An evaluation of online video services

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Summary:

This paper begins by examining online video consumption trends. Based on them, and more specifically on four key service dimensions (quality, choice, time and location), it proposes a framework for evaluating online video services. This framework was then qualitatively applied to 12 such services, resulting in a mini-case study for each one of them. The case studies were analysed comparatively in relation to the key service dimensions. The findings offer useful insights into the fast developing online video industry, while at the same time highlight the need for and point the direction to future research.

1 Introduction

'Television' (and video consumption in general) has experienced significant changes within a relatively short period of time, due to the introduction of new technologies. In turns this has significantly affected who the 'television viewer' is and what the viewer wants. A simplistic approach would have been to consider a case in which the viewer demands the best picture and sound quality on the chosen viewing platform, anywhere and anytime with access to a wide range of content.

In reality, though, this is not –yet– the case for three main reasons:

1. The provision of services has not reached the maturity level to enable such a scenario
2. Consumer demographics play a significant role in what their 'real' preferences are. These can range dramatically from one segment to the next.
3. Traditional television and related distribution channels are still among us, playing a leading role in how viewers consume their content.

With the viewer's consumer behaviour changing, it is imperative that any investigation into any facet of online video broadcasting starts with an examination of the key ingredients of such behaviour. Measuring consumer behaviour in an age of convergence is proving to be difficult, even for the more mundane of measurements (Stelter 2008). Consequently, in next section this paper will first examine important aspects of viewing preferences such as how long viewers spend watching television and video, what type of content they prefer and where, when and how they consume it. It will then present a framework for evaluating online video services, which is applied to 12 services. Following this, the discussion section will present the findings of the evaluation before concluding with avenues for future research.

2 From 'television' to online video services

Television is still a very important medium for video consumption. Online television and video consumption are relatively small, when compared to traditional television, but they are increasing in magnitude. In this section we present market-evidence highlighting key changes in viewing preferences. More specifically, we examine how long viewers spent online watching video, what do they watch, what is the content's quality, where and when do they watch online video and finally how do the watch it?

How long?

Forrester surveyed Internet users in North America during the final quarter of 2007 and found that 67% of them watch online video in a typical month (McQuivey et al. 2008b). This increased further to 77% in late 2008 according to the comCast VideoMetrix (2008). Although such a high figure looks impressive at first sight, a Gartner report revealed that consumers worldwide may continue watching their TV channels, DVDs and videos, for between 20 and 30 hours per week (about 22 hours in total for the United Kingdom), but the average Internet video consumption is only about four hours per month (Jopling 2008). This was also backed up by a Nielsen three-screen report which shows that in May 2008 Americans spent 127 hours in front of their TVs, compared to 2 hours 19 minutes spent watching online video (Stelter 2008). Hence, compared to traditional viewing, online viewing is still a small, albeit significant, phenomenon. Additional support for this conclusion can be found in the results of a European Forrester survey which concluded that European consumers consider the Internet as an 'additional' medium. Despite the increasing number of users accessing the web, the traditional media usage of the overall population has not yet

been significantly affected, i.e. “the percentage of consumers watching television, listening to the radio, or reading newspapers hasn't decreased over time — nor is it lower among online users” (Le Quoc et al. 2008). With more Europeans going online the number of hours overall that the population spends using the Internet has increased. However, the average amount of time they devote to traditional media per week has hardly changed since 2004, with television still taking up most of their time (Le Quoc et al. 2008). When it comes to TV and video content, a more recent Forrester report (Nuthall et al. 2008) shows that consumers' appetite shows no sign of slowing down: Viewing hours are up, as are the number of devices available to access TV and video content.

Table 1: Top U.S. Online Video Properties by Videos Viewed and by Unique Visitors in October 2008 (Rankings based on video content sites; excludes video server networks. Online video includes both streaming and progressive download video.) (Comscore.com 2008)

Property	Videos (000)	Share (%) of Videos	Unique Viewers (000)	Average Videos per Viewer
Total Internet	*13,536,595*	*100.0*	*147,283*	*91.9*
Google Sites	5,373,783	39.7	100,475	53.5
Fox Interactive Media	519,926	3.8	60,791	8.6
Yahoo! Sites	363,426	2.7	45,187	8.0
Viacom Digital	305,258	2.3	25,658	11.9
Microsoft Sites	286,464	2.1	30,696	9.3
Hulu	235,096	1.7	23,993	9.8
Turner Network	228,024	1.7	20,858	10.9
Disney Online	126,611	0.9	13,757	9.2
AOL LLC	122,580	0.9	22,743	5.4
ESPN	104,724	0.8		
CBS Corporation			13,639	4.7

comCast (2008) found that the average US online video viewer watched 274 minutes of video, with the duration of the average online video being 3.0 minutes, although this figure is probably heavily influenced by user-generated content, which tends to be short in duration. In contrast, the duration of the average online video viewed at Hulu was 11.6 minutes, higher than any other video property in the top ten (Comscore.com 2008) online video services (Please see

Table 1). Finally, in terms of mobile phone viewing, Nielsen estimates that out of 217m people carrying a mobile phone in the United States only about 4.4m are subscribed to mobile video. Still, the average user watches 3 hours and 15 minutes a month (Stelter 2008).

What?

When it comes to the types of content consumed the Forrester (McQuivey et al. 2008b) and Gartner (Jopling 2008) surveys converge to a similar list. Forrester, for example, found that the viewers surveyed watch a great deal of TV-like content online, including news, TV shows and movie clips and trailers. Full length episodes were watched by 24% of those surveyed, while full-length movies were watched by 17%. The numbers clearly suggest that “the days of thinking of online video as mostly a YouTube phenomenon are officially over” (McQuivey et al. 2008b). Despite this, Gartner does not expect significant changes in the short term: “there is some slight resemblance to traditional TV in the list, but mostly it is a

new entertainment medium due to the consumers' propensity to watch short video. Internet video evolved from a PC-centric position and this will be its prime focus in the short term. In the longer term, that will change." (Jopling 2008) The above could be seen reflected in the top online video properties rankings (

Table 1), which Google dominates mostly due to the popularity of YouTube, accounting for 98% of the 5.4 billion videos viewed.

Quality?

Quality is a direct function of two key parameters, namely the bandwidth available and the reproduction capabilities of the viewing platform. For example, there would have been little point in streaming HD content to a tiny mobile phone screen even if that was possible and financially viable, as the users could not actually see and experience the difference. Bandwidth is associated with two other important aspects. Firstly, the time it will take to download the content and whether this real-time stream is possible, eliminating any waiting times and offering an on-demand service. If quality of service is not in place, though, then buffering could rapidly lower the quality of the viewing experience. Secondly, there are the costs involved for transferring the content. Among the types of content listed above, TV shows (especially serialised ones), movies and sports events would have particularly benefited by high quality broadcasts and not surprisingly examples of such initiatives have existed since 2007, for example ABC (2007) broadcasting online in HD. Networks now have the means to directly reach the audience in reasonable quality, if not even better (Jopling 2008).

Where? When?

The online experience does not only include quality, but also the convenience to watch one's favourite programme where one prefers and when one prefers to do so: "the demanding consumer is in charge and will dictate all the parameters surrounding their video consumption- any time, anywhere any content and how they want it" (Jopling 2008). In other words, "successful distribution of video content will mean matching the content *and* its conveyance medium to its most applicable audience. Simply having the right content will not suffice" (Jopling 2008).

For time-shifting, be it a VCR, DVD device or disks, or DVR, and the associated convenience of watching their favourite programmes when they like, consumers have already shown themselves willing to pay for some time (Jopling 2008). However, DVR as we got to know it may soon be a thing of the past. Forrester (McQuivey et al. 2008b) predicted that although consumers may continue to sign up for DVR services from service providers, they will depend less on the DVR compared to what used to be the case, as this confines them to their living rooms. Perhaps an interesting reflection of how this can apply in practice can be seen in the fact that a significant proportion of consumers (18%) surveyed in the aforementioned Forrester Research survey (McQuivey et al. 2008b) were driven to connect a PC to their televisions. More than a third of those had watched online video, extending the convenience of online TV show viewing to the large-screen TV set, taking matters into their own hands and creating a 'hybrid' solution (McQuivey et al. 2008b). Gartner's prediction that the PC's primary role in video consumption will change from being a viewing platform to being a general sourcing mechanism for all consumer video seems to be in alignment with such behaviour (Jopling 2008). When it comes to watching video 'everywhere' the Gartner report concludes that a tactical three-screen (TV, PC, mobile devices) liquid content, i.e. that

video must be easily presented, adapted to any device and probably not displayed identically, market reality is many years away (Jopling 2008).

How?

It is interesting to note that the television industry was named after the form factor of the device through which consumers view content (McQuivey et al. 2008a). The challenge of defining what exactly 'television' is highlights how out-of-date the term is. Users now have a plethora of options beyond their traditional television box as to how they consume video with each one of these devices usually having its own distinct set of attributes. The rapid growth in the 'How' can also be seen from the other side of the spectrum: the connected devices themselves. Strategy Analytics estimated that by the end of 2008 there would be around 186 million connected TV device in use (Mercer 2008). "While games consoles and set-top boxes dominate the market today, demand for connected flat panel TVs is also set to explode, as indicated by recent strategy announcements from Sony and other major CE vendors." (Mercer 2008) It is not hard to imagine that there will soon a time when all of these connected devices will be able to support, in one way or another, video consumption blurring further the boundaries between 'traditional television' and IPTV. Which one converges more towards the other may play a crucial role in how usable devices end up being.

3 Developing an evaluation framework

With viewers shifting their attention to the Internet-based services, seeking not only content, but also new ways of consuming it, there are clearly opportunities to be explored. There are also associated business and technical challenges that need to be overcome, if these opportunities are going to be converted from potential to actual value. A number of services already exist that promise to deliver quality services to ever more demanding customers. Following the previous section's structure, their offerings will be considered on four key service dimensions: quality of image and sound, location and time availability and choice of content.

Figure 1: Key service dimensions: quality, location, choice and time.

Starting with location, viewers' choices could be distinguished into two main flavours depending on the content source itself. In the first scenario the content is broadcast directly from the service provider to the viewer, provided a data connection between the provider and the viewer exists. This usually involves an Internet or mobile phone connection. The second one, assuming again that a network connection is required at the point of consumption, is a form of place-shifting which allows for the consumption of audiovisual content received

indirectly via a data network at any location where a connection to the network is available. This usually involves shifting streams from a cable/satellite box or other similar sources to devices such as a personal computer or a mobile phone. Unlike the traditional TV business model, such technology does away with the content distribution rules of advertising, geography and syndication, which are the three key layers of the traditional and current TV business (Bosnjak 2006).

In theory, the availability of the Internet virtually everywhere renders the first scenario of direct content access practically the default scenario for content distribution over such a network. However, as this has not materialised yet, place-shifting has a clear gap to fill. Redirecting content beyond the living room, where the typical source would be found, to a computer screen across the house or over a continent is an attractive proposition for frustrated couch-restricted viewers. This is particularly true for those opting to watch a programme over a mobile device, as mobile users are typically restricted to the few channels offered by each provider (Bosnjak 2006).

The quality of picture and sound experienced by the user is heavily based on the quality of the connection available. Then, when it comes to directly connecting to the source the limitations are set by the viewing device, while in the case of place-shifting additional limitations may be posed by the place-shifting technology itself and the network it is connected to. For example, a typical upstream bandwidth ranging between 256-512kbit/s is not enough to experience the quality one would have had locally using only the broadcaster's equipment. Although this becomes a bigger challenge the bigger the screen, when it comes to a typical computer window or mobile phone, it should be enough to balance the viewing expectations of those remote viewers, who would not mind trading quality for location independence (although this could be addressed with the introduction of ultra-small projectors, often built into the devices themselves). This suggests that the location and quality are currently linked together and should also be considered in relation to the device used by the user to fulfil a specific need. This challenge could be turned into a commercial opportunity for as long as there are business models that revolve around broadcasting content to a specified location that users would like to take with them on the go. With connection availability and bandwidth improving, quality could eventually reach a point where users would not have to compromise their viewing experience in return for location independence.

Arguably, the main challenge for truly location-independent content consumption is the legal restrictions. Content owners and distributors will be concerned that consumers are able to watch their programming while in geographies for which that content is not licensed, for example by place-shifting it (Bosnjak 2006). As place-shifting is not a significant commercial phenomenon and considered a niche, this is not an issue at the moment. However, when it comes to direct consumption it is often the case that connections are refused depending on the viewer's location. For example, due to legal restrictions Hulu will not stream videos to users outside the United States. This even includes their very own product-tour video! In the UK, the BBC (2006) signed an exclusive deal with Infront Sports and Media, the company responsible for the worldwide marketing and sales of the broadcast rights to the 2006 World Cup, to allow Internet users in the UK to watch all the games online. As a result, location-independence should be closely examined with viewers' available choice as the two are inter-related. The wider the choice offered and the geographies covered are, not only the higher the chances a provider will hit a legal barrier, but the higher the costs will be (Schaefer 2007).

When it comes to the time dimension, similarly to the location dimension, there are two main scenarios to consider. In the first, usually referred to as time shifting, the user is able to record and store content on a device, in order to consume it at a more convenient time. The second scenario involves on-demand viewing with the user placing requests for content. If the

content requested is a low quality short clip, typical of user-generated content, this can easily be streamed to the user instantly. However, if the content is of high quality and longer duration, e.g. a HD full-length movie, then the user would have had to first download the content and then watch it, as it would not be feasible to stream it over a typical home connection. One solution could be to first download the beginning of the programme requested and store it locally at the viewer's end. Then once the request is placed, the user is able to start the viewing immediately using the local copy, giving the system enough time to progressively download the remaining. This, though, implies that the header content is already stored at the viewer's end, which in its turn implies limited options when it comes to choice, as it is not physically possible to store everything. Consequently, time and choice can be related. The above of course applies only to pre-recorded content, as for live content (e.g. sports) asking the user to wait for the provider to first record the event, then make it available and then wait to download it would be far from ideal. In such a case the broadcaster may offer live streams of lower quality and then make a high-quality recorded copy available for download at a later time. Hence, time delivery and quality are also related. In fact this point can be extended to cover release dates of pre-recorded content also (e.g. new episodes of hit-series) as fans would want to watch them as soon as they are available.

4 Methodology

For this paper we adopted a qualitative methodology, preparing for each of the services listed in Table 2 a mini case study based on the framework discussed in the previous section. Each service's case was arranged under the following subheadings:

- Business model, with particular emphasis on the revenue streams
- The content on offer
- The availability of the service and the distribution methods
- Information about the user base, when available
- The user requirements
- The quality
- The technology the service utilises and
- Any web 1.0/2.0 features the service offered (e.g. web site features, social networking, etc).

The above were not 'strictly' followed, though, as many key facts fell under various subheadings. For example, content may have been only available in a specific country, which meant distribution may have been affected due to legal agreements. We then undertook a comparative analysis of the cases relating them to the key points mentioned in section 2 and 3.

Table 2 below lists the services that were reviewed and tabulates a few key characteristics for each one of them. Typically, services, apart from those that require customers to buy their own hardware, are accessed using a standard Internet-connected PC. Four of the services reviewed had explicit support for mobile phones, which often came as part of a telecom provider bundle. The majority of the services had an international focus, albeit this often meant that not all content was available everywhere. This is clearly illustrated in the case of Hulu, which offers content produced by the big studios only in the United States. The majority of the services employ a buy/rent content business model with the rest following an advertisement supported approach. Only one service (ReelTime) offers a subscription package.

Table 2: Key characteristics of online video services

#	Service	Hardware	Mobile	Country	HD	Buy	Rent	Subscribe	Ads?
1	Amazon VoD	Optional	✓	US-only		✓	✓		
2	AppleTV	Required		International	✓	✓	✓		
3	Babelgum		✓	International					✓
4	Bell Video Store	Optional		Canada-only		✓	✓		
5	CinemaNow	Optional	✓	International	✓	✓	✓		
6	Hulu			US-only	✓				✓
7	Joost		✓	International					✓
8	Reeltime			International		✓	✓	✓	
9	Veoh			International					✓
10	Vimeo			International	✓				✓
11	Vudu	Required		US-only	✓	✓	✓		
12	ZML2.com			International		✓			

Table Notes:

1. *Hardware: This refers to any proprietary hardware requirements required to access and use the service, apart from the PC. 'Optional' indicates that the service is accessible using a PC but the content can also be played on other 3rd party devices that support it.*
2. *Reeltime and CinemaNow appear to have an International version of their site and a country specific one (most probably a US version).*

5 Discussion

(Free) content is king: viewers must get used to the new ways of accessing it

The rise of Hulu over the past few months as a considerable force among the online video providers signals that viewers are certainly interested in good-quality professional video over the Internet. After all, who would not like to watch free hit TV series and movies in high definition (HD) anytime anywhere? However, as other providers found the quality of the content (which is very subjective anyway) and the actual quality of the broadcast may be important, but consumers may not be as ready to pay for it as many in the industry had hoped. Vudu, for example, plans to make available free web content (it already offers access to services such as YouTube and Flickr) via its boxes and its RIA platform (LeBlanc 2008), while AppleTv already offers access to the aforementioned services.

This prompts us to ask the following question: Why would someone pay for service-specific hardware (like the Vudu box) to watch YouTube when for a comparable price one may get a media-oriented PC to connect to a television. HD definition and convenience may be a reason, but at the moment these alone do not seem to be enough, especially with other service offering similar services. Strategically, though, it does make sense to offer add-on features such as those that Vudu plans to offer as they could drive the adoption of the hardware required to the first place and increase its implicit value. More importantly, viewers are already familiar with the content from sources like YouTube and having a convenient way to enjoy and share –properly– the experience in their living room is a welcome change. Access to web content would also mean using the hardware more, as it does not cost anything to consume free content and hence one may be more inclined to use it.

Bring people to the connected living room

On the other hand, consumers are already familiar with set-top boxes of various types. Still, these have been traditionally associated with a specific provider and a very specific function: watching television. Then came watching video online, mostly user-generated

content of a short duration. Now, we are coming full circle by bringing together television with content downloaded from the Internet, which, although fundamentally it may not be very different to what already happens, would require a transition period. For those at the 'traditional' end of the spectrum (e.g. older viewers) there are now ways to go online without leaving the comfort of their sofa, while for younger viewers there is now a way to get away from the PC monitor.

How instant is instant?

Depending on the user's Internet connection, many services will offer –almost– instant viewing, using either a progressive download approach or by pre-storing content locally. In addition many services would make it possible to (remotely) queue content for download to watch later so that the user does not have to wait for it. Consequently, the time dimension associated with the availability of the content is becoming less of an issue. Things can only improve as bandwidth increases over time. Users on the go would probably appreciate instantaneous viewing more, as they are often reported to try to fill the waiting time, while in transit. The lower quality and the small screen, compared to television viewing, means that mobile phones pose lower bandwidth requirements, when a connection is required, which should be possible to meet where high-speed coverage is available. An example of such usage can be seen in Babelgum (2009) partnering with mobile phone services to bundle the service on certain contracts. What about access to other services, though?

Cost of access

When it comes to download charges, this is more of an issue for mobile phone users, if their favourite provider is not included in a bundle or if they use more than one service. Often a fair usage policy may be in place. For those on unmetered Internet connections this is of lower importance, albeit more telecoms are paying attention to the ever rising levels of bandwidth consumption. This would raise more eyebrows once more content is available in HD, significantly increasing bandwidth consumption for the same content.

How many services do we –really– need?

For most of those involved in the online video value chain it makes sense from a transaction cost perspective to centralise content. After all, the Internet is a global medium and economies of scale would yield higher returns. However, the more centralised the provision the fewer services may be sustained, as with content centralised in one place where will the competitive advantage, at least when it comes to content for the rest of distributors, come from? A glimpse of this phenomenon when it comes to user-generated content can be seen in the case of YouTube, which has become the first point of call for user-generated content.

From a viewer's perspective, if popular content gets fragmented among the various services this may result in higher viewing costs, as in order to watch TV series or movies that are available by different services one would need multiple accounts and pay for those separately. Consequently, this may result in less convenience at a potentially higher price when compared to television prices. One potential route to address this issue is by catering for small niches (e.g. like Vimeo), something television could never viably achieve. Viewers would potentially be happy to pay for what they can not get in other ways.

With centralised content and with most services (especially those based on software players) offering more or less the same features, there seems to be a point of service convergence. This may be pushed further by initiatives such as that of BBC (Andrews 2008), which encourages TV and set-top box makers to adopt an open IPTV platform. Convergence

will render innovation and differentiating factors even more important, as otherwise service provision will eventually be commoditised. With little to put forward in terms of competitive advantages, the obvious route would be to initiate a price war or innovate in terms of business models (e.g. start offering bundles or subscriptions in the first instance).

What about availability and prices?

All service providers boast about the horizontal and vertical span of their libraries and the thousands of titles they contain. However, picking a few titles and looking up the fees demonstrates in action that many are better (often much better) in terms of offering choice than others. When it comes to prices a typical rental fee is about $3-$4 while purchasing ranges from $3-$4 to $15-$20 depending on the movie and quality. What is perhaps more interesting is that searching the services' web sites to find content is not always an easy task. Searching and filtering mechanisms will need to improve if viewers are to easily find content catering to their taste.

What about HD?

From the online services reviewed, 5 offer content in HD, often as an 'extra' and not as the standard. Even Vudu, which is the one service focusing more on quality, has recently shifted, via its RIA interface, its attention to content of lower quality. Do consumers really demand HD or are they generally happy with 'good-enough'? To answer this question one needs to consider four important parameters that affect the buying decision:

- **Where:** There is little point in paying the premium to watch HD content on a laptop's small screen or a portable device. This would most probably confine viewers to their living room, where typically the HD television would be.
- **How Much:** Cost sensitive customers may not be willing to pay the premium prices especially for standard definition, which even when compressed, is close to DVD quality.
- **Choice:** Not all providers support HD and not all content is available in HD. Consequently, even if one would have liked to purchases in HD this would not be possible.
- **Time:** HD content is bigger in size, hence needs faster Internet connections and more storage. These may result in longer waiting times and even higher download costs, depending on the ISP.

Business models

From a business model perspective there seems to be two main approaches when it comes to viewer-related income streams:

1. Those that are based on renting and/or selling content. Although the majority of the providers who follow this approach do both, there was one that offered content for purchasing only. No rental-only service was found.
2. Those that offer ad-supported services. Not surprising great emphasis is put on the models adopted by each service when it comes to delivering and measuring advertising impact. For example, Hulu (2009) offers various approaches to displaying advertising that often involved the user making a selection, e.g.:
    - Ad selector: An opportunity for the users to pick an advertisement
    - Branded Entertainment Selector: Users can choose to view either a longer-form movie trailer up front or a series of commercials as they view the content. If they choose the trailer, the content is viewed without interruption. If not, they will watch advertisements running during regular commercial breaks.

Interestingly, only one subscription model was found, for a service's library. This was offered by Reeltime, a provider that also offers a pay-as-you-go option. The subscription allows customers to access their standard titles for free. Subscription options are available for serialized content by a number of providers, an option which is typically much cheaper than renting episodes separately.

The above business models are very similar to those that the online music industry adopted. For example iTunes sells individuals tracks, Pandora offers ad-supported music, while Napster offers access to its library for a monthly subscription.

When it comes to publisher related services online video service may charge extra fees to offer additional benefits. For example Vimeo (2009) charges an annual free for among the other benefits an increased upload quote, higher quality encoding, and the ability to customise the player. On other hand video service providers are also willing to share revenues with publishers. For example, with Veoh Pro (2007), users can make money on their videos by charging on a Pay-to-Rent or Pay-To-Own basis.

6 Conclusion

In 2007, a report about Babelgum (Bosnjak 2007) concluded that there are some performance and risk issues that are common to many Internet TV players over the short to medium term :

1. most are still in beta or early launch phase
2. most are struggling with picture quality
3. most are struggling with content deals
4. most are backed by venture capital or private equity ranging from $5 million to $45 million
5. it is difficult to understand basic 'must-have' content elements for such a new type of service
6. it is also difficult to understand what exactly the successful business models will look like
7. all of Babelgum's content acquisition deals seem to be small appetisers rather than comprehensive 'three-course content meals'. This may be a problem, because other free Internet portals such as Google, Yahoo!, Amazon and others are also pursuing an 'advertising-cash' growth model similar to that of 'formal' Internet TV players
8. simultaneous entry into the Internet TV market of the media industry: traditional broadcasters and media players are building their own digital content delivery platforms, so why would customers sign up for a global deal with emerging players, if they can do it on their own?

It has been more than a year since the report and much progress has been made on many fronts. Still, the majority of points still hold true. Many services are still experimenting with the features of the offerings (in particular their player's capabilities and the video quality) and the content that they will include on their platform. Quality is improving and HD content is now offered by a few services, albeit still at the periphery and not at the core of their offering. On the business model front there is little evidence of innovation as most models simply

followed the traditional buy/rent and ad-supported services that were already in existence. More ‘mainstream’ studio and television content is reaching Internet-based video services, but this is often fragmented and country specific. Finally, when the experimentation period is over and both the products and customers mature, what is there (apart the from new player’s brand recognition) to stop big broadcasters and producers from establishing their own services? The resistance to signing a global deal is already evident in those services (especially US-based ones) that are country specific.

More research is needed in this fast developing area and many of the issues raised in this paper could form part of future research initiatives. For example, from the services’ point of view, further research could examine their strategies, their value chain and their business models. From the viewers’ point of view future research could study among other topics their behaviour and preferences when it comes consuming video online (e.g. in relation to quality and choice) or the impact and influence of social networking.

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