its subscriber base, and it has an inventory of 36,000 titles.

Most recently, Lovefilm announced plans to leverage its customer relationships and launch a UK movie download service before Christmas 2005. The PPV service will offer users a five-day period in which to view content, with titles priced at £2.99 (€4.50), using Windows DRM 10. The VoD platform will launch initially with 500 titles, including content from five major suppliers, including Warner, as well as independent titles and its own sourced content.

The renter is targeting 1m downloads within the first year of service. Screen Digest understands that whilst LoveFilm's platform will be focused on PC downloads, the online renter is also exploring the possibility of IPTV distribution. What is essentially unique about LoveFilm is the company's plans to offer online DVD rental and digital downloads through a single user interface.

Strategic positioning

Lovefilm certainly believes that specialist film is "the bigger opportunity for VoD for the short term". As such, the service provider has been keen to encourage such titles to take advantage of its new platform. According to the company, deals have been agreed with some specialists, the identity and terms of trade of which are at present confidential. Of the initial 500 titles to be available on launch, 200 are to be independent and foreign films that may not have even been released in the UK or made available on DVD. It is believed that Lovefilm are in discussion with Optimum Releasing amongst others, as well as having secured a deal with Celluloid Dreams and Warner Bros.

In the long term, Lovefilm is looking at both download-to-own and rental models, not to mention subscription models mimicking its DVD rental business, but will be launching initially with a la carte rental downloads. The service also has ties with Intel's Viiv technology which it hopes will drive it towards its ambitious goal of 1m downloads. This effectively amounts to a pre-loading of the service on new Viiv branded entertainment PCs. It is also looking at the possibility of offering its service white label to other ISPs and service providers – in the first instance AOL.

The benefits and limitations of any alliance with LoveFilm are evident. The company --- through Arts Alliance --- is building a digital repository which will serve both theatrical and, in time, other outputs of that content (VoD). The current output is geared to theatrical digital cinema outlets, but there's little to prevent that being extended to delivering the same content to the living room. Added to this, Lovefilm, as much as Video Island (see below), have demonstrated an ability to manage and handle transactions very well, to grow a brand in a competitive marketplace and develop strategically in line with market developments. Most importantly, the service is one of the few (alongside Video Island) to have championed independent and specialised content as a core element of its business model.

However, although the service is widely available to anyone who wishes to join, there is a requirement that the customer be in a direct contractual subscription relationship with Lovefilm before being able to access services --- though whether this will operate in the download model remains to be seen. Moreover, the company's credentials in running a consumer-side digital download service has yet to be proven both technically and commercially, given Lovefilm's lack of a track record in this field.

Video Island

On Demand Offering

DVD-by post company Video Island differs from Lovefilm in that it has pioneered focus on White Label and partnerships. The company currently has five brands offering online DVD rentals – including ScreenSelect, ITV, MSN, Tesco and Easy. The ScreenSelect brand has increasingly developed resonance (as the only brand to be a 'pure' DVD rental mark and nothing else) and as such is now to Video Island what the Lovefilm brand has been to Arts Alliance.

Video Island's range of branding partnerships has also expanded --- the company has 'multi year, multi-channel distribution relationships' for ScreenSelect with Comet, Currys, Dixons, Boots, ToysRUs, Real Networks, Times Newspaper group, Express newspapers and Top up TV. There is also a deal in place with Vue Cinemas (a cross promotional deal and the creation of 'Vue at Home' brand). Through this process, Video Island has been increasingly pro-active in gaining as much insight into release windows and audience behaviour as possible in an effort to support its strategy to branch out from the pure DVD rental service.

UK FILM COUNCIL

Video Island currently has 120,000 subscribers across all its brands of which 10 per cent are on trials. The service is growing at approximately 10 per cent per month, with the company predicting accelerated market growth in 2006. In terms of inventory, Video Island has a comparable number of titles to Lovefilm.

Although not as far down the line as Lovefilm in terms of digital downloads, and much more cautious about how the market will develop, Video Island does have plans in this area. The company plans to make available digital content starting with clips, trailers and short film, and has entered a deal with digital content website iFilm. Other alliances include a partnership with Mobix to offer movie ringtones as well as viral video through, again, iFilm.

Video Island's priorities are retail, download and international expansion in that order with an eventual aim to be an 'on-demand platform for home entertainment'. As already stated, Video Island has a partnership with Microsoft (through MSN) as well as with Real Networks.

Screen Digest anticipates that a movie download service will appear from Video Island in 2006.

Strategic positioning

Video Island, like Lovefilm, has shown a commitment to specialised titles as part of its strategy. It is actively acquiring specialised content as a core element of its business model. The service provider goes as far as providing a 'selection pledge' --- meaning that if there's a DVD that users want that Video Island doesn't already have, then the company will attempt to acquire it.

Although Video Island doesn't have a set VoD model in mind, it is their aim to offer users the ability to do as much with the content as they can. Whatever the eventual terms of trade with the rights holders, Video Island is firmly of the mindset that one of the restrictions of pure VoD is that it "uses the TV set as a termination point" whereas one of the huge advantages of download-to-burn is the portability offered by DVD. The company views the digital retail model and mobility of content --- rightly in Screen Digest's opinion --- as the key driver of Internet VoD services. This is informing its specialised strategy, where it aims to position its proposition as a cost-effective method for independent rights holders to distribute DVDs. That is, the rightsholder commissions Video Island to burn DVDs on demand rather than invest in a traditional DVD release.

CinemaNow

On-Demand Offering

UK FILM COUNCIL

US-based CinemaNow was founded in 1999 with the backing of Lions Gate Entertainment, Microsoft and Blockbuster. In the US, the CinemaNow library contains approximately 7,500 feature-length films, shorts, music concerts and television programs from more than 250 licensors, including 20th Century Fox, ABC News, Disney, Endemol, MGM, Miramax, NBC Universal, Sony, Sundance Channel, Warner Bros. and Lions Gate. Approximately one third of CinemaNow titles are from the majors; the rest are from independents, including specialised film content.

CinemaNow entered the European market in early 2001, initially offering streaming and later adding with PPV and SVoD downloading. Since its launch, CinemaNow has been attempting to broaden its offering in terms of its business model, access and content. The most significant development to date is Cinemanow's introduction of digital sell-through on a download-to-own model (though no burning rights) in January 2004. This model has yet to receive studio approval. Also, outside of the US, CinemaNow is precluded in its licensing agreements to provide any premium content from the studios or any of their subsidiaries. Even in the US, it is believed that over 80 per cent of CinemaNow transactions are derived from adult-orientated content.

Otherwise, the market has been slow to develop. CinemaNow offers three payment models: rental; monthly unlimited subscription; and digital retail. The company lays claim to less than 50,000 subscribers. So far, according to the company, the subscription-based model appears to be the most popular as users are reluctant to risk single payments for an unfamiliar title; the subscription model allows users greater freedom to pick and choose from a diverse range.

There are significant restrictions on how the studios allow their content to be used. Although CinemaNow's downloaded content can be stored on any number of machines, restrictions are imposed by content providers rather than CinemaNow. In the case of the studios, there are no burn rights and no portability permitted beyond the device the film was downloaded on. All billing is handled by CinemaNow, and PayPal will be added to its range of accepted payment methods in 2006.

CinemaNow is currently available via the open Internet to PCs and Windows Home Media Centre-enabled TVs. Many titles have also been encoded for Portable Media Centres, on which CinemaNow is working with Archos and other handhelds for download compatibility. The platform expects delivery to Microsoft OS Smart Phones to be available soon. The platform has yet to offer support for other browsers beyond Microsoft's Internet Explorer as well as Sony's PSP handheld and Apple's video iPod. This is largely due to the company's extremely close affiliation with Microsoft.

In a wider context CinemaNow has been looking to broaden the accessibility of its service. The company already facilitates downloads to compatible mobile devices – making around 550 feature length titles and 200 music videos available – and is now looking to accelerate its progress to the living room, agreeing alliances with Microsoft's MSN TV and Digital 5 in 1H 2005.

CinemaNow is also exploring the IPTV sector in partnership with VoD infrastructure firm Entone and has plans to develop an integrated VoD platform aimed at the telco TV market. Entone had scheduled deployments before the end of 2004 but the service is yet to arrive. In the meantime, the service provider is assuming that Microsoft's Home Media Center is the quickest route market --- which given Intel's Viiv marketing plans for 2006 --- is not a fanciful presumption. Such a platform is likely to be available before telco and IPTV internet VOD platforms are up and running. However, Cinemanow has been keen to point out that it is following all potential routes to TV, sustaining relationships with computer companies, set-top box manufacturers and telcos alike.

As a pioneer of the download-to-own strategy, CinemaNow is also intent on offering secure DVD burning in 2006. In a hypothetical scenario files would be downloaded in the Windows Media Video (WMV) format, encoded at 2Mbits/s, transferred to MPEG2 format, before being copied onto a custom DVD with CSS built in. Users would then be able to play the discs in any DVD-capable PC, although discs would not be playable in standalone players. However, it is expected that CinemaNow would benefit from greater studio initiatives taking place at present investigating different scenarios for secure DVD burning.

In the UK, the company is now actively positioning its service. It has a strategic relationship with European ISP Tiscali (see Tiscali below), and has been in dialogue with BT. More importantly, it is about to launch its Cinemanow.co.uk brand with titles from at least one studio, namely Warner Bros.

Strategic Positioning

Of all the services profiled, CinemaNow is the only so far that proffers to not only be a pure digital download and streaming business but to have made a relative success of it (with a healthy range of independent content). And it offers not only universal worldwide access --- limited of course by the geo-blocking and DRM requirements of the content owner—but also long running expertise in this area supported by key technology and content companies.

One of the service's selling points is that its terms of trade are universal for all content providers—both major studios and independents alike. CinemaNow splits revenues 50-50, as well as additional bandwidth and credit card costs. However, the company provides encoding and DRM at no extra cost to content providers, using Microsoft's DRM and codec. Although the service provider is considering other options such as MPEG4, future decisions are effectively dependent on approval from the Hollywood studios. The key issue seems to be the DRM solutions, with many studios favouring alternatives to Microsoft and currently investigating.

Joining the CinemaNow service from a content owner perspective is easy. Potential content providers need two elements: the content, which is accepted in most formats (including a digital file, HD, DVD, NTSC video, PAL video) and the metadata (synopsis, credits, etc). The content is then encoded and uploaded exclusively to third party servers from Nine Systems, which delivers streaming and downloading.

Although CinemaNow has not offered a white label service to date, it has carried out co-branding packages for companies such as MSN and AOL. Its primary proposal would be to offer something such as this for the UK Film Council. However, the company not only sees the value of independent and specialised content (as evidenced in its deal with the Sundance Channel), it would be prepared to offer a white label service to this end. But a total white label service might require up front and back end fee, whereas a semi-branded service would reduce the fee, possibly eliminating up front charges. Nevertheless, the company has gone to great pains to assert that it believes that its online platform grants specialised film content exposure that it would likely not receive through traditional distribution channels.

One drawback of CinemaNow is the Microsoft factor and whether the UK Film Council would be prepared, politically, to irrevocably tie the development of an independent film platform with the technology and strategies of the US software giant.

World Cinema Online

On Demand Offering

Independent production company Transmission Films has been in the process of testing and establishing an open Internet digital download service called World Cinema Online, dealing exclusively in independent content. With the involvement of UK producer Nick O'Hagan as head of Business Development, the service is seeking to deliver content worldwide via an advanced peer-to-peer (p2p) network designed to keep prices low and increase the rate of download by retrieving content from a pool of users simultaneously (similar in nature to the technical characteristics of the Sky Movies Broadband service built by IOKO/Kontiki).

The venture has received financing from NESTA, and has distribution alliances with US start-ups Akimbo (Internet-to-TV delivery) and Blinkx (Internet video search) amongst others. Although none of these services nor their technologies have been proven, the alliances do place World Cinema Online in a small group of companies pioneering video business models over the Internet.

Relaunched in November 2005, the platform currently offers around 30 feature and short titles for download worldwide, charging from £1.00 for a five-day rental, and £3.99 for a download-to-own for feature films going up to £1.99 and £6.99 respectively. Like Cinemanow, World Cinema Online has chosen to adopt the sell-through model as a unique aspect of its service, and can be more liberal with its consumer proposition (such as five-days viewing time as opposed to 24 hours). The content is distributed in the Windows Media environment and DRM. Its titles are predominantly budget, but there are notable exceptions, such as George Romero's *Night of the Living Dead* and Roman Polanski's *Cul-de-Sac*. The service also takes direct submissions from filmmakers through its website, on a model not dissimilar to TuneTribe.com in the music market. The website as it currently stands however frequently malfunctions and has recurring consumer issues which if not resolved will prove to be a problem.

Strategic Positioning

Like CinemaNow, World Cinema Online is a pure digital rental/retail business, and is the only one of its kind worldwide to make independent and specialised content the core of its business model. With the involvement of independent filmmakers, and a young board that arguably understand the grass roots independent film market very well, World Cinema Online would in all likelihood bring considerable understanding to a VoD service dedicated to independent titles.

The issue however, as with any start-up, surrounds the robustness of its P2P distribution solutions, and whether or not the company can attract the necessary financing (and content) in a very competitive market to attract a customer base and stay afloat. Unlike Cinemanow, and many of their peers, World Cinema Online is trying to make a business case with content for which no business case has been proven (and indeed quite the opposite in many cases).

Greengrass

On Demand Offering

London-based start-up Greengrass has developed and commercialised what it refers to as a 'pre-pay broadcast network' with the aim of encouraging the mainstream adoption of the Internet as a broadcast medium. The company's approach has been to choose one business model (a pre-pay credit system much like that used by mobile phone operators) over the others (advertising, sponsorships, subscription, etc) and align the price with the costs of streaming to ensure profitability.

The service effectively enables broadcasters to monetize linear channels over the Internet. Broadcasters price their content with a simple credits based system that offers the flexibility to vary pricing by country and quality of the feed viewed. Viewers buy credits in bundles (credit vouchers) and credits are debited from their account while watching at the per-minute rate the broadcaster has set. Viewers can spend their credits with any of the broadcasters on GreenGrass and only ever pay for what they watch. Channels can be accessed either via the Greengrass.tv aggregation portal, or the broadcaster or content owner's own website.

The most notable aspect of Greengrass is that the company does not charge for its service (other than essential set-up costs) unless the broadcaster chooses to charge the consumer. As such, the company offers the means to exploit Internet distribution with little financial commitment, although strictly speaking not on an on-demand basis.

The service is primarily delivered in Windows Media solutions, and the company relies on Microsoft solutions for security. To date, the service has won favour with 24-hour news channels, with both ITN and BBC World choosing to partner with Greengrass for their Internet offering.

Strategic Positioning

What is unique about Greengrass is the company's commitment to the pre-pay streaming business model (unlike other solutions firms such as Narrowstep and Enriq who are more generalised and support a wider range of models). Notably, Greengrass has not factored downloading into its model, although the company is open to variations. For example, Honda had sponsored one of the pay channels for a period of time by pre-buying a bundle of credits to enable a selection of users to watch for free.

The Greengrass platform throws up an interesting scenario for anybody that has a linear broadcast channel already being carried on one of the digital TV platforms. Whether or not the consumer has to pay for watching the channel is completely at the discretion of the broadcaster. However, in terms of credit costs, according to Greengrass, it would be possible to charge a customer £2.50 to watch a full feature length movie at VHS quality streaming and still make a healthy profit on the service. And as both ITN and BBC World have demonstrated, a channel feed through Greengrass would not only establish a web presence, but may also provide a means of driving audiences to other Internet-based services (such as a downloading service or other e-commerce applications).

Sony Connect

On Demand Offering

Consumer electronics giant Sony has been very active trying to make up ground lost to Apple in the portable devices market. It's not an understatement that since the launch of the iPod, Sony has found market conditions tough for its Walkman brand, once synonymous with portable music. This is an ironic situation given Sony's position as the only global company that, aside from being one of the largest consumer electronics companies in the world and developer of the most successful gaming console currently on the market (Playstation 2), is also a major rights holder in the music (Sony BMG) and movie markets (Sony Pictures Entertainment, which also houses the production capacity and libraries of Columbia, MGM and Screen Gems amongst others). As such, the company is perched on a large library of music and almost 10,000 movie titles (not including Sony's considerable TV programming library).

In various forms, the music and movie units have been involved in a number of on-demand services --- from setting up the Filmflex VoD joint venture with On Demand Management in the UK to licensing music content to Apple's iTunes Store. However, despite also being one of the founding members of the online movies service Movielink, there has been little consistency in an overall Internet strategy. Sony

has only recently begun to leverage its considerable assets to take advantage of its presence in the entertainment market. In May 2004, Howard Stringer, vice chairman and COO of Sony, announced the launch of the Sony Connect music download service (Sony's web-based answer to iTunes) with the promise that video downloading would follow over the service by 2005. This has coincided with the development and launch of a number of Walkman branded MP3 players and the flagship handheld multimedia device the PlayStation Portable (PSP).

Launched in the UK in September 2005, the PSP allows the user to play games and watch films (amongst other functions) either from a pre-packaged Universal Media Disc (UMD) bought at retail, or on a download to the Memory Stick. It is also possible to rip pre-bought DVDs onto the Memory Stick, although there are arguably legal obstacles in this regard. Nevertheless, Sony had sold 185,000 PSPs in the UK within the first week of release, making it the fastest selling games console ever according to official statistics. It is expected there will have been 1m sold by Christmas 2005.

Film titles on UMD also did well. UMD made up one per cent of the UK's video retail market in the format's first month of availability. Sony's proprietary format was launched in Europe on 19 September 2005 and designed for playback only. According to a British Video Association (BVA) analysis of Official UK Charts Company (OCC) data, UMD contributed up to five per cent of total sales of some films during September 2005. The top title on the format was 2003 release *Underworld*, which sold 7,487 units, followed by new release *The Hitchhiker's Guide to the Galaxy*, with 7,136 copies sold.

However, this has not prevented Sony from going further. The company has, according to a report by the New York Times, converted 500 movie titles for digital sell-through via its Sony Connect music website. According to conversations with a UK technology developer, which is purporting to be developing Sony's download service, the platform will launch Europe-wide in 2006.

As a sign of its intent, Sony has already launched short form video downloading through Sony Connect as well as dedicated PSP portals in Japan and the US --- offering a small selection of movie previews, animated cartoons, entertainment, digests of TV dramas, music, lifestyle programming and sport. Content is initially available at no cost. Launch of the sites coincided with the availability of a software update for the PSP that added features required for the service. These new features include a Web browser and support for the MPEG4 AVC video codec and AAC audio codec in which the clips are encoded. Users will be able to access and download clips in two ways. The first is directly from the PSP using the newly added Web browser and the already-present built-in wireless LAN adapter, the second is download via PC.

Notably, the Sony PSP has a wide variety of peripherals, such as a personal video recorder (PVR) add-on and a 4Gb hard-disk adaptor, that is bringing increasing functionality to the device. Moreover, PVR pioneer TiVo has made an enhancement to its current TiVoToGo feature that will allow TiVo subscribers to easily transfer recorded television programming to their Apple iPod or Sony PSP handset. The service includes an exclusive TiVo auto-sync feature that will allow subscribers to choose if they want new recordings of their favourite

programmes transferred to their portable devices via their PC. Every morning the devices can be loaded with new programmes recorded the night before.

Strategic Positioning

With a considerable library at its disposal, and a tendency to explore avenues of direct retail, Sony is unlikely to seek third party content over its service in the short term. However, as competition increases, especially from Apple, the need to differentiate its service may force Sony Connect to sign a more diverse range of content agreements. Given Sony Pictures' adherence to independent and specialised content through its own subsidiary labels (such as Sony Pictures Classics) it is expected that part of the library content available will be closer to the genres that the UKFC wishes to support.

Apple iTunes

On Demand Offering

Built on the iPod personal music device, of which there are currently in excess of 30m sold worldwide, Apple's iTunes Store is the most successful music download service in the world, with almost 600m music track sales since launch. As of November 2005, the service accounted for 80 per cent of the UK digital music market.

Notably, Apple spent much of 2005 working on adding video functionality to its application-based platform, culminating with the launch of the video iPod in October this year. The new iPod supports video playback at 30fps using either the H.264 or MPEG 4 codecs and features a 2.5 inch colour screen with a resolution of 320 by 240. It can display video or pictures on a TV using Apple's new universal dock. The iPod is available with either a 30Gb or 60Gb hard disk and retails for \$299 and \$399 in the USA and £219 and £299 in the UK.

Video content is handled through iTunes 6 which allows users to download-to-own music videos, short films, and TV shows from iTunes. At present there are 2,000 music videos available in the USA and approximately 1,000 available in the UK from artists including Madonna and U2. Short films come from Pixar, animation studio affiliated to Apple CEO Steve Jobs. Premium TV content, meanwhile, is currently limited to five series and is only available in the USA and is supplied by Disney (*Lost* and *Desperate Housewives*). The TV content is available on the day after transmission. Apple has continued the one size fits all pricing policy that it pioneered with music - all videos cost \$1.99 from the US iTunes Store and £1.89 from UK store. However, unlike music, users don't have the ability to burn the videos to CD or DVD. iTunes 6 also handles video podcasts (vodcasts) and allows users to put home movies onto their iPod.

Within 19 days of launch, Apple announced that it has sold over 1m videos through iTunes. Of these, 125,000 were short films from Pixar. The bulk of the rest came from the two premium TV programmes available. Although the announcement was impressive, it came as part of a pattern from Apple. The company tends to experience a rapid uptake of new products shortly after launch, followed by a normalisation in buying patterns. For example in June 2004 the company announced that it had sold over 800,000 tracks in the first week of ITS Europe. However, it took the service a further nine weeks to hit the 5m mark. A similar pattern has been seen with the iTunes Japan platform launch in August 2005, which resulted in the sale of 1m songs in the first four days followed by a subsequent drop off. It has been estimated that 40 per cent of the Apple video sales were one-off 'experimental' purchases by users.

Nevertheless, since this announcement, there has been a scramble from some content owners to provide content to the video iPod, ranging from providers of adult entertainment to TV companies. The most high profile addition has been from PVR company TiVo which, as stated earlier, made an enhancement to its TiVoToGo feature in November 2005 allowing TiVo subscribers to easily transfer recorded television programming to their Apple iPod or Sony PSP handset.

Notably, Apple has yet to announce sales figures for its video iPod, which suggests it has yet to hit any significant milestone.

Strategic Positioning

The move from music to video for Apple has not been a great surprise, given the need for the company to continue to diversify content to sell the highly lucrative iPods. But although Steve Jobs, Apple's CEO, has always maintained that feature length movies do not have a natural home in the portable environment, Apple's move into the home media centre market has created the prospect of iTunes forming the basis of a download platform for use of content in the living room.

The issue with Apple, however, is the closed nature of its platform --- limiting users to Apple devices --- and the single price-point policy. The latter has created much concern amongst the music majors, who have actively refused to sign content to Apple's new services in 2005 (such as Sony BMG in the case of iTunes Japan). The concern has been enough for studios to remain wary of using iTunes as a means of exploiting their content online, despite Disney's part in the video iPod launch. This scenario, if it plays out, may make Apple more amenable to supporting titles from independent and specialised circles (a reverse of its approach in music). The company has demonstrated this by its recent carriage of the first ten minutes of Lars Von Trier's *Manderlay* via iTunes in the US in November 2005, ahead of its 3 February 2006 release.

ISPs

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AOL UK

On Demand Offering

AOL is the UK's largest ISP not to directly own its own network, and overall the country's third largest broadband ISP behind BT and NTL. Content has always been a core component of the AOL strategy, choosing to pioneer a walled-garden approach over the Internet. Effectively, AOL members (whether subscribed to AOL broadband or not) can download a unique browser application and for a monthly fee access entertainment content, news and e-commerce facilities via the PC.

AOL UK	2003	2004	2005
Broadband households	250.0	750.0	1445

Source: Screen Digest

However, despite its association with Warner Bros, AOL UK has yet to offer anything by way of feature film or premium television content. At present its offering is limited to extended trailers and selected highlights from titles about to be launched at theatrical. In a recent in-depth conversation with Warner Bros executives, it has come to Screen Digest's attention that a deal has been struck with AOL on premium movies enabling the ISP to carry around 100 Warner Bros movies from 1Q 2006. The deal is expected to be on an output basis, with 20 new titles a year, including 'Batman Begins' and 'Harry Potter and the Philosopher's Stone'. AOL has yet to determine pricing, but the terms of the deal are likely to be on a par with others struck by Warner Bros around Europe; namely, in the PPV window, being exploited on an a la carte rental basis, with no burn rights nor portability permitted. Nevertheless, with Warner having a roadmap for eventual digital retail, it is expected that films will be made available for electronic sell-through, possibly in the DVD retail window in some cases, through AOL UK at some point in late 2006 (though it should be noted that this may be somewhat contingent on security and copy-protection issues being resolved around DVD burning and portability).

As AOL comes to finally reap the value of its very costly association with Time Warner, it is expected that the UK arm of the company will come to benefit from the alliance in a manner it has not done so far. One possibility will be to follow trends set by AOL in the US, which in November 2005 announced the 2006 launch of a free Internet TV service called In2TV, featuring exclusive access to 3,400 hours of programming from 4,800 episodes spanning 100 series of Warner Bros-produced television shows. The US service will be ad-supported and organised under six channels divided by comedy, drama, animation, action, classic and superhero/villain genres. The eventual aim is to add up to 14,000 episodes from 300 series Warner Bros has currently cleared with rights holders. AOL, which has pulled out of US broadband provision in favour of simply being a content portal and aggregator, and which currently has approximately 64m unique

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visitors a year in the US, is also in talks with other major television distributors to acquire rights for its US service. It is understood that a similar service, based around movies, is likely to be unveiled in 2006 – though unclear whether in Europe or in the US.

The In2TV service will also trial DVD quality video delivery in the shape of 'AOL Hi-Q', free to broadband users. The US services will be powered by P2P platform Kontiki, which also sits behind the Sky Movies Broadband and BBC Interactive Media Player services. It is expected that Kontiki will also supply solutions to AOL UK's film downloading platform when that eventually launches.

AOL has announced plans for local loop unbundling in the UK, ahead of IPTV trials, in 2006.

Strategic Positioning

The position of AOL UK is an interesting one. The ISP has placed itself as a premium content channel, and has displayed its adherence to this principle by neither courting nor hosting alternative content such as short or experimental films over its platform. However, the alliance with Warner Bros has taken long to bear fruit --- the US television service, for example, was in development for two and a half years. The pace of co-operation though is likely to accelerate, meaning that AOL UK's immediate content needs are taken care of by a supply from its sister company. But as it is currently doing in the US, it is not unfeasible that the ISP will seek to strike third party rights holder deals to bolster its offering within the UK also.

A significant drawback in an alliance with AOL UK would be the requirement that customers pay a subscription before being able to access content (in most cases for free, but in the case of movie and music, for an additional rental/purchase fee). Also, culturally, the AOL brand has been frequently knocked within the Internet community both in the UK and the US as an exercise in US-style corporatism that may not necessarily place nor be able to balance the best interests of the Internet user above the need to make a profit. Though this may not be true, the perception of AOL as a brand may not politically make it a natural home for any UK Film Council backed initiative.

Yahoo! UK & Ireland

On Demand Offering

Yahoo! UK & Ireland, as a division of Yahoo! Europe, has been a curious creature. With Google dominating the online search market, and severe competition from many ISPs in a content capacity, it has sought to carve a niche as a premium content provider. Yahoo! currently has a deal with BT, providing the value-added content aspect of the BT Yahoo! broadband service, and still maintains an open portal strategy in its own right.

BT	2003	2004	2005
Broadband households	796	1,491.0	2350

Source: Screen Digest

The open portal service makes available a number of content propositions, including Yahoo! Music, Games, TV and the recently revamped Movies and DVD section. The Movies section is no more than a search facility that provides listings, show times, advanced online ticketing, DVD release information, reviews and previews for all current films, trailers, exclusive clips and detailed coverage of films from pre-production through DVD. The search facility is powered by ChoiceStream which is reported to be one of the most accurate search solutions available at present. In terms of downloading feature films or even shot films however, there is nothing available as yet.

Strategic Positioning

Though having a recognisable brand, and close ties with BT, Yahoo! has yet to make its presence felt in the digital content delivery market. Its Yahoo! Music service is only one of over two dozen music download services collectively occupying a 20 per cent slice of the UK digital music market (iTunes accounts for the remaining 80 per cent). Even BT has chosen to market iTunes downloads to drive its BT Yahoo! subscriber acquisitions. In terms of movies, it is expected that when the portal chooses to add such content to its service, then it will do so on a direct acquisitions basis, as it has done so with music so far. The notable benefit of Yahoo! is its adherence, unlike AOL, to the open portal strategy, allowing universal access to its services to all UK broadband homes. Moreover, it is a company with a significant amount of capital, and the strong possibility of directly funding its own programming (as it has done with some television content).

Wanadoo UK

On Demand offering

The development of movies over the Wanadoo UK platform has very much played second fiddle to plans by parent company France Telecom in France. In the UK, Wanadoo, which is the country's fifth largest ISP, and the second largest not to directly own a network, has made much of the Livebox home networking device, local loop unbundling (LLU) services and cheap IP-based voice calls. But unlike its parent company in France, despite ambitious announcements in 2004 ahead of the Livebox launch, no VoD aspect has appeared to the service. Nevertheless, it is expected that the move into UK LLU signals the first stage of an eventual launch of IP-based VoD to the TV-set using the Livebox.

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Wanadoo UK			
	2003	2004	2005
Broadband households	158.0	600.0	896

Source: Screen Digest

As suspected, Wanadoo UK, which also allows access to its premium and entertainment content via its open portal, will benefit from the deals struck by parent company France Telecom. France Telecom is currently in the process of bringing all of its European fixed line, Internet and mobile services under a single brand --- Orange --- and as such has been seeking multi-platform (and in some case multi-territory) deals on many of the movie and television deals it signs. It is understood that Warner Bros is one studio to have already signed an output deal with France Telecom for approximately 20 new titles a year and 50 library titles to be carried over France Telecom's French IPTV service MaligneTV with the potential to be made available over other platforms in the future.

Strategic Positioning

Though Wanadoo in the UK is set to greatly benefit from its relationship with France Telecom, this has yet to materialise as a consumer proposition. The ISP can and will in due course offer a multi-platform distribution opportunity --- over the open Internet through its portal, through a walled garden over the Livebox and via mobile through sister company Orange, which is one of the UK's four largest mobile operators. However, given that it has no separate Movies or TV section on its website, and currently only offers access to movie trailers through the Entertainment section of its portal, this may be some way off. Moreover, given the parent company's approach to date in France, any VoD content that appears on Wanadoo will in all likelihood do so in a walled garden TV environment first via the Livebox (using France Telecom's Viaccess security solutions) rather than on the open Internet.

Tiscali UK

On Demand Offering

The UK arm of European ISP Tiscali has been one of the most forward-thinking in terms of providing access to mainstream and specialised content as a means of driving market share. On one hand, the ISP has been busy building strategic relationships with third party service providers. It currently has an alliance to promote LoveFilm's DVDs-by-post service, which could be extended to LoveFilm's download-to-PC VoD service, due to launch before the end of 2005, as well as a separate deal in place with CinemaNow. Since September 2004, the European ISP has hosted movies from the limited CinemaNow library for its customers, on both a streaming and downloading basis.

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Tiscali UK			
	2003	2004	2005
Broadband households	112.0	390.0	880

Source: Screen Digest

On the other, Tiscali is actively seeking content for its own download-to-PC service, developing its own online publicly accessible Tiscali Cinema Club, and has given a great deal of attention to the specialised market. In July 2005, Tiscali offered a film from UK independent Dogwoof Digital called *EMR* for £2.99. Although the film was anything but a hit, the digital delivery was part of a simultaneous release campaign and was therefore available whilst the film was being exhibited theatrically and launched on DVD. Tiscali has agreed a deal with Dogwoof Digital to deliver two more films and has also agreed one more UK deal and a US deal along the same lines.

Though Tiscali sees movies as a spearhead for its entertainment content, and hosts a number of promotional microsites for studio titles, most revenue is currently generated in the less glamorous money such as business, gambling and travel content. To this end, Tiscali does not believe film VoD is a viable business model on its own, but only as a supplementary offering. Despite this, the ISP is staying in Internet VoD in the hope that it becomes more profitable.

Tiscali does not have the financial clout of BT or AOL. Therefore the independents strategy has been one of necessity rather than choice. Outside of digital downloads, Tiscali has been active in other ways in the specialised field --- most notably acting as a sponsor for the Raindance Film Festival 2005 and putting money up for the 'Best British Short Film Newcomer' award. The ISP has also partnered with Turner Classic Movies to offer short movie VoD content through its portal, as well as from independent filmmakers.

Outside of movies, Tiscali has performed video transmission tests with BBC. There were two phases in 2004, one of which involved Tiscali and two other ISPs (reportedly NTL and AOL), and was designed to see if any technical problems arose with video transmission over the Internet. In the first phase, there were several hundred users, whilst in the second upwards of 5,000. The tests found that the top downloads by far were programmes such as *Top Gear*, followed by *Eastenders*. The tests have influenced the ISP's belief that films will be a small proportion of downloads. To this end, the ISP launched Tiscali TV, offering content from production companies such as Kudos (*Spooks*). It views the service as potentially being multi-platform, especially as it ramps up LLU plans ahead of an IPTV trial in 2006.

Strategic Positioning

Tiscali has shown great commitment (albeit out of necessity) to the independent sector and has experience in the distribution of digital movies. The *EMR* deal was done on revenue sharing terms with costs of encoding, DRM-wrapping (Windows DRM 9) and bandwidth added subsequently. *EMR* cost £2.99 per unit, of which roughly 99p covered overheads with the rest split 60:40 in favour of Dogwoof—which is

a revenue share type Tiscali would like to use for all movie content. According to the company. Tiscali's recent industry activity is creating trust between Tiscali and independent UK filmmakers.

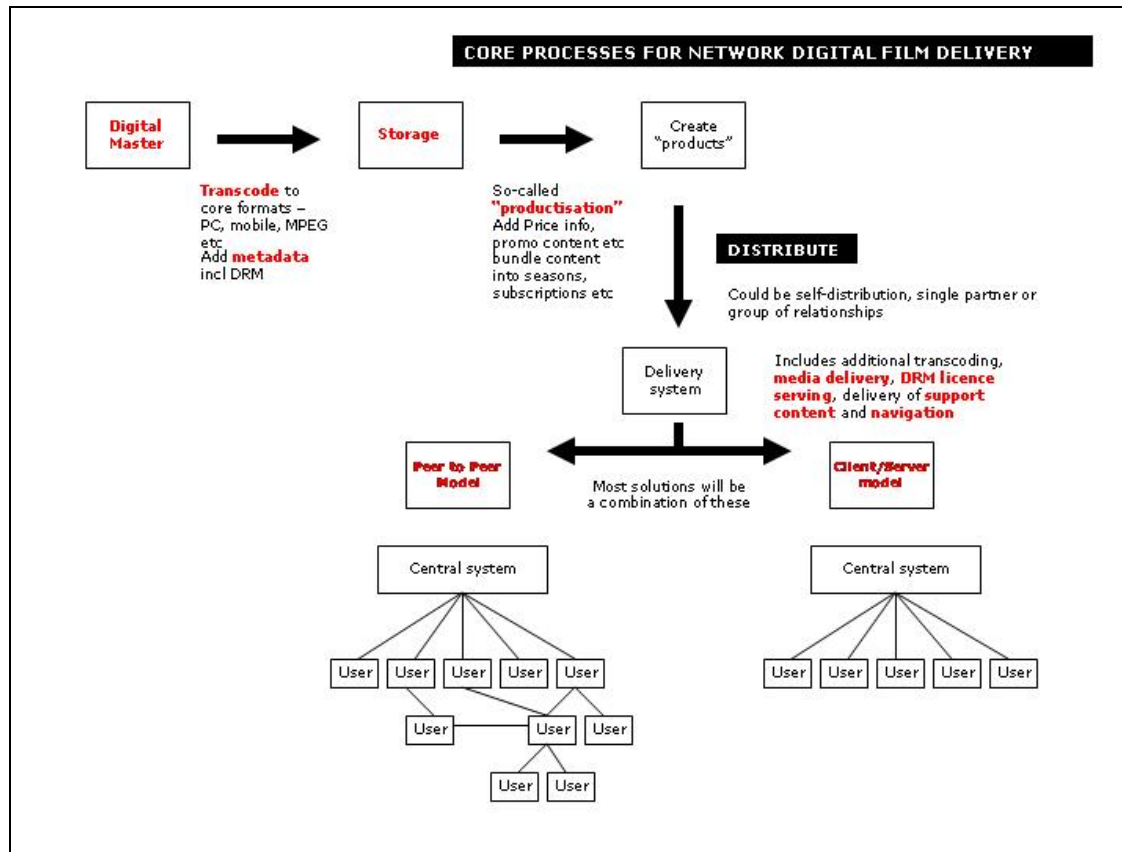
The ISP however views premium content as a key driver of future services. Indeed, it has been reluctant to promote its VoD partner CinemaNow due to the lack of premium content available in the UK, and the ISP believes it is important to create a critical mass for specialised VoD content in order to generate significant revenues. Tiscali is working internationally with Warner and Sony on a rental movie VoD model --- possibly coming to market in 2006. However, conversations with the latter studio and also with Tiscali itself suggest that there is a lot of groundwork still to be done, primarily because of some reluctance from certain studios (though not all) to have their content being used as a secondary 'value-added' product to drive another primary service (i.e. broadband).

Also, Tiscali has a number of technical issues. In a hypothetical partnership with the UK Film Council, the ISP would expect an up-front cost for building out a system in the UK (as all content is currently encoded and stored in-house in Calgiari, Italy). Although server space isn't a concern, Tiscali would prefer to store the more popular titles as the bandwidth would subsequently pay for itself. It would also require payments over and above any revenue share for encoding, DRM wrapping and bandwidth costs.

The ISP would also require promotional and marketing support for the service. To provide an idea of cost in addition to the revenue share agreement, Tiscali would charge an estimated £1,000 per film to encode, upload and arrange the DRM. Tiscali would then seek 50p per download in order to cover bandwidth costs (on the assumption that a film costs £1.99 and is basically the same size file as *EMR*). If Tiscali were uploading films in large volumes then it might be able to find a way to give a volume discount on these costs. If there was a sell-through model, then if a film cost £9.99, the ISP would expect around £2 from the transaction. All in all, the Tiscali proposal could prove rather an expensive prospect. In Tiscali's favour though, the ISP has been keen to put across its enthusiasm for an independent and specialised film download service, being prepared to set-up a dedicated website on its portal under the UK Film Council brand (albeit, again, for a fee).

5. Platform Choice Assessment

The diagram below represents a generic description of how a digital platform for distribution of films might operate. Below we discuss what is involved in each element.



Digital Master

The basic raw material of digital film delivery is the digital master. Increasingly, as almost all films are digitally post-produced, a digital master will be available in almost every case. The process of creating a digital master from a pre-existing analogue (e.g. tape) original is called encoding.

The key requirements of a digital master, subject to the cost and data storage, is that the master is held at the highest practical quality level, ideally as uncompressed video, a so-called 'lossless' compression format, or a very high quality compression format such as MPEG. This will help to ensure that there is no unnecessary degradation in quality when the master is re-encoded or transcoded to provide versions which can be used on a variety of technology platforms. Different delivery platforms will often have their own technical standards. This is discussed below in transcoding.

Without a digital master, it is impossible to distribute a film via digital networks.

The digital equivalent of a library of master tapes – called a repository – could form a key part of any proposition going forward. The benefit of a repository is mainly that it provides a central store for films. This should be backed up to ensure protection against loss of the films through technical failure or physical disaster (such as fire).

The creation of a repository allows the owner to set and determine technical standards, including for compression and metadata (see below) at the central level. This simplifies the process of delivering films to multiple outlets, helps improve the quality of metadata by setting minimum standards for it, and mitigates the possibility of poor quality content being delivered to end users as a result of poor transcoding.

Films in a repository should ideally be stored at the highest possible quality, as close to uncompressed as possible. However, it may prove prohibitively expensive to store a large number of films in a central repository at very high quality due to the data storage space required to house the files, which will be very large in size. As an indication, a 90 minute film could require up to 2 terabytes of hard disk space to store (1 terabyte is 1,024 gigabytes – i.e. around 10 times the storage on a typical PC). For this reason, most repositories decide upon a lower technical standard and picture quality such as something akin to High Definition quality compression in MPEG-4 standard. This allows a 90 minute film to be stored using less than 10 per cent of the disk space of an uncompressed file. The loss in picture quality is low (for the purposes of online delivery) so whilst this option is not ideal, it often turns out to be the most pragmatic.

There is the potential to consider integration of the requirement for a digital master with the mastering element of UKFC's digital cinema Digital Screen Network (DSN) programme in some cases. A central repository could serve both projects. Indeed, even at a less integrated level, shared technical standards for compression and metadata would be very beneficial.

It is unlikely to prove cost-effective for the UKFC to consider the establishment and ongoing management of a repository for digital masters as an in-house project. The capital costs of such a project would not be insignificant. Assuming a target of 500 films, the capital costs of an uncompressed repository would likely be between £750k and £1 million. The capital costs of an MPEG set up would most likely be measured in the low hundreds of thousands. However, added to this, the operational requirements of the business stand well outside the core competencies of UKFC. Thus, such a venture would likely be best handled by a franchised third-party in a similar manner to the DSN.

There are a number of organisations in the market – highlighted elsewhere in the report but including BT, Entriq, Narrowstep, Ioko and others as well as content delivery companies - who lease and rent the equipment and skills required to maintain a central repository. Regardless of the chosen delivery partners for any consumer service, it is likely that such a contract would need to be established.

It is difficult to be precise on costs as a number of different business models exist depending on whether the provider is involved in the end delivery of films to the consumer. In general, however, the following aspects of the service are chargeable:-

- Initial encoding (if the master is not digital) – charged per minute. This is often known as ingest.
- Storage of data – charged per GByte on a monthly or annual basis
- Tagging and metadata – charged on a time basis

Other services (such as transcoding, media delivery, DRM licence serving, etc) are often provided as part of the same contract. These are discussed in more detail below in the appropriate section.

Transcoding

Transcoding is the direct digital-to-digital conversion from one encoding scheme, such as Apple Quicktime, to a different encoding scheme, such as MPEG-4, without returning the signals to analogue form. In other words, it is the process of turning a film formatted to be delivered on, for instance, a walled garden TV-based Video-on-Demand service, into an appropriate format for use on the open Internet, or on a particular mobile phone.

There is a common understanding that digital files retain their characteristics (e.g. the picture quality of a film) regardless of how many times they are copied. This is true, but only so long as the format of the file does not change. To explain, the act of turning a film encoded to play in Apple Quicktime into one able to play on the same PC but using Windows Media formats requires that a new kind of file is created, in other words the file is transcoded. This is a technical process in which the images and sound are encoded again using the Quicktime file as the master. The effects, if done badly, can often be similar to those seen when VHS video tapes are copied again and again from generation to generation.

The rule of thumb is always to transcode from the best possible master – see digital master section above – to protect against loss of quality through transcoding generations. There are ways of limiting the possible damage from bad transcoding, however. Whilst it is almost impossible to add quality through transcoding from one file format to another, there is, however, a process known as “up-converting” – currently being used, for instance, in some consumer DVD players to upgrade the quality of pictures to allow them to take advantage of High Definition displays. Many commercial operators combine high quality masters with some element of signal cleaning and transcoding to get the best possible quality pictures and sound.

In general, most commercial outfits bundle encoding and transcoding into one transaction related to the the management and storage of a digital master. When managing large numbers of films, it is substantially more efficient to determine a list of file formats in which the film may be required and to produce them in “one pass” at the time at which the film is ingested. It is, of course, possible to produce new film formats or quality standards at a later date, but there may be larger costs associated with this, as well as time delays. Most larger players have an automated (or at least semi-automated) process of ingest which includes transcoding.

Once again, exact costs vary depending on the overall scope of the contract with the supplier, but, commonly, ingest and transcoding costs vary according to:-

- The duration of the film – charged per minute, usually pence per minute
- The number of formats – there is often a set-up charge per format - £50 is not uncommon
- The storage costs of the files created as part of the encoding/transcoding process – charged per GByte on a monthly or annual basis. Costs between 50p and £3 per GByte per month are not uncommon, although some commercial operations provide storage for “free” as part of revenue sharing arrangements.

Metadata

Metadata literally means “data about data”. Metadata is information that describes another set of data. A common example is a library catalogue card, which contains data about the contents and location of a book. There are a number of approaches to the management of

metadata, some of which are specific to archiving, some to media assets and some, such as the Dublin Core, which are intended to span all digital media types. The Dublin Core describes 13 core types of metadata which should ideally be used to describe and locate data regardless of its type or use. These include the author, the date of creation, the type of file, and the location or address of the data. Metadata is an essential component of any successful digital media service. In our context, it allows the user to locate and access the film, to search effectively for films across a database of titles and to find out more about them.

There are four major issues to consider in relation to metadata:

- What is the minimum set of metadata which is needed?
- Who will input this data and when?
- Who will control changes to this metadata?
- How can metadata be added over time and by whom?

Some metadata (such as technical metadata concerning the file format or size) can be added automatically as part of the ingest process. Other metadata, such as the title of the film, is likely to be readily available. Much of this type of metadata will also be added early in the ingest stages. This is called structured metadata. The required data fields are usually agreed in advance and set down in a metadata schema which must be used consistently and comprehensively. This is called a taxonomy.

However, more qualitative metadata and other tagging may need to be drawn from a variety of sources. This is called unstructured metadata. The addition of keywords, either from an agreed list of approved terms or less formally, is a form of unstructured (or less structured) metadata.

Tagging is an informal term for this process of adding data “around”, for instance, a film. Tagging may include the activities of professional archivists or, increasingly, users themselves who may add qualitative data to films by, for instance, reviewing them.

At a deeper level, systems such as Amazon’s recommendation engine and Google’s search engine, mine data showing the previous activity of users to suggest possible products or to improve the relevance of search results. These processes add data (although this is not strictly metadata) to the record of the film, without changing the metadata which describes the film itself. In the process, they add value for the user.

It is essential to have both structured and unstructured metadata surrounding a film. Ideally, both forms would have some relationship to the digital master – again, to reduce duplication of effort and add value for the end user. In practice, especially with the potential for multiple delivery partners, this will be hard to achieve. There should be, at the very least, an agreed structured metadata schema for all digital masters and, if possible, some agreed keywords which can be added at this stage or soon after.

The costs of this process can vary hugely depending on whether the data required is readily available. The technical systems required to facilitate it are not especially complex and, once again, usually form part of the set-up of commercial operations. It would be possible, however, to manage the metadata and tagging function of a proposed service centrally, particularly to take account of the benefits which having huge numbers of users as potential “taggers” can bring. This is the model used by the Gracenote music database, to some extent by the Internet Movie Database and, increasingly, by the BBC for their Creative and Open Archive projects. The resulting data is becoming known as a “folksonomy” in counterpoint (or addition) to the traditional idea of the taxonomy mentioned above.

Storage

Storage has been discussed in detail above. Clearly, it is essential that there is sufficient data storage available to accommodate both the digital master and all subsequent versions for different formats. Whilst hard disk storage prices continue to fall, there are a number of reasons why data storage for this kind of project is still a major issue: -

- The sheer quantity of data involved in digital films
- Specific technical requirements for video play-out at high qualities which necessitate certain types of hardware and disk management systems
- The need for robust back up and system redundancy

Each of the above necessitates significant capital investment and ongoing management. There are a number of companies in the field to whom it is possible to outsource any or all of these processes and tasks – many of whom can manage on a franchise basis by renting their equipment and disk space. Storage costs are discussed above. It is also likely that delivery partners (or a central UKFC service itself) will store and manage files as part of the media delivery end of the chain.

Productisation

A consumer film service, no matter what platform it is delivered on, must be more than simply a list or database of film titles. It is essential to be able to present a meaningful proposition to the user. This process, for want of a better term, is often referred to as productisation in the digital media distribution business.

The term means different things to different people. Here it is taken to mean the ability to present information about a film to the user on the appropriate platform in a way which allows the user to make an informed choice about that film. More significantly, productisation

tools allow the service provider to bundle films together to present, for instance, seasons. A season may be defined editorially, or commercially (e.g. British films of the 1990s, or these three films for £5 – or a combination of the two). Without productisation processes, it is not possible to present films in this way.

It is usually only necessary for the final service provider to have to use productisation tools on their particular platform(s). Some providers charge a “set-up” fee for this service although, usually, it should be charged as a part of the revenue share arrangements rather than as a separate fee.

There is little requirement for a centralised productisation service serving more than one platform, although it is possible to imagine that the UKFC might conceivably provide editorial advice or even commercial subsidy to providers to encourage them to feature certain material regardless of platform. However, even in these circumstances, it is extremely unlikely that it would be either cost effective or very helpful for productisation to be provided at a central level.

Media delivery

Media delivery is the act of transferring the datastream which contains the film (we’ll call it the film for ease) from one place (often but not always a server – we will call it the “providing machine”) to another. The key determining factors affecting media delivery are:-

- The bit-rate (measured in Kbps or Mbps (Kilo bits per second) of the film file being delivered
- The size and “burstability” of the provider’s Internet connection – i.e. how many films it can deliver simultaneously
- The closeness (and number of) providing machine(s)
- The bandwidth available to the consumer

A Note on Bit Rates

The amount of data required to store a film and, thus, it’s bit rate (the amount of that data which has to arrive per second to display the pictures) is controlled by three main factors:-

- The size of the display/window in which the film is being viewed
- The number of frames per second
- The quality of the image – including how well the compression format copes with the detail of the images, the original format (SD or HD), etc.

As a guide, at the end of 2005, it is common to find the following bit rates in different environments: -

- DTV – BBC channels and other high quality up to 6 Mbits/s
- Multi-channel services – between 2-5 Mbits/s (and above)
- DVD – 6 Mbits/s on average but often up to 9 Mbits/s
- Internet streaming – 300Kbits/s up to 1.5Mbits/s – average = 500 Kbits/s or 768 kbits/s
- 3G mobile phone – up to 200 Kbits/s but often lower
- 2.5G Mobile phone – 56Kbit/s and upwards

The general principle regarding bit rate is to always encode at the highest bit rate possible. Over time, improved compression techniques, increasing consumer bandwidth and hardware improvements continually redefine the norm for bit rates. This is particularly true of video playing software (such as Apple QuickTime player and its associated format) which is able to adapt to show the film at the highest possible quality available given the available bandwidth automatically.

■ Provider's Internet Connection

There are a number of issues which can affect the cost and, potentially, the quality of service to consumers for a digital film service. These start with the possibility that there might be insufficient bandwidth to deliver the films in the first place. It is essential that sufficient bandwidth is available.

Bandwidth should be “burstable” up to a very large amount (this means that if there is a high peak of demand, the internet connection will scale to meet that demand). With such a “burstable” connection, the monthly charge for bandwidth will be calculated based on either total data transferred or average data throughput (which amounts to the same thing).

It may be necessary to cap the maximum data rate of the system to ensure quality of service and to give some predictability to costs. Data delivery costs vary hugely across the market depending on the provider's model (especially in relation to peer to peer systems (discussed later)). In price per Gbyte transferred, they range from a few pence to more than one pound. In the mobile environment, the cost of the data transferred will be passed directly to the user by the network operator, although operators are usually loath to share these revenues with content providers.

In all circumstances, as the size of file will be known in advance, it should prove possible to recover (or at least account for) data delivery charges in much the same way that internet e-commerce companies account for postage and packing.

■ The Providing Machines

The two distinct models of client/server and peer to peer are discussed in more detail below. They both, however, rely on the same general principle; namely that it is best to locate the machine which provides large data files such as media files as close as possible to the end user.

With client/server networks, although it is technically possible to deliver media from a single server there are risks to the quality of the user experience if the service is popular. It is most common that a cluster of servers acting in parallel to appear to be a single server is used at the centre of the operation.

In addition to this, especially with larger media delivery projects, it is very common to use a content delivery network (CDN) such as that provided by Akamai, Vitalstream, Entriq, and others. These networks generally operate by locating “mirror” servers containing the media files around the edges of the network, i.e. as close to user’s machine as possible, in order to get the best possible speed of delivery of the file and, thus, avoid buffering of streaming media or excessively long download times.

No media delivery project of scale should consider the operation of a client/server model which does not include the use of a CDN and content mirroring in this way, even if there is also a single server or cluster at the heart of the operation. Even with a CDN, it is essential to closely monitor quality of service and to ensure that the quantity of servers and the available bandwidth is sufficient to meet anticipated user demand. Actual usage figures must be kept under review – particularly diurnal or seasonal peaks in usage which can severely stretch under-resourced operations (even the BBC has problems from time to time).

■ The Consumer’s Bandwidth

The final variable, over which the provider usually has no control, is the bandwidth of the end consumer. Some services such as BT’s proposed video on demand service and many walled-garden services (including current mobile offerings and traditional linear TV delivery) do have a direct relationship to the consumer but more open offerings (such as those across the internet) do not.

It is extremely unsafe to rely on the data rates published by providers as a guide to the actual bandwidth available on the user’s machine. This is affected by a number of factors including contention ratios (how many other people share your connection at the telephone exchange) and other activities using the connection in the household (e.g. other users on a shared connection, virus software, etc).

A good rule of thumb is to always aim for the average consumer bandwidth as shown by industry research (including www.adslguide.org) and then provide a higher bandwidth version in addition. Remember also that the range of products available on the market is also now very large and extends from "broadband" services at 256Kbps up to 22Mbps – often within the same broad price range.

The range of possibility on mobile networks is currently much more limited, but devices such as the Sony PSP, which uses wireless networking to connect to the internet rather than 2.5G or 3G mobile technologies are showing another way in which mobile media delivery might be headed.

DRM and licence serving

Digital rights management (DRM) is the umbrella term referring to any of several technical methods used to handle the description, layering, analysis, valuation, trading and monitoring of the rights held in relation to a digital work. In the widest possible sense, the term refers to any such management.

The term is often confused with copy protection and technical protection measures (TPM). These two terms refer to technologies that control and/or restrict the use and access of digital media content on electronic devices with such technologies installed. There are also technical measures that could be used not to restrict use or access, such as to monitor use in order to record royalties for collecting societies. The media most often restricted by copy protection and TPM techniques include music, visual artwork, computer- and videogames, and movies.

Because the "rights" (actually technical capabilities) that a content owner grants are not the same as the legal rights of a content consumer, DRM critics argue that the phrase "digital rights management" is a misnomer and the term digital restrictions management is a more accurate characterisation of the functionality of DRM systems. Some digital media content publishers claim DRM technologies are necessary to prevent revenue loss due to illegal duplication of their copyrighted works. However, others, including civil libertarians, argue that transferring control of the use of media from consumers to a consolidated media industry will lead to loss of existing user rights and stifle innovation in software and cultural productions.

It is into this complex domain that a public body such as the UKFC must step when considering the extent of DRM and its legitimate use on any proposed service. Clearly, it is operationally impossible and undesirable to ignore the use of DRM. Rights holders and others have a legitimate expectation of reward from the use of content; however, the UKFC may have a different point of view to commercial operators in this field, many of whom make the commercially rational decision to adopt a particular DRM (often Microsoft DRM or, in

many cases, their own proprietary DRM format. This approach is often seen where, as with the Apple iPod and iTunes Music Store, which use Apple's proprietary DRM (Fairplay), the provider wishes to provide a seamless user experience and, at the same time, lock the consumer into a particular set of technologies.

The UKFC is charged to maximize access to content. Although this does not mean free at the point of use, it probably prohibits an exclusive approach to DRM which could make it impossible for users on a variety of platforms to access content. The area of DRM is immensely complex – some even object to it at an ethical level. It is recommended that the UKFC's approach to this subject should stretch beyond the boundaries of this current project and could be the subject of a separate workstream. Some objectives of a workable DRM approach could be: -

- Practical use across a number of platforms – including interoperability with a number of existing DRMs
- Effective management of the demands of rights holders
- Seamlessness, even invisibility, to the user
- Fair embodiment of fair dealing principles

■ How does it work?

Regardless of the precise model adopted, a DRM system requires two elements: -

- Rights are described for each bundle of content and rules for accessing that content are defined
- A system of licence serving exists to serve and, where necessary, control the use of those rights – this can be based around a client/server relationship and/or the DRM can attach to the content itself

Many providers bundle DRM and licence serving within the charging model for content. They charge a proportion of the fee for accessing content to the content provider as a charge for DRM. Some charge a set-up fee, others bundle the fee within the productisation charge. Some provide this service for free or as part of an editorial maintenance overhead.

Regardless of the model, the operational costs of DRM are usually low, although, once again, the capital costs could be high as licence servers usually exist within a more complex media delivery and service environment (often one large suite of software) and separating them out would be costly. It is anticipated that the UKFC would out-source this requirement having first thought hard about the use of DRM at a general level. As many providers consider this area to be their sole domain, and deliver DRM services themselves, the UKFC would need to take care to be principled but also pragmatic in its approach to DRM in order to make it possible to deliver a service which maximises access to British and specialist film.

Support Content

This term simply refers to content which is wrapped around the film, or delivered alongside it (e.g. via a website etc) to encourage people to view the film or to deepen their relationship to it. Often this content is created by a central editorial facility and then syndicated to platform providers. This content could include digital P&A as discussed elsewhere in this report. It could also include the creation of a consumer-facing UK film portal designed for multi-platform use and syndication.

The costs of such content can be high but, in the networked world, one of the major barriers to content consumption is the inability of users to find what they want. Ensuring that a UKFC-supported service ranked high with search engines and also became a destination in its own right should be seen as priorities.

The set-up costs of such a site would most likely be in the region of £250 – 500k with annual editorial maintenance requirements of £250k - £300k. This service could act as the central editorial hub for syndicated content, the addition of films to system and general administration. Alternatively, it could be outsourced to a provider/providers with existing skills and infrastructure.

Navigation and Search

Good metadata will go a long way to ensure that films can be found by search engines and the like. But it will be insufficient on its own. There are a number of techniques to maximize exposure to the search engines and these should be used to the full.

However, there is also a case to be made that a central clearing house to point users to the availability of British and specialised films on a variety of platforms and from a range of providers could solve some of the problems of access. This argument can be thought of as a public service EPG for British film. It assumes, of course, that the service itself can be found by users. There will be a need for marketing spend to help with this process as well as partnership deals with delivery partners and maybe hardware companies to bring the service to the public notice. An imaginative way to achieve this might even be to commission specially-produced content to draw attention to it.

Regardless of the platform, the UKFC has a range of legal duties to ensure that navigation systems make it possible for users with all abilities to access content. Although there are minimum statutory responsibilities in this area arising from the Disability Discrimination Act, many commercial providers are not yet acting fully upon their responsibilities in this area. The UKFC could see this proposed project as a way to raise awareness and standards in this area to ensure fairness for all parts of the population.

Peer to Peer meets Client/Server

A peer-to-peer (or P2P) computer network is a network that relies on the computing power and bandwidth of the participants in the network rather than concentrating it in a relatively few servers. P2P networks are typically used for connecting nodes via largely ad hoc connections.

Such networks are useful for many purposes. Sharing content files (see file sharing) containing audio, video, data or anything in digital format is very common, and real-time data, such as telephony traffic, is also passed using P2P technology.

A pure peer-to-peer network does not have the notion of clients or servers, but only equal peer nodes that simultaneously function as both "clients" and "servers" to the other nodes on the network. This model of network arrangement differs from the client-server model where communication is usually to and from a central server. A typical example for a non peer-to-peer file transfer is an FTP server where the client and server programs are quite distinct, and the clients initiate the download/uploads and the servers react to and satisfy these requests.

Some networks and channels, such as Napster, Imp, and Ioko, use a client-server structure for some tasks (e.g. searching) and a peer-to-peer structure for others. Networks such as Gnutella, or Freenet use a peer-to-peer structure for all purposes, and are sometimes referred to as true peer-to-peer networks, although Gnutella is greatly facilitated by directory servers that inform peers of the network addresses of other peers.

A Client/Server architecture is intended to provide a scalable architecture, whereby each computer or process on the network is either a client or a server. Server software generally, but not always, runs on powerful computers dedicated for exclusive use to running the business application. Client software on the other hand generally runs on common PCs or workstations. Clients get all or most of their information and rely on the application server for things such as configuration files, stock quotes, business application programs, or to offload computer-intensive application tasks back to the server in order to keep the client computer (and client computer user) free to perform other tasks.

Each system (and the hybrid between the two which is used by such systems as Kontiki, the BBC iMP and Sky Movies download system) has a number of advantages and disadvantages. Foremost amongst these are: -

- Peer to peer distribution removes much of the need for centralised bandwidth and server infrastructure
- But they require a specially downloaded and installed application to manage the process
- Peer to peer systems can draw from numerous "servers" simultaneously to ensure that delivery is efficient

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- But peer to peer is (erroneously) synonymous for some people with piracy
- Client/server models allow greater centralised control over quality of service and consistency of delivery
- Client/server models fit existing IT infrastructure more closely than peer to peer models.

6. Strategic options and recommendations

Introduction

We have divided our discussion of strategic options for the UK Film Council into two sections:

- options related to rights issues
- options related to distribution.

It is important to stress that these two areas are highly interdependent and also that the options presented here are not mutually exclusive. Thus, for example, it is likely that prior to intervention in the distribution market, significant issues surrounding rights and content access would have to be resolved. Likewise, some of the interventions that alone could be seen as easing friction in the rights market may also be necessary prior to launch embarking on one of the distribution options described below.

Nonetheless, if the UK Film Council decides that its best course of action is to act as a facilitator only or simply to seed the market for an unrelated commercial entity to take over set-up and running of the digital platform that results, it may wish to only undertake the earlier stage projects suggested in sections one and two of this discussion.

None of the strategic options assume that the UKFC itself should necessarily be taking on the particular functions described. Rather they could be franchised out to third-party commercial operators or other public agencies.

Strategic options in relation to rights

Within the area of rights issues, we have divided potential kinds of intervention by the UK Film Council into three broad categories:

1. Clarifying rights issues
2. Easing friction in the market
3. Commercial intervention in the market

1. Clarifying Rights

Our research indicates that there is general confusion and inconsistency surrounding access and ownership of rights within the Internet and Video-on-Demand space, both from the perspective of the window of exploitation and the technological platform on which content is distributed.

At an independent level, rights holders have put forward a variety of opinions as to the ownership of Internet rights, mostly demonstrating a vague awareness as to in whose possession the relevant rights may reside and that some sort of further negotiation might be necessary. This has naturally filtered across to platform owners, who are seeking to tie down all electronic rights in standard agreements, but are unable to do so with independent titles (unlike the relatively clear process with the Hollywood studios) given the often ambiguous nature of independent contracts and the necessity to deal with more than one distributor/rights holder at a time on a given title.

Away from the Internet, the on-demand segment is generally in a state of confusion. In terms of an understanding of how negotiations surrounding rights would proceed, a similarly varied range of views have been encountered. At one extreme, an operator who had yet to negotiate any VoD deals attached little importance to the contracts and confidently felt that negotiations to secure the rights would 'not be a problem'. Those involved in real negotiations for VoD rights occupied the other end of the spectrum and were aware that consistent access to a rights holder's entire slate was difficult. Opinion was expressed that this was particularly an issue with independent and specialised film producers, one executive commenting that independent producers 'sell their souls on a daily basis', a reference to indie producers selling all rights to a single distributor (or a distributor selling all rights to a single broadcaster) to secure any deal at all. It was also suggested that independent and specialised film distributors tended to hold content in the DVD window for longer than usual in order to milk this lucrative form of distribution before releasing their properties for on-demand use.

A core problem seems to be ambiguity in terms of the scope of selected VoD rights. At present, an operator wishing to offer transactional VoD (also called *a la carte* VoD) must acquire content in the PPV window. This has become relatively standard industry practice. However, an operator wishing to offer VoD content on an alternative model is faced with significant problems. The nature, availability and terms of trade for Subscription VoD (SVoD) rights for example is a major issue that has yet to be resolved. Even in the deals currently being struck between the Hollywood studios and Sky, there appears to be an incongruity amongst studios as to which window SVoD would and should appear in, for how long, and how each customer viewing would be monetised. Though the general leaning seems to be towards the pay-TV window for SVoD, as a means of bolstering pay-TV revenues for the studios, there are still significant parties such as Warner Bros who are holding out against this approach.

VoD within the Free TV window is also shaping up to be a problem area. With many broadcasters now developing an on-demand presence in the online environment, they are increasingly seeking to tie up all on-demand (and multi-platform) rights within their specific window to force some kind of convention for future deals (without necessarily paying market rates for separate rights). This is an important issue because the key concern faced by all rights holders great and small is how to best exploit their emerging rights yet navigate around

existing broadcasters, such as the BBC and Channel 4, who are not only the independent sector's best customers, but in some cases financiers in their own right.

Fundamentally, we believe that there is an overall lack of clarity not only as to what rights are available for both Internet and VoD exploitation, but also as to who owns the rights (if anyone). It increasingly appears to be the case that contracts silent on Internet and VoD rights are interpreted to not include such rights within them, thereby creating a convoluted scenario whereby an operator will have to deal with an exponentially larger number of rights holders on each and every title (rendering the whole process an expensive and time-consuming exercise).

There are also fundamental questions surrounding rights granted by platform or window, mainly because of a lack of clarity (and arguably understanding of all the technologies) within many contracts. For example, do 'on-demand rights' include rights for on-demand exploitation across all possible platforms: walled garden TV, open gateway Internet and possibly mobile? Likewise, do cable rights include exploitation across all technologies that cable operators may choose to exploit that may include, for example, IPTV. The current approach, where contracts differ greatly and separate rights in an arbitrary fashion, leaves much to be desired – only compounding the already prevalent chaos.

Questions such as these, as well as the overall silence on VoD and Internet rights in older contracts, have led to the confused situation in which companies and rights holders are now operating. It is also one of the reasons why larger players are seeking more extensive rights in a bid to remove ambiguity. In a sense, independent rights holders and distributors can be doubly disadvantaged. They do not have the same resources as larger companies to sort out murky rights issues – plus they are under increasing economic pressure from platform owners and broadcasters to give up VoD/Internet rights along with the sale of linear rights.

We believe that any action taken to resolve these issues will facilitate the wider distribution of specialised film in the on-demand space and discuss below a number of options as to how this might be undertaken.

Development of a 'rights portal'

One relatively simple step that could be undertaken by the UK Film Council to ease the confusion surrounding rights would be to establish a 'rights portal' – an online business-to-business (B2B) database of rights information. A number of off the shelf applications already exist for managing rights inventories. The portal could work on both a 'push' and a 'pull' basis. That is, rights holders would have the opportunity to populate the database with their own information in order to make distributors and platforms aware of the availability of their content ('push'). On the 'pull' side, the UKFC could facilitate the undertaking of an industry rights audit (possibly as the first step in setting up this initiative and then on a regular basis) – see below. Such a step can be recommended on several grounds:

- The cost could be moderately low
- The initiative may be welcomed by producers and distributors and have positive community implications
- The UKFC could brand the portal to add authority and act as a promotion tool for its own activities.

However, whilst a rights portal could have short term positive impact and go some way to easing confusion surrounding rights, it would not go far enough to provide a long-term solution in itself. Chief amongst the pitfalls are that the impetus to keep the information up-to-date would be lost once the rights holder had struck a distribution deal. One analogous system would be that of on-line hotel booking services. Hotels are compelled to keep their room availability up to date and re-populate the databases on a daily basis because the availability of their rooms is changing constantly. In the film world, however, once a UK distribution deal is done there is not necessarily any on-going impetus for the rights holder to keep its entry up to date because (with the exception of on-demand-only rights) there is limited potential to do a second deal within the same window in the same territory. Another significant concern is the question of the authenticity of the information communicated through the portal and who has the authority to provide it and adjudicate over competing claims. This again raises the issue of the role that a rights audit might fulfil.

Indicative costs

The set up costs for developing a rights portal for software development and the license for suitable database software would be around £70,000. Additional annual software licensing costs would be in the region of £20,000. This does not include staff costs or office overheads.

A rights audit

Given the level of confusion and lack of clarity over the rights to UK independent and specialised films coupled with the shortage of resources in the sector to address this, there is a strong argument for the UKFC to facilitate some kind of audit. The purpose of this would be both to establish or confirm a chain of ownership in titles and illuminate the availability or otherwise of all rights (especially Internet and on-demand rights). Depending upon the number of titles scrutinised (which in turn depends on the relative balance between current releases and archive/catalogue titles), this could be a complex and expensive process. There is also likely to be a need to persuade and motivate the industry to cooperate in the exercise, given the need for involvement from not only domestic distributors but also the production sector and sales agents who are by all accounts sitting on a pile of unexploited rights.

Indicative costs

The main cost of a rights audit would be in legal fees for examining and recording the details of rights contracts. On a day-rate the costs for such an audit would soon escalate out of control as we believe each title would take between one and eight hours to audit which

would produce a cost range of between £125,000 and £1m for 500 titles. The best option would therefore be to employ to qualified junior lawyers full time giving a likely annual cost of £100,000 to £150,000.

Creation of a public rights database

A natural extension of the B2B rights portal could be a public-facing rights database. The idea of this B2C application would be to make it easier for the general public to find specialised and UK independent films. Within the Internet/PC space this might take the form of a dedicated search engine or Web portal, while in the TV space it might consist of a special data feed or enhancements for electronic programme guides (EPGs). The EPG or search engine could carry some kind of UKFC branding, as the database may, highlighting the UKFC's presence and support of independent and specialised content outside of the theatrical environment. This would be a relatively low-cost exercise (even more so as part of a cohesive rights clarification initiative) which could raise awareness and improve ease of access to independent films.

Indicative costs

Similar in cost and scope to the B2B rights portal and database, the set up costs for developing a public-facing rights database would total around £90,000 for software and database development. Additional annual software licensing costs would be in the region of £20,000. This does not include staff costs or office overheads.

Education initiatives

The UK Film Council could undertake an education initiative to raise awareness among rights holders that confusion surrounding on-demand and digital rights is potentially depriving them of a revenue stream. An education initiative that targeted both rights holders and distributors/platforms would make it easier for third party operators to source and access specialised rights and encourage communication within the industry on the topic. One important factor within the education process would be to highlight for rights holders the technological advancements that have enabled the secure single territorial distribution of content in both open gateway and walled garden environments, and as such create more confidence in how their content is handled by established and emerging operators. One possible extension to any education initiative could be a networking event bringing together rights holders with operators for a discussion of concerns and an exchange of ideas to improve dialogue between buyers and sellers.

Indicative costs

An education initiative based largely on a public Website would cost in the region of £20,000 to set up with annual Website technical costs of about £3,600.

2. Easing friction in the market

We believe that there could be an opportunity for the UKFC to ease friction in the emerging digital film market without necessarily getting directly involved in the set-up and running of a service or platform. Most of the options here would require that the issues surrounding rights had already been clarified, so discussions under this section to some extent complement the strategic options discussed above.

Facilitate brokerage role on behalf of rights holders

The UKFC could undertake to facilitate a brokerage role on behalf of specialised film rights holders. There are various levels at which this could be done. At a minimum level it could involve the creation of a physical space or piece of virtual cyberspace to bring buyers and sellers together. At a higher level of intervention, it could involve acting as an agent for the specialised film rights holders and negotiating deals on their behalf. This role could be combined with some form of content aggregation function, allowing the brokerage of larger volume deals which would be more attractive to platform operators.

Indicative costs

The software and databases to run a rights brokerage would cost about £25,000 to set-up with annual Website technical costs of £3,600. This does not include staff costs.

Establish a royalty collection facility for rights holders

The UKFC could, by making use of previously established rights databases and adding a tracking function to the applications, use available technology to establish a royalty collection facility for specialised film rights holders. With content increasingly being made available on many different digital platforms, this could address the potentially chaotic process of collecting royalties given the haphazard nature of where rights are located as well as potential for numerous services accessing rights. However, it is important to note that not everybody may want their collection centralised and therefore any such function would have to be presented as an opt-in scheme for rights holders (even if on a title by title basis).

Indicative costs

Set-up of a rights-tracking database and associated software would cost around £75,000. The annual software license and running fees would be in the region of £22,000, not including staff costs or office overheads.

3. Intervention in the market

The next level of options refers to some kind of intervention in the market through the aggregation of rights.

Content aggregation

Appropriate independent UK and specialised film content could be aggregated through pre-sale or post-purchase of key on-demand rights. This might possibly be done on a share-of-future-revenue basis or even without money changing hands at all.

There are a number of options for defining the type of rights to be aggregated:

- By territory (e.g. all on-demand rights for the UK only)
- By distribution platform (e.g. rights to open Internet exploitation only)
- For public service usage.

The latter could itself be defined in a number of ways. Public service usage could be defined in terms of technical quality (e.g. a lower quality of content could be offered for non-commercial users such as the BBC does with the material it offers under a Creative Archive licence). It could also be defined in terms of a particular release window (e.g. a public service window might be scheduled after the first full cycle of commercial exploitation has occurred) or it could be defined in terms of a particular class of user (e.g. the rights might be confined to educational institutions only).

A pre-sale arrangement for films going into production would provide a safety net for films that may not otherwise get an on-demand distribution deal as well as add value to the UK film sector. Arguably, direct acquisition of rights is the only approach that will guarantee distribution to the kind of titles under consideration here and provide a bargaining chip for commercial negotiations with existing platforms. Such an approach would potentially:

- Give control over the distribution of titles regardless of their UK theatrical performance.
- Provide a degree of pre-funding for specialised film titles.

Allow the UKFC to use public funding as a bargaining chip, making granting of digital rights a pre-requisite for funding.

Politically this approach may meet with disapproval from existing distributors and possibly financiers, especially if the UKFC is seen to be exploiting its privileged position in order to tie up rights through pre-purchase. The approach of a pre-sale in some ways is similar to that taken by other funding sources such as the BBC on conventional platforms—such as the practice of taking Free TV rights in return for production investment—and may yet create a response from the broadcaster. Indeed, the broadcaster's public strategy of acquiring the UK licence for Pay TV and Free-to-Air rights as part and parcel of its funding in some cases is well documented, and saves the Corporation millions of pounds than if it were to acquire content post-release in the open market (one key example is 'Billy Elliot'). However, as much as this is a favourable position for the BBC, it is arguable that this may not be in the best interest of producers of independent and specialised films who, beyond the BBC and Channel 4, have scarcely few buyers.

Similarly, post-purchase of rights might bring the UKFC into conflict with existing buyers and potentially draw fire from the commercial sector (unless post-purchase is provided as conditional on no other buyer being found in the market first). Nevertheless, an important argument for adopting such a stance would be to provide not only a safety net for producers, but also leverage in negotiations in all stages of financing and rights selling where on-demand and Internet rights are concerned, to ensure that a fair market price is reached with both financiers and buyers that serves the long-term interest of the UK independent and specialised film sector as a whole rather than purely the commercial interests of broadcasters.

Strategic options in relation to distribution

As indicated above, the options discussed here on distribution must be considered in conjunction with those on rights.

Promotion of standards and interoperability

A pro-active way in which the UKFC could seek to promote the development of the digital distribution and consumption of specialised film would be to promote digital platform technical standards and an interoperability framework (especially with regards to DRM). This could greatly encourage wider distribution of film across manifold platforms, reducing the costs and barriers to entry associated with preparing content for multiple delivery systems. It may also ease consumption from the consumer end by encouraging standardisation of the software needed to view and pay for the content. The issue of interoperability of DRM technology and related systems has particularly important public policy significance in relation to both consumer access to content (e.g. ensuring access on fair and non-discriminatory terms) and competition (e.g. ensuring dominant players in the DRM sector do not distort operation of the digital film market).

Any intervention in this field might conceivably bring the UKFC into conflict with market forces currently shaping the direction of technology in this area. In addition, the current status of standards within digital space is something of a political minefield, not least because of the dominant positions already held in the media DRM sector by Microsoft and Apple. While an intervention in this field may

have limited wider impact in relation to the effort expended, it is important that the UKFC develops a coherent and thought-through public policy position on the issues involved.

Indicative costs

Standards promotion done primarily through a lobbying website and education initiative would carry costs of about £15,000 for establishment of a suitable web presence with associated annual technical costs of around £4,000.

Facilitate mastering (encoding), tagging and storage of content

A positive step that could potentially have a major beneficial impact on the market for specialised film would involve taking responsibility for the 'back end' of the digital film technology chain: that of encoding and tagging the content to create and store a digital asset. Standards within this sector are reasonably well established and the UKFC could draw on its experience of the Digital Screen Network to facilitate this step. Smoothing the way to creation of a high quality digital master, possibly combined with centralised storage of content, would provide a valuable hub for the distribution of specialised film, reducing the element of duplicated costs involved with players 'doing their own thing'. Some economies of scale could conceivably be generated by integrating this step with the back-end mastering processes already established for the Digital Screen Network. Although apparently a simple step, this undertaking would encompass and address many of the issues raised in relation to other recommendations. An encoding and digital storage facility would:

- Allow quality control over the digital master
- Aggregate specialised film content in sufficient volume to make it commercially interesting.
- Provide a central and single point of contact for distributors and platforms seeking to diversify their content slate or offering.
- Allow content to be released in multiple formats at different compression rates for distribution across multiple platforms.
- Potentially save costs that would otherwise have to be paid to multiple platform partners to carry out this step.

This step would benefit from being combined with some sort of rights database (as discussed earlier) in order to manage the exploitation of the content. There is a small danger that such an initiative may alienate some potential platform partners who have a preference for carrying out this stage of the process themselves, either as a quality control function or a means of generating additional income. The establishment of this kind of facility would in itself make a positive contribution to the establishment of common standards for the sector, as discussed above.

Indicative costs

Based on a library of 500 films, the costs associated with creating digital masters suitably tagged and stored centrally would be £60,000 for initial creation of masters, tagging and encoding. On-going annual storage costs would be in the region of £25,000.

Enable marketing support (“digital P&A”) for on-demand distribution

In the traditional film outlets, independent and specialised products require as much marketing support as possible to bring them to the attention of potential viewers in a crowded and ‘noisy’ marketplace. This is just as important in the digital space. One of the strengths of on-demand platforms is their flexible virtual ‘shelf-space’ that could allow a wider choice of content to be available. The corollary of this is that it can potentially be difficult for the consumer to find more specialised product when there is a large number of titles on offer. Moreover, harsh business realities dictate that platform owners will generally still promote and ‘push’ mainstream films perceived to have the strongest commercial appeal and will have little incentive to advertise the availability of more niche offerings. Promotion in this context can mean anything from marketing materials included with a cable operator’s monthly bill to electronic measures that highlight particular titles within a TV electronic programme guide (EPG) or on the home page of a particular website.

The point here is that it is not enough to simply make specialised films available on digital platforms; it is just as important to let people know they are there. The concept of “digital P&A” could encompass both a ‘digital print’, in the sense of a digital master (as discussed above), as well as a marketing support element. This latter component could be used, for example, to buy favourable positioning within an EPG or to buy a strong ranking within particular Internet search engine results.

Indicative costs

Based on Web promotion of 500 titles, the costs of digital P&A would be around £3.7m. If creation of digital masters was included, this would add an additional £10,000 for 500 titles.

Partner with one or a restricted number of distribution partners with access to a platform

There are a number of ways in which the UKFC could partner an existing UK distribution platform. One platform or a restricted number of platforms could be charged with distributing a quota of independent UK and specialised films (perhaps on a franchise basis). The potential advantages of this approach include the relative simplicity of dealing with one or a small number of players and the fact that a specially chosen partner could be expected to put more effort into promoting the content in return for having some kind of exclusivity. The downside of this option is that a limited partnership of this kind is unlikely to achieve the strategic objective of maximising exposure for specialised films.

Partner with a range of distribution players based on shared standards for delivery and a content commitment

A relatively light touch form of intervention would be to effectively 'endorse' a number of distribution platforms/partners for specialised rights holders to deal with based upon some minimum set of criteria. These criteria could include some element of shared technical standards and some minimum commitment to promote and distribute specialised and independent UK product – perhaps through some kind of 'quota' akin to that used within the Digital Screen Network scheme.

The obvious potential criticism of this approach is that potential partners are likely to want some kind of quid pro quo for cooperating. Commercial operators may also be wary about shared or 'open' standards, preferring to rely on proprietary solutions.

Indicative costs

The main costs associated with these types of partnership are staff and office overheads. A number of on-demand platforms will handle ingest and mastering (from Digibeta) at no upfront cost. Costs are often taken out of the back-end. Thus the revenue share is done on a percentage of net (after costs) rather than gross.

Set up a 'white label' B2B publishing platform supporting content which is "sold" on to distribution/marketing partners

At its simplest level, the UKFC could act as a match-maker between content owners and existing VoD platforms, perhaps also encompassing some aspects of content aggregation discussed above in the rights section. VoD operators are eager to secure a wide range of content for their services, but are obviously most interested in doing volume deals rather than piecemeal negotiations. Providing specialised film content to VoD operators in an open non-discriminatory manner for inclusion within their on-demand libraries would be one way in which the remit of digital delivery could be met. A prior aggregation step would be necessary to provide the volume of content needed to make any such deal compelling. The plus points of this approach are that, assuming the platform owner could be convinced of the value of the content on offer:

- The upfront costs would be minimal and the on-going financial commitment could be controlled and minimised.
- Deals could be struck with a wide spectrum of distribution partners in order to maximise access for consumers.
- The 'white label' strategy would minimise any perception of competing with existing services.

The potential downside to this approach is that the degree of control over what content was included in the distribution agreement with the VoD operator would be minimal. Less commercial films, particularly those that had not received a UK theatrical release, would be unlikely to be included in such agreements. As discussed above, an on-going marketing commitment across multiple platforms would

almost certainly be required to generate and sustain interest in the content on offer. This approach would provide limited opportunities to build a brand and consumer awareness of the availability of the specialised film content as it would merely inject a selection of specialised movies into a much larger pool of content. In addition, the exposure may devalue the content in later windows of exploitation and would also negate creation of a more organised platform or channel for the content concerned.

Indicative costs

Again the main costs for a match-maker option are staff and office overheads. The costs associated with content aggregation and audit, which may be necessary preliminary steps, have already been detailed above.

Set up and manage an independent film platform on the open Internet

Broadband access and recent technological developments mean that the open Internet offers real potential as a means of distribution for on-demand film content. A number of models are already in place, including the Sky Movies download 'channel' and the BBC iMP trial. In the near term in order to be economically viable, the platform would likely need to utilise a download rather than streaming model and peer-to-peer (P2P) technology (both Sky and the BBC are utilising a download P2P system), although streaming could be utilised to transmit a 'showcase' channel or selection of promotional on-demand content.

As with several of the other options, a large part of the set-up of an open Internet platform could be outsourced and there are 'off the shelf' platforms that would enable an on-line 'on-demand' service to be created relatively quickly and simply for relatively little cost. Rights management, content aggregation, ingest and encoding would be a necessary pre-cursor to set-up of such a service.

There are many reasons why an open Internet platform represents a potentially compelling option:

- Costs relative to a full-blown broadcast channel are low (there is no requirement for satellite transponder space or spectrum allocation, for example)
- Once encoded, the content could be easily fed to other broadband distribution platforms and quickly re-purposed for distribution to 'future' viewing devices, including mobile devices.
- The broadband environment, community, and user base is likely to be a good 'fit' with specialised film.
- The broadband environment is already recognised as an outlet for specialised and challenging film content.
- The service would still potentially fit within the definition of Public Service Publishing (PSP).
- All of the branding opportunities of a traditional channel exist within the broadband space.

By taking this option there are a number of possible downsides, including:

- The UKFC would be committing largely to a single distribution avenue and thus limiting the potential reach of the service.
- There are potential equality of access issues in that, while broadband access is growing rapidly, it has yet to reach the majority of homes in the UK. Further, a fast broadband connection in excess of the typical 1 or -2Mbit/s connection most common in the UK today would be required to make the user experience compelling (at 1Mbit/s a film would download only in real time, thus the user would have to wait up to two hours after making the decision to watch before he could begin viewing).
- The broadband user base is representative of a certain upper-tier demographic that may not fit politically with the UKFC's agenda, despite the apparent support from regulators for the potential use of broadband for a new PSP.
- Release of movies into such a broadband channel could be detrimental to overall incremental revenue streams as the content would likely be deemed to have been made widely available—at least in perception—and thus be less attractive to on-demand operators in the cable, satellite and IPTV spaces.

Indicative costs

Set-up of an Internet delivery platform would cost about £350,000 with on-going annual development costs of about £120,000. Additional costs for Mastering, tagging and transcoding a 500-title movie library would be as above (that is £60,000 with annual storage costs of £25,000). The cost of each stream (that is the cost incurred each time a movie was viewed) would be £0.25. This does not include any costs for the acquisition of rights, staff costs, marketing costs or office overheads.

Make available a branded cross-platform 'channel' of on-demand UK/specialised film

Through creation of a branded cross-platform service, the UKFC could have a large degree of control over the way in which specialised film is distributed in the digital space as this option encompasses branding, marketing, scheduling and play-out of content. But even within this option there are a variety of degrees of involvement and partnership potential at every stage of the process, potentially reducing the commitment required. Thus, while this may appear a very hands on approach, there are many ways in which the UKFC could out-source creation and running of such a service and still retain the degree of control necessary to ensure its remit with regard to specialised film distribution was met. This approach, despite its apparent magnitude, is thus fully scalable.

Further, there are two complementary options within the channel category which could be undertaken in unison. The first is the establishment of an on-demand channel made available across cable, IPTV and probably also the open Internet. The second is creation of a more traditional linear digital channel along the lines of those created by Channel 4 under the Film Four brand. Indeed, Film Four provides a good example of the way in which linear television can be hybridised with on-demand-style delivery. While Film Four is a

traditional style linear movie channel, the Film Four Weekly channel is effectively a mini near-VoD service showing the same movies at set start times throughout the week.

We believe there are a number of potential benefits to this approach:

- The UKFC could retain full control of branding, content and scheduling.
- The potential revenue streams are greater and more diverse than any of the other options discussed (potentially including subscription and advertising).
- Any or every aspect of the set-up and operation could be outsourced or franchised
- Partnerships and outsourcing could provide opportunities to leverage the marketing power of established operators.
- A properly organised and branded channel could have strong appeal to a wide range of platforms
- It offers the best opportunity to build brand values and thus awareness of the content
- It seems most likely to fit within the definition of Public Service Publishing.
- It is wholly compatible with creation of a family of services across windows and platforms
- It offers the greatest potential to access international markets beyond the UK.

One potential downside of this option is that it could have the greatest impact on the market overall and thus be perceived by some companies as a (publicly funded) competitive threat. Moreover, the cost and logistical implications of this option are probably greater than with any other. However, the potential upside is arguably also the greatest.

Indicative costs

Costs associated with a full-blown channel would vary depending on the type of channel required. A traditional linear television channel would cost around £1m a year to set-up and run. An Internet on-demand channel would cost around £500,000 (as per indicative costs for open Internet portal above). A linear Internet channel would cost around £200,000 to set-up and run each year. A traditional TV space on-demand service would vary in cost dependent on number of users and potential user base, but to set up an operation for 1,000 potential users would cost around £50,000 for the head-end equipment. There would, of course also be mastering, tagging and transcoding costs (£60,000 for initial creation of masters, tagging and encoding. On-going annual storage costs would be in the region of £25,000). This final option does not include staff costs, rights acquisition costs or office overheads.

7. Glossary

A la carte VoD – video-on-demand business model where video content is paid for and consumed on an ad hoc pay per view basis

Application-based – Internet services that require the consumer to download a specific programme and/or application rather than be available via an open website

Broadband – high-speed Internet connection, on average 10 times faster than normal dial-up connections (see below)

Codec – Software/hardware that compresses and decompresses digital audio and video data streams in order to speed up transmission and save storage space. Term can also be applied to technology that performs analogue-to-digital or digital-to-analogue conversions.

Compression – technology enabling large audio-visual or computer data files to be digitally compacted to a smaller size, enabling easier download/upload (see Codec)

Dial-up – basic Internet service that uses a simple telephone line to dial a connection to the Internet

Download – transferring of content or data from the Internet to a terminal (which can be a PC, personal digital assistant, mobile phone or some other Internet-enabled digital device)

DRM – Digital Rights Management; software that regulates how and by whom digital content is used.

DSL – Digital Subscriber Line; broadband technology used in traditional copper-based telecommunications networks. Most common flavour of DSL in the UK is ADSL (asymmetric digital subscriber line).

Encoding – process of digitising content. Quite literally, the process of electronically "writing" information.

EPG – Electronic Programme Guide; on-screen display that organises content for the viewer

IP – Internet Protocol; the standardized method of transporting information across the Internet in packets of data.

IPTV – Internet Protocol Television; the use of IP platforms such as DSL and FTTH to deliver video services to the television set using a set-top box

ISP – Internet Service Provider

Kbits/s – Kilobits per second; measurement of Internet and network connection speeds

Mbits/s – Megabits per second; 1 Mbit/s is equal to 1,000 Kbits/s (see Kbits/s)

Metadata - data that is used to describe other data, which may include information about the author, title and subject of web resources.

NVoD – Near video-on-demand; pay-per-view scenario where multiple channels are used to broadcast the same piece of content with a short lag between start times

Open gateway – open network platform that can be access with a PC or other Internet-enabled device over the open Internet.

P2P – peer-to-peer; communications applications in which Internet users can exchange files with each other directly

PPV – Pay-per-view television

PVR – Personal Video Recorder; consumer recording device that stores programmes on a hard disk rather than conventional tape.

SVoD – Subscription video-on-demand, VoD services offered for a subscription fee

Transcoding - direct digital-to-digital conversion from one encoding scheme to a different encoding scheme.

Upload – transfer of content or data from a personal device to the Internet

VoD – video-on-demand

Walled Garden – a closed network where the service/platform operator defines content available to its users and limits access to content outside of this environment.

8. Interview List

Rights holders

- Sony Pictures Entertainment – Stuart Baxter
- Artificial Eye – Robert Beeson
- Soda Pictures – Ed Fletcher
- Metrodome – Andrew Keyte
- Tartan Films – Laura Decasto
- BFI Trading – Katherine Pusey
- Pathe – Simon Fawcett
- Qwerty Films - Michael Kuhn
- Entertainment Film – Nigel Green

Platforms

- BSkyB – Mark Winterbottom, Griffin Parry
- CinemaNow – Bruce Eisen
- Microsoft – Erik Huggers
- IOKO – John Griffin
- BBC – Tony Ageh
- LoveFilm – Mark Livingstone
- Homechoice – Jonathan Sykes
- BT – Andrew Burke
- World Cinema Online - Nick O'Hagan
- Narrowstep – Iolo Jones
- Sundance Channel – Britt Benson
- Video Island – Saul Klein and Simon Calver
- Tiscali – Richard Ayers
- Entriq – Guy Tennant
- On Demand Group – Andy Birchall
- Greengrass – Alex Taylor
- FilmFour/Channel 4 – Tom Sykes, Heather Rabbatts