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Directorate-General for Internal Policies of the Union

STUDY

Policy Department Structural and Cohesion Policies

DIGITAL PLATFORMS: RISKS AND OPPORTUNITIES FOR EUROPEAN FILM-MAKERS

CULTURE AND EDUCATION

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Digital platforms: Risks and opportunities for European film-makers

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Content:

This study addresses the threats and opportunities offered to European film-makers by the direct delivery of films to consumers via the Internet, using broadband networks. It attempts to predict the evolution of the technology and market for direct delivery and provides advice to film-makers on how to adapt to, and take advantage of, developments already underway. It concludes by providing the European Parliament with specific policy ideas. The study also includes opinions provided by stakeholders, including film production companies.

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Glossary

3G	Third-generation mobile phone technology. 3G mobile phones allow the transfer of both voice data and non-voice data, including downloading information, e-mail, web browsing and video telephony.
ADSL	Asymmetrical digital subscriber line. This allows simultaneous transport on a pair of telephone lines of voice, data and video.
Bit	Short for binary digit, a unit of computer information.
Bits per second (bps)	A unit for measuring the transmission speed of digital data.
Byte	A unit of computer information. One byte is 8 bits of computer information processed as one unit.
Broadband	The definition of 'broadband' varies by operator, but generally applies to Internet connections with a speed greater than 2 MB.
Convergence	A home served by an open carriage system at a bandwidth able to carry IPTV services. This means it can search on the Internet for the entertainment of its choice and is not locked to a single aggregator or service provider, such as BSkyB or Telepiu.
D-cinema	Digital cinema. This refers to the digital storage and projection of films.
Day-and-date	The practice of simultaneously releasing a film theatrically and on a number of other formats (such as video-on-demand or DVD).
Digital rights management (DRM)	Digital rights management (DRM) refers to a system for protecting the copyright of data circulated via the Internet or any other form of digital media, designed to enable the secure distribution of data and prevent piracy.
Disintermediation	This refers to removal of an intermediate stage of an entertainment value chain, to be replaced by 'direct delivery'. Thus, a film distributor might be replaced by a direct relationship between a customer and a production company; a content aggregator might similarly be replaced by a direct supply from a rights owner.

Download	The transfer of data from one place to another over a network.
DTH	Direct-to-home digital television. This is delivered through satellite and received with a satellite dish.
DTT	Digital terrestrial television. This is digital television broadcast over the air and received through an aerial.
DV	A digital video format that has become the standard for amateur and semi-professional film-makers.
DVB-H	Digital video broadcasting — handheld. This is a technical specification for broadcasting services to handheld receivers such as mobile phones.
Electronic sell-through (EST)	Refers to content sold as a digital download; for example, a film downloaded from a website over a broadband connection and stored on a computer.
Film	A long-form narrative entertainment which may be fiction or documentary. The term can also refer to the physical film stock on which images are recorded.
HD	High definition. This refers to audiovisual content with a higher than normal resolution.
ICT	Information and communication technology, e.g. technology used to handle information and aid communication.
iPod	The iPod is a portable media player marketed by Apple Computers. Earlier versions of the iPod could only be used for audio applications, but the fifth-generation iPod (launched in October 2005) introduced video playback capability based on the MPEG-4 standard.
IP	Internet protocol. This is the common language computers use to communicate.
IPTV	Internet protocol television. A system that delivers audiovisual content to a consumer over the Internet.
ISP	Internet service provider. This is any company providing access to the Internet.
Kilobits per second (Kbps)	A measure of data transfer speed.
LCD	Liquid crystal display — a thin, flat display device made up of any number of colour or monochrome pixels arrayed in front of a light source or reflector.

Local loop	The network connection between a household and a local telephone exchange.
Megabits per second (Mbps)	A measure of data transfer speed.
Megabyte (MB)	A unit of computer storage. 1 megabyte is 1 million bytes.
Metadata	Metadata is structured 'data about data'. In a media context, the content (programming) is the 'data' and anything used to describe that content (such as genre codes, production info etc.) are metadata elements. The Internet relies heavily on metadata to allow users to find content.
MMC	Multimedia card. A portable digital storage device using flash memory, typically used in storage media for portable devices, such as mobile phones.
Mobisode	A broadcast television episode specifically made for viewing on mobile phones.
MPEG-4	MPEG-4 is a group of audio and video coding standards introduced by the ISO/IEC Moving Pictures Experts Group (MPEG) in 1998. MPEG-4 includes support for externally specified digital rights management and requires nearly half the bandwidth needed by MPEG-2, that is 2.5 MB for video streaming.
Network readiness index (NRI)	A methodology for systematically comparing the information and communications technology development of countries, developed by Harvard University.
NVoD	Near video-on-demand. This is similar to video-on-demand, but the same content is offered on a number of different channels with different start times.
Pay-per-view (PPV)	Content available to view (but not keep) for a one-off payment.
Pay-TV	Television channels that require a subscription to view.
PDA	Personal digital assistant. A handheld computer, typically with e-mail and Internet functionality and featuring a colour screen.
Peer-to-peer (P2P)	A P2P computer network relying on the computing power and bandwidth of its participants, often utilised in file-sharing applications.

Personal video recorder (PVR)	A consumer electronics device for recording television services to a hard disk in a digital format.
Point-to-point	Refers to a type of transmission that is sent from one antenna to another (single) antenna. The signal cannot be received by multiple recipients.
Point-to-multipoint	In point-to-multipoint transmissions, a single antenna broadcasts a signal to multiple receiving antennas simultaneously.
Portal	A website that acts as a gateway to other sites on the Internet.
PSP	Sony's portable PlayStation games console. As well as games, the PSP's colour screen can be used to watch audiovisual content stored on Universal Media Disks (UMDs).
Set top box (STB)	A device that enables an analogue television set to receive digital transmissions.
Streaming	Streaming media is media that is consumed (read, heard, viewed) while it is being delivered.
TFT	TFT stands for thin film transistor, but is commonly used to refer to a type of flat display screen offering high image quality.
Triple-play	The provision of three services (high-speed Internet, television and telephony) over a single broadband connection. Triple-play services are offered by cable operators and telecommunications companies.
UMD	Universal Media Disk. An optical disk format capable of storing 1.8 gigabytes of data. UMD disks are only compatible with Sony's PSP games console.
UMTS	Universal mobile telecommunication system. This is the third generation mobile phone network standard in Europe.
Video-on-demand (VoD)	A platform enabling viewers to select content and have it delivered to them over a network at any time.
Wi-Fi	A term used to describe devices that conform to the IEEE 802.11 standards for wireless local area networks (WLANs).
WLAN	Wireless local area network. A wireless network using radio frequencies for the communication between computer devices.

Executive summary

The brief of this study was to identify the threats and opportunities for European film-makers posed by the direct delivery of films by the Internet.

We decided to explore these threats and opportunities in the context of ‘digital convergence’.

Towards digital convergence

- We define ‘digital convergence’ as the point at which the majority of homes in a given market would be able to receive content by broadband at an acceptable download speed. The most advanced European countries will reach this stage in about 2012.
- The digital home will be able to receive all audiovisual services on a single carrier.
- Most content will be playable on, and some receivable by, mobile devices.
- This will offer a huge increase in consumer choice and a rapid evolution of the modes of entertainment, including an increase in user-made programming.
- For film-makers, the most significant impact will come from video-on-demand (VoD) services, for which the United Kingdom and France appear to have the highest potential demand at present.
- There will be many kinds of online film store, using various business models.
- Many different types of company are getting ready to provide VoD and other content services. They include broadcasters, telecoms companies, satellite and cable companies, established Internet portals (such as Amazon and Google) and some specialist film providers.
- Most people today watch the majority of the films they see on a domestic screen. Film is one of a continuum of fiction genres, in particular the one that receives the highest level of investment. It is a key driver of digital convergence.

Is Europe digital-ready?

All countries in the EU-25 are making progress towards convergence, but the level of progress varies greatly.

Using the measure of ‘network readiness’, developed by Harvard University, Denmark tops the European table and is third in the world behind the United States and Singapore. All the Nordic countries rank near the top of this index.

Broadband penetration ranges from 24 % in the Netherlands to just 1 % in Greece, with a European average of 11 %.

The impact of digital convergence

- Content production will become cheaper and the means of production widely available.
- Content will be receivable from anywhere with negligible delivery costs.
- Digital convergence ends audiovisual ‘market failure’, caused by scarcity of spectrum, which limited the channels from which the public could receive content.
- Convergence will hasten the end of ‘default viewing’ of TV and films, that is, viewing what is on because there are only a few channels available.
- The Internet will improve the distribution of less popular or specialised work with a low concentration of demand. This is because an online rental or retail store will serve a much wider population than a local cinema or ‘bricks and mortar’ store and will have an incentive to make such films available. The Internet will remove barriers to the distribution of the ‘arthouse’ film.
- However, convergence will draw people away from national to transnational services and online communities.

Stakeholder interviews and survey responses

To help us understand the threats and opportunities posed by convergence, some 80 stakeholders were interviewed, including film-makers, broadcasters, distributors, regulators and people involved in the launch of new services. They identified the following key issues.

- They felt it would become harder to finance the production of European films. Digital convergence threatens current film-funding models based on advances in return for exclusive rights in certain media or in certain territories. Some stakeholders felt that VoD services would acquire films on a non-exclusive basis, and would therefore not be willing to pay in advance for this.
- As a consequence of these concerns, some film-makers feared ‘market dominance’ by, for example, the Hollywood studios or the telecoms companies now launching VoD services.
- Both of these types of company were wealthy enough to offer ‘vertically integrated’ services, that is, to finance content, own exclusive rights to it and deliver it direct to the consumer via the Internet.
- Some stakeholders, on the other hand, were concerned that new online services, particularly those being launched by the telecoms companies, would have relatively little interest in European films.
- The stakeholders responsible for these new services put most emphasis on mainstream entertainment and established programme brands. They had a need for strong, popular content to get their services up and running.
- However, stakeholders — other than broadcasters — complained that television controlled the majority of established programme and film rights and were often aggressive in protecting these.

- Some stakeholders felt that the threats to existing funding models would make them more reliant on funding from television.
- The stakeholders had divided views on the scale of subsidy currently distributed, mainly through Member States, to film producers.
- Some felt that European film production could never be profitable without government support.
- Others felt that subsidies were responsible for an oversupply of films and had created a 'cottage industry', mainly consisting of very small firms.
- The new audiovisual directive, replacing the 'Television without frontiers' directive, was a subject of debate. A number of stakeholders felt that the 'light touch' proposed for 'non-linear' audiovisual services meant that some significant players would be able to avoid the regulations that impose European and independent content rules on 'linear' broadcast channels.
- Most stakeholders agreed that Hollywood's advantage lay not only in its ability to finance very large budgets, but also in its integrated distribution system, which enables it to market films on a global basis, whereas European distribution is fragmented into territorial markets.
- Most stakeholders involved in the film industry felt that the current release 'windows', starting with cinema and ending with free-to-air television, were necessary both to the funding of films and to achieving maximum revenues from them.
- European film-makers feared that, at some point, these would be eroded. Hollywood studios might introduce a 'day and date' release pattern, further undermining current distribution models.
- Some stakeholders felt there was a quality issue with European films, by which they were, in general, too 'literary and slow-moving' and, on occasion, 'downbeat and miserable'.
- One stakeholder felt that there is a shortage of films appealing to the young people who populate cinema audiences.
- In general, stakeholders felt that the Internet would enable improvements in the distribution of European films and, in particular, 'niche' films.

A survey of film-makers and distributors was also conducted.

- The majority of those who responded came from small and medium-sized enterprises which, though in the main profitable, depended on support from national film bodies and television.
- The majority of them did not use bank borrowing, relying for funding on national support bodies and national television. None agreed that digital convergence would reduce their need for support.
- A minority were already working with digital video. The majority were still using film.

Strategic review and recommendations

We argue that the right perspective, the one that best informs forward planning for the digital age, is one that treats film as part of continuum of digital screen entertainment modes.

We believe digital convergence will transform the way films are currently funded, made and distributed. As digital convergence starts to fashion new habits, most films will be viewed on demand and delivered directly to the home by multi-language platforms supplying many different national markets.

A failure to adapt to change will further fragment European audiovisual production and increase the competitive advantage of Hollywood.

However, we foresee a period of reasonable stability over the next few years, providing a window of opportunity for structural change. During this time, commercial television will experience some turbulence, and the audiences of traditional channels will erode. However, box office and home video (mainly DVD sales and rentals) will be stable or even grow in the short term.

Unless they are remedied, digital convergence will expose structural weaknesses in European film production.

European film production has been drawn into subsidy and support structures designed to promote Member State cultural policies rather than build the European audiovisual market.

Europe's film-makers have, in general, not yet addressed the business models or the production techniques which will make for success in the digital era.

Europe has an opportunity to redress the competitive advantage of Hollywood by taking advantage of digital convergence. To do so, it must move quickly to understand and apply the new technologies and stimulate pan-European content production.

In the light of this, we decided that the right strategy needs to be implemented via core objectives, which aim to:

- widen the European market for audiovisual content;
- encourage the growth of the new platforms as buyers of (and possibly investors in) content after convergence;
- create the conditions for rights-owning entrepreneurial content companies, ready to take commercial risks in the changed environment of convergence.

These recommendations are consistent with the Lisbon strategy and the i2010 initiative which aims at a common European information space. They are consistent with the policy of encouraging entrepreneurial small and medium-sized enterprises (SMEs) in the cultural industries. They also take account of previous reports which inform the growing consensus that the European film industry is too fragmented to achieve its full potential or compete internationally and that the objective of a common production and distribution market is not being achieved.

Achieving these objectives will require strong political support on specific issues.

Cultural policy, film support and subsidy

We concluded that European cultural policy, as currently interpreted, implies a limiting concept of diversity, with too much emphasis on Member State aid and too little recognition of the ‘common interest’ of the internal market. We feel that a policy designed to achieve common production and distribution must have a parallel cultural component.

We recognise the widely held view that European film is dependent on financial support and subsidy. However, we also had concerns about the type and level of subsidy, which derives mainly from the exemptions to European state aid rules, permitting Member States to support production in their own countries on cultural grounds. This could result in a bias towards Member State support for national production, and a possible oversupply of national films.

We reached a preliminary view that public broadcasting law provides wide scope for the support of national cultures and cultural production, while state aid for audiovisual work should be reoriented towards the common interest of the external market.

The Commission is about to conduct a review of Member State film support schemes. We feel that the results of this review will help the European Parliament to take a definitive view on such issues as the appropriate level of subsidy, possible oversupply of films, the impact of the current support schemes on co-productions, the correlation with the financial growth and health of companies, and any other issues relevant to the future of Europe’s film industry in a digital era.

Following the review, we hope that European state aid will be redirected to a profitable, technology-led content sector, addressing a pan-European market.

We therefore recommend that Parliament urgently consider, by providing appropriate time and scope for discussion and debate, whether:

- *European cultural policy as currently interpreted and implemented properly reflects the common interest of the European Union;*
- *public broadcasting law provides an adequate basis and adequate scope for the safeguard of national cultures and languages;*
- *a reorientation of state aid rules to give greater support for the internal market is justified (the coming Commission review of ‘territorialisation’ will help to inform this issue).*

Audiovisual directive

We support the intention of the directive to enable the early entry and launch of new online services and platforms.

However, in reviewing the new draft audiovisual directive, we saw a risk that if ‘non-linear’ services became popular faster than expected, this would dilute the value of the content rules currently imposed on ‘linear’ services under Articles 4 and 5 of the ‘Television without frontiers’ directive. We therefore propose that a ‘significance test’ is included in the draft to indicate the point at which Member States might impose certain conditions on certain services.

In addition, we were concerned that the new directive still contained no definition of an independent producer. This has been identified as a problem in the past, but becomes more pressing if we are seeking to encourage entrepreneurial rights-owning independent content producers to meet the challenge of the digital age.

In our view, Parliament should adopt the following position in its response to the new audiovisual directive. It should:

- *support the country- of-origin principle;*
- *consider removal of the rules limiting advertising breaks in films, seeking evidence from stakeholders that this will actually deliver more European content;*
- *request the Commission to define a significance test for non-linear services for incorporation into draft legislation;*
- *request the Commission to define measures that may be imposed on significant services relating to the promotion and availability of European content; and*
- *insert into the draft legislation a definition of independent producer that includes the retention and control of rights.*

Transitional arrangements

While a diversity of new platforms is to be desired post-convergence, the majority of new European audiovisual content is currently funded by broadcasters. Interventions by CSA in France and Ofcom in Britain make programme rights available to new platforms without destabilising the funding of new content, the majority of which, as above, still comes from traditional broadcasters.

New platforms need access to existing content during their launch phases. We recommend transitional arrangements between broadcasters, producers and new platforms that enable new platforms to acquire prime content.

In addition, both interventions support the development of rights-owning independent production from which, in our view, entrepreneurial European content producers will largely emerge.

We feel that such arrangements can only survive within an interim period before digital convergence because, as audiences fragment and migrate to other services, the traditional broadcasters will cease to have an incentive to participate in such agreements and regulators will lose the power to enforce them on grounds of vertical integration or market dominance.

‘Inter-professional agreements’, between broadcasters, regulators and new media players, are an effective way of managing transition to digital convergence without destabilising new content production. A positive lead by the Commission would probably help achieve consistency among Member States.

We therefore recommend that Parliament instruct the Commission to publicise the benefits of such transitional arrangements to the Member States and, if necessary, use its competition powers.

Vertical integration

As we found, some stakeholders fear the emergence of vertically integrated platforms, that is online platforms which hold exclusive content rights and deliver content directly to the home. Hollywood studios or, perhaps, the telecoms companies now entering this space may become very dominant players, commanding large shares of audience. In a certain respect, this concern runs parallel to that of networks, where the Commission has pressed for the separation of services from networks.

However, new online platforms will be important buyers and investors in films and at present seem, in the main, to be aiming to be non-exclusive aggregators of content. A vertically integrated content platform would have to have a significant market share to be regarded as dominant — a matter already considered in the connection with the proposed significance test. Only in this case would it be appropriate to impose conditions such as a must-carry rule.

We recommend that Parliament request the Competition Directorate-General to consider and advise under what conditions a dominant platform could be compelled to provide a 'right to carriage' to a content owner.

Enabling a digital production economy

Enabling profitable digital content production means transforming existing production models.

The MEDIA programme has already identified a number of ways in which to provide support for a transition into the digital world. In proposing the following as key areas for support and training, we aim particularly at knowledge necessary for formulating new operational models for the digital age.

Digital video production, which offers significant economies, is better suited to development and piloting, reduces the need to encode for digital delivery and increases creative freedom. We believe digital video quality is now on a par with celluloid. The parallel development of digital exhibition saves the cost of prints. We recommend support for both digital production and digital exhibition.

We recommend more help in understanding the processes of digital delivery, which are so different for most film-makers from current modes of distribution with unfamiliar terms and techniques, such as metadata, transcoding and digital rights management (DRM). Since digital delivery offers content owners so many different options, indicative costs and well-documented delivery models will help entrepreneurial companies to plan for the digital future and make decisions on how to invest their resources.

The Internet can make the smaller film available, provided it can be easily searched and found. The key to this is the 'metadata' about the film, enabling searches on a variety of parameters by an interested party. The preparation of the metadata for European films poses particular issues. First, consumers need to be able to search in their own language. Second, it needs to address their needs. The development of an experimental platform that would be able to test a European metadata solution and monitor consumer interest is required.

We propose that film-makers should take full advantage of the seventh framework research programme (FP7), which offers new encouragement to content industries to engage with technology industries. For instance, it specifies ‘new media paradigms and new forms of content, including entertainment’ as one of a number of research areas that justify research applications.

Europe needs profitable content producers, working on a very different model from that which is prevalent today. Business plans need to be developed and evaluated by qualified financial experts. Companies should be encouraged to think about various options, ranging from mergers to the formation of groups with pooled rights, and encouraged to seek out possible investors.

The European Investment Bank (EIB) has a specific mandate to contribute towards the integration, balanced development and economic and social cohesion of the Member States. Since the creation of a single European information space is a key objective, we think the EIB should survey the European media industry in order to assess it as a candidate for lending.

Taking advantage of digital convergence means transforming a subsidy-dependent or commission-led ⁽¹⁾ industry into a creator and owner of intellectual property. That will require intense focused effort over the next few years. Parliament should ask agencies such as the MEDIA programme to lead this effort and seek additional funds where necessary for projects such as:

- *assisting companies to convert to digital production;*
- *creating models for digital production and distribution;*
- *creating a model for multi-language metadata;*
- *encouraging access to research and development by creative companies;*
- *engaging qualified financial advisors to review business plans; and*
- *requesting the EIB to survey the European content industry to identify candidates for lending.*

A pan-European release window

The separation of distribution rights into separate markets and separate territories makes the pan-European distribution of films much harder than, for instance, studio films. We recommend the convening of stakeholder groups to discuss solutions. Attention should be paid to the changes suggested by the Commission’s Copyright Division to the Member States with regard to collecting societies. These are designed to enable cross-border licensing of copyright-protected content and the cross-border distribution of royalties.

The harmonisation of release windows and the availability of multi-country licensing will enhance the prospects for a pan-European content industry. The issues facing audiovisual content are more complex than those facing musical content. Parliament should encourage stake-

⁽¹⁾ We are referring to the practice of ordering a programme from an independent producer and cash-flowing its production. If, as we think it will be, digital convergence means a multiplicity of buyers acquiring content on a non-exclusive basis, this will change.

holders to cooperate in solving the issues facing pan-European online services and request the Commission to continue to convene groups, like Content Online, which can make proposals for inter-professional cooperation on such issues.

The audience

We propose that, as we look ahead to a digital era in which consumer choice is almost absolute and a pan-European market is open to the film-maker, more attention should be paid to the audiences for European films. Understanding an audience's taste is both a creative stimulus and the basis for successful investments in films. We need to understand the films that have 'travelled' into other cultures. We need to understand the potential audiences for both specialist and mainstream films and how to satisfy them. 'Market failure' will no longer be a valid argument for subsidy, which should be reserved for specific cultural objectives of Member States or for promotion of successful transnational European content.

We recommend that Parliament ask the MEDIA programme to conduct research into film audiences, in particular to understand the demand for films made on the budgets that are typical for European films.

Piracy and digital rights management

While good digital rights management (DRM) is the key to content producers getting value out of the digital age, piracy is the enemy of that value. DRM has the potential to offer direct, one-to-one relationships between a content owner and a consumer. Current systems are in an early stage and lack 'interoperability'. We argue that the Parliament should press the Commission to convene stakeholder groups and others to take an early view on many aspects of DRM, including appropriate consumer warnings, control of 'lock-and-load' systems, the right to copying and the harmonisation of anti-piracy measures across the EU-25.

Many Commission directorates have an interest in anti-piracy measures and the issue of interoperability. Functioning DRM is key to the direct delivery of films on the Internet and to the monetisation of content rights. Parliament should encourage directorates to work together on the appropriate level of interoperability, appropriate consumer protection, and coordinated anti-piracy measures, enabling them to make recommendations to the Member States.

Contents

1 Introduction	1
2 Towards digital convergence	3
2.1 The digital home	3
3 Is Europe digital-ready?	7
3.1 Network readiness	7
3.2 Film output in Europe	10
3.3 Film demand	12
3.4 The potential for direct delivery of European films	13
3.5 The impact of the Internet: first indications	15
3.6 The players	17
4 Stakeholder interviews and survey	19
4.1 The stakeholder interviews	19
4.1.1 <i>Threats to current film finance models</i>	19
4.1.2 <i>Danger of market dominance</i>	20
4.1.3 <i>Lack of demand for European films from new media services</i>	20
4.1.4 <i>Lack of current capacity for mobile content</i>	21
4.1.5 <i>Increased reliance on television</i>	21
4.1.6 <i>Broadcasters control strong programme brands, holding back development of new platforms</i>	22
4.1.7 <i>State aid and subsidies</i>	22
4.1.8 <i>The new audiovisual directive</i>	24
4.1.9 <i>The dominance of American films</i>	25
4.1.10 <i>Market fragmentation</i>	25
4.1.11 <i>Changes in release windows</i>	25
4.1.12 <i>A question of quality</i>	26
4.1.13 <i>The new media landscape</i>	26
4.2 The survey	27
4.3 Summary of opinions: The stakeholder interviews and the producer survey	29
5 Review of findings and recommendations	31
5.1 The impact of digital convergence	31
5.1.1 <i>Recommendation</i>	33
5.2 European cultural policy	33
5.3 Film subsidy and support schemes	35

5.4	Public broadcasting	36
5.5	State aid	37
5.5.1	<i>Recommendation</i>	39
5.6	The audiovisual directive	40
5.6.1	<i>Recommendation</i>	42
5.7	Transitional arrangements	43
5.7.1	<i>Recommendation</i>	46
5.8	Vertical integration	46
5.8.1	<i>Recommendation</i>	49
5.9	Enabling profitable digital production	49
5.10	Converting to digital production	50
5.11	A working model for digital delivery	52
5.12	Transnational metadata	54
5.13	Research and development support for creative companies	55
5.14	Business models for content companies	56
5.14.1	<i>Recommendation</i>	56
5.15	Pan-European release windows	57
5.15.1	<i>Recommendation</i>	58
5.16.	The audience	58
5.16.1	<i>Recommendation</i>	61
5.17	Secure digital rights management	61
5.17.1	<i>Recommendation</i>	64
Appendix 1: The digital home, the technology		65
	Overview	65
	Internet protocol television (IPTV)	65
	Electronic sell-through	67
	Wireless local area network (WLAN)	68
	Mobile phones	68
	Other mobile and portable devices	70
	Digital cinema	72
Appendix 2: Medium-term prospects for film		73
	Theatrical	73
	Consumer rental and retail	76
	Television	79
Appendices 3: The long tail theory		83
Acknowledgements		85

1 Introduction

This report addresses the threats and opportunities offered to European film-makers by the direct delivery of films via fixed and mobile broadband networks. (We use the phrase ‘digital convergence’ ⁽²⁾ to mean the moment when a majority of homes receive audiovisual services by broadband.)

As home broadband builds in coverage and bandwidth, it represents an opportunity to increase the circulation of European films at home, in the rest of Europe, and beyond. It also presents a threat, posed by the liberation of consumer choice. Consumers may choose to enjoy less European content. There will be nothing to stop them if they wish to do so. That leaves only one option: to make the content of our audiovisual industries better, stronger and more attractive to audiences.

Film retains a special kind of glamour. Film is the narrative form worth going out for, which is why cinemas survive, and the big new release is an ‘event’. However, the key economic role of the theatrical launch today is to concentrate the marketing and publicity that creates a demand that lasts until it reaches the other distribution systems.

The second part of the preceding paragraph will indicate that we look at film, in this report, in a way that will be unfamiliar, even repugnant to some. For we treat film as part of a continuum of forms of screen entertainment, the form that receives the highest level of investment, the most highly wrought of the genres of screen narrative, but not as a wholly separate activity with different values and intentions from other forms of audiovisual entertainment.

We think this is the right way to treat films for three reasons. First, Europeans watch most of their films, not in the cinema, but on a domestic screen, originating in the home, on video or DVD, or broadcast to them by a TV or satellite channel. Films exist to be seen: this way of looking at films stays close to the way most viewers opt to watch a film, selecting from other alternatives on a menu of domestic choices.

Second, online film will be a driver of the take-up of broadband and will play a special role in opening a single European information space, one object of the Lisbon strategy ⁽³⁾. The pleasure given by films, and the new opportunities which digital convergence offers to enjoy them, will be one of the main reasons people will want high-capacity broadband services. Consumer demand for broadband is what will drive digital convergence, and convergence, in turn, is the key to the creation of a European information space.

Why should film not be expected to play its part in this hugely ambitious project, which will require the transformation of Europe’s content and media industries if it is to succeed?

Film production has been most successful at reaching a wide range of audiences where it gets support from the larger structures that also make other audiovisual content. In the USA, the production of film and TV coexist within the same economic units. They have different

⁽²⁾ Digital convergence refers to the combination of voice, data and video onto a single network. Historically these technologies were separate, but are now ‘converging’ to share common resources and interact with each other, creating new synergies and efficiencies.

⁽³⁾ ‘A key element of the renewed Lisbon partnership for growth and jobs, i2010 will build towards an integrated approach to information society and audiovisual media policies in the EU’, COM(2005) 229 final.

cultures and different routines, but both have access to a pool of marketing expertise, capital and research disciplines. In Europe, as you will read later in this report, most of our film production units are very small. There are some exceptions, of which France is one: 10 out of the top 15 European production companies were French in 2004. France, too, in its own way, has kept film and television close.

However, this is already changing. Broadcasting is no longer a mass medium. It is splitting into many different channels. Digital convergence will end its era of dominance forever. We will need to find new structures in which film-making can flourish.

We expect some to be hostile to our approach. They may think that the central aim of film policy should be to preserve the *form* of film, a 90-minute entertainment shown in a cinema. Others see film as, almost exclusively among current entertainment media, a medium for passionate opinions or an original vision.

We hope to persuade them that there is plenty of scope for protecting cultural values such as these within a wider, more open market.

Where is the public interest? Europeans want good entertainment, and people get a special pleasure when it portrays places and people that are relevant to them. The Member States want their languages and cultures to flourish. The ability to make films of quality depends, in the end, on the resources you are willing to risk in making a film. That in turn depends on the size of the market you think you can reach. European film-makers need to address that wide European market. The trick Europe has to pull off is a single market that accommodates, indeed celebrates, linguistic and cultural diversity. Unfortunately, as most people will know, the USA has been better at exploiting the single market than Europe itself.

Digital convergence creates a new opportunity to realise this objective. Digital technology has enormous potential to make films and distribute films more cheaply and easily than before. Is Europe going to use the opportunity or lose it? The next few years will decide.

There is a third reason for treating film as part of a continuum of electronic content. That is exactly what it will be when all electronic content supplied to the home, now split across telephone lines, broadband cables, satellite and terrestrial frequencies, comes down the same 'pipe'.

2 Towards digital convergence

Digital convergence heralds a new phase of consumer choice, because entertainment and information now carried on various different media will be available on one medium, as a digital file on a fibre optic cable.

Viewers will choose what they want, when they want it. Content will no longer be 'pushed' at the viewer but 'pulled' by the viewer. Interactivity and huge storage capacities mean you will be able to choose from vast libraries of content.

Digital convergence will be a big win for the consumer, since many current entertainment services rely on physical constraints, which limit choice and convenience.

What is really happening? Constraints or bottlenecks along the route between producer and consumer are disappearing as the costs of distribution reduce and as the route becomes more direct.

In economic terms we may say that the end of audiovisual 'market failure' is in sight. By 'market failure' we mean conditions which limit choice because routes to the customer are limited. Market failure in television was all about the shortage of spectrum and therefore limited the numbers of channels available. Film's market failure is less extreme: the local cinema is not accessible to everyone and shows a limited selection of films over a limited time; a video shop can only stock a certain number of titles. Market failure means you watch 'what's on' rather than what you really want. This is sometimes called 'default' or 'residual' viewing.

Will people still read newspapers, go to the cinema, or spend an evening watching the new programmes in scheduled TV services? Probably. History suggests that most old modes and media of entertainment remain part of the mix, but they may have a difficult passage, just as cinema did when television came.

Certain media carriage systems will disappear, as motor transport replaced the horse and cart. There would be no need to stream services from geostationary satellites if the fibre link in the ground were cheaper and more efficient. They, like the old analogue transmission masts, may, one day, become redundant. Or they might be used as a backbone service, providing wide area relays.

2.1 The digital home ⁽⁴⁾

We do not know precisely when digital convergence will arrive. However, we know it will come, and it is partly in place already. The converged home, the destination towards which media policy should now orient itself, will be the focal point of this report.

Step changes are not complete until new technologies become widespread and behaviour changes with them. Internet shopping is reaching this stage: e-mail has certainly reached it. There will be early adopters and technophiles, well ahead of the mainstream: their habits and enthusiasms are sometimes indicative of future norms, sometimes not.

⁽⁴⁾ A detailed description of all the technologies associated with the digital home are to be found in Appendix 1: The digital home, the technology'.

This reporting team is more conservative than many in predicting when the converged home will become widespread and what form it will take. However, its features are something every maker of audiovisual entertainment should now think about. Defining 'convergence' as 'a time when the majority of homes in a given territory receive acceptable audiovisual service by broadband', we expect the larger and more advanced European countries to reach that condition by 2012. (The next section of this report looks in detail at 'digital readiness' across the EU-25.)

Let us try to picture a digital home. What follows is hypothetical, but it draws on what is happening at the leading edge of the computer and Internet revolution.

First, there are hardly any limits on the content available to the consumer. At a price, any available content can be ordered and delivered. Most content is accessible from mobile devices and nearly all of it is playable on them, extending the capacity of today's music players.

This plenitude of choice poses problems. How and what to choose? The viewer will be helped by personal recommendation systems, which will observe and monitor his or her preferences and offer solutions and suggestions.

These guides will observe your entertainment choices and make recommendations to you, helping you find the programmes and films you would really like in this ocean of choice.

Because all the services to the home enter through the same 'pipe', output devices in the home connect with many services, selectable from menus: a wireless communication system links them to the 'hub'. There will be screens of different sizes and resolutions, according to their purpose, and audio devices as well.

Linear narrative will remain popular but commercial entertainment will respond to the interactive potential of convergence with new types of entertainment. People will certainly be able to join in quiz shows from the home. Where fictional narrative is concerned, viewers might be able to access different content streams from the same material, short and long versions, for example. Films will be delivered with the extras that currently come with the DVD package — star interviews, out-takes, trailers, etc.

There will be a big increase in user-made programming, which will be exchanged and even sold by individuals operating from personal websites or online communities, which, as physical neighbourhoods decline, are becoming the neighbourhoods of the future. Some of it will be very skilled and professional. There is no way in which guilds or unions can prevent this. This trend is accelerating because of the dramatic reduction in the costs and capabilities of new digital equipment.

Go to the website www.starwreck.com and request to download *Starwreck: In the Pirkinning*. The download is free and the site will suggest you use the peer-to-peer system Bit Torrent. This will take, depending on your system, anything from one to three hours. This, now the most viewed Finnish film ever, is a sci-fi parody made by amateurs: their studio was a two-roomed apartment and the wardrobe was used for dubbing.

There will be new personal and family uses for the home network, which will compete for time with commercial entertainment services: inter-home-video calls, talking to friends, showing the holiday or birthday video via the broadband network. Anyone with teenage chil-

dren will already know how much time they spend talking to each other on MSN Messenger, or texting friends on their mobile phones, and how big a role online encyclopaedias, like Wikipedia, play in homework routines.

There will be various price points and various kinds of content service, some subscription based. This flexibility will be achieved through digital rights management systems (DRMs) which will, in our view, eventually be personal to the individual and will generate bills like your mobile phone does today. (We will be reporting in more detail on DRMs later.)

There will also be free services, some paid for by advertising. We have yet to see how advertising will deal with the inevitable decline of the traditional 'spot', which precedes, follows or interrupts a programme ⁽⁵⁾. Some content, for instance, will be free if you view an advertisement first. You might earn home credits on certain services depending on how much advertising you watch. Advertising has a big incentive to maintain the link with prime entertainment: it will explore new ways of doing so and push for change. (The EU's new draft audiovisual directive proposes rules for product placement.)

Digital convergence is creating new and confusing hybrid media forms and genres. Film-makers might like to consider *Second Life*. People who log on to *Second Life* create an 'avatar' (i.e. an online extension of themselves). As avatars, they mingle, go to parties, create what they wear. Some avatars have created cameras and are filming things that happen in *Second Life*: in effect, some avatars become actors for other avatars, who become directors. These new directors then post their films to websites ⁽⁶⁾. One consultant even thinks that 'metaverses' (as this 'metaphysical' universe is called) could disrupt the economics of mainstream film-making ⁽⁷⁾.

Digital convergence is greedy for innovation. A short time ago, peer-to-peer services were synonymous with piracy.

However, early in 2006, Warner Bros released a platform to deliver films over the Internet directly to consumers. Warner Bros argue that the best way to tackle piracy is to provide a legal, user-friendly alternative. This service, which started in Germany, Austria and Switzerland, is based on peer-to-peer technology. Consumers get free credits to watch films if they download an application to be part of the peer-to-peer system, by means of which films are split into parts which are stored on the PCs of scheme subscribers. Copyright protection is achieved by the fact that the films are not stored in any one PC. The quality of service and speed of delivery is enhanced because, each time a user requests a film, it is downloaded or streamed from the closest PCs where it is stored. 'in2movies', as the scheme is called, claims the system allows DVD quality over the Internet, even with only a 2 MB connection.

A key word for the digital revolution, and one that captures the pending change in content delivery, is video-on-demand (VoD). In a VoD environment, a viewer can typically select a title from an unlimited content catalogue and pay a one-off fee to watch it. Many think what

⁽⁵⁾ Devices like the personal video recorder (PVR) can pause, fast forward and reschedule programmes. Skipping the advertisements will intensify as more viewing becomes non-linear or interactive.

⁽⁶⁾ Based on an account in *The Economist*, 22 April 2006.

⁽⁷⁾ According to Philip Evans of Boston Consulting Group, '...about 90 % of the content is created by the players ... and the production values are amazing.'

is now called VoD, backed by very large libraries of material stored on servers, could become the dominant mode of film viewing in future.

Because the Internet offers new possibilities for creating a direct link between consumers and content providers or rights-holders, the balance of power may indeed be shifting towards content owners as opposed to distributors or platform owners, a process that is known as 'disintermediation'. However, where film-makers are concerned, this potential benefit comes weighted with questions.

How will films be funded? Will companies that have traditionally focused all their effort on artistic development and production have the organisational ability to manage a direct relationship to consumers? What support services will film-makers use after digital convergence and who will they be?

3 Is Europe digital-ready?

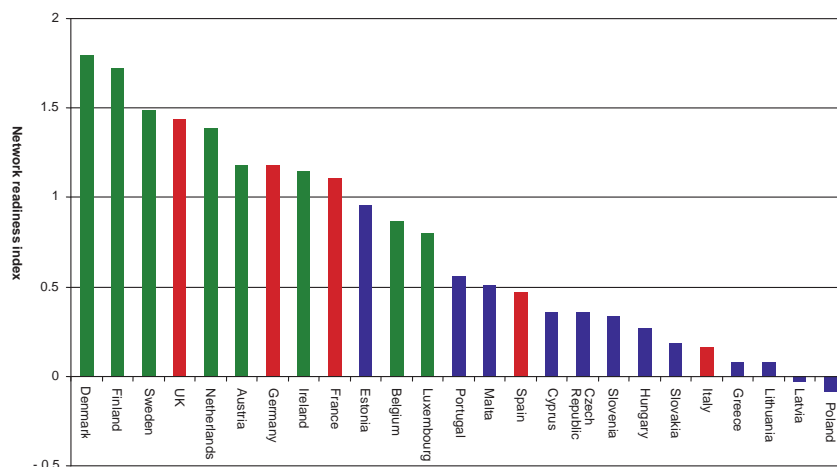
The converged home will have a broadband input supplying data to a number of devices, including PCs, television sets and games consoles. This will deliver audiovisual content alongside other services such as voice calls. The enabling technologies behind these are referred to as information and communication technologies (ICTs). In this section, we look at the digital infrastructure of the EU-25.

3.1 Network readiness

Harvard University has developed a methodology for systematically comparing the ICT development of countries, known as the network readiness index (NRI). The NRI assesses a country's ability to exploit new opportunities offered by ICTs. The direct digital delivery of films is one such opportunity. Harvard University defines the NRI as the 'degree to which a community is prepared to participate in the networked world' and its 'potential to participate in the networked world in the future' ⁽⁸⁾.

The NRI combines a wide range of factors grouped into two key areas: enabling factors and network use. Enabling factors reflect the necessary conditions for high-quality network usage, and the potential for proliferation and use in a given country. The network use component is a measure of the proliferation of ICT in a specific country. We believe the NRI is a relevant indicator for the development of digital platforms, since it takes into account a wide range of contributing factors that we have identified as important to this development. It also provides a means of comparing progress across nations (both within Europe and worldwide). Table 1 gives the top 10 countries worldwide in 2005 (above the bar) and the global position of all the EU-25 countries. Figure 1 compares the NRI for the EU-25, using the colour code classifications in the previous sections.

Figure 1: Network readiness index, 2005



Source: World Economic Forum.

⁽⁸⁾ *The Global information technology report 2001–02: Readiness for the networked world*, Oxford University Press, 2002.

Table 1: Network readiness index rankings, 2005

Global rank (115 countries)	Country	NRI score
1	United States	2.02
2	Singapore	1.89
3	Denmark	1.8
4	Iceland	1.78
5	Finland	1.72
6	Canada	1.54
7	Taiwan	1.51
8	Sweden	1.49
9	Switzerland	1.48
10	United kingdom	1.44
12	Netherlands	1.39
17	Germany	1.18
18	Austria	1.18
20	Ireland	1.15
22	France	1.11
23	Estonia	0.96
25	Belgium	0.87
26	Luxembourg	0.8
27	Portugal	0.56
30	Malta	0.51
31	Spain	0.47
32	Cyprus	0.36
33	Czech Republic	0.36
35	Slovenia	0.34
38	Hungary	0.27
41	Slovakia	0.19
42	Italy	0.16
43	Greece	0.08
44	Lithuania	0.08
51	Latvia	– 0.03
53	Poland	– 0.09

Source: World Economic Forum.

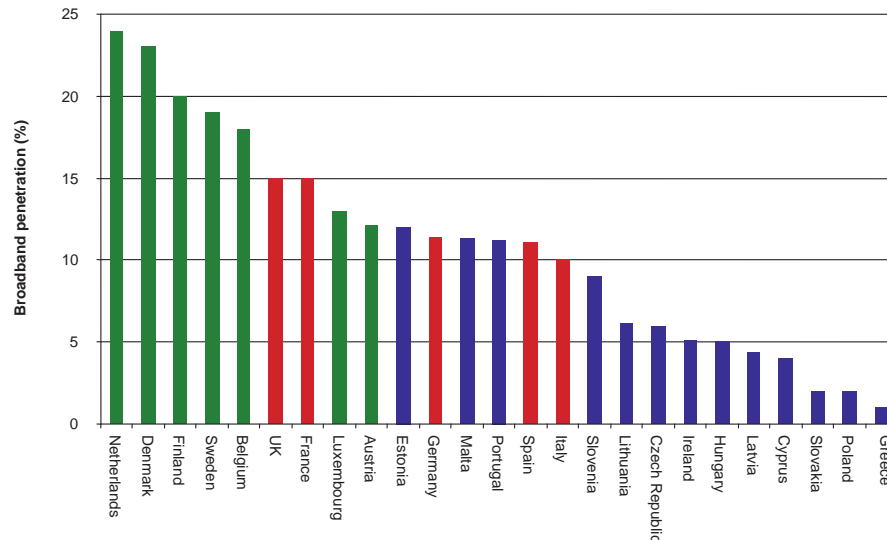
The Nordic countries (Denmark, Finland and Sweden) have a very high NRI value, and are best positioned to take full advantage of new opportunities afforded by ICTs. Denmark ranks third in the world, with only the United States and Singapore achieving a higher NRI score.

Poland has the lowest of all EU-25 countries with an NRI of – 0.09 and ranks 53rd out of the 115 territories included in the report ⁽⁹⁾. This could be a scale factor: implementing ICTs in a country 312 685 square kilometres and with a population of 38 million is a major task. Estonia's NRI index exceeds that of Belgium and Luxembourg, two states with a significantly higher GDP.

⁽⁹⁾ Ethiopia has the lowest NRI score at – 1.39.

Broadband penetration rates vary greatly, from 24 % penetration in the Netherlands to just 1 % in Greece, with a European average of 11 %. Broadband penetration in the UK and France stood at 15 % in October 2005. Italy lags, with a broadband penetration of 10 % (just under the European average) contributing to its low NRI score.

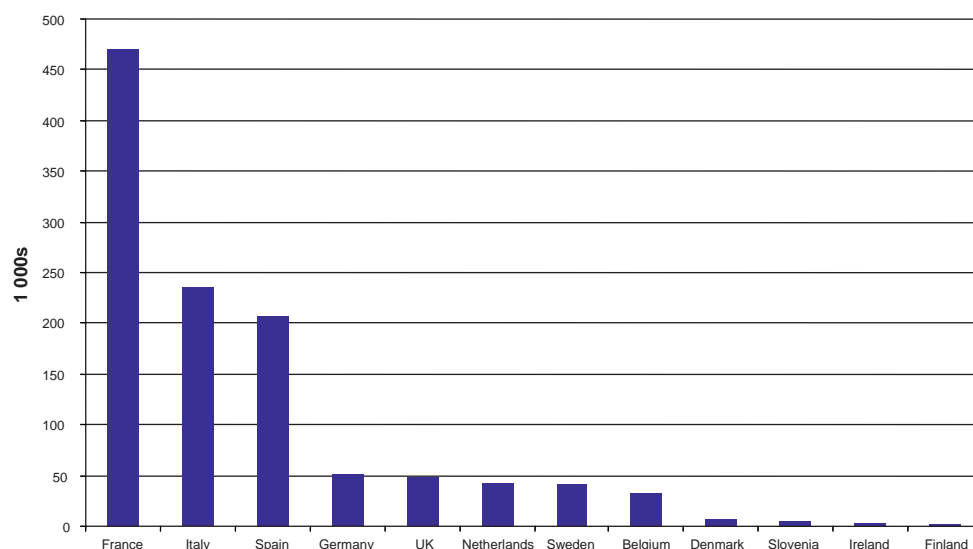
Figure 2: European broadband penetration, 2005



Source: COCOM/European Commission.

The actual application of broadband networks for the delivery of audiovisual services is still in its infancy. Figures from Screen Digest ⁽¹⁰⁾ show just 1.2 million Internet protocol TV ('IPTV') ⁽¹¹⁾ subscribers in 2005, a sharp increase from 390 000 in 2004. This increase is fuelled by a rise in the number of operational IPTV services: 10 IPTV services launched in 2005, compared with eight in 2004 and six in 2003. France accounted for 470 000 (40 %) of IPTV subscribers in western Europe, with two main IPTV services already operating in the country.

Figure 3: IPTV subscribers, 2005



Source: CScreen Digest.

⁽¹⁰⁾ 'Internet protocol TV lifts off', Screen Digest, April 2006.

⁽¹¹⁾ See Glossary — pages i to v.

It is interesting to note that, while Italy and Spain have relatively poor NRI scores and low levels of PC and broadband penetration, they have taken an early lead in IPTV. Italy is second only to France in the number of IPTV subscribers with 235 000, followed by Spain with 206 900.

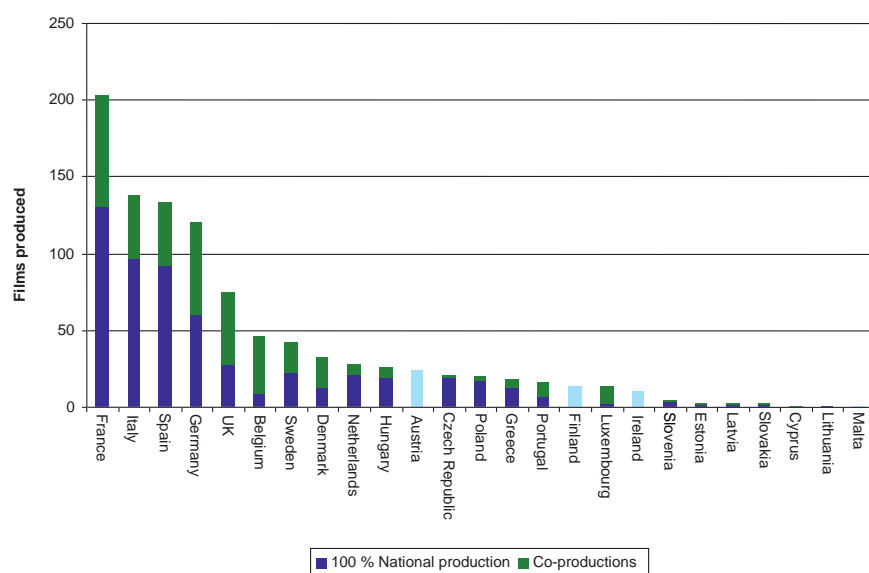
These countries may have taken an early lead in the development of IPTV services to capitalise on an opportunity created by relatively low levels of multi-channel penetration. However, the low NRI score suggests that they are not so well-placed to maintain this leading position in the longer term, when the key challenge will be making IPTV services accessible to all, rather than operating specialised services in limited geographic areas (for example, Italy's FastWeb service is available to one third of the population, mainly in densely populated cities). Estimates on IPTV penetration in Italy actually suggest slow but steady growth, going from a household penetration of 1.1 % in 2004 to 3.6 % in 2008.

3.2 Film output in Europe

A total of 761 films were produced in the EU-25 in 2004 (including co-productions), and the number has been increasing steadily over the last five years. The large, richer countries (France, Germany, Italy, the UK and Spain) accounted for 670 of these films.

France is the biggest film producer in Europe, with 203 productions in 2004 of which 130 were 100 % national productions. All countries in the EU-25 were involved in at least one film production in 2004. The Czech Republic and Poland show an above-average proportion of 100 % national productions rather than co-productions. Other countries, such as Luxembourg and Belgium, are heavily reliant on co-productions.

Figure 4: Films produced in EU-25, 2004 ⁽¹²⁾



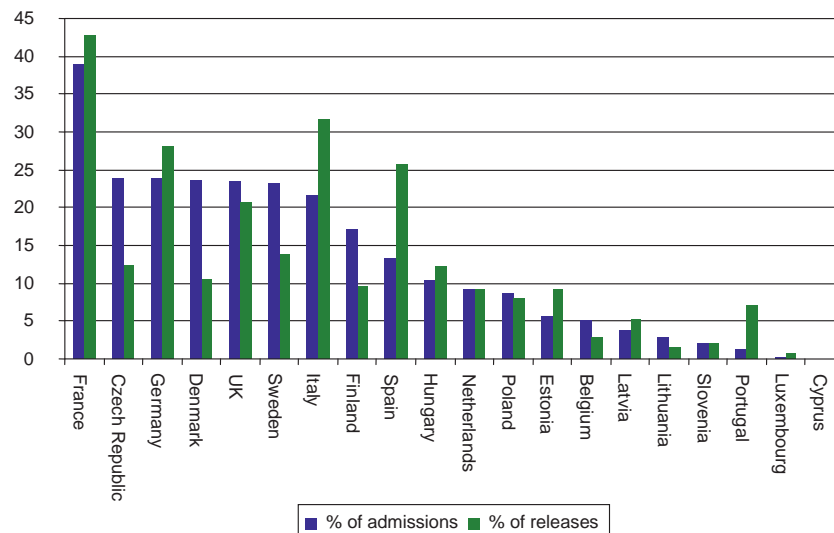
Source: OBS.

⁽¹²⁾ No split between national productions and co-productions is available for Austria, Finland, Ireland and Malta, so total figures only are given for these countries.

Belgium had more first-release feature films than any other European country in 2004 at 632, including 278 European films. However, only 18 films (2.8 %) were national productions. In France, 560 films were released in 2004, and 239 of these (42.7 %) were national productions. This gives France the highest ratio of domestic releases to total releases.

Some idea of the popularity of national films can be gained from a comparison of national films as a percentage of all releases and their market share of admissions (see Figure 5). Since the majority of non-national releases are American films, this broadly measures the ability of home production to compete with Hollywood. The success of France's national film industry is apparent as French films accounted for 39 % of admissions in 2004, although this is slightly lower than the ratio of national films as a proportion of total film releases. National films have performed particularly well in the Czech Republic and Denmark, accounting for approximately double the proportion of admissions compared with the proportion of films released. In contrast, national films accounted for 13.4 % of admissions in Spain, less than half the share of releases (25.6 %).

Figure 5: Market share of national films, 2004 ⁽¹³⁾ (%)



Source: OBS.

Both France and Denmark, with rather different support schemes, have been very successful in generating high shares of European films in their domestic markets, Denmark from a smaller base and France from a large one. The French system has automatic features that trigger reinvestment in future production. The Danish system combines automatic funding with the use of independent and experienced consultants in assessing projects and puts heavy emphasis on training and a competitive distribution sector ⁽¹⁴⁾.

Another important data point is the share of European non-national films, that is, films from one European country that play in another. Between 2000 and 2004, this share, as estimated by the European Audiovisual Observatory, was 6.5 %, 9.7 %, 7.2 % and 6.6 %.

⁽¹³⁾ Data unavailable for Austria, Greece and Slovakia.

⁽¹⁴⁾ A comparison and evaluation of the two systems is to be found in *Les Aides Publiques au Cinema en France*, Yann Gaillard and Paul Loridant for the Finance Commission of the Sénat, 6 May 2003.

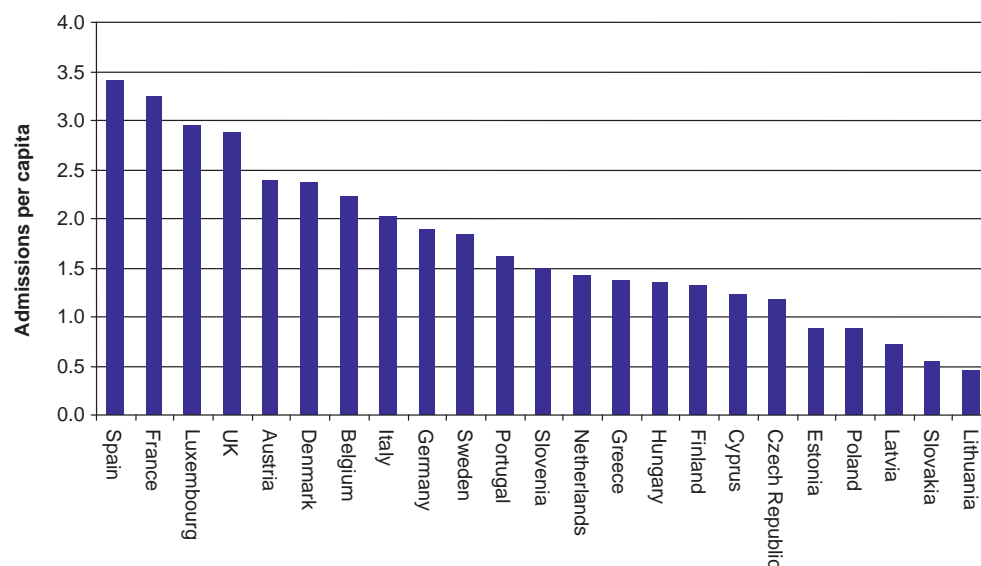
The category of non-national European films comprise a small proportion of the total. This is an important figure, which, as we see later, will need to be addressed. While European film production remains locked into a series of national film markets, we cannot hope to create a competitive European industry.

3.3 Film demand

There were just over 1 billion cinema admissions in the EU-25, and this number was relatively stable over the five-year period 2000 to 2004. France, Italy, Spain, Germany and the UK combined accounted for 78 % of annual cinema admissions in the EU-25 in 2004.

The average number of cinema admissions per capita varies significantly, ranging from more than three admissions per year in Spain and France to less than one in Estonia, Poland, Latvia, Slovakia and Lithuania.

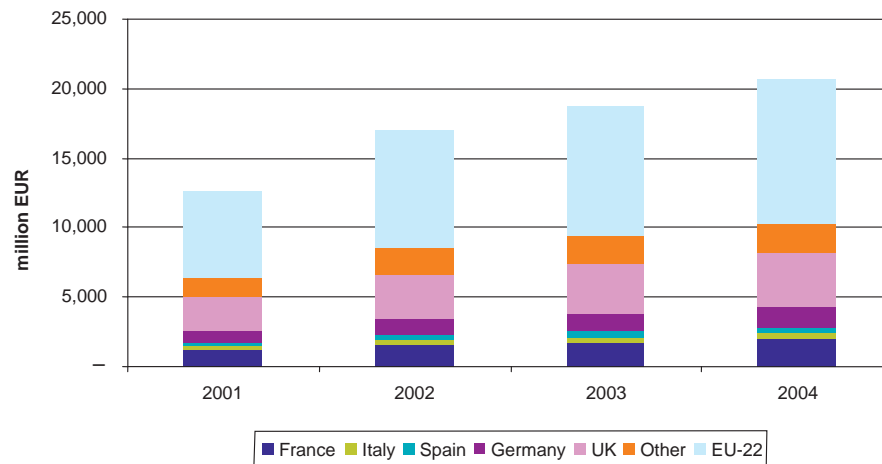
Figure 6: Cinema admissions per capita, 2004



Source: OBS.

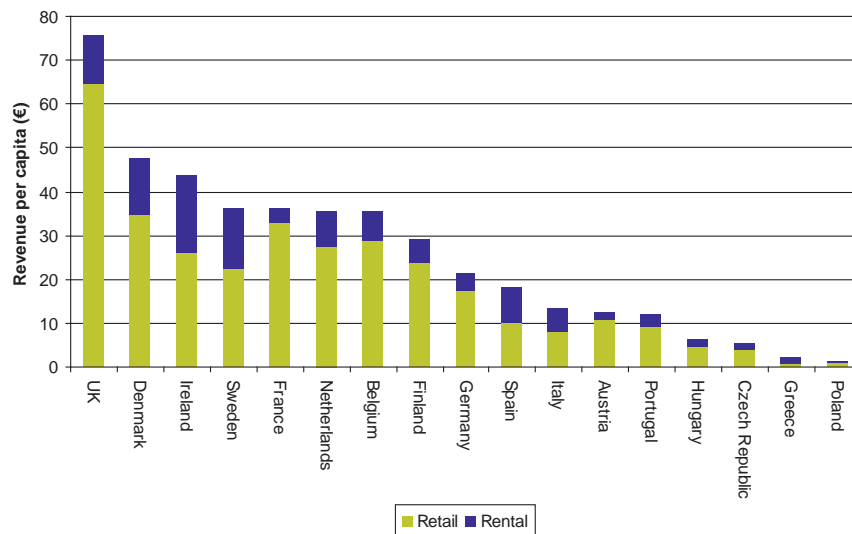
Total box-office revenue was EUR 5.4 billion in 2004. France, Italy, Spain, Germany and the UK combined accounted for EUR 4.5 billion of this (84 %).

Online platforms will deliver films for consumption in the home. Thus, an overview of the existing market for home video consumption (both retail and rental) can give a useful indication of potential consumer spending on VoD. The European home video (VHS and DVD) rental market was worth EUR 2.6 billion in 2004, but has shown signs of a decrease since 2002. In contrast, the home video retail market was worth EUR 10.4 billion in 2004, and showed strong growth between 2001 and 2004 as consumers upgraded VHS content to DVD.

Figure 7: Home video retail market

Source: OBS.

Home video revenue per capita shows huge variance by country. In the UK, the figure stands at EUR 75.72 per inhabitant (EUR 64.57 from retail and EUR 11.15 from rental), driven by strong retail DVD sales. In contrast, spending in Poland was EUR 1.32 per head of population.

Figure 8: Home video revenue per capita, 2004

Source: OBS/DGA.

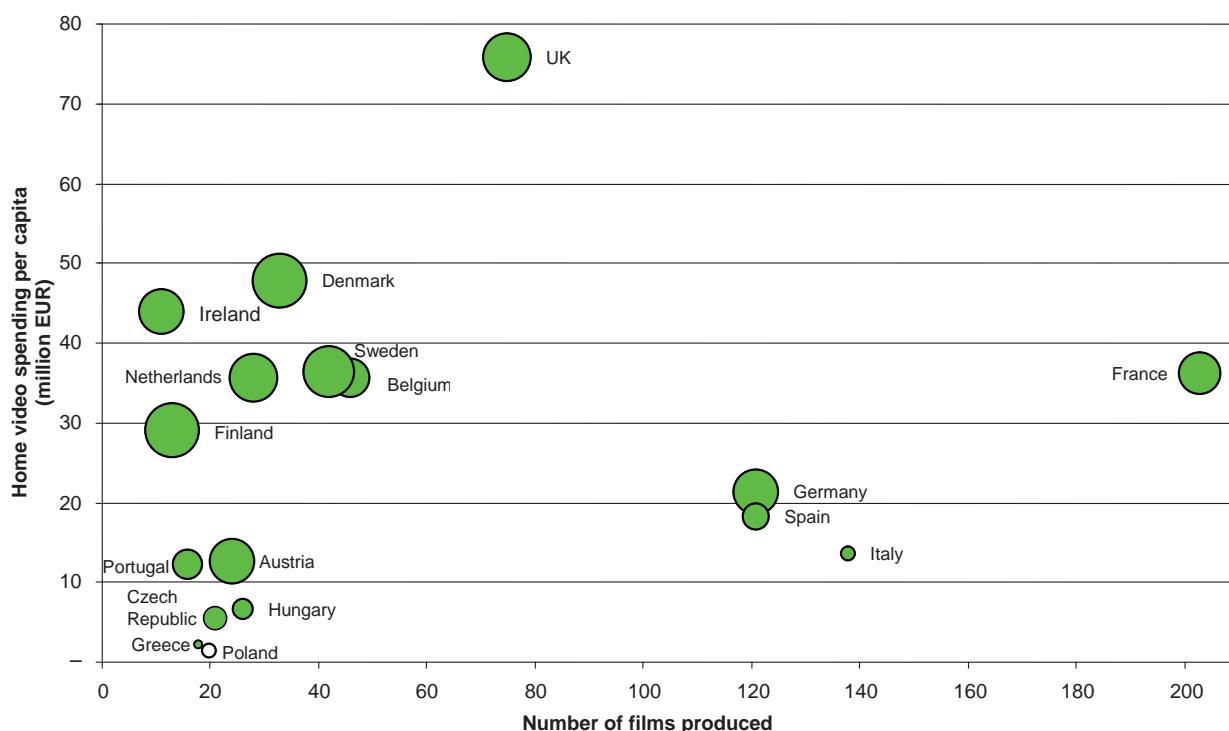
3.4 The potential for direct delivery of European films

What will the demand for European films be when digital delivery is common? DVD sales and rentals may be a better indicator for this than box-office figures since the choice is wider. Unfortunately, we were unable to acquire data that separates home video sales and rentals of national films from non-national films, let alone data on the important category of non-national European films, which would capture the circulation of European films outside their country of origin. So, for the type of film chosen, we had to rely on release data, such as that given in Figure 5 for the market share of national films.

The network readiness score for each country gives a good indication of current technological development and therefore readiness for VoD. The number of films produced in each country (including co-productions) indicates the size of the domestic film production market. Total turnover for home video (VHS and DVD retail and rental) per capita indicates the demand for film consumption in the home.

Figure 9 combines these measures in one chart, illustrating the key characteristics of each country. The x and y axes represent film production and home video consumption respectively, while the size of each bubble is in ratio to the NRI score. We have presented 17 countries in this way ⁽¹⁵⁾.

Figure 9: Estimated demand for the direct delivery of digital films
(bubble size = NRI score)



Source: WEF/OBS/DGA.

Figure 9 suggests that the highest demand for non-Hollywood films will come in the UK and France, offering two very different cases. France makes a large number of films and has a home video spend on the European average. The UK makes fewer films but has a high home video spend ⁽¹⁶⁾.

⁽¹⁵⁾ A full set of required data is unavailable for Cyprus, Estonia, Latvia, Lithuania, Luxembourg, Malta, Slovakia and Slovenia.

⁽¹⁶⁾ In effect, we have treated the position on the vertical axis as a 'propensity to buy' and the position on the horizontal axis as 'available supply' and multiplied them. Data for a more sophisticated model was simply not available.

3.5 The impact of the Internet: first indications

There is a widely held belief that the direct delivery of films by broadband will revolutionise the demand for smaller films ⁽¹⁷⁾. This raised hopes that convergence may help drive forward a pan-European film market. This argument usually refers to the 'long tail' theory ⁽¹⁸⁾.

The theory shows how an 'online', as opposed to a 'bricks-and-mortar', store increases access to speciality films. This is quite simple to explain: a physical store serves the local population within, say, a radius of 15 miles of the store and holds, let us say, 500 films. If, in the catchment area of that store, there is a low concentration of demand for, say, foreign language films, it will not be worth using the shelf space in the physical store for that kind of film. An online store, however, delivering by the Internet, would be serving huge populations so that even if the concentration of demand for a foreign language film remained small, the potential customer base would be very large and justify holding that kind of film in an inventory.

In fact, the absence of widespread broadband connections capable of downloading full-length films in a reasonable time has not prevented the Internet from already becoming an important element of film distribution. Many existing video rental companies have added e-commerce to their websites, enabling consumers to select and pay for film rental online. This harnesses the convenience of the Internet as a means of processing transactions, but stops short of using it as a means of delivering content.

Online rental companies deliver DVDs by post. The success of Netflix in the USA has led other companies in the USA and Europe to emulate the business model. Online video stores are now to be found in all major European countries, although some countries (notably Italy and Spain) have faced a significant challenge from poor national postal services. The UK is the most mature European market. There are signs that the leading UK companies may be expanding their coverage to other European markets ⁽¹⁹⁾.

Internet-based VoD services can therefore be seen as the logical next step for online rental as domestic broadband capacity increases to provide film downloads in a reasonable time. The online stores already have the front-end in place (consumer websites) and the transactional systems (secure online payment and order tracking) for the delivery of the film across the same network. They may therefore be considered a good indicator of the impact of post-convergence VoD services on the demand for content.

The UK Film Council recently commissioned a research report to assess the feasibility of a UK VoD market for UK independent and specialised films ⁽²⁰⁾. The report chose to use online rental as an indicator of VoD potential and set out to discover the demand for smaller films using an online rental system delivering DVDs by mail. It finds, for example, that the film *Inside I'm Dancing*, an Anglo-Irish-French production, had recorded no traditional video rentals by the end of 2005 but had achieved an estimated 35 761 online rentals.

⁽¹⁷⁾ We use the terms 'small film' or 'smaller films' rather than the term 'specialised' as shorthand for films made on typical European budgets that are, of course, much lower than mainstream Hollywood budgets.

⁽¹⁸⁾ See Appendix 3: The long tail theory'.

⁽¹⁹⁾ The two leading online stores in the UK have already entered the Scandinavian market, and look set to increase their European presence further as part of their mid-term strategy.

⁽²⁰⁾ *Feasibility study of a digital platform for the delivery of UK independent and specialised films to the home*, Screen Digest and Magic Lantern for the UK Film Council, April 2006. We are grateful to the UK Film Council for making this, as yet unpublished, report available to us.

The study also found that, of 521 UK and specialised titles released theatrically in 2003 and 2004, only 100 (19 %) were available through traditional video rental stores. However, 400 (77 %) of these titles were available through online DVD rental services ⁽²¹⁾.

This evidence suggests that the online rental market is already feeding a demand not catered for by traditional video stores: 8 % of transactions on the online services were for films not carried in 'bricks-and-mortar' video stores. Further evidence of demand was found in a study of the top 25 UK/specialised films. This revealed an increase in demand of around five times compared with cinema, around two and half times compared with video rental and 10 times compared with video retail.

This is impressive. It is for this reason that some observers argue that VoD will significantly improve the competitive position of European films relative to American films.

However, in drawing this conclusion, they may be missing an important factor. The majority of European films are currently seen not in the cinema, not on DVD, but on the television via the traditional analogue channels that, in most countries, still retain a majority share of viewing. However, their share of viewing is declining and will, almost certainly, decline further.

The high share of traditional channels has been sustained by two factors that are challenged by digital convergence. Firstly, major channels are restricted on the number of imported programmes that they may air: not only do all the major channels face a requirement that 50 % of their content is of European origin, but many countries impose more stringent rules that effectively exclude imported programmes from prime time. VoD services are unlikely to bear such obligations. (We discuss the possible evolution of such content regulations in Section 5.6.) Secondly, the majority of European citizens still have access to and watch only a few channels. Large audiences can be assembled. However, with the end of channel scarcity and with the range of choice offered by convergence, national audiences will 'hollow out' as they divide into taste groups and online communities, many of which will cross national boundaries.

European television services will thus lose these twin advantages after digital convergence. Statistics from every country confirm that additional services result in audience fragmentation, as happened when satellite services began to compete with the old terrestrial services. In the recent period, more services have invariably meant the viewing of less new European content ⁽²²⁾.

Currently, we cannot judge either to what extent the larger broadcasters will be able to sustain quality domestic programming (the amount of it is certainly at risk, for the reasons given above), nor can we estimate the extent to which free choice will change consumer demand.

The 'long tail' theory is therefore double-edged. On the one side, it will widen the market for, and improve access to, European films — nationally, throughout Europe, and across the globe. On the other side, when all services come down the same 'pipe' and choice is unlimited, more viewers will be liberated from traditional channels.

⁽²¹⁾ A study by NPA Conseil, released in May 2006, found that by aggregating the libraries on offer, more than 700 films were available in the French language in early 2006. *The development of video on demand in Europe*. NPA Conseil, May 2006.

⁽²²⁾ This reverses a process that occurred in the 1990s, when new commercial channels, such as Sat1 or Pro7 in Germany, built audiences by increasing domestic content and reducing American imports in prime time.

On current trends, the viewing of domestic or European content, including European films on TV, will decline ⁽²³⁾.

The only option for European content production is therefore to make its content more attractive to its European audience. There is no better moment to do this.

For the producer, the digital age offers huge potential changes in:

- the nature of consumer demand;
- the formats in which content can be delivered;
- the costs of production;
- the costs of delivery; and therefore
- the risk/reward ratios that determine investment in particular types of content.

In later sections, we examine some implications of these changes in more detail.

3.6 The players

In this section, we look at the types of player who will, in our view, have a strong influence on the shape of the emerging VoD market. They fall into four main categories: broadcasters, multi-channel platform operators, new media companies and telecoms companies ⁽²⁴⁾.

Prime audiovisual content is expensive. The traditional channels that grew up through the analogue era still fund the majority of new programming. It is this content that draws the majority of viewing in all countries. That is why television will still drive most consumer decisions on how to spend an entertainment budget and what domestic services and technologies to invest in. The major broadcasters are now introducing new digital services (including on-demand) and building a considerable presence on the Internet to compensate for declining audiences.

Another important presence is the subscription-funded multi-channel platform, equally concerned about the impact of convergence but without, on the whole, the same quantity of first-run production to support its interest. These platforms have found gaps not served by traditional broadcasters, providing dedicated film services and catering for niche, as well as mass, tastes. This sector looks at risk from digital convergence, since the primary rights owners may opt to supply the customer directly. However, companies like BSkyB in the UK or Canal Satellite in France have a unique advantage: the addressable subscriber. They will want to maximise this advantage in the digital age, using a detailed knowledge of each home or subscriber to anticipate and cater for their needs.

⁽²³⁾ Data from the European Audiovisual Observatory shows us a mixed picture for the performance of public television throughout Europe with most countries showing a downward shift over the last five years but some, such as Norway, countering the trend.

⁽²⁴⁾ The report, *The development of video on demand in Europe*, a detailed study by NPA Conseil of VoD services in Europe that were active in early 2006, gives the following categories of 'new entrants': IT or consumer electronics manufacturers (Apple, Samsung, Sony); music and book retailers (FNAC, Virgin, Amazon); aggregators who have emerged around digital distribution (Vodeo, Zooloo Kids); DVD rental companies (Glowria, Blockbuster, Netflix); search engines and web portals (Google).

We will no doubt see new players emerge during the convergence process, some of whom will expand fast: the Internet and its disruptive technologies stimulate new approaches and none of the leading online music stores started inside the music majors. Few would have predicted the dramatic impact Amazon would have on book sales in its early days, or the meteoric rise of Google.

Music portals like Napster and iTunes operate their own portals, containing industry news, graphic displays and new releases, 'community' pages where users can communicate their views about music and technology and get advice on compatible 'players'. The sites offer various tariffs: Napster offers both a pay and subscription service, with a DRM system tailored to the service. Equivalent sites will emerge for online film rental and electronic sell-through. They could come from existing film rental and retailers (including the new generation of online rental companies like LoveFilm).

Established Internet giants like Yahoo, AOL and Google (via its Google Video Service) are also candidates. It is not yet clear whether all these will join the queue to license prime entertainment, or whether they will stay closer to the developments (which do not include film) that are currently driving Internet take-up and use: searches, weblogs, transactions, social networking, interactive entertainment, short-form content and, above all, user-generated content.

Finally, there are the telecoms companies (or 'telcos'). They are in the VoD business because their carriage monopolies have been dismembered and they have been forced to 'unbundle the local loop', that is, allow competitors to connect directly to homes and set their own supply prices. This has commoditised their old (and, usually, profitable) business carriage, and pushed them into competition with cable companies, offering a 'triple play' of Internet access, telephony and content. The key issue for telcos is the extent to which they wish to get involved in generating content themselves, and the answer so far seems to be 'not very much', as yet.

The telcos have one unique advantage: a mass customer base, providing a good position from which to take advantage of triple-play services. Most countries have incumbent telcos with links to a large proportion of homes, giving existing customer relationships to build on. France Telecom is one such incumbent telco and its IPTV service (Ma Ligne TV) already has over 200 000 subscribers.

We may call services such as Ma Ligne content 'aggregators' in that they have secured rights to content which they will package into branded services. In each case, access to these services requires the installation of a particular 'black box' which provides access to the rights that have been 'aggregated' on domestic television systems. Content may be viewed without a black box on a computer served by a broadband line of adequate capacity.

We have presented four types of players here: the broadcasters, the platform operators, the new media companies and the telcos. Although each comes from a different background (with its own strengths and weaknesses), as we move towards convergence the divisions between them will become increasingly blurred. In the UK, incumbent telco BT is launching broadband television services, while multi-channel platform Sky has acquired an Internet service provider. We may expect to see some interesting mergers, acquisitions and strategies as the fight for the converged home intensifies.

4 Stakeholder interviews and survey

4.1 The stakeholder interviews

We spoke to nearly 80 stakeholders, always on an unattributable basis, for we wished them to speak frankly. They covered representative organisations, national film agencies, film executives, regulators, broadcasters, those involved in the launch of new services (both fixed and mobile), film producers and distributors. The focus of the discussion was the threats and opportunities of digital convergence.

Most of this group were closely concerned with medium-term issues of digital convergence. While generally optimistic about the potential long-term benefits of digital convergence, they were, in general, more concerned with the practical short- and medium-term issues of change.

The key issues they identified are itemised below.

4.1.1 *Threats to current film finance models*

The dominant business model for film finance in Europe is one in which funding comes partly from subsidy, partly from TV rights and partly from ‘pre-sales’. The latter are sales of exclusive distribution rights to distributors that are often paid in advance and which therefore help to finance production. Getting a film budget funded is always difficult, hence the perceived importance of this distribution model. VoD is likely to be a non-exclusive right: non-exclusive rights do not generally give guarantees or advances.

Most stakeholders accept, in one way or another, that the transition to a digital world could mean a bumpy ride for European film, especially where its current financial models are concerned. Thus, even those enthused about new media, on the grounds that the opportunities are greater than the threats, agree that VoD, like rental and retail, will be, in one stakeholder’s words ‘a retail model, not a distribution model’ and it will not ‘monetise films ahead of exhibition’ ⁽²⁵⁾.

A second, even larger, question is posed by the arrival of VoD. Will the new windows bring extra revenues to the whole industry like VHS, pay-TV and DVD, which have combined to grow the average earnings of individual pieces of content? Or will they cannibalise existing markets, weakening the traditional business partners of film-makers, and thus the film-makers’ ability to fund production budgets? Fears over new technology may not be unfounded. New players wishing to secure non-exclusive rights expect to pay less for them: old players, like the distributors and the TV channels, used to getting exclusive rights, now face competition and, as a consequence, wish to pay less, too.

Some stakeholders, in particular those close to film production, welcomed the end of the ‘middleman’, thus referring to the issue of ‘disintermediation’. Others took a more pessimistic

⁽²⁵⁾ A ‘retail’ model, as, for instance, for the sales of DVDs, generally returns a straight percentage of sales and is non-exclusive. This revenue is not activated until the film is made and out in the market: that is why it does not ‘monetise films ahead of exhibition’, as one stakeholder put it.

view: since the current system encourages specialist firms with specific expertise in given markets, any loss of expertise would be damaging.

A threat to current business models, and, in particular, to the ability to raise pre-production finance, would increase the risk of production, the large upfront 'sunk cost' that films incur before they earn any revenues. In the view of some stakeholders, this would lead to more reliance on subsidy and on financial support from television.

4.1.2 Danger of market dominance

VoD services, offered or pending from telecoms or cable companies, have aroused interest because very large corporations have launched, or are about to launch, VoD services for the first time, usually using IPTV technology. The telecoms companies, in particular, are seen as much larger and wealthier than traditional broadcasters, but without any of their obligations.

A different kind of concern was prompted by the fear of 'vertical integration' and associated with the large corporations now entering the audiovisual sector. As one stakeholder put it: 'The big fear for the film sector is vertical integration. That is why the possible involvement of the telecoms companies in the financing and distribution of film is potentially dangerous'. This concern seems to be focused on the sheer scale of telecoms companies, enabling them to 'swallow media companies anytime they wish' as they take steps to expand their businesses away from reliance on fixed-line telephony. For the time being, it was noted, the telcos profess a desire to remain as carriers of content, not funders or originators of new content, nor acquirers of exclusive rights in content. This is disbelieved by many film-makers, who think that they are 'lying low' in order to avoid regulatory intervention.

Another reservation about future models came from observations of the music industry. Those who look to the music industry as a precursor, with lessons for film, note that its most successful manifestation, iTunes, is not the main profit centre. In fact, music merely supports the main profit engine, the hardware, in this case the iPod. Thus, the music download market is hardware — not content — driven. Music downloaded from iTunes to an iPod cannot currently be transferred from the iPod to another music player, of which there are now many on the market. iTunes currently holds 85 % of the music download market. Our stakeholders were thus raising the fear of a hardware or player monopoly with a unique, non-transferable content library.

4.1.3 Lack of demand for European films from new media services

Some stakeholders were concerned, not so much by the potential power of the telcos, but by the lack of evidence that the 'new players' have an interest in European films.

Even some of those launching new services were, in fact, keen to 'talk down' high expectations. Those involved with the launch of France Telecom's new IPTV service pointed out that although, by one criteria — low penetration of multi-channel — France appears a good prospect for IPTV and VoD, the recent launch of digital terrestrial television has reduced this potential.

Some stakeholders wondered whether, given their current aims, which focus mainly on TV content and popular films, they should see these services as a complete change or merely as an extension of the time-shifting capability of personal video recorders (PVRs), whether branded retail products, like TiVo, or integrated services, like the Sky+ box?

Belgium's Belgacom was one of the first telecoms companies into the IPTV space and put a lot of money into the acquisition of soccer rights. However, it found that a few expensive rights are not enough. VoD services, according to one stakeholder, the manager of a producers' organisation, need to be easy to understand, simple to use and offer exhaustive catalogues. In his view, this has not yet been achieved. In other words, these services are still technically immature.

Some stakeholders, therefore, felt the prospects for VoD and IPTV services were overrated. In Germany, for example, with traditional access to many channels via analogue, cable and pay-TV just taking off, the cable companies are aggressively developing and marketing upgraded networks, compliant with triple-play offerings: 3.5 million at the end of 2004, 6.2 million by the end of 2005 and 12 million predicted for the end of 2006. However, the cable companies do not see a high demand for VoD and IPTV: demand, they think, is more focused on Internet and telephony services.

4.1.4 Lack of current capacity for mobile content

Even more uncertainty pervades mobile content, which, according to stakeholders in that field, has not yet found a standard able to provide a consumer content service likely to catch on. 3G is too prone to 'contention': in other words, its availability is limited to a given number of users. Mobile operators are now lobbying for broadcast spectrum in competition with digital terrestrial television (DTT), which will provide greater capacity for streamed services. Mobile operators tend to acknowledge that present services are, basically, ways of testing the market and building knowledge, and they expect failures and false starts. There is no mobile service yet offering video-on-demand: short extracts of TV programming are their main offering.

We are using the term 'mobile services' to describe services that can be received by devices that can receive content while on the move, mainly, at present, 3G mobile phones. It is important to distinguish these from portable services, like the video iPod, to which video can be downloaded from a computer. During the course of writing this report, a number of studios announced releases of current TV series for downloading to portable devices.

4.1.5 Increased reliance on television

As above, there was a perception, among the stakeholders, that changes in the funding of films could increase the difficulty of raising finance for production. Some stakeholders thought that continued public access to European films and, to a large extent, access to funding for production of European films, would depend more than ever on television. (Many stakeholders came from countries where television plays a key role in the financial support of film, either via licences or via mandatory funding schemes.)

In most countries, broadcasters have obligations to support domestic film production. In large markets, a large population creates a correspondingly large demand for local content.

Regulation is not needed to achieve it. In Germany, for example, as one speaker pointed out, when ProSieben and Sat1 reduced domestic film commissions following the troubles within the Kirch Group, ZDF simply increased their domestic film output. However, Germany is the exception: most European TV companies are not large enough to fully finance movies, but they remain, in most peoples' minds, a key component in film funding.

4.1.6 Broadcasters control strong programme brands, holding back development of new platforms

Dependence on television has its downside. Some stakeholders were afraid that existing TV interests could stifle innovation and new platforms. Producers, in German-speaking countries, for example, fear that the old 'oligopoly' of buyers will remain, or be created, at European level, by the merger of platforms. The established broadcasters are perceived to have powerful lobbying capacity and political influence. One stakeholder said that the existing interests, i.e. broadcasters, are by far the most aggressive parties in the negotiations that are taking place, since they have an interest in retaining control of the programming they have commissioned across all platforms.

While there are fears over the consequences of changing business models, there is a general wish to see new platforms succeed, and an awareness that both the Member States and the European Union support policies designed to promote digital convergence. In this, the attitudes of broadcasters are often seen to be obstructive.

New platforms, it is argued, need recognised programme brands, but most recognised programme brands are controlled by broadcasters.

This leads to a view that new media rights, for instance VoD rights, should be defined separately and properly. Rights should not default to the broadcasters who originally commissioned or ordered programmes (or produced them in-house) because they were not properly defined when they were acquired.

Some stakeholders simply argue that the public should get access to the back catalogue of European works residing with public broadcasters because they are a cultural heritage, not the property of one company. Broadcasters, of course, argue the opposite and are launching Internet services themselves, which exploit their archives. New players, like the telecoms companies who are launching VoD services, argue back that they are building the infrastructure that makes digital convergence possible and, without access to recognised content, broadband installation will slow down.

Attitudes to broadcasters are thus very ambivalent. On the one hand they are seen as a source of funding for films: on the other they are seen as an obstacle to the development of new platforms.

4.1.7 State aid and subsidies

Another source of funding on which film-makers rely is public subsidies, most of which are distributed at Member State level. These represent an allowable compromise with European state aid policy that, in general, prohibits state aid for national enterprises.

Subsidy schemes currently operate under amended state aid rules applying to the audiovisual sector and are due for review by the Commission in 2007. One representative of a producers' organisation saw this review as a 'great danger', presumably fearing that the Commission may wish to amend the current rules on competition grounds. The Commission has indeed indicated that the exemption from state aid rules applying to audiovisual content may contravene the Treaty on European Union.

The majority of those involved in the production and distribution of European films do not regard film production as a sustainable activity without government intervention. As one distributor put it, 'European film cannot survive without government money. It is not big enough to sustain itself'. Another distributor put it, 'Film exploitation is national ... It is very difficult to make a film travel ... Among the 900 films produced in Europe each year, approximately 600 make it beyond their national borders, but their impact is very limited'.

A minority of the stakeholders, however, were strongly opposed to European subsidy systems, arguing that European subsidies generate a cottage industry, doing things that 'only subsidies will support'. One put it this way: 'A producer presents his project to a group of people who may not be very successful in their field. If the film does well, he does well. If it does badly, he still gets his fees.' Another stakeholder put it more strongly, saying 'I see the evidence — they are just not working hard enough to get the budgets down...'. One stakeholder felt the system was only sustainable in the short term because, in the long term, film subsidies would increasingly have to be in the form of direct cash support rather than indirect support via broadcasters. This would make it more 'visible' and increase popular resistance to it.

Others acknowledged the weaknesses of the European subsidy systems but saw no other solution given the diversity of the European Union. One argued that 'you need systems to reduce the risk of releasing a film' and instanced the MEDIA programme's support for distribution as an example.

One speaker admitted that 'concentration is also possible in development and writing ... but on the whole the film industry is one of prototypes, so there are a lot of independents, artists, small teams. Any view that that they should organise jointly to operate in the converged world needs to take that into account'. This more nuanced view takes account both of the socio-political realities of the European Union and the nature of a creative industry, and argues that improvements might be possible at the margin as long as these unchanging factors are recognised.

Other stakeholders felt that the subsidy system was responsible for the oversupply of films. Europe might be making too many films, which might therefore be 'cannibalising' one another. One speaker said that European films were 'rushed out' of cinemas because there was a long queue of European films waiting to get in, while most of the screens were occupied by popular American films.

4.1.8 *The new audiovisual directive*

On the new audiovisual directive, the majority of the stakeholders we spoke to supported its general approach ⁽²⁶⁾. They identified that its aim was to retain the obligations on traditional broadcasting channels to offer a high proportion of European programming, while offering new services a 'lighter touch', thus helping them in their start-up phase. However, many would like to see the directive strengthen the obligation on media services to originate new content and to carry European content, perhaps by a 'must carry' rule.

Some said that they would like the 'country of origin' rule to be replaced by a 'country of destination' rule: one stakeholder argued that this change was supported by 13 European countries. The current rules allow channels to transmit to one European country from another country under the regulations of the country of origin, as RTL broadcasts to Belgium from Luxembourg and TV3 broadcasts to Norway from the UK, under Ofcom rules.

A minority of our stakeholders strongly opposed the new directive on the grounds that:

- the distinction it proposes between 'linear' and 'non-linear' was not clear and would inevitably fail to anticipate the innovations and changes that digital convergence will enable; and
- its attempt to regulate the Internet duplicated the e-commerce directive and was against the spirit of the Lisbon strategy.

The difficulty with the 'linear' and 'non-linear' services was down to the hybrid nature of emerging popular Internet content. What would one do about social networking sites like MySpace.com, where individuals create their own home pages from which they can offer their favourite music or make short videos and compete to be distinctive and original? What about a blog? It might start life as a purely personal communication but become popular and even generate advertising revenue. Would this make it an 'audiovisual media service'?

The second objection came from those who felt it was now time for regulation to be rolled back. In their view, regulation was needed in times of spectrum scarcity to make sure all viewers got services that interested them, but, with the end of spectrum scarcity, 'it was no longer necessary'. The market will find a way of providing services for everyone.

Much of the most intense debate about the new audiovisual directive has been about advertising rules. Few people with a specific interest in film had much to say about this, however. One stakeholder, representing a broadcaster with a free-to-air film channel, is pressing the Commission to reconsider the rule on advertising breaks in films ⁽²⁷⁾, arguing that shorter and more frequent breaks would enable it to increase the proportion of the schedule allocated to European and world cinema.

⁽²⁶⁾ This replaces the current 'Television without frontiers' directive and is in the form of a draft, which has already been circulated and discussed and on which consultations have taken place. On current plans, the new directive will take legal effect from 2009.

⁽²⁷⁾ The draft audiovisual services directive proposes that cinema and TV films may be interrupted once every 35 minutes. This would replace the current 45-minute rule.

4.1.9 The dominance of American films

The fear of Hollywood's power and American dominance remains very powerful. This focuses on two issues: first, the sheer promotional 'noise' that Hollywood can generate for their films, based on their large budgets and global market potential; second, Hollywood's integrated distribution systems, which enable them to market on a worldwide basis. This overwhelms anything Europe can match.

However, there were some dissenters. One distributor took a contrary view. His argument is that the studios have invested billions in a global distribution system and even more in the financing and control of high-budget pictures. This gave them prime access to the limited distribution channels that were available in the past. With the disappearance of those limits, and because the Internet means almost costless delivery, the potential dominance of the studios disappears.

4.1.10 Market fragmentation

Historically, many European films have been licensed on a territory-by-territory basis, with different rights even separated within a given market. Exploiting international markets means untangling these rights. Many stakeholders referred to the difficulty of this. European films could, therefore, be put at a disadvantage by being unavailable to the large international portals. As one stakeholder put it, 'Rights issues in Europe are highly complex and only the (American) studios control all the relevant rights'.

One stakeholder suggested that Europe needs 'a new kind of aggregator to bring together the service providers and develop a single interface with the new players', involving a joint approach to DRM, contracting and pricing. Regional groupings, as with the Nordic countries, represent one possible approach. Could the collecting societies, which are currently nationally based, take on an international role?

However, if the demand for European films remains, on the whole, a national demand, then the gain — some additional sales to expatriates working and living away from the home country, and some to rare enthusiasts for foreign films — may just not equal the cost of setting up new structures that change the practice of generations of production.

4.1.11 Changes in release windows

Many stakeholders accept that film windows are changing and will continue to change.

The dominant film and TV models are driven by phased release and differential pricing. Because the new film has to be seen in a physical cinema for a limited period at a certain distance from your home, there is a residual demand for the next phase of release, when, for instance, the same film is available for rental at a lower price from a neighbourhood store. Satisfying the residual demand means extra revenue. The last window is usually the television window, some two to three years after cinematic release, which is the cheapest option of all.

This, for many years, has been the way in which films have maximised their total revenues. It has come under threat before, but new windows have always been accommodated. The cinema has always remained the primary window, even though it does not deliver the highest

share of revenue, partly because going to the cinema remains a more important social event than simply watching television and partly because it is a convenient focus for launch publicity. It also retains a premium price.

Cinema release may come under pressure. Some countries have gone for flexibility: a Portuguese stakeholder told us that he expected each window to shorten fairly rapidly. Others think windows should be left to the market. Yet others think that regulatory interventions should impose a windowing structure or encourage 'inter-professional' agreements ⁽²⁸⁾.

Some film-makers believe that a 'day and date' release pattern, by which all films are released in all media at the same time, might be pushed by the Hollywood studios, driven partly by a fear of piracy, since 'day and date' reduces the incentive for piracy and by the perception that, once VoD services were up and running and widely available, there was more money to be made by online releases than cinematic ones.

4.1.12 A question of quality

We have already heard a reference to the possible oversupply of European films, prompted by subsidy concentrated at a national level.

Comments on the quality of European films focused on two issues. One viewpoint held that European producers spent too little time on development and that, in particular, screenplays were often inadequate. Producers were forced to go into production before screenplays were ready.

The second line of criticism focused on the fact that European films, according to them, played not only to smaller, but also to older, audiences. This viewpoint held that European film-making was often too 'literary' and carried too much 'baggage from the past'. It was sometimes 'downbeat and miserable'. As one stakeholder put it, Europeans don't make 'date' films, i.e. films to which young people go out together.

4.1.13 The new media landscape

There was a general view that the media landscape, post-digital convergence, would be different. As one person told us, it could divide into 'prime' and 'niche', with a '... thinning of the middle ground'.

Many feel hopeful about aspects of this landscape — that, for instance, it could create opportunities for improved distribution of European films, and give a new chance to niche products. Vodeo.tv is a French documentary site, with a library of 1 300 documentaries, rentable for EUR 1 each.

⁽²⁸⁾ Hollywood's latest position seems to be to protect the theatrical window but to embrace legal downloads from the Internet simultaneously with DVD release at a price just below the average DVD title. For the most part, the studios are not currently permitting films to be 'burned' to DVD disk. At the time of writing (August 2006), Hollywood is moving away from its own proprietary services, Movielink Inc and CinemaNow Inc. 'Our goal is to seek out as many ... retail outlets as we can, and put as many titles as we can on those sites,' said Peter Levinsohn, President of News Corp.'s Fox Digital Media. Wall Street Journal, 3 August 2006.

4.2 The survey

Concurrently with the in-depth stakeholder interviews, we surveyed producers and distributors. The extended questionnaire asked respondents to agree or disagree with statements, or answer yes/no questions, an approach intended to avoid the need for free-text entries. The questionnaire was in English, with a cover note in six languages. It was designed to be completed electronically and returned by e-mail. We are very grateful to those who completed it.

Unfortunately, the response to the questionnaire was disappointing and our summary of its findings should be treated with caution. The following is a summary of the views expressed in the responses.

Two thirds of those that responded came from companies controlled by their original founders and the remainder came from companies in which either another communications company, a broadcaster or, in one instance, the State, had an interest. (The latter respondent came from one of the Baltic countries.)

Most respondents said their films were either supported by public funds or by a mixture of private and public funding. Only one respondent reported that their films were privately financed. This respondent was British.

When asked about their sources of finance, two thirds said that they did not use bank loans. Financial contributions to budgets came mainly from national free television, and national or regional public bodies. Support also came from public bodies and subsidies outside their home territory, and co-producers in other EU countries. Only a minority reported that their film production was partly financed out of retained profits.

A small minority said they received some financing for budgets from distributors or sales agents outside the EU. Slightly more said that, at some time, they had received support from theatrical distributors or sales agents in other EU countries. The number reporting production finance from pay-TV was much smaller than free-TV.

The highest film revenues earned across the sample were from theatrical distribution in the home country, followed by non-theatrical distribution in the home country and non-theatrical distribution in other EU-25 countries. Just under half said that their films generated some revenues from theatrical distribution in other EU-25 countries. Many more said they had received some sales revenue from outside their national market and two thirds said they had received some sales revenue from outside the EU-25.

Asked if their films generally generated a profit or surplus, half said they did and half said they did not. Just over half said they thought the companies in their countries were, in general, profitable.

The respondents were asked which formats they were using, to which 60 % replied 35 mm, 10 % said 16 mm and 30 % said digital video.

When asked about digital convergence, the vast majority felt it to be more of an opportunity for the film industry than a threat. Most agreed with the proposition that digital convergence would widen the audience they would be able to reach with their films.

All the respondents felt the Internet would make it easier to buy or rent European films. There was universal agreement with the proposition that the extra convenience of delivery by download would increase the use of online film stores. There was also universal agreement with the proposition that online film stores could hold a larger inventory than physical stores, which would increase their ability to satisfy minority interests. However, a majority felt that the revenue currently earned from non-theatrical sales could be reduced by the Internet.

Some felt that powerful players could aggregate film rights and operate business models that crowded out specialist suppliers. However, the majority disagreed with the proposition that Internet delivery would be dominated by large portals so that niche items would be impossible to 'find'.

There was strong agreement that Hollywood would continue to dominate the European film market and similarly strong agreement with the proposition that no European company could match the way American film studios had populated the film value chain, from production to distribution. A large minority agreed that this was a result of a large American domestic film market, allowing them to set budgets at levels with which Europeans cannot compete. However, very few agreed with the proposition that producers in Europe do not want to reach a mass market.

About half the respondents agreed that European films usually addressed national interests. However, a majority agreed that there is no pan-European cultural identity and that it is a purely synthetic concept.

Half of the respondents felt that digital convergence was already influencing their approach to film-making.

A minority said that they would be exploring the possibility of direct delivery to the viewer and reducing their reliance on distributors and other intermediaries. Nearly all the respondents, however, said they would continue to expect to use distributors and intermediaries.

Asked to assess where sources of finance for production might change following digital convergence, top of this list, unsurprisingly, came new media platforms (both in the home country and the other EU-25). In terms of revenues generated, they felt, on the whole, that theatrical distribution would be delivering less, new media more (unsurprisingly), with more, too, from non-theatrical distribution (a more surprising result, since VoD is often considered to be a competitor with non-theatrical).

A very large majority agreed with the proposition that piracy and unlimited copying would remain a serious problem for the foreseeable future. However, they expected solutions to be found by implementing good DRM. Many felt that, without strong government intervention, powerful companies, such as the Hollywood majors, would seek to unduly limit consumers' rights within their DRM systems.

Many felt that the digital world would encourage large companies with a high level of vertical integration, and felt that legislation would be needed to ensure fair terms of trade with film producers, and adequate public access to their work.

A large majority said that they relied on public support to enable them to make films, and all respondents except one agreed with the proposition that they would continue to be depend-

ent on public subsidy and the obligations of TV channels to support national and European films. None of the respondents agreed with the proposition that digital convergence would reduce their need for public support.

The sample was also given an opportunity to comment on existing legislation and EU support structures if they felt sufficiently well informed to do so.

The MEDIA programme and the Eurimages programme were identified as the support services that most producers knew about. There was a general view that these services should be rebased, closer to industrial reality. They felt that the support services, including the MEDIA programme, should be made simpler, with more automatic support by way of direct investment and sharing of the proceeds with the producer. One respondent said that funding should be 'more market driven' and less directed towards minority causes.

Other respondents suggested that the Media Fund should supply bursaries for digital conversion and other preparations for the digital age. One respondent said Europe could initiate a media bank and provide support for distribution too.

Some respondents who supported the subsidy schemes suggested that they provided the wrong incentives: for instance, they relieve distributors from taking risks on investment in production.

4.3 Summary of opinions:

The stakeholder interviews and the producer survey

As we have seen, the stakeholders were, on the whole, the more apprehensive about the future. They felt that current film finance models were under threat and were not sure that a solution would be found. They feared the arrival of new players, such as telecoms companies, with the capacity to create vertically integrated services, possibly producing and owning the rights in films themselves.

A parallel fear, however, was that the new services were showing a relatively low level of interest in European films, concentrating more on well-established programme brands and other services. This led film-makers to feel that they might have an increased reliance on television.

Film-makers remain of the view that European film production is heavily dependent on public subsidy while acknowledging that subsidy has its faults. Many fear that the new audiovisual directive will dilute the obligation on broadcasters to carry European films and will have little ability to impose content rules on new non-linear services.

They expect Hollywood to move fast into the pan-European domain and exploit its control of rights and ability to adapt its distribution methods. By contrast, stakeholders fear that market fragmentation is difficult for Europeans to untangle because of the way films are licensed in Europe.

The producers and distributors, on the other hand, felt more optimistic. This is partly because they felt little change in the current status quo in terms of funding and distribution.

Paradoxically, both may be correct. Where the producers are concerned, we show, in Appendix 2: Medium-term prospects for film', that the big changes will not happen right away. In the short to medium term, the impact of convergence will be limited and the current ways of doing things will survive or evolve relatively slowly. Indeed, we foresee a relatively buoyant period, with an expansion of screens via multiplexes and an increase in pay-TV subscriptions and home video spend.

The stakeholders took a more strategic view, with a greater sense of what convergence might mean to them and its impact on the future of European films.

5 Review of findings and recommendations

The production of European films currently relies on three basic sources of finance: commercial distribution advances, television rights and public subsidy. The share each source plays in financing production varies from film to film and country to country. One estimate we received for European films in general was 50 % from public funds, 25 % from pre-sales, and 25 % from TV licences ⁽²⁹⁾.

We take the position in this report that European film production faces a period of comparative stability, even growth, during which existing arrangements will be maintainable ⁽³⁰⁾. In about five years' time we expect a 'tipping point' in consumer behaviour, when mainstream home entertainment will have shifted towards the converged home described earlier in our report. This is the moment for which our creative companies should prepare.

5.1 The impact of digital convergence

The main features of digital convergence have, we hope, been indicated in previous sections and its challenges described in our summary of the stakeholder interviews.

A world in which:

- content production has become cheaper and the means of production widely available, and
- content can be received from anywhere with negligible delivery costs

... means the end of arrangements set in a world in which:

- content was expensive to produce and to distribute and delivery routes were scarce, limited to the local cinema or rental store and analogue TV channels; and
- distribution systems were based on national networks.

At this point it is likely that:

- current film funding models, based on advances and minimum guarantees, may no longer apply;
- current regulatory interventions will have less impact;
- audiences will have easier access to European films, but they will also have easier access to American films;
- the viewing of European content on television may decline.

These are very significant changes. To adapt to this world, European film-making will have to change fundamentally.

⁽²⁹⁾ We are also grateful to Klaus Hansen for these specific details about Danish film production: the average budget for 2005 was EUR 2 164 000; the average subsidy was EUR 814 000; and there are subsidies for marketing and distribution. No reliable data was available on non-theatrical sales or the average earnings of Danish films.

⁽³⁰⁾ See Appendix 2, which presents a five-year projection for film-related media, such as cinema, television and retail/rental.

Anyone who has reached this stage of the report will have seen evidence that the European film industry is, in many ways, ill prepared for the digital future. To put it bluntly: it uses, mainly, old technology; it has little knowledge of the emerging digital world; it operates within national subsidy systems; it does not compete, even on its home ground, with imported American films; it realises that its current business models for financing production will probably run out of steam, but it does not know how to replace them; and it is, alternately, afraid of, and complacent about, the future.

We are not saying that the Member States should not continue to support films as they have done. They will certainly choose to do so in many cases, and their right to do so is safeguarded in European legislation. In the digital age, much content will, of course, remain directed at national audiences. But the European objective of a common audiovisual market takes on a greater importance than it has before. Unless a significant proportion of content production and distribution aims at a European level, the European nations will become regional producers in a global market. Yet film is, truly, the most international of all the audiovisual genres.

Now, as we face digital convergence, the expansion of the internal audiovisual market is not just desirable but essential. If film cannot increase its ability to reach audiences outside its home countries, its weakness will leave it at the mercy of its global competitors. It will remain a cottage industry.

So what are the appropriate strategies? Each challenge has a negative and positive polarity.

On the one hand, convergence will ‘hollow out’ national audiences and could further reduce the viewing of national films on traditional TV channels and cinemas. On the other hand, it could increase the circulation of European films around the EU, identifying new demands as yet unsatisfied.

The strategic solution? To look for ways in which the circulation of films around the EU can be stimulated while providing the right measure of support for national cultures.

On the one hand, current sources of film finance may be at risk. On the other hand, convergence brings with it the prospect of many new buyers and investors in film.

The solution? To encourage the development of new online services, while maintaining diversity, by taking reasonable measures against market dominance and applying appropriate content rules.

On the one hand, current film business models are threatened. On the other hand, convergence and new technology mean new opportunities for creative entrepreneurs.

The solution? To remove obstacles, encourage creative risk-taking and create the conditions for profitable investment in content.

The last objective may be the hardest to achieve. The others rely mainly on legislative or regulatory change or a desire, already demonstrated, to compete to establish new online entertainment platforms. The third solution requires the transformation of an industry’s culture and practice.

There can be no better moment for this: digital production and delivery so changes the economics of audiovisual content as to offer a completely new opportunity for creative entrepreneurs. In particular, digital convergence offers new room for small or medium-sized enterprises (SMEs) ambitious to develop important content. This is consistent both with the aim of cultural diversity and with the dynamics of creative industries ⁽³¹⁾. Such companies will, however, need to minimise development and production risk by spreading it across a range of properties, and retain sufficient control of intellectual property rights to build asset values over time. Without an asset base of rights, such companies will not be able to raise finance for growth.

Not every film-maker will follow this route, but those who wish to do so will have to assemble new skills. Building this sector means not only providing the right market conditions but helping film-makers to learn a new way of doing things.

The next sections reflect on obstacles to the realisation of these strategies and suggest some steps that we think are likely to help them succeed.

5.1.1 Recommendation

In our view, the appropriate strategy to address the threats and opportunities of digital convergence is one that aims to:

- *increase the incentives to think, create and do business on a pan-European dimension;*
- *encourage the emergence of a wide range of new players and platforms as potential investors and buyers of film; and*
- *encourage more European creative companies to acquire the ambition, knowledge and entrepreneurial skills to make use of digital convergence.*

5.2 European cultural policy

Under Article 151.1 of the EC Treaty, ‘... the Community shall contribute to the flowering of the cultures of the Member States, while respecting their national and regional diversity’. Article 87.3(d) of the EC Treaty states that the Commission may consider Member State aid ‘... to promote culture and heritage conservation, where such aid does not affect trading conditions and competition in the Community to an extent that is contrary to the common interest’. Thus the Treaty allows an exception to its core requirement, that of economic harmonisation, in the case of ‘culture’.

The exception is given legal substance in various instruments. For instance, the 1989 ‘Television without frontiers’ directive defines the economic or harmonisation objective as a ‘... common programme production and distribution market’. But Recital 31 instances ‘... the protection of lesser used languages in the European Union’ as an objective of the directive.

⁽³¹⁾ The preamble to MEDIA 2007 states that ‘... full exploitation does not mean that public policy should try solely to create large market players, but rather to create an environment adaptive, in particular, to SMEs that will facilitate circulation of non-national audiovisual works throughout the European Union’. COM(2004), 14 July 2004.

The Treaty thus has divergent objectives that have to be held in balance but, as we reported in 2005 ⁽³²⁾, ‘... sometimes the two may be in conflict as where, for example, national regulations relating to (TV) programme production in indigenous languages act as a barrier to intra-Community trade in programme production’. The tension between trade and culture is recognised in the Unesco Declaration on Cultural Diversity, adopted in 2001, which says that ‘states have ... the sovereign right to adopt measures and policies to protect and promote the diversity of cultural expressions within their territory’.

Such conflicts exist wherever legislation aims to strike a balance between interests. But is it possible, for example, to achieve a ‘common production and distribution market’ (the economic objective) without some convergence of cultural taste? That convergence might have a very European character, embracing the many languages and nationalities of the European Union, but the economic objective of a common production and distribution market cannot succeed without a parallel cultural component. ‘Culture’ should not be reserved exclusively for Member States ⁽³³⁾.

The evidence suggests that the economic objective of a common production and distribution market is not being achieved. As implemented through the ‘Television without frontiers’ directive, this policy has provided effective support for domestic or national productions but limited incentives for the circulation of TV programmes or films originating in other EU countries. As a market for cars or washing machines, Europe, with over 400 million citizens, is very large. As a market for cultural production, it remains, largely, a series of separate markets determined by nations and languages. This is especially important in the case of film, for films can seldom be profitable by relying solely on the home market.

These observations are supported by previous EU studies. This from a study in 2001 ⁽³⁴⁾: ‘As yet there is little concentration in [the] European sector. This is probably the result, on the one hand, of quota mechanisms and professional practices, which restrict the use of the same companies by broadcasters and public support bodies and, on the other, of the extreme diversity and scale of public funding, which gives producers relative autonomy in relation to the traditional sources of funding.’

The same report goes on: ‘The national cinemas are still inadequately prepared, while their American competitor has already taken on board the concept of the European internal market.’

The preamble to MEDIA 2007 acknowledges that, while a ‘culturally diverse’ and ‘independent’ production industry has its value, ‘fragmentation’ has prevented the European industry from achieving a larger market share or matching the ‘competitiveness of its American counterpart’ ⁽³⁵⁾.

⁽³²⁾ *Impact study of measures concerning the promotion of distribution and production of TV programmes provided for under Article 25(a) of the TV without frontiers directive*, David Graham & Associates, 2005.

⁽³³⁾ I am grateful to Chris Germann for the observation that, while issues of harmonisation have been defined by judicial process, ‘culture’ has had relatively little exposure to legal clarification.

⁽³⁴⁾ *Identification and evaluation of financial flows within the European cinema industry by comparison with the American model*, IMCA for the Education and Culture DG.

⁽³⁵⁾ Brussels, 14.7.2004, COM(2004) 470 final.

Some appear to view the harmonisation policies of the European Union as a threat to cultural diversity. However, as one of our interviewees pointed out, public support for film is disproportionately delivered at Member State level. ‘... In relation to cinema, the European Union, through the MEDIA programme, spends around EUR 70 million annually to support film (i.e. nearly the entirety of the MEDIA budget), while Member States spend (if we include the cost of compulsory investment by broadcasters and tax incentives for investment in European film production) around EUR 1.5 billion. And yet the debate ... seems to have as its premise that it is the actions of the European Commission that are driving film policy in Europe’ ⁽³⁶⁾.

In our view, European cultural policy, as currently interpreted and applied, implies a limiting concept of diversity. As above, Member State aid to promote national cultures is permitted providing it does not affect trading conditions and competition in a way that is contrary to the ‘common interest’. Interpreting the law depends on how ‘common interest’ is defined, where the border lies between the national cultural protection and the European interest. The definition of such terms varies with changing circumstances. We hope that the Parliament will consider ‘common interest’ anew in the face of digital convergence, and that this report will help in understanding the implications of digital convergence. Parliament should also consider whether changes in surrounding policy, such as the i2010 initiative and the Lisbon strategy, justify a review of the application of state aid policy.

5.3 Film subsidy and support schemes

Film subsidy should be justifiable and necessary. Many people in the European film industry, as we heard from stakeholders, take it as a given that the production of European films is fundamentally unprofitable. We accept that the production of European film is generally unprofitable *under current arrangements* and may continue to be so. But it is in the public interest to determine whether subsidy is necessary to achieve given policy objectives and help set its minimum necessary level. In addition, most agree that an industry will be stronger, more resilient and more dynamic the less it depends upon subsidy, a view that we also heard from stakeholders.

A sustainable film industry, able to finance its production without intervention, will face the digital future better than a subsidy-dependent industry.

We take no position on whether, ultimately, European film is financially dependent on subsidy or not. Our position is simply that: (1) public policy should limit subsidy to what is really needed; (2) subsidy has some perverse incentives and the way it is distributed can have a profound effect on the economic structure of an industry; and (3) the potential benefits of digital convergence need a substantial growth in European companies ready to take development and investment risks in creative assets. In this section, we report on concerns as to whether subsidy, distributed under current exemptions, is likely to help or hinder this last objective.

⁽³⁶⁾ From a presentation to the Committee on Culture, Youth, Education and the Media, by Jonathan Davis, Strategy Advisor to the UK Film Council, 16 March 2004.

There is a second issue about subsidy: does subsidy promote quality? Many prominent people do not think so. In a recent speech to the Danish Film Institute, the British producer, David Puttnam, has spoken on this issue ⁽³⁷⁾:

‘Ultimately, cinema has to be commercial. The economics of film-making simply demand it, and the failure of much European cinema over the last quarter of a century has stemmed from its reluctance to fully come to terms with that reality.

For a number of years, we in Europe were encouraged to believe that we could ignore our audience by hiding behind a comfortable and ever-shifting windbreak of subsidy... Yet, for all its public investment and for all the energy expended on production, where are the European examples of film for this year to sit comfortably alongside *Crash*, *Goodnight and Good Luck*, *Brokeback Mountain* or even *Munich*? All of them are films that have a fair degree of cultural integrity and have managed to reap an equally fair degree of commercial success.’ ⁽³⁸⁾

If audiences are ignored, then a double disservice is done to the European consumer. It means someone is both willing to spend his or her money and uninterested in what he or she wants. Do most Europeans agree with the proposition that film is an essential public service? ⁽³⁹⁾

Film production support is available from two sources.

5.4 Public broadcasting

Special European legislation deals with the funding of electronic communications channels to which citizens have access and to the content that occupies them ⁽⁴⁰⁾. European broadcasting law permits the Member States to finance channels or content that entertains, as well as informs and educates, and thus to ensure services for those on the other side of a ‘digital divide’, i.e. the less privileged and more vulnerable, living in homes that cannot afford to take up the full benefits of convergence.

This leaves the Member States to define the remit of public broadcasting, acknowledging that the system of public broadcasting in a given state is ‘directly related to the democratic, social and cultural needs of each society and to the need to preserve media pluralism’ ⁽⁴¹⁾. Member States have a high degree of latitude over the use of public funds to, for instance:

- assure cultural production in the home language;
- give citizens maximum access to that production by making it available on free-to-air services;

⁽³⁷⁾ *The challenges in the twenty first century for European cinema*, delivered to the Danish Film Institute, 21 June 2006.

⁽³⁸⁾ Editor’s Note: The films mentioned by David Puttnam are all American. UK films probably perform in line with other European films. A calculation for 2002 estimated that GBP 200 million was spent on producing British films but detectable UK revenues were GBP 90 million. *Audit of the screen industries in Scotland*, David Graham & Associates, 2002. This position may well have improved in recent years.

⁽³⁹⁾ In Britain, when Ofcom consulted public opinion about public service television, film was judged more important ‘personally’ than to ‘society’. However, its social importance was considered higher than light entertainment or classical music.

⁽⁴⁰⁾ In this context, public broadcasters may be state-owned or licensed to operate privately.

⁽⁴¹⁾ Treaty of Amsterdam amending the Treaty on European Union, 2 October 1997, including a protocol on the system of public broadcasting in the Member States. C340/109.

- deliver programming with social values, such as good quality news and documentaries; and/or
- maintain a talent and skill base of producers, performers and the other services essential to film or TV production;
- provide basic services, including entertainment, to those too poor to afford pay services.

Public broadcasting thus provides a basic safeguard for national cultures. Where film is concerned, each Member State will set its own remit for public broadcasting and determine to what extent film should play a part in that. Public broadcasting law offers scope for the support of 'specialty' films, for films with special cultural value and for new talent.

It seems to us that European public broadcasting law should be the right mechanism for the protection of cultural diversity by the Member States. It gives them a high degree of freedom regarding how much to spend and what to spend their money on and explicitly provides for support for cultural and social objectives. European state aid rules, on the other hand, are specifically set to stimulate a common market.

The sums available to the Member States for spending on content for broadcasting are very large. It is estimated that, in 2002, EUR 13 billion was spent by European broadcasters on new content other than news and sports coverage ⁽⁴²⁾. We do not have a precise figure for the amount paid to film production but a recent report from the European Audiovisual Observatory estimates that the TV directly contributed one third of public aid to film in 2002 and a significant additional amount via national film institutes ⁽⁴³⁾.

5.5 State aid

European state aid rules are designed to establish and protect an open market for goods and services throughout Europe. In certain circumstances, it permits exemptions that allow national services to be favoured.

An exemption from European state aid rules is available to film subsidies ⁽⁴⁴⁾, distributed through a wide variety of national bodies. Most film subsidy is distributed at national level. The special rules for audiovisual production currently mean that up to 80 % of funding for a particular production can be spent in a specified country. This is called the 'territorialisation' clause ⁽⁴⁵⁾.

⁽⁴²⁾ *Impact study of measures concerning the promotion of distribution and production of TV programmes provided for under Article 25(a) of the TV without frontiers directive*, David Graham & Associates, 2005.

⁽⁴³⁾ See *Broadcasters' obligations to invest in cinematographic production*, European Audiovisual Observatory, February 2006.

⁽⁴⁴⁾ Some schemes create a right to share in net revenues, so may technically be a loan. We use the word 'subsidy' in a general sense to refer to any form of support that does not generate an absolute repayment obligation. It can therefore refer to a grant, a soft loan or a tax rebate against a notional loss.

⁽⁴⁵⁾ Aid schemes for audiovisual production are thus an exemption from Article 87(1) of the Treaty on European Union. This prohibits aid granted by a state that threatens to distort competition and trade between Member States. Article 87(3), however, permits aid to promote culture, where such aid does not promote competition to an extent contrary to public interest. On these grounds, the schemes have been permitted to include 'territorialisation' clauses permitting a condition that up to 80 % of any subsidy shall be spent in the Member State concerned.

Subsidies may be automatic or discretionary and include schemes that operate by allowing a proportion of a budget to be treated as a tax loss, releasing an immediate tax refund to the production budget. According to the latest figures from the European Audiovisual Observatory, the subsidies to Member States of the EU-25 totalled EUR 1.3 billion in 2004. Of this total, France took 42 % and other significant recipients were Germany, Spain and Italy. The quoted figures came mainly from direct funding schemes, rather than tax relief schemes, which are also designated as state aid under European rules. An unofficial estimate of the impact of tax relief schemes in the UK alone, in one recent year, was near the above figure, which suggests that the total scale of European subsidy is under-reported.

The European Commission requires that subsidy schemes be notified. We have evidence from an authoritative confidential source that schemes have not always been notified, sometimes because they are wrongly thought to be part of ‘block exemptions’.

The Commission now has a concern that the exemptions, as currently applied, ‘may constitute a barrier to the free circulation of workers, goods and services across the EC. They may, therefore, fragment the internal market and hinder its development’. The Commission has also noted, in past communications on this exemption, that ‘there is little circulation of European works outside their country of origin’ ⁽⁴⁶⁾. Previous studies ⁽⁴⁷⁾ for the Commission have shown that successful films need to perform well in their home market and have a life in other markets. The Commission is also concerned to know whether current exemptions encourage or discourage co-productions, since co-productions are, on the face of it, more likely to circulate in more than one Member State than national productions.

Subsidies certainly run the risk of producing more of something than consumers want. An excess supply of national films not only runs the risk of crowding out the relatively successful ones; an excess supply of national films also reduces the demand for non-national films. The current system, focused on national production, may therefore result in an oversupply of films of an inadequate quality to succeed, either in their home markets or in other markets ⁽⁴⁸⁾.

In an earlier chapter of the report, we drew attention to relative box-office shares of national and non-national production. We noted that, in the case of Spain, this was particularly pronounced ⁽⁴⁹⁾. National films accounted for 13.4 % of admissions in Spain, while releases of Spanish films made up 25.6 % of releases.

I am grateful to a Spanish colleague for the following case. It would appear that films need a theatrical release, if only on one screen, to receive automatic subsidies, although they have to meet an attendance threshold to receive the subsidy. Payments from TV stations to producers are also conditional on theatrical release. This suggests that the system may be, in effect, using the state aid exemptions to support low-budget films that are unsuitable for full theatrical release, inhibiting a more selective approach to cinematic distribution and benefiting, mainly, TV stations. It is doubtful if Spain, with 4 000 screens, can accommodate the number of

⁽⁴⁶⁾ COM(2001) 534 final.

⁽⁴⁷⁾ Op. cit.

⁽⁴⁸⁾ The present clauses were permitted ‘to ensure ... the continued presence of human skills and technical expertise required for cultural creation’. The Commission, in 2004, accepted that ‘the cinema sector in Europe is under pressure and therefore aid is needed to support it’.

⁽⁴⁹⁾ See Figure 5, in Section 3.2, which sets out the share of box office relative to the share of releases.

releases generated by the current support system, a system that appears to support production, independent of performance, by offering low barriers to automatic funding.

Our preliminary view is that the state aid rules for film should be reoriented towards their proper objective, the encouragement of an internal audiovisual market.

The current European state aid exemptions for audiovisual production, extended until June 2007, are shortly to be the subject of an 'extensive study', which will address the relative impact of territorialisation clauses on film budgets and co-productions.

The review will also take account of the objective of a more vibrant and competitive European film sector, in line with the Lisbon strategy, the i2010 strategy and the objectives of MEDIA 2007.

We hope the review may inform such issues as:

- Is there an oversupply of European films limiting Europe-wide circulation?
- What is the actual level of spending under state aid exemptions?
- Do the current exemptions stimulate or inhibit co-productions? (Are the current co-production rules actually associated with higher budgets or a higher circulation of films within Europe?)
- Are the state aid exemptions, as applied over the recent period, correlated with company growth and financial performance?

This review will enable the European Parliament to assess the current performance of film subsidy, whether it is addressed to the threats and opportunities of digital convergence, and what the appropriate scale and scope of subsidy in the future is.

It may be appropriate for the Commission, in its review, to consider the type of company supported, and to see whether, over the period of the study, there was evidence of a contribution to the growth or development of companies able to manage significant development slates, or support the business skills necessary to operate fully commercial operations. As for the application of state aid rules to audiovisual policy in future, the Commission should, in our view, ensure that state aid is directed to helping viable content companies, addressing a pan-European market. (We outline some of the ways to do this in Section 5.9 'Enabling profitable digital production'.)

5.5.1 Recommendation

Digital convergence will provide a new opportunity for the international circulation of European content. However, it also threatens to marginalise European content production if it cannot adapt and provide a base for companies able to produce, sell and distribute internationally via the Internet.

Current structures may encourage market fragmentation, putting too much emphasis on the right of Member States to subsidise national industries.

We therefore recommend that Parliament urgently consider, by providing appropriate time and scope for discussion and debate, whether:

- *European cultural policy as currently interpreted and implemented properly reflects the common interest of the European Union;*
- *public broadcasting law provides an adequate basis and adequate scope for the safeguard of national cultures and languages;*
- *a reorientation of state aid rules to give greater support for the internal market is justified (the coming Commission review of 'territorialisation' will help to inform this issue).*

5.6 The audiovisual directive

The directive that has guided European audiovisual policy for many years is being revised. The revised directive ⁽⁵⁰⁾ is currently in circulation. The new directive must contribute to the Lisbon strategy and is a crucial component in the i2010 policy strategy adopted by the Commission in June 2005, as the preamble to the new draft directive makes clear ⁽⁵¹⁾.

The Lisbon strategy requires new European media services that make use of digital convergence and thus are transnational in scope. To encourage these, the Commission has proposed a light regulatory regime for 'non-linear' services, where the user chooses a programme from a selection offered by the media service provider and receives it at a chosen time. Meanwhile, 'linear' television services retain, in much the same form, the obligation to meet the requirements for the stated proportion of European and independent works ⁽⁵²⁾.

As we have seen, the proposed redrafting faces criticism from a number of directions. On the one hand, some stakeholders say that the distinction between the two types of service is not strong enough to serve as a basis for policy. Linear services, for example, turn into non-linear services when stored and replayed from personal video recorders (PVRs). Linear services may offer 'catch-up' services, which are, in effect, non-linear, so that the same service will fall under both definitions. Traditional services may go 'non-linear' more quickly and easily than anyone expects. All this, they say, will lead to legislative uncertainty.

While new players would like to see the Internet entirely released from content rules, others fear that the linear/non-linear approach offers an easy escape from content regulation, in particular the requirement for a significant proportion of European and independent content. Unsurprisingly, people representing new platforms are in favour of light regulation, while those representing film bodies tend to want stringent content rules on 'non-linear' services. Some even want to extend the quotas on European and independent content from the current levels of 50 % and 10 %.

Because media law is implemented at national level, with consequent variations in both definitions and compliance monitoring, some stakeholders wish to see the reversal of the

⁽⁵⁰⁾ COM(2005) 646 final, 12.12.2005.

⁽⁵¹⁾ Op. cit.

⁽⁵²⁾ Linear programming will have to continue to meet the requirements similar to Articles 4 and 5 of the current 'Television without frontiers' directive, which respectively require that 50 % of qualifying content be of European origin and 10 % be independently produced. Non-linear programming will be required to follow only basic rules, such as the protection of minors, the right of reply, and the banning of incitement to violence or racial hatred.

‘country of origin’ principle and its replacement with a ‘country of destination’ principle. Under current rules, programming can be transmitted to one country from another with a lighter regulatory requirement ⁽⁵³⁾.

Let us explore these issues.

Opponents of the proposal to change the country of origin rule argue that a non-linear service delivered via the Internet but originating outside the EU could not be subject to EU content regulation at all. Why then apply a rule to content providers who are EU members that could not be applied to content providers outside the EU? It could only be stopped by making access to it, or retransmission of it, a punishable offence: punishing the use or originator of such services would seem both impractical and an affront to personal freedom, something reserved for sites, for example, that offend human decency or overtly support piracy.

A ‘country of destination’ rule also assumes that an audiovisual service is only addressing one country. What if it is addressing more than one, Germany and Austria, for example? Which destination has jurisdiction?

Those who oppose the extension of the revised directive to the Internet via its creation of a non-linear category argue that the e-commerce directive already exists to cover this type of service and that this, in combination with competition law, provides an adequate basis for new services. But to rely wholly on these would be to deny Treaty provisions on cultural policy. Take a look at a video blog, such as *www.rocketboom.com*. It is already looking like a successful audiovisual service, but accessible on demand rather than ‘streamed’. Is it therefore a linear rather than a non-linear service? It is certainly an audiovisual service with cultural content.

The new directive provides for performance reviews. Article 3(f) of the new draft directive says that Member States will report to the Commission every three years and the Commission will then report to the Parliament on the application of the directive, ‘taking into account the market and technological developments’. The Parliament would thus be alerted to significant adverse developments.

As with most new legislation, the active discussion of the new audiovisual directive has focused on matters of immediate concern to the current players, such as changes in advertising rules and the regulation of new Internet services. The only advertising issue of direct concern to film-makers is the rule which limits breaks in films. Broadcasters have argued to us that this is counterproductive: shorter and more frequent breaks are more resistant to fast-forwarding by digital video recorders and would derive more revenue for film slots, enabling them to play films, in particular, domestic or European films, more frequently.

Our personal view is simply that there will, after convergence, be a diversity of film channels or portals between which viewers can choose. They should be free to explore whatever funding models suit them and offer the choice to the viewer. We would like to see flexibility in the placement of advertising spots.

⁽⁵³⁾ This is an issue of current controversy in Sweden. Sweden bans advertising directed at children. But satellite channel TV3 is uplinked from Britain and operates under Ofcom regulations, thus avoiding the ban.

The big issue for content providers — it has hardly been addressed as yet — is: what would happen if the current quota protections lost their force? This might occur if, for example, new non-linear services became successful and popular but were able to avoid the obligations of non-linear services. These obligations, embodied in Articles 4 and 5 of the current ‘Television without frontiers’ directive, have a very significant impact on current services and impose the carriage of significant proportions of domestic and European content.

We cannot guess whether, post-convergence, significant services will be linear or non-linear. Should the audiovisual directive have a ‘significance’ test, designed to be implemented at Member State level, and enabling them to take appropriate steps on content issues? The new directive could define a ‘significant’ service as a service receiving a given share of viewing in a particular Member State. The directive could also define measures — of equivalent impact to Articles 4 and 5 of the current directive — obliging a significant service to take steps to promote the availability of European content.

The periodic performance review should inform the Parliament and the Member States on the emergence of significant new media services and determine appropriate scope for measures to promote European content.

Another important issue for some content providers is that the audiovisual directive, in both its old and proposed new forms, fails to define ‘independent producer’. Article 5 specifies that 10 % of all broadcast content should be provided by independent producers, but the definition of independent is left to the Member States. We believe that a definition of independent should specify retention and control of secondary and tertiary rights ⁽⁵⁴⁾.

This is because lack of control may have made it difficult for secondary channels to obtain repeats of recent European works at a reasonable price ⁽⁵⁵⁾ and because it offers no encouragement for the asset-bearing production units which we believe will be an important component in a post-convergence European content industry.

5.6.1 Recommendation

In our view, Parliament should adopt the following position in its response to the new audiovisual directive. It should:

- *support the ‘country of origin’ principle;*
- *consider removal of the rules limiting advertising breaks in films, seeking evidence from stakeholders that this will actually deliver more European content;*
- *request the Commission to define a significance test for non-linear services for incorporation into draft legislation;*
- *request the Commission to define measures that may be imposed on significant services relating to the promotion and availability of European content; and*
- *insert into the draft legislation a definition of independent producer that includes the retention and control of rights.*

⁽⁵⁴⁾ We are using ‘secondary’ to refer to repeat rights on channels other than the first-run channel and overseas sales, and ‘tertiary’ to refer to other sources of revenue such as merchandising.

⁽⁵⁵⁾ Ref. Impact Study (see footnote 32), Section 10.5.2.

5.7 Transitional arrangements

In determining a strategy for the future of European film, it makes sense to look both at the potential advantages and the threats posed by digital convergence to content production. The advantages include:

- a seller's rather than a buyer's market;
- greatly reduced production and distribution costs; and
- greatly increased scope for formal and technical innovation.

As we have already indicated, we believe a diversity of platforms is something to be strongly encouraged.

However, as we found from our stakeholder interviews, television has been and remains very important to film-making and provides, numerically, its largest release window. The traditional broadcasters are the beneficiaries of the scarcity of spectrum that is now fast being removed by digital convergence. However, traditional broadcasters are still, today, the primary funders of new content. Therefore, a key concern in the interim period before convergence must be with that prime content, mainly consisting of film and television fiction, which still takes the majority of European viewers' screen time. If this is destabilised, content production would take a hit from which it would be hard to recover.

European film currently exists in a regulated environment. This environment needs to adapt to the digital era, but Member States will want to ensure a smooth transition. For example, they may wish to find a balance between the interests of traditional broadcasters, who are responsible for most of the creation of new content, and the interests of new players such as the VoD services, who need recognised content to build their portals and brands.

Since the Internet was not envisaged when many agreements were reached, a new media or VoD right has, in effect, never been defined. Instead it has been bundled in with other rights. This means that it is often controlled by a broadcaster, who, in a desire to protect an advantage based on exclusive access to key content, may be unwilling to see it exploited elsewhere.

Conseil Supérieur de l'Audiovisuel (CSA), in France, and Ofcom, in Britain, have both addressed this issue and have led the way in policies designed to ease the transition to digital convergence.

The French agreement is the most developed version of the management of the transition to digital and has, as one of its partners, a telecoms operator that offers a VoD service.

France is the first European territory to establish a separate release window for VoD following lengthy discussions between the Internet service providers' union AFA, and national broadcasters and film production companies. It led, in July 2006, to the establishment of a 33-week window for pay-per-view VoD, increasing to 36 weeks for content made available through subscription VoD services. Previously, content would be available on pay-per-view VoD nine months after theatrical release and, on subscription VoD, one year after theatrical release, with titles becoming available on DVD between three and six months earlier. The gap between DVD and VoD windows is reduced to around two months under the new legislation.

The proposed agreement met with strong opposition from French content providers, who were keen to impose later windows for subscription VoD services. Responding to the concerns of content companies, legislation will initially be valid for one year only and will be reviewed by a committee every two months. The timing of the VoD window was a cause for concern for DTH platforms offering PPV services, and neither TF1 nor M6 signed the agreement, though Canal+ did so.

The agreement provides rights-holders with a guaranteed minimum 30 % share of revenue for library titles, and 50 % for new releases. It also states that VoD operators must reinvest a proportion of revenues into the domestic and European film industry, putting VoD in line with every other film platform in France.

VoD operators with a turnover less than EUR 1.5 million will be required to invest 3 % of revenue into European film, while operators with a turnover between EUR 1.5 million and EUR 3 million will invest 5 % of revenue (EUR 75 000 to EUR 150 000) in European film, of which 3.5 % will be allocated to French films. If a VoD operator records revenues of more than EUR 5 million, the proportion of revenue going to European and French films increases incrementally to a maximum of 10 % and 7 % respectively.

The telecoms operators were initially opposed to any form of regulation, but changed their position after lengthy discussions as they realised that, without direct involvement in production funding, they would be unable to secure exclusive rights to new productions.

The legislation creates a shift in the release windows for films in France. Italian exhibitors and distributors are in the process of agreeing a similar framework for distribution windows. Portugal is already introducing new legislation to bolster support for films, including the creation of a new production fund that will double the country's public support for film production. The new law will also require exhibitors to invest 2 % of their revenue into film production, an approach already in place in France.

While many producers favour legislative intervention to ensure new media players put a proportion of revenues back into local film production, the imposition of legal sanctions, with the capacity to fine infringements, may be difficult to implement. In Spain, for example, the Federation of Audiovisual Producers argues that the fines proposed are not significant enough to influence broadcasters and that they are often ignored anyway.

The British regulator, Ofcom, has an avowed policy of ensuring access to prime content by new media platforms⁽⁵⁶⁾. Ofcom ensures that new platforms have good access to programme rights by insisting that 'secondary' rights are under the control of producers and by negotiating the length of particular windows with the broadcasters⁽⁵⁷⁾.

In 2003, Ofcom implemented, in Britain, terms of trade that prevented broadcasters from taking 'secondary' rights in commissioned programmes. This has resulted in a rights-owning independent sector, consisting almost entirely of small to medium-sized enterprises (SMEs),

⁽⁵⁶⁾ Ofcom's primary concern was TV content other than feature films. We use the Ofcom example as a model that can be applied where television is an important source of finance for film production.

⁽⁵⁷⁾ Under British terminology, the 'primary' rights relate to broadcast on the channel that commissions and first broadcasts a work, while 'secondary' rights relate to the use of that work after its 'first run' has been completed.

a number of whom have raised capital on financial markets. This resulted in concentration in the TV production industry without, so far, limiting the scope for entry of new companies. (Unfortunately, film companies did not negotiate similar terms.)

Thus, broadcasters cannot ‘warehouse’ the main content brands, even though they are funded by them. Ofcom and the French CSA, who put the players under pressure to reach an agreement, are therefore intervening with very similar objectives.

We may define these objectives as:

- protecting the current suppliers of primary content; while
- supporting the emergence of new platforms; and
- ensuring the existence of production companies with free rights to sell.

Ofcom acknowledges that these interventions are only appropriate to certain market conditions. The British regulator justifies the intervention, on the grounds that analogue broadcasters are still highly vertically integrated and are responsible for a disproportionately large share of new programme orders, making them dominant buyers of programming. When these conditions cease to apply, intervention on competition grounds would no longer be justified.

Ofcom’s intervention, in effect, rearranges TV’s windows under the influence of technology change, just as the French are doing for film windows. In doing this, it is thus applying traditional competition policy criteria and looking to a traditional competition policy objective: relative ease of entry by new players via access to programming and programme-makers. It secures the funding of production in a different way from the French system by setting indicative tariffs for key genres, thus ensuring that broadcasters effectively finance production budgets.

The arrangements implemented in Britain, France and others recognise some important principles. Digital convergence can deliver growth and choice, but it will not do so without substantial producers and access to quality content by new players. Growth will be less likely if existing broadcasters retain too much control of their content, because they have an incentive to ‘warehouse’ it to restrain competition. Both approaches ensure that independent producers retain control of intellectual property rights in their programming.

Access to strong programme brands speeds the launch phase of new platforms. Many public broadcasters have very large archives of material, built up over many years and, in effect, funded out of the public purse. They remain powerful, vertically integrated players. There are a number of practices against which competition authorities might consider acting, such as:

- refusal to make content available on fair terms to secondary users;
- the use of ‘free’ programming to fund new channel launches; and
- the use of old contracts to assume all rights in new media.

We consider that the steps taken by CSA in France and Ofcom in Britain represent approaches to this issue that could be applied in other countries and should be supported by the Parliament and the Commission. PriceWaterhouseCoopers (PWC) and DGA have been undertaking market analysis for Ofcom. One of the interim insights is that scenarios that encourage

new media exploitation will tend to increase overall industry income. This, therefore, supports an approach designed to preserve TV investment while promoting new media platform development in the ways we have described.

What can be learned from these two approaches? First, the French approach, running over many years and now being adapted for the digital era, has led to larger and more resilient production units than in other European countries. According to the European Observatory, 10 out of the top 15 European production companies in 2004 were French and three were Italian. France also offers its home audience a range of films, serving a range of audiences. The link with television, whereby the majority of films made in France receive funding from TV, seems to have led some film-makers to see their craft as continuous with, rather than different from, other forms of screen narrative, and closer to the mainstream domestic viewer.

The question overhanging the French approach is: how will it adapt to a future in which access to content is transnational and TV services can no longer be so easily persuaded to surrender revenues to finance film production on terms agreed with a regulatory body? Some traditional broadcasters will lose their dominant positions and most, when digital convergence is complete, will no longer need to operate under government licences. (Both the ability of governments to implement national cultural policies and the advantage traditional channels received from them have traditionally depended on the ability of a government to licence the use of the spectrum allocated to its territory. This has given the Member States a huge influence over traditional broadcasters.)

As for the approach taken by Ofcom, it has had a dramatic effect on TV production companies but little impact on film. The competition-led approach can only intervene on the grounds of market dominance, a ground that may soon disappear in many cases.

The lesson from both approaches is therefore that they need to be implemented early to have maximum impact.

5.7.1 Recommendation

'Inter-professional agreements', between broadcasters, regulators and new media players, are an effective way of managing transition to digital convergence without destabilising new content production. A positive lead by the Commission would probably help achieve consistency among Member States.

We therefore recommend that Parliament instruct the Commission to publicise the benefits of such transitional arrangements to the Member States and, if necessary, use its competition powers.

5.8 Vertical integration

Some stakeholders told us that they feared the emergence of vertically integrated 'oligopolies'.

Hollywood studios, say, become the dominant providers of films, with direct online delivery from studio sites, making full use of their (unique) global licensing and distribution networks. Worse still, their services are supported by proprietary digital rights management (DRM).

Rights to non-studio independent (and European) films are picked up on easy terms because the studio sites are the leading suppliers of film entertainment. They set effective prices, setting European films high to protect their own profit streams.

Here is another scenario: large telecoms companies with lots of cash, in retreat from their basic business, look to build their own networks and become content providers in their own right. They are rich enough to directly fund new content, such as films, and retain all rights in the content they create. In doing so they may decide to release films online either simultaneously with, or independently of, theatrical release. They may also be the exclusive suppliers of those films. This would undermine the current business models for film based on a cascade of windows and impair films still dependent on traditional releases. This would also inhibit the growth of rights-owning small and medium-sized enterprises (SMEs).

We have already seen that stakeholders were concerned that content could become a mere contributor to the profits of a hardware device, such as the iPod. However, the iPod is successful not because it is helped by a structural limitation such as channel scarcity (as was the case for television), but because of exceptional design and functionality and its cult status. The content available to it is not, in the main, exclusive, suggesting that its market position will need to be supported by superior design and branding, as was the Sony Walkman before it, if it is to hold its dominant position. Nor is music on the iTunes store unprofitable for content owners. It is merely that the hardware device, its design and the support provided by its proprietary online store are so successful that they are exceptionally profitable at present. Apple would be subject to intervention by competition authorities if its market share was deemed to offer potential for abuse ⁽⁵⁸⁾.

Such scenarios invariably project an old world onto a new one. We already know that the cost of entry in the new world will be very different. We already know, as one stakeholder pointed out, that the overhead associated with distribution and delivery will change too. Other aspects in the new world are hard to descry. It is hard to guess at the production risk when online distribution is fully established.

Things *will* change, but it is too early to say how. We have no idea if any of the above scenarios will occur. Some offer threats to existing business models, but they may also offer potential benefits to consumers. Were the large telecoms companies to become direct funders of significant content, they could provide a solution to Europe's fragmented and subsidy-dependent film industry, reducing calls on the public purse, delivering more and better films. They could provide structures more able to finance risk and carry large enough development slates to allow the 'hits' to pay for the 'misses'.

They already represent new platforms from which European films can be promoted and viewed, and financed. (We have already referred to the recent study of VoD in Europe by NPA Conseil that revealed that more than 700 feature films were available in French) ⁽⁵⁹⁾.

Competition law exists to protect consumers in situations where dominant players may exploit them. It may also have a political dimension: anti-dumping laws exist in part to protect the domestic workforce. Many Europeans fear that the marketing 'noise' Hollywood can generate drowns out any corresponding ability to promote smaller European films. The fear

⁽⁵⁸⁾ We refer to the French action against the iPod in a later section devoted to DRM.

⁽⁵⁹⁾ Op. cit.

is justified: pre-emptive action on the basis that it *might* happen is not. However, platforms that supply their own productions direct to the customer (i.e. platforms that are vertically integrated) will be subject to scrutiny if they are dominant and could certainly face intervention from competition authorities. That intervention might be in the form of an obligation to promote and make available European content, or even go as far as a fair access rule, an obligation to provide a right to carriage on fair terms to a content provider.

Since we are moving into a demand-led world, such interventions should naturally focus on whether such platforms favour their own productions against others, i.e. whether they hold an adequate stock of programmes from other sources and whether they promote them on equal terms. If studios turn themselves into vertically integrated online stores, they too may well see the benefits of holding a ‘long tail’ of smaller films and might wish for the widest offering possible. If they operate as narrow brands, competition law will be able to act against dominant portals as it has acted against dominant platforms in the past.

In adopting such policies, Europe would be extending the stance already taken — correctly, in our view — on the principle of open networks. A national telecoms company may ‘go slow’ on local loop unbundling ⁽⁶⁰⁾ by failing to install fibre optic networks, or refusing access to its own network on fair terms. This holds back broadband penetration, delays digital convergence and creates digital ‘laggards’.

The UK offers an instructive lesson on the telecoms issue. Most people now think that Britain took far too long to liberalise its telephone network and make the ‘local loop’ open to competition. Unbundling the local loop has been a stimulus to broadband development because it introduced competition by way of new players who wanted to develop new services.

Casualties of this delay were Britain’s first attempts to introduce VoD services by ADSL lines into private homes. The company Homechoice, operating in the suburbs of London, was a very early entrant into this field but, for many years, found it almost impossible to establish a working business model because of the prohibitive costs imposed by British Telecom. Countries that allow anti-competitive conditions to persist could fall behind in the digital world.

The Commission’s telecoms policy seeks the separation of networks and services. The Commission has opposed Deutsch Telecom’s request for a regulatory ‘holiday’ on the grounds that this would enable it to install fibre optic networks faster.

The Portuguese national telecoms company has recently come under pressure on two grounds: one, because it is accused of preventing new entrants; two, because it controls both telephone and cable networks. Regulations to grant third-party access have been resisted, a problem shared by other EU countries, where the incumbent may seek various ways to prevent new entrants and service providers. Such restrictions are, in our view, to blame for the relatively low penetration of innovative services such as IPTV and VoIP in Portugal, compared with other countries. Additionally, because PT controls the only nationwide cable network, there is no competition from alternative networks driving PT to innovate on quality, diversity and price. This is why new entrants are complaining both at the national level — at Autoridade da Concorrência — and to the European Commission, in search of fair access to PT’s network.

⁽⁶⁰⁾ ‘Unbundling’ refers to the practice of permitting other suppliers to connect directly to the home.

Thus, vertical integration is not something to oppose as a matter of course. Vertically integrated companies may become a new source of finance for film investment. The problem is one of dominance: if they hold a very large share of the investment in film in a given market, or a very large share of sales, then they start to resemble a national network.

This is why we believe that the new audiovisual directive should include a significance test, to be applied to online services with large market shares as the basis on which they might be obliged to obey must-carry rules or promote European content.

5.8.1 Recommendation

The emergence of new platforms with the capacity to invest in new film rights is to be encouraged. However, we recommend that Parliament request the Competition DG to consider and advise under what conditions a dominant platform could be compelled to provide a 'right to carriage' to a content owner.

5.9 Enabling profitable digital production

Until now, our recommendations have addressed structural changes and initiatives designed to promote wide access to, and availability of, European films post-convergence and to encourage a competitive array of online platforms, thus aiming to drive up the number of potential buyers for — or potential investors in — European films.

In the following section, we look at the other arm of the strategy defined earlier, that of enabling profitable, successful European content producers and creative entrepreneurs.

Europe's MEDIA programme has already identified many ways in which to provide support for the transition into a digital world. It supports the side costs of SMEs in acquiring commercial finance, it supports the creation of multilingual masters and it is actively encouraging the online distribution of non-national works. Its decision to support 'slate' development, in addition to individual project development, recognises that creative companies need to spread their risks. Its support for distribution, the largest item on its budget, goes to the acquisition, preparation and promotion of European films for other European markets. It also supports festivals, the means by which European films currently seek to raise their profile internationally ⁽⁶¹⁾.

The MEDIA programme also identifies the importance of another key ingredient in the success of a film: the screenplay. Getting the screenplay right is much cheaper than getting a film made but, as some stakeholders told us, European producers, short of funds, often 'rush into production' before the film is ready.

However, building a profitable European content industry, with a significant proportion of small or medium-sized enterprises, will be a transformational process. What follow are proposals to help carry European firms into a virtual space in which digital models can be innovated, rehearsed and enacted.

⁽⁶¹⁾ A website dedicated to European cinema can be found at: <http://www.cineuropa.org/>

There is a historic opportunity here. European firms, combining creative thinking with technology-led innovation, have an opportunity to build a new kind of single market by developing media forms that accommodate linguistic and cultural diversity, yet attract transnational audiences.

To do so, they will need to transform their current operations, reshaping their practices to take advantage of digital convergence. Enabling this will include:

- reducing production and distribution costs by converting to digital technology;
- making informed choices on digital distribution;
- implementing multi-language metadata;
- accessing European research and development (R & D) programmes; and
- developing business models that can attract lenders or investors.

5.10 Converting to digital production

Digital video reduces the cost of production, thereby decreasing the requirement for external finance. It also reduces the cost of development and piloting.

Digital film-making involves the use of digital video (DV) or high-definition (HD) cameras capturing the image, rather than celluloid. Post-production has embraced digital technology since 1992, when the Avid Composer was released commercially. Due to economies of scale, the costs associated with digital editing have reduced significantly, and will continue to as digital convergence quickens its pace. For instance, in 1994, the fixed costs of setting up a digital post-production procedure were estimated at EUR 170 000 while, by 2000, they had fallen to EUR 13 000 ⁽⁶²⁾.

In terms of the production process, digital cameras have actually been on the map since the Danish film, *Festen*, was released in 1998. It was shot entirely on a DV camera, and began the movement called Dogme ⁽⁶³⁾, whose 'manifesto' was geared towards shooting digitally. Photographing motion pictures on digital equipment is now an accepted form, particularly for those that are perceived as offering an alternative to the glossy Hollywood experience. Wim Wenders' *Buena Vista Social Club* (1999), Danny Boyle's *28 Days Later* (2003) and even the American film-maker, Spike Lee, with *Bamboozled* (2000), have chosen DV for creative reasons, as opposed to financial restrictions.

While removing the high costs associated with 35 mm cameras, DV was traditionally seen as being unable to match the so-called quality of the celluloid experience. But in recent years, this has changed dramatically with the advent of wide-ranging cameras that operate at 24 frames per second (24P). Even the criticism that film possesses higher resolution (4 000 K) than 24P (2 000 K) has been nullified by emerging HD technology and the continuous improvements to digital cameras. Developed in Germany, the ARRI Cine Technik D20 is supposedly a film-style digital camera. The D20's CMOS (complementary metal oxide semiconductor) sensor offers the same image dimensions as 35 mm film.

⁽⁶²⁾ *Screen Digest report on 'Implications of digital technology for the UK film industry'* (September 2002).

⁽⁶³⁾ Key Dogme tenets include minimal artificial lighting, naturalistic sets and improvisational freedom for actors.

Lower costs of digital production allow new entrants into the market. As an example of the cost savings, let's take a look at *Star Wars II: Attack of the Clones*. Film-maker George Lucas used a custom-made high-definition video camera, storing around 220 hours of scenes on storage media. The cost of this was USD 16 000. ILM and Sony Electronics estimated that a 35 mm version would have required a USD 1.8 million investment ⁽⁶⁴⁾. In literal terms, this is a saving of 99 % ⁽⁶⁵⁾.

From a producer's perspective, the cost savings are a huge benefit, but film-makers also gain creative freedom by applying digital technology. How?

- The ability to reshoot scenes without worrying about running out of film stock allows actors and directors to take risks.
- Using multiple DV cameras reduces the need for many set-ups (master, close-up, two-shot, etc.) and hastens shooting schedules.
- Digital photography reveals instantly what has been shot, whereas previously the film-maker had to wait hours to see the 'dailies'.
- The pictures do not need to be digitised before editing, which allows post-production experiments to occur in conjunction with production.
- Visual and audio manipulation is not limited to the processing lab. CAD (computer aided design) means that special effects can enhance the appearance of a digital film and make it seem 'expensive'.
- There is less of a burden on the production budget as cameras do not need to be rented and expensive film stock is not required.

High-definition TV (HDTV) is the latest improvement in viewing technology, now becoming available in the home. High-definition (HD) technology is now allowing complete digital studio solutions at the most sophisticated level. Focus Enhancements will be showcasing their HD Tapeless Workflow product at NAB 2006. These 'direct-to-edit' recorders are designed to work in conjunction with high-end HD cameras (like the Panasonic AG-HVX200) and they offer extended record time, instant editing and guaranteed capture. This effectively means that one piece of hardware can now control media acquisition, storage, manipulation and distribution.

Silence Becomes You, released in 2005, was billed as the world's first uncompressed 4:4:4 feature production — shot with a video camera and later converted to film. Once this approach is more widely adopted, we will see a major jump in image quality and post-production speed and economy, making the switch to HDTV even more attractive.

The development of digital exhibition ⁽⁶⁶⁾ stimulates the transition towards digital production, completing an end-to-end digital chain, avoiding the costs of hundreds of prints, transporting them to cinemas, and the image degradation associated with them. The cost of living

⁽⁶⁴⁾ *Fraunhofer Magazine*, February 2005 edition, feature on 'Digital film production'.

⁽⁶⁵⁾ Larry Thorpe, Senior VP at Sony Electronics has publicly stated that George Lucas saved at least USD 3 million on *Attack of the Clones* by shooting digitally. (www.cybercollege.com/filmtap.htm).

⁽⁶⁶⁾ A detailed account of the technology for D-cinema can be found in Appendix 1: The digital home, the technology'. A simple account of the benefits of digital exhibition may also be found at the website of Arts Alliance, the company responsible for the roll-out of digital screens in the UK, Europe's largest network of digital screens (<http://www.artsalliance.co.uk/>).

in a hybrid, half-digital half-celluloid world are considerable. A *Screen Digest* report estimates that a 90-minute long film costs on average between EUR 24 000 and EUR 40 000 to process, and a further EUR 13 000 to EUR 20 000 to transfer to video for an online edit. To transfer the edited digital material back to film (for exhibition purposes) costs another EUR 56 000 to EUR 80 000 ⁽⁶⁷⁾. With a digitally produced 90-minute feature, there is only an approximate EUR 1 500 cost to download the footage to a non-linear workstation. If it is projected digitally, no transfer back to film is necessary.

Digital cinema (D-cinema) is already having an impact on cinema exhibition in Europe, with initiatives in France, Germany and the UK. One company, XDC International, has set a target of 5 000 D-cinema screens in Europe by 2016, with a focus on Belgium, the Netherlands, Luxembourg, Germany, Switzerland, Austria, Spain, Italy, France and Sweden. The company offers exhibitors an integrated solution, including equipment and installation, training and maintenance. XDC owns the equipment, so the exhibitor does not run the risk of buying into expensive technology that could potentially be obsolete by the end of the decade.

When its short-term problems have been sorted out, D-cinema could make a wider range of European films available to cinemas by reducing promotional and distribution costs for the smaller film and giving the exhibitor more flexibility in the selection of a programme. In Britain, cinema owners are finding new opportunities for digital screens, such as the broadcast of live events and the hosting of conferences.

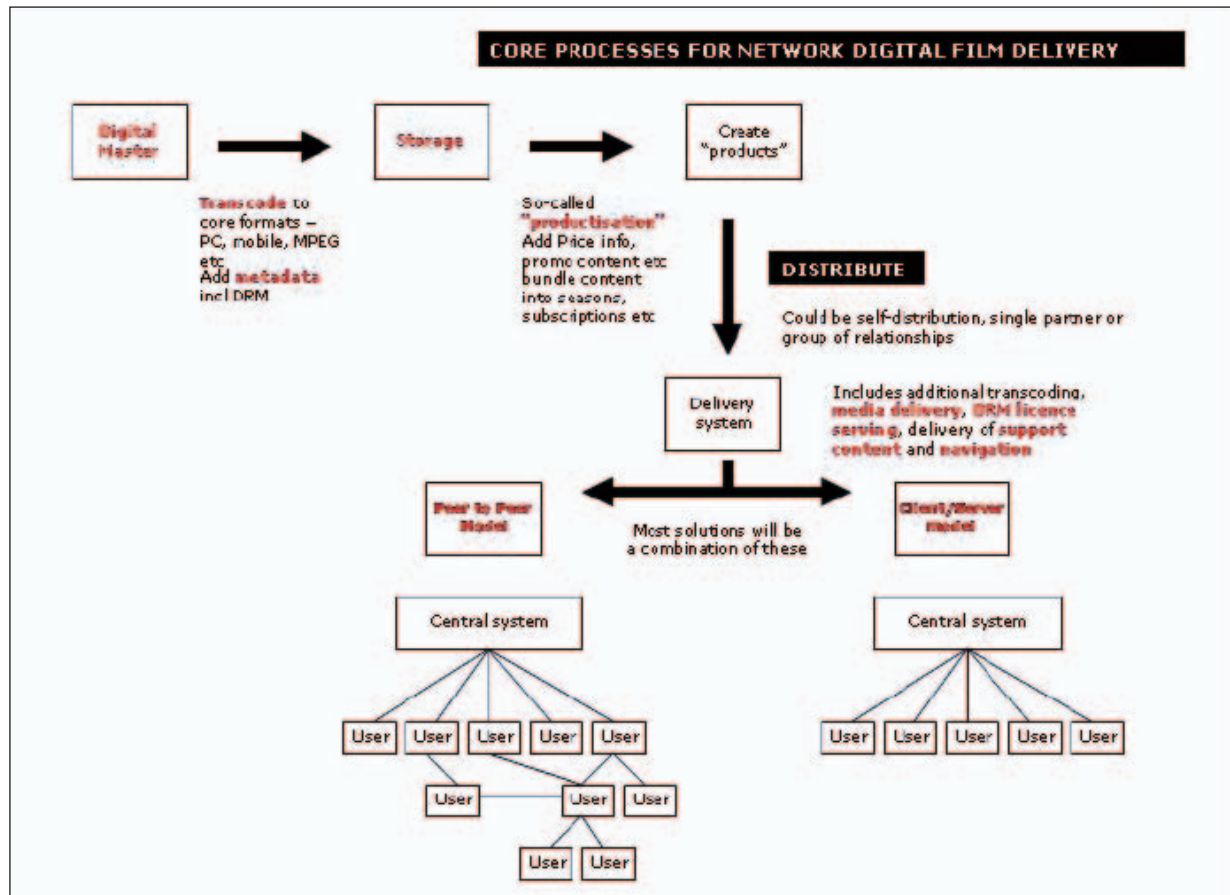
5.11 A working model for digital delivery

The direct delivery of films, the technology for which is only just emerging, will offer many options, variously suited to the skill sets and preferred modes of operation of particular companies. From these options, each company will need to select the combination that suits it best.

Figure 10 below is a generic description of the operation of a digital platform for the online delivery of films.

⁽⁶⁷⁾ *Screen Digest* report on 'Implications of digital technology for the UK film industry', September 2002.

Figure 10: Core processes for network digital film delivery



Source: Feasibility study for a digital platform for the delivery of UK films and specialised films to the home, UK Film Council 2006 ⁽⁶⁸⁾.

A business model for pure VoD would need to recognise at least the following costs:

- encoding a digital master (unless content is already on digital video (DV));
- transcoding to appropriate formats and adding metadata;
- storage;
- sales and marketing materials;
- addition of DRM;
- navigation and search functionality; and
- delivery (whether peer-to-peer or client server).

A film-maker entering the age of digital convergence will need to ask a number of questions to determine the right mode of operation. Am I considering direct delivery of my own work? Or am I thinking about being an aggregator of rights and aiming to develop a branded service? Should I keep it simple, just licensing my film to other intermediaries? How many units do I need to sell to make a profit? What budget can I afford, given my projected revenues from known sources? Using a core cost matrix, it would be possible to estimate the number of downloads of a given film required to yield a profit, taking into account services charged against the rights owner, payment of royalties and other costs, etc.

⁽⁶⁸⁾ This figure is reproduced by kind permission of the UK Film Council.

To assist decisions on VoD, we suggest that companies will need a source of *core technologies with indicative costs*. The film community could use this to inform business models and explore variants that suited their skill set.

We think Europe's MEDIA programme should commission (and keep up to date) a working model for digital distribution and make it available both as a report and as an interactive tool.

5.12 Transnational metadata

Thinking about using convergence to increase the circulation of European work means thinking in new ways about the European consumer.

You like European films, but you do not live in a large urban centre. Up to now you have been reliant on a local film society, occasional visits to the capital, and rentals from the 'World Film' section of your local video rental store. Your local multiplex shows mainly American films, and less frequently, films from your own country, but hardly any films from other European countries.

Online film delivery could change that. Now you can look for more films by the Hungarian director you have discovered, because there is a portal specialising in such films. You need to be able to go to the portal, and search under the director's name. (You don't speak Hungarian.) A list of films is not enough; you want synopses. You would also value more information about the films available: you are interested, for example, in films made in a particular phase of the director's career, or films that won awards. There are also some practical considerations. Is there a version with subtitles in your own language?

To enable this search, a body of multi-language metadata, that is, data about a film, is needed. On selecting a film, you may need to pay for it, and download it to your system.

Nor should we see this as just for the specialist. A young woman is living in another country and is having her parents to stay. She is not in close touch with the entertainment scene at home, and just wants a comedy that has done well, is upbeat and has no explicit sex scenes. Does the metadata cover her needs as well?

An experimental project exploring direct delivery of European films may derive useful knowledge and set benchmark practices for commercial operators that will, in turn, help the circulation of the smaller film. At the heart of the project should be research into, and development of, a multi-language metadata model suited to the kind of search described above.

As for content, there are categories of films to which it could have early access. It could offer films available from public libraries and archives, and national films unreleased outside their home market; there may be original language versions that fall outside the licence already taken by a distributor. There will also be rights owners with free rights, able to place films on this service on a non-exclusive basis.

We noted a high level of concern among stakeholders that the multi-territorial marketing 'noise' of the Hollywood majors would continue to drown out the competition, as, they would say, it has done in the past.

The development of a multi-language portal for the direct delivery of films would present valuable research and development lessons in its own right and stimulate new players to think in pan-European terms ⁽⁶⁹⁾. (We offer this as an example of the kind of research and development that could receive support from the new FP7 programme.)

5.13 Research and development support for creative companies

The next phase of Europe's research programme, FP7, is intended, in its most recent revision, to provide '... new impetus to increase Europe's growth and competitiveness, recognising that knowledge is Europe's greatest resource. The programme places greater emphasis than in the past on research that is relevant to the needs of European industry, to help it compete internationally, and develop its role as a world leader in certain sectors'.

This includes a new recognition of content industries. In its latest amendment, it specifically refers to:

- new media paradigms and new forms of content, including entertainment;
- creation of interactive digital content;
- enriched user experiences;
- cost-effective content delivery;
- DRM; and
- hybrid media.

These headings represent a comprehensive account of the opportunities to reinvent media forms and entertainment strategies which digital convergence may stimulate. They recognise that the development of an entertainment concept or innovation in the way it reaches an audience may be seen as research and development that justifies support.

This is an extraordinarily rich range of options, close to the challenges of digital convergence, touching on key features of its potential. It represents a new opportunity for the content and technology industries to engage with each other. Calls will be issued in 2007 ⁽⁷⁰⁾.

⁽⁶⁹⁾ In France, INA has launched a video archive offering 10 000 hours of television content. This has proved very successful; 80 % of the video is available free; others require a payment of EUR 1 to EUR 3 for rental and EUR 1 to EUR 12 for purchase, after viewing a free trailer. Videos are watermarked and rights owners receive 46 % of the revenue, with 32 % to be invested in further storage and digitisation, and 22 % to operating costs.

⁽⁷⁰⁾ Europe is justly proud of linguistic variety, but language differences are probably the biggest single factor in restraining the single European audiovisual market. Will digital technology come to Europe's aid? It may one day be possible to overcome the problems associated with language barriers using new technology. An application developed at *New York University*, known as Video Rewrite, uses computer animation to match lip movements with the voice track. Thus digital technology offers the possibility of automated dubbing, altering mouth movements to conform to auditory input. Similarly, a company in *Israel*, Voice Imitation & Recognition Ltd, has a Vocal Imitation application to replicate famous voices. This can then be used to make the new voice track sound more authentic, as well-known actors will appear to be speaking a different language in their own voices. (From Wikipedia.)

5.14 Business models for content companies

Europe lacks a model for content companies, in particular film production companies, able to undertake significant development risks or finance the cost of production.

The European Investment Bank (EIB) should be asked to review the content sector, including the larger players, ahead of convergence. We suggest the EIB conduct a survey of European media firms designed to identify candidates for lending.

Digital production has the potential to reduce both development and production costs, thereby limiting the need for production finance. However, making a film, even when using digital technology, is still going to be expensive and beyond the means of many small companies that now occupy the sector ⁽⁷¹⁾.

A degree of concentration would not necessarily lead to very large units; there may be no reason why a firm with a turnover of, say, EUR 5 million to 10 million should not survive and prosper in this environment, given the changes. Even the larger units that might emerge, with a turnover of, say, between EUR 10 million and 100 million, would be small compared with American studios or European broadcasters. Ambitious producers should be encouraged to develop business plans, and seek feedback from possible investors.

One other option might be for producers to form groups where assets and rights are pooled, and where some skill-sharing would enable access to the business skills that would give them a higher degree of self-sufficiency, and a better ability to retain control of rights, than their individual components have achieved in the past ⁽⁷²⁾. Such arrangements are difficult, both personally and structurally. There could be scope under the Innovation programme or even under the FP7 research programme, to support the testing and exploration of such models. In addition, we think the MEDIA programme should support the qualified evaluation of business plans.

5.14.1 Recommendation

Taking advantage of digital convergence means transforming a subsidy-dependent or commission-led ⁽⁷³⁾ industry into a creator and owner of intellectual property. That will require intense focused effort over the next few years. Parliament should ask agencies, such as the MEDIA programme, to lead this effort and seek additional funds where necessary for projects such as:

- assisting companies to convert to digital production;
- creating models for digital production and distribution;
- creating a mode for multi-language metadata;

⁽⁷¹⁾ Europe has few equivalents of the 'family and friends' financing which seems quite common in the USA. *Napoleon Dynamite*, made by a graduate of the University of Southern California on a budget of USD 300 000, generated over USD 50 million.

⁽⁷²⁾ We have already suggested that broadcasters, as the main buyers and commissioners of new content, might be obliged to release rights on to the market. Production companies could compete to acquire and exploit these rights, to help then build up revenue streams and asset portfolios.

⁽⁷³⁾ We are referring to the practice of ordering a programme from an independent producer and cash-flowing its production. If, as we think it will be, digital convergence means a multiplicity of buyers acquiring content on a non-exclusive basis, this will change.

- encouraging access to research and development by creative companies;
- engaging qualified financial advisors to review business plans; and
- requesting the European Investment Bank to survey the European content industry to identify candidates for lending.

5.15 Pan-European release windows

The ability to release films, in whatever window, on the same day throughout Europe will help to enable a pan-European audiovisual market.

There are three reasons why the release of new films is different by country: different release dates, different time windows, and separate country-by-country distribution contracts. This inhibits pan-European online distribution. Were an online service to offer a film outside these windows, a given distributor in a given country would justifiably argue that his contract was being breached and his investment put at risk.

Today's practices exist for a reason. Film revenues have been — and still are — are maximised by a system of phased release and differential pricing, sold through a series of windows, beginning with the theatrical or cinema release. The time windows are set by professional agreements and vary by country. This release pattern, in turn, is tied into the financing of films, whereby a distributor often makes a financial guarantee for the exclusive right to distribute a film in a given territory and market segment.

Release dates vary, too, and for various reasons. The preparation of dubbed versions and prints is expensive and time consuming. Local exhibitors have different stocks of pending releases and their own ideas about the best time to release them. The distributors, who pay for prints and advertising, have their own portfolios to think about, and have their eye, too, on the right gap through which to reach cinema-goers. Where a film is distributed to different countries, it will help to launch where it is most likely to succeed and where a good reputation will spill over to other territories.

Online services today are a marginal business, too small to influence a change in the business models that currently supply finance for production.

To force change that undermines current business models would contradict the policy of aiming for transitional arrangements that do not interfere with current funding models. But, at some point in the future, as we move to digital convergence, new online services will emerge, will grow, and will become major sources of revenue in their own right.

Just as it would be unwise to undermine current business models, it would be dangerous to legislate, or even to anticipate, structures whose shape we do not yet know. However, current distribution models may be less appropriate to an online world where multiple platforms wish to license films on a non-exclusive basis, and where rights-holders could not individually monitor all the different uses made of their work.

Collecting societies may offer a solution here. They represent particular categories of rights-holder and, using data from the end-users, apportion revenue between them. For example, a society representing companies who make the recordings of artists, and have rights in these,

licences radio stations to use them and apportion payments between the recordings on an agreed basis ⁽⁷⁴⁾. Collecting societies work best where an artistic work is widely available and where many different commercial bodies use it on an occasional basis over an extended period. A radio station may, for example, hold a large library of CDs, some of which it plays frequently, some infrequently.

The Commission has already recognised, in the case of online music stores, that the absence of pan-European copyright licences makes it difficult for new Internet-based services to take off ⁽⁷⁵⁾.

The Commission determined that obstacles to the growth of Internet-based services could be removed by introducing effective models for:

- cross-border licensing of copyright-protected content in the online environment; and
- cross-border distribution of royalties in both the online and offline environments.

The Commission has made recommendations to the Member States to ensure that individual rights-holders are free to move to societies that offer multi-country licensing, and that collecting societies remove obstacles to multi-country licensing.

5.15.1 Recommendation

The harmonisation of release windows and the availability of multi-country licensing will enhance the prospects for a pan-European content industry. The issues facing audiovisual content are more complex than those facing musical content. Parliament should encourage stakeholders to cooperate in solving the issues facing pan-European online services and request the Commission to continue to convene groups, like Film Online, which can make proposals for inter-professional cooperation on such issues.

5.16 The audience

A creative company aware of risk and investing for profit will want to understand national and international audiences.

A market study of successful European films would help European film-makers to reach a view on the appropriate budgets for particular categories of film, the best options for distributing them, and the potential revenues from particular market segments. Entrepreneurs have an instinctive appetite for such knowledge, but it is also a creative stimulus.

To take one example: people watch different kinds of film at home from those they watch in the cinema, but we do not know the home video 'hits'. There is a lack of available information on European home video rental and retail sales. The publications of the European Audiovisual Observatory (OBS) tell us that DVD and video rentals and sales totalled nearly EUR 12 billion in 2004 and were growing at about 8 % per annum, while gross box office appears to be between EUR 5 billion and 6 billion. Europeans are spending twice as much on home video as they spend in cinemas, yet we do not know what they are spending their money on.

⁽⁷⁴⁾ The Spanish society, Egeda, is a good example, and can be seen at http://www.egeda.es/EGE_ING_default.asp

⁽⁷⁵⁾ Memo/05/241, 7.7.2005.

(The little information we have suggests that smaller or ‘niche’ films do relatively better on home video than in the cinema.)

How do people distinguish the relative attractions of European and American films? An interesting piece of work was presented at a workshop in Britain in 2004 ⁽⁷⁶⁾. It was based on focus groups conducted around the United Kingdom, asked to describe their film tastes. Drawing on the interviews, it divided film audiences into four categories: mainstream, mainstream plus, aficionados, and film buffs ⁽⁷⁷⁾. The mainstream went mainly for American films, whose appeal was described in terms like ‘epic’, ‘excellent’, ‘exciting and exhilarating’, ‘glamorous and stylish’, ‘escapist’, ‘heroic and romantic’. Interviewees were asked about the perceived weaknesses of both American and British/European films: the former were identified as ‘schmalzy and moralistic’ and the latter as ‘unglamorous and gritty’.

The mainstream plus audience had an appetite for English-language films that were ‘knowing and clever’: the examples used to illustrate this were such films as *Being John Malkovich*, *Best in Show*, *Bowling for Columbine*, *Lost in Translation*, *Girl with a Pearl Earring*, *Secretary*. Beyond them was the aficionado group with an appetite for non-English-language films, instanced by *City of God*, *Amélie*, *Etre et Avoir*, *Battle Royale*, *Amores Perros*. Beyond that again was the group called ‘film buffs’, described as highly literate cinema-goers, capable of enjoying work that was ‘difficult and depressing’. The taste of the latter group was exemplified by such films as *Lovers of the Arctic Circle*, *Mother*, *In the Mood for Love*, *Lilya 4-Ever*, *Comment J’ai Tué Mon Père*.

In a separate part of the work, films are placed in an arc that described where mainstream and aficionado audiences overlapped, i.e. spanning both mainstream and aficionado tastes. There we find such films as *Goodbye Lenin*, *Belleville Rendezvous*, *Russian Ark*, along with blockbusters like *Lord of the Rings* and *The Day After Tomorrow*.

This work thus acknowledges a reality more complex than the simplistic split between ‘popular’ and ‘arthouse’ or — even more simplistic — between ‘cultural’ and ‘commercial’, that so obscures debate about the film audience. The American independent sector is actually closest to the European tradition. It keeps an eye on developments in European films and is frequently influenced by them. Specialist American distributors seem to have an instinct for the European film that gets missed: Fox Searchlight ‘picked up’ the British film *The Fully Monty* and turned it into a worldwide hit.

American independent films, made on budgets little different from many European films, are part of a commercial value chain that certainly can produce ‘knowing and clever’ films that make money. Too little credit is sometimes given to commercial production methods in driving quality when a specific audience has been identified and imaginatively served ⁽⁷⁸⁾. ‘Knowing and clever’ are values that do not need huge budgets. They will grow from carefully honed

⁽⁷⁶⁾ I was given this account verbally and, regrettably, cannot source this information further.

⁽⁷⁷⁾ A ‘buff’ is an English jargon word for an enthusiast with an encyclopaedic knowledge of his subject.

⁽⁷⁸⁾ ‘The industrial process — the free market — produces movies that people actually want to watch. Scripts are honed into clarity, economy and satisfying conclusion. And I am not just referring to Hollywood blockbusters but also to US indie-flicks that cost little but are now showing at a multiplex near you. A small, ambitious American film such as *The Station Agent*, about a dwarf moving into a rural New Jersey community, is a lesson to the British hardhouse miserabilists, obscurantists and one-draft wonders in its delicate interplay of grief and humour, issues and narrative force.’ ‘Forget the Brit flicks, gimme Hollywood for the big picture’. Janice Turner, *The Times* (2005).

screenplays, well-drawn characters, angles on corners of reality we have not seen before. They are values the best European films deliver.

There are, of course, multiple audiences for films. As the 'long tail' theory tells us, technical change and the Internet have the potential to find new taste groups and give them content that can be highly profitable. This discovery process is stimulated by competition, technical change and new market conditions. There was a time when TV drama in the USA was a purely mass audience form. Then satellites and cable systems brought subscription services and HBO discovered new taste groups, led by people who wanted something more intelligent and challenging than mainstream fare and were prepared to pay for it. Stimulated by this demand, discovered by a process of commercial trial and error, HBO came up with masterpieces such as *The Sopranos* and *Six Feet Under*.

One of our stakeholders referred to the problem that Europeans do not make 'date' films. Others referred to them as 'downbeat' or too 'literary'. David Puttnam, quoted earlier, also notes the failure of European films to reach young people. He goes on to say something interesting, talking about self-doubt:

'In the smallest doses, self-doubt is probably good for a country. It can be the catalyst for the effective 'reinvention' of a society, a means of avoiding impending chaos. It can be interesting and important, a kind of 'renaissance', but it can also be very dangerous. Too much self-doubt can very easily result in an explosion of frustration.'

Maybe self-doubt is part of today's European heritage. We were struck, in preparing for this work and watching as many European films as possible ⁽⁷⁹⁾, by how many look back, with an uneasy conscience, on the errors of Europe's past, wars, the catastrophes of occupation. *Sophie Scholl* (Germany), *Fateless* (Hungary) and *Joyeux Noël* (France) reflect on horrors, the avoidance of which was the forming motive of the European Union 50 years ago ⁽⁸⁰⁾.

In crossing over from leading world power to membership of a community of advanced democratic nations, Europe seems to have lost some narrative belief in a contemporary protagonist and a story objective that engages an audience ⁽⁸¹⁾.

An American friend, Jim Metzler, as a member of the nominating committee for foreign language films for the Academy Awards, has watched many European films. He said: 'A word

⁽⁷⁹⁾ Here are some of the films we watched as part of this process: *The Death of Mr Lazarescu*, 2005, Romania; *Man Without A Past*, 2002, Finland/Germany/Greece; *Elling*, 2001, Norway; *The Constant Gardener*, 2005, UK/Germany; *Bread and Roses*, 2000, UK/France/Germany/Spain/Italy/Switzerland; *Spring, Summer, Autumn, Winter ... And Spring*, 2003, Germany/South Korea; *Le Couperet*, 2005, Belgium/France/Spain; *Peindre Ou Faire L'Amour*, 2005, France; *Tsotsie*, 2005, UK/South Africa; *Mondovino*, 2004, Argentina/France/Italy/USA; *Darwin's Nightmare*, 2004, Austria/Belgium/France/Canada/Finland/Sweden; *Il Ne Faut Jurer De Rien*, 2005, France; *Joyeux Noël*, 2005, France/Germany/UK/Romania; *Palais Royal*, 2005, France; *Sophie Scholl*, 2005, Germany; *Downfall*, 2004, Germany/Italy/Austria; *Belleville Rendez-vous*, 2003, France/Belgium/Canada/UK; *Caché*, 2005, France/Austria/Germany/Italy; *Fateless*, 2005, Hungary/Germany/UK; *Vinterkyss*, 2005, Norway; *Wilbur Wants to Kill Himself*, 2002, Denmark/UK/Sweden/France.

⁽⁸⁰⁾ There is also a value in moving on (and the reality that things change so that a message from the past loses relevance). When Ken Loach, speaking of his new film, *The Wind That Shakes the Barley*, says 'Our film, we hope, is about the British confronting their imperialist history and maybe if we tell the truth about the past, we will have the truth about the present', one wonders how many of his audience will see that link.

⁽⁸¹⁾ 'Cinematic attempts to represent the lives of people in contemporary Britain are all too rare ... except in the tabloid context of "new brutality" cinema and gangster movies.' Nick James, *Sight and Sound*, October 2005.

you might use ... is character-driven ... my favourites from the last few years, Denmark's Adam's Apples, the Czech movie Up and Down, Sweden's As It Is In Heaven, and Finland's Man Without a Past, all succeeded for me because, although they each had a strong central character, they were all basically ensemble pieces.'

Those of us who travel know that being European means something that makes us different from our friends from other continents. What is that value? Humanism? The sense of mystery around ordinary lives? Not despair, surely (and as for guilt, only in reasonable measure, please).

5.16.1 Recommendation

We recommend that Parliament ask the MEDIA programme to conduct research into audiences, in particular, to understand the demand for films made on the budgets that are typical for European films.

5.17 Secure digital rights management

Digital rights management (DRM) refers to a system for protecting the copyright of data circulated via the Internet or any other form of digital media. It is designed to enable the secure distribution of data and prevent piracy. DRM systems typically achieve this by encrypting the data so it can only be accessed by an authorised user or marking content with a 'digital watermark' to prevent free redistribution. The development of flexible and robust DRM technology is a key requirement if the potential of digital platforms is to be fully realised.

As the generic term for digital protocols that prevent unlicensed copying, define the licensed use of an intellectual property, and monitor that use, they may soon replace less efficient data collection methods now used by collecting societies.

DRM itself is actually computer code that forms an integral part of the content (which is, itself, just a digital file). Most DRM codes effectively contain a set of attributes, which are checked each time the content is used. These attributes can include the identity of the user, the type of use permitted for the content (e.g. streaming only, burning to DVD, etc.), and the number of times it can be used (for example, a user may be able to 'burn' a downloaded file to DVD three times, and after this the DRM will prevent further DVD burns).

Important lessons can be learned from the music industry, where multiple DRM systems have emerged. Industry leader iTunes has created its own proprietary DRM system called Fairplay. This allows users to purchase music from an iTunes website, store it on a computer, burn it onto an unlimited number of CDs, and transfer it to iPods. Files are encoded in AAC format, and only iPods can play back material downloaded from iTunes. This makes good business sense for Apple (owner of iTunes and manufacturer of iPods), but such a closed standard could hardly be said to benefit consumers. Apple also reserves the right to alter DRM restrictions at any time, including those applied to music that a user has already downloaded ⁽⁸²⁾.

⁽⁸²⁾ Apple has already faced a challenge in France on the issue of interoperability. On 30 June, the Senate and National Assembly passed a law designed to allow customers to play music bought on iTunes on another player.

The system also has its weaknesses: several computer programmes have been released that bypass the DRM. Perhaps more worryingly, the DRM is not copied with the file if it is burnt onto CD. This means users could 'rip' the music from the CD back onto a hard drive in any format with no DRM.

Napster has taken a different approach, offering a subscription service as well as one-off purchases. Subscribers can download and stream as much music as they want but, as soon as they stop subscribing, the DRM will render all of their downloaded music unplayable. Napster also charges subscribers an additional fee if they wish to transfer files to portable devices (Napster files are incompatible with iPods) or CDs.

Perhaps the closest the music industry has come to a 'standard' DRM system is Windows Media DRM. Many online stores are based on this Microsoft software, including Napster, MSN and Tiscali. These services are accessed directly from Microsoft's Windows Media Player software, which is installed on most PCs (but not Apple computers). Given the fact that television content is already offered alongside music on Windows Media Player services ⁽⁸³⁾, it seems only a matter of time before films are added to the mix as the next natural progression, probably using Windows Media DRM or an evolution of it.

The big issue for DRM is interoperability. If DRM locks consumers into single products, or if large companies dominate the market with proprietary systems, we have a big problem. Interoperability is also important to film-makers and their ability to license their films to as many different services as they choose.

Piracy is the enemy of DRM. Piracy is a function of the ease of copying a digital work and the fact that digital copies do not degrade. However, video files are still too large for most systems and have to be compressed, leading to a loss of quality. Most piracy results from theft of masters or final cuts from studios. This is a serious problem for Hollywood but less of a problem for European films.

Hollywood studios have a huge incentive to solve the piracy problem — and such huge resources to invest in its solution — that European film, in effect, rides on the back of the Hollywood anti-piracy project. The Hollywood majors are acting cautiously when it comes to licensing Internet downloads, driven not just by the fear of piracy but by the need to protect the DVD trade.

Correctly specified and functioning DRM goes to the heart of what Europe's film-makers stand to gain from direct delivery via the Internet.

It is now possible to identify the desirable aspects of a DRM system. This should allow the licensor flexibility in setting the terms for the use of the property he or she controls. Potentially, it can establish a direct relationship between the rights-holder and the user, allowing for a high level of flexibility over different terms and offers, managing compliance with those terms and handling transactions. It should also be able to capture that use across different

⁽⁸³⁾ For example, users in the UK have the option to access Discovery Broadband. They can then choose to watch a range of Discovery programmes 'on-demand' for a one-off price between EUR 1.40 and EUR 2.80 or subscribe for a monthly fee of EUR 8.60 to view any programme at any time. Programmes are streamed rather than downloaded, and users have 24 hours to view the content once it is purchased.

platforms in a home and out of the home on a portable storage device. DRMs are thus also a potential source of rich consumer data — though this raises a separate set of privacy issues.

Working DRMs will be very important to the future of film on digital platforms. If common, working DRMs do not emerge, IP protection will have to rely more heavily on watermarking systems ⁽⁸⁴⁾ and audits which will be both less efficient and, probably, much more expensive. There will be a continuing need for criminal action against serious ‘pirates’.

DRM systems are both an essential protection of copyright and a potential barrier to the internal market. If systems either remain highly proprietary or non-interchangeable that will limit their use across many markets and threaten consumer welfare. A problem arises if one proprietary system becomes dominant. (Similar issues relate to standards to help projector manufacturers create uniform and compatible digital cinema equipment.) Competition law will play an important role here. Concerns are already being expressed, both about dominant platforms with proprietary DRMs and differential pricing for music downloads across Europe, suggesting impediments to the single market.

Competition can, in certain circumstances, promote interoperability. With its new content protection software, Microsoft hopes to counter the growing popularity of Apple Computer’s iTunes online music shop, which distributes music and video using its own copyright protection format, and which is currently proprietary to that service.

We are at a relatively early stage in the development of DRM for video. Market developments have to be monitored closely in order to ensure that seamless, complementary protection is offered by the law. We believe it would be wrong, at this stage, to challenge existing proprietary systems.

Interoperability will never be absolute. There will be significant changes in technology in the future, as there have been in the past. Our vinyl record did not give us a property in the songs it contained ⁽⁸⁵⁾. There are also other consumer issues worth consideration.

- Systems that offer a high degree of flexibility to rights-holders pose problems for consumers. Permitted uses and durations of use may be highly variable. The European Commission should therefore press for accurate and visible labelling so that the consumer knows exactly what he or she is paying for.
- Anti-piracy activity and the prosecution of offenders fall within national jurisdictions. There could therefore be a problem where a national jurisdiction provides a haven for piracy if its laws or police actions are relatively lenient. Europe needs mechanisms to act in this instance.
- ‘Lock and load’ systems, which insert virus-like spyware into the consumer’s system, should be made illegal.
- The right to make domestic copies and back-ups from purchased material is inconsistent across Europe. The Commission should press for harmonisation and set a basic domestic copying right.

⁽⁸⁴⁾ Watermarking systems put a code into a work that is unreadable by the consumer but readable with specialist equipment. It has to be designed to resist ‘stripping out’.

⁽⁸⁵⁾ We can record them, though, using an analogue feed. This is known as the ‘analogue hole’ in DRM systems.

5.17.1 Recommendation

Many Commission directorates have interest in anti-piracy measures and the issue of interoperability. Functioning DRM is key to the direct delivery of films on the Internet and to the monetisation of content rights. Parliament should encourage the directorates to work together on the appropriate level of interoperability, appropriate consumer protection, and coordinated anti-piracy measures, enabling them to make recommendations to the Member States.

Appendix 1: The digital home, the technology

Overview

Ahead of us is the converged digital home. We believe that this is the benchmark destination on which strategic planning should focus. But we do not know when it will arrive.

The destination may be clear but the journey to it will not be simple. On the way there, there will be a multiplicity of intermediate stages and technologies as businesses try to feel the pulse of public taste.

Internet protocol television (IPTV)

The Internet can deliver audiovisual media directly to the home, in the same way you can listen to radio stations online or download music tracks. The delivery of television services to the home via the Internet is called Internet protocol television (IPTV). IPTV services can deliver content in a number of ways.

Firstly, content can be 'streamed' over the Internet. When you visit the website, you can watch the content in real-time just as you watch traditional television services. This uses a high-speed Internet connection (for most wired homes in Europe, this is an ADSL broadband line) to send channels into the home. Streaming means that the content can be compressed to allow for the capacity of the carriage system.

Streamed media is actually 'downloaded' to a hard drive, but the consumer need not wait for the download to end before viewing. It creates a small video 'reserve' on the hard drive so the programme does not stop or slow down if there is too much traffic on the network. This reserve is called the 'buffer': only a small amount of buffer video is stored on the hard drive so the film is never downloaded in its entirety, and the file is destroyed as the content is played.

IPTV services may offer VoD content, where consumers can select content to view at any time. This content is delivered to them as a personal feed from the host server to their computer. While live television services are always streamed, VoD can be either streamed or downloaded. The two approaches are very similar; the difference being that for a 'download' the entire film is sent over the network and stored on the user's hard drive prior to viewing. One advantage of streamed video is that the file is never completely stored on the client's hard drive, which reduces the risk of illegal file copying.

The actual device to which IPTV content is delivered is an important issue. As the services are delivered over a broadband connection, the easiest option is to deliver the services to a home computer, as this device will already be connected to the network. Most home computers have good quality screens and soundcards optimised for viewing audiovisual material.

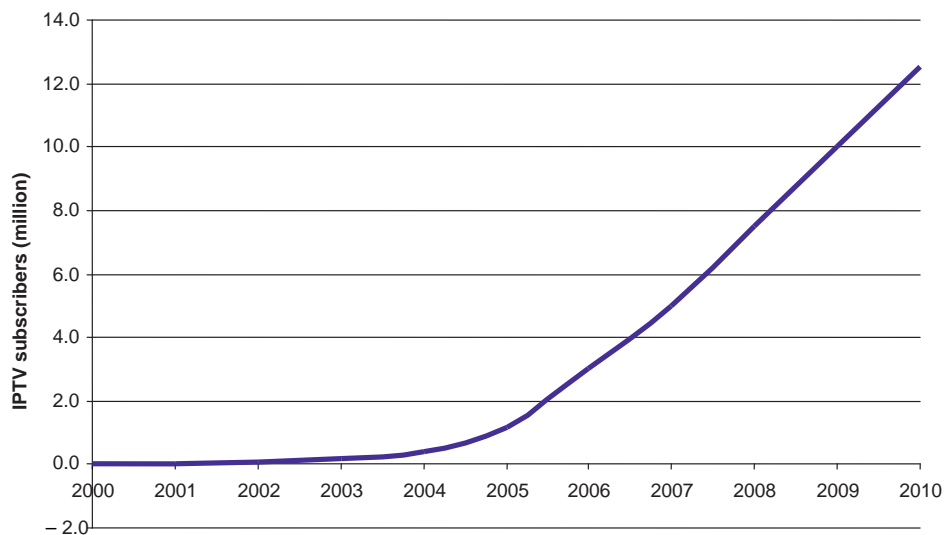
However, many home PCs are situated in home offices or spare bedrooms, separate from the main living area. Furthermore, while the screens are of high quality, they are typically much smaller than a main television set. Content has to be delivered to the television set to gain mass acceptance. This is supported by a survey on public attitudes to IPTV carried out by

Accenture, which concluded that ‘providing a reliable service to a television set is essential for a mainstream service’ ⁽⁸⁶⁾.

To achieve this, the television set has to be brought onto the network. This is accomplished by a set top box (STB) that acts as a bridge between a broadband router (carrying the signal) and the television (displaying it). France Telecom’s Ma Ligne TV is one example of an IPTV service using this approach: an ADSL line feeds data to a router, which then sends data to a PC (wirelessly) and a television set (via a wired connection to the STB).

Estimates from *Screen Digest* suggest that the number of IPTV subscribers in Europe will grow sharply from 1.2 million in 2005 to just over 12 million in 2010, when IPTV will reach a share of 12.5 % of the total pay-TV market.

Figure 11: Western Europe IPTV subscriber forecast



Source: *Screen Digest*.

The *Screen Digest* estimates are supported by research from IDC, which predicts a sharp rise in the value of IPTV in western Europe over the next five years, growing from USD 262 million in 2005 to USD 2.5 billion in 2009. The IDC study also suggests that France, Italy and Spain will account for 60 % of this, and expects strong demand for IPTV services in Belgium, Luxembourg, the Netherlands and the Nordic countries ⁽⁸⁷⁾. Many IPTV providers also offer some form of VoD service, and so the rise of IPTV and Internet-based VoD are likely to be closely related.

A report by Informa Telecoms & Media suggests that the number of European households with access to a VoD or NVoD service will grow from 39.4 million in 2005 to 98 million households over the next five years ⁽⁸⁸⁾. The same report estimates that European VoD revenues will increase from EUR 1 billion to nearly EUR 4 billion during this period.

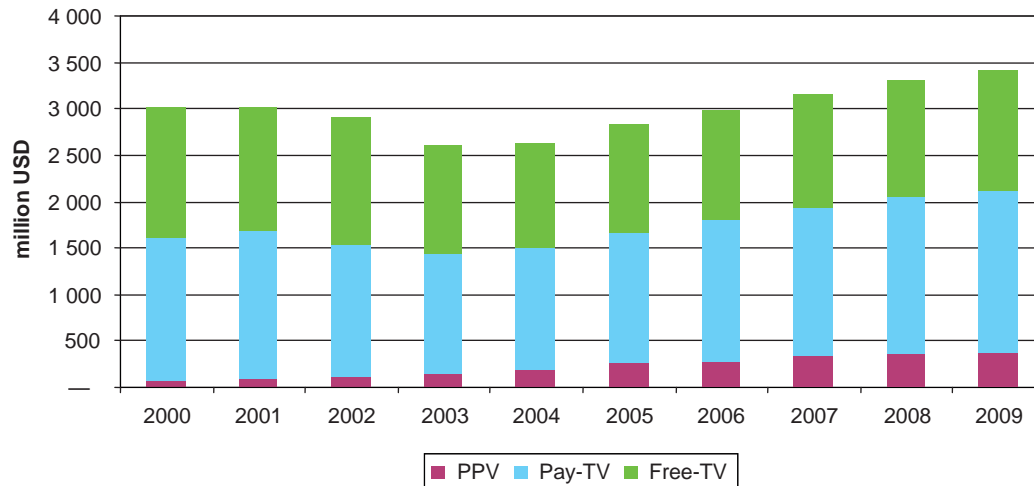
⁽⁸⁶⁾ *International IPTV consumer readiness study*, Accenture, 2006.

⁽⁸⁷⁾ IDC market analysis western Europe, 2004–09.

⁽⁸⁸⁾ *On-demand TV (Fourth Edition)*, Informa Telecoms & Media, November 2005.

Estimates produced by *Screen Digest* suggest that revenue from the sale of feature films to European pay-per-view platforms (encompassing both VoD and NVoD services) will grow steadily, rising from USD 253.6 million in 2005 to USD 380 million in 2009 ⁽⁸⁹⁾. However, this remains a small proportion of the overall revenue raised through sale of feature films to European television, projected to be 11 % of total revenue in 2009.

Figure 12: Revenue from sale of feature films to television in Europe



Source: *Screen Digest*.

PriceWaterhouseCoopers (PWC) and DGA have recently been undertaking analysis for Ofcom, assembling forecasts from different sources. One estimate of consumption levels in 2011 is that 15 % of viewing will be on-demand TV.

Electronic sell-through

Sell-through depends on downloading content over the Internet for permanent storage at the user end. The technology required is very similar to that needed for IPTV services, although we have treated it as a separate item as bandwidth needs to be higher to avoid lengthy download times when transferring a full-length feature film onto a personal computer.

While people may accept streamed services at a lower level of quality than the original (i.e. convenience of receiving a television service on a mobile phone may compensate for the loss of quality required to carry it on that medium), this does not apply to owned products. Today, people are used to buying films on DVD and, as a result, getting high-quality products for viewing in the home. Indeed, high-definition television, which begins its rollout in 2006, will set a new higher standard of quality.

The bandwidth available for electronic sell-through, for rental and for retail, is therefore very important. Currently, a typical broadband home with a 2 MB service may fall well below that. Tests we conducted indicated that film delivery on a newly launched broadband film service could take over three hours per film over a 2 MB broadband link. Such links are subject to 'contention', that is, the allocation of capacity depends on others using the same 'local loop'.

⁽⁸⁹⁾ 'European movie TV rights', *Screen Digest*, June 2005.

Near-DVD quality can be achieved at 4 megabits per second, but to achieve DVD-quality video (the current benchmark for consumers) requires a downstream speed of around 8 megabits per second. These 8–10 MB services are available in some countries, and are likely to be the next broadband upgrade. However, with current levels of broadband penetration across Europe and inadequate bandwidth for downloading at this quality, we have to say that this market is in its very earliest stages.

Other delivery services will remain the main route to film ownership by the consumer for some years.

Wireless local area network (WLAN)

The digital home will require a wireless local area network (WLAN) much more advanced than those available today, connecting all devices in the home such as televisions, music centres, games consoles and mobile devices through a ‘home hub’. This will be the link between all devices in the home.

It is already possible to connect music centres to a WLAN so that downloaded music can be played either through a PC or through a home stereo. However, the main obstacle to overcome in creating a wireless home is that the telecoms and television networks are separate, making the connection of the television a more challenging task.

The recent ratification of a new standard for WLAN protocol (802.11n) represents a big step towards making the required home hub a reality. The 802.11n standard utilises multiple-in multiple-out (MIMO) technology, meaning that a device can have more than one antenna and handle multiple data streams simultaneously, thus speeding up data transfer significantly.

Mobile phones

Emphasising the reality of ‘anytime anywhere’, audiovisual content can be viewed on the latest generation of mobile phones through one of three delivery methods: live streaming, download or pre-recorded media.

Most mobile operators are now offering or planning live streaming of television on mobile phones, making existing television channels available to a mobile audience. However, the recent emergence of new video-over-mobile services being launched across Europe, such as Vodafone Live (launched in 11 EU countries) and Orange TV, could represent something of a false dawn.

These services are delivered via third-generation (3G) mobile phone networks. 3G is a ‘point-to-point’ technology, meaning that even when the same service is being delivered to multiple users at the same time (as is the case with streaming television services) the signal is actually being sent to each user individually. This is a very inefficient means of delivering video content to end-users, and 3G networks may struggle to provide video services once mobile television gains in popularity.

The solution to this problem is likely to come in the form of digital video broadcasting — handheld (DVB-H), a new ‘point-to-multipoint’ technology that will enable video services to

be broadcast to mobile phones. This is a far more efficient means of simultaneously broadcasting the same services to a large subscriber base. It also promises to reduce battery usage (currently a major drawback of video on mobile phones).

However, DVB-H is not without its own drawbacks. It offers the high downstream data rates necessary to deliver video content, but it lacks an upstream path so there is no return path from user to broadcaster. The biggest barrier to DVB-H is that it is essentially an adaptation of the system already being used by digital terrestrial television (DTT) services in many countries, leading to a conflict of interest over spectrum allocation.

Users wishing to view DVB-H services would also require a handset upgrade, but as the average mobile phone user upgrades a handset every 18 months this is not a significant drawback. Today the point-to-point technology, small screens and lack of viewing habits do not allow mass consumption of films. When DVB-H is in place, customers will be able to view streamed content on their mobiles.

Downloading content to mobile phones offers more opportunities for delivering specialised content and breaks the reliance on traditional television channels or streamed output. Currently there are severe limitations on file sizes imposed by download speed, which limit the content available to short clips. 3G requires the compression of video images, resulting in a preference for topical material like news and interviews or short segments, called 'mobisodes'. Even short films with a duration of five minutes currently have to be edited to approximately three minutes before they can be offered as a mobile phone download. In practice, trials suggest that downloading content takes place at near real-time; for example a three-minute film takes approximately three minutes to download ⁽⁹⁰⁾.

Until technology develops to allow the download of long-form entertainment programming, the market for video downloads on mobile phones will be restricted to short films and film trailers.

Another drawback is the physical screen size of mobile phones. While the latest generation of mobile phones offers high-resolution full-colour screens, the size of the screen is restricted by the necessity to make the device compact. This does not lend itself to prolonged periods of viewing, unless the phone is connected to a larger screen (such as a laptop computer) and used merely as a modem. The latest mobile phones are being designed with audiovisual applications in mind, introducing increased screen sizes and resolutions. For example, the Sony Ericsson S700i features a TFT screen with a resolution of 240 x 320 pixels.

Given the current constraints on downloading long-form programming onto mobile phones, one alternative is to store films on pre-recorded memory cards. This approach is being pioneered by UK-based mobile content provider ROK Entertainment. ROK released the first full-length film on a mobile phone memory card in May 2005. *The Shawshank Redemption* was released in the UK on the multimedia card (MMC) format and can be played on compatible mobile phones using the company's ROK Player software. ROK Entertainment estimates that 1.1 billion of the world's 2.5 billion mobile phones will be compatible with the MMC by 2009. *The Shawshank Redemption* is priced at EUR 25, approximately 25 % more than the average

⁽⁹⁰⁾ Trial carried out by DGA using a Nokia N70 3G mobile phone on the UK's Vodafone Live! service.

DVD price. However, the technology is still in its infancy and unit costs are likely to decrease as more titles become available.

Other mobile and portable devices

Sony's PSP portable games console was unveiled in 2004 and was launched in Europe in September 2005. The device features a 110 mm (diagonal) 16:9 ratio TFT LCD screen, with a resolution of 480 x 272 pixels. Unlike its main rival (the Nintendo DS portable games consoles), the PSP also incorporates built-in multimedia support. While the PSP is designed primarily for gaming, the screen lends itself well to film viewing.

Films became available for playback on PSP on Sony's proprietary Universal Media Disk (UMD) format in April 2005. The UMD format is capable of storing 1.8 gigabytes of data, which is ample for storage of feature films. Feature films are sold on UMD with similar functionality to DVD, often including alternate language options, subtitling and special features. Content has to be viewed on the on-board screen as there is currently no legitimate way of linking a PSP to a television screen, although an unofficial modification can be made to enable television playback. Perhaps the biggest limitation of the PSP is its relatively low battery life. A fully-charged battery will give approximately four hours of UMD playback, although Sony expects to extend battery life in future versions.

Alternative mobile devices are portable music players, exemplified by the fifth generation of Apple's iPod. The iPod was launched in 2001 as a portable digital jukebox, capable of storing 1 000 audio files on a 5 GB hard drive. The first four generations of iPod featured monochrome screens for menu navigation and were restricted to audio playback. The fifth generation of iPod, launched in October 2005, introduced MPEG-4 video playback functionality.

The fifth-generation iPod is capable of screen resolutions of up to 480 x 480 pixels, although videos purchased from the iTunes online music store are currently restricted to resolutions of 320 x 240. Video can also be played back on a television via an AV cable (although quality is poor due to the limited resolution).

Whereas content for the PSP is only available on pre-recorded media, the iPod relies on internal memory. Content is downloaded over the Internet onto a home computer and transferred onto the iPod's internal memory. Two versions are available, with 30 GB and 60 GB storage capacities. These models also have different battery lives, with the 30 GB version lasting 14 hours for audio playback (decreasing markedly to two hours for video playback) and the 60 GB version lasting 20 hours for audio playback (three hours for video playback). This means that it would not be possible to watch some longer films on the 30 GB iPod running off battery power, and some films may even stretch the limits of the 60 GB version.

Video content for the iPod is being sold through Apple's iTunes website, alongside audio files. Content on offer is mainly restricted to music videos, priced at EUR 2.49. Videos are downloaded to a home computer and transferred to the iPod, in the same way that audio tracks are added to the device.

There are also other mobile devices available that have been specifically designed for viewing video, although none has yet to capture the public's imagination (and money) in the

same way that Apple's iconic iPod has for portable music players. One such example is the A700 from French company Archos. This device comes with a TV docking station, enabling direct recording from a television onto its internal memory. The A700 also has a built-in digital video recorder, which can work with existing VCRs and STBs, and material can also be recorded directly from DVDs unless the contents are protected.

The unique feature of Archos' approach is that it focuses on existing audiovisual equipment (centred on the television set) to supply content for the device, and this content is already available to the owner. Archos takes a live stream of video and digitally encrypts it onto its hard drive. The device is fully compatible with Windows Media Player and video content can be purchased and downloaded from websites. Alternatively, users can fill up the device with their favourite programmes straight from a television feed and watch them on the move on a 7-inch screen. Video stored on an A700 can also be played back on a television set in near-DVD quality.

A US company, Sling Media, has taken a different approach to providing content on the move. The company's SlingBox device connects to a home network router and home-video equipment, and comes with software that can be installed on a PC. This then enables the user to watch their home television services on a PC from anywhere in the world, provided they have access to a high-speed Internet connection. In other words, the system 'slings' the content from one device to the other. Sling Media has now taken the concept one stage further with the development of SlingPlayer Mobile, allowing the content to be viewed on network-enabled mobile phones or PDAs.

There are thus three possible routes to providing a feature film on mobile phones: physical media (such as a memory card), download or live streaming.

While physical media for playing films back on mobile phones already exist, this will not form a significant part of the film value chain and can only be viewed as a source of supplemental revenue. High manufacturing (and subsequently retail) costs also means that this is not a viable option for all but the most popular titles.

Downloading content to mobile phones dispenses with expensive media and gives users the added convenience of being able to access new content anywhere and at anytime. However, Europe still has a long way to go until mobile phone networks offer sufficient bandwidth to make downloading a full-length feature film an everyday reality. Perhaps of more direct benefit to film-makers, for the foreseeable future, is the ability to use mobile phone downloads to promote films, as most film trailers are an ideal length for current download limitations.

Piracy and DRM issues do not affect mobile phones to the same extent as other platforms. Video for mobile phones tends to be of a relatively low quality to reduce file sizes, and while this may be acceptable on a small screen the image quality does not lend itself to playback on television sets or PC monitors.

Live streaming, the third option, does currently offer a means for mobile phone users to view full-length films at present. Take-up of this technology is limited by the point-to-point nature of the delivery system, and should increase as and when DVB-H is introduced. Live streaming mainly delivers existing linear television channels to mobile phones and, as such, there is little benefit to film-makers.

The key issue for the take-up of mobile television is therefore the deployment of DVB-H, and this is as much a regulatory issue as a technical one. This makes it difficult to predict penetration, as we will see big step changes as and when each country releases spectrum and implements DVB-H. In Italy, this is scheduled to happen during 2006, and Finland also looks set to make an early start. In other countries, such as France, it is not yet clear when the spectrum will be made available.

Digital cinema

Digital cinema (D-cinema) uses digital technology to distribute and project films electronically using a digital projector instead of a conventional film projector. In October 1998, *The Last Broadcast* became the first film to be filmed, edited and distributed digitally. It was transmitted by satellite and shown using digital projectors in some US cinemas.

D-cinema offers economic advantages over film, and can also reduce costs while shooting and editing. (We look at the production process in the next sections.) On the distribution side, making and distributing copies digitally is cheaper (although not necessarily faster) than film. The high quality required for cinema exhibition means that a typical feature film results in a file size of approximately 200 GB, which takes around 12 to 20 hours to send over a satellite system (with download speeds of 36 to 45 Mbps).

At present, physically distributing a hard drive is still quicker, cheaper and more reliable than satellite. However, transporting hard drives requires a well-developed logistics system. Therefore the only real cost savings are the studio costs for prints.

The costs to the cinemas are actually increased in the short term as D-cinema requires expensive digital projection and file storage systems, although once the technology is in place there are operational cost savings. Because of this, cinemas may be reluctant to switch to D-cinema without some financial aid from other stakeholders. Another potential downside of D-cinema is that digital copies could be more susceptible to piracy than film. As a consequence, complex access and 'hand-shaking' protocols are being incorporated into digital projection systems, which add to operating costs and inhibit installation.

However, when these technical issues have been resolved, D-cinema will become an important part of an end-to-end digital supply chain.

Appendix 2: Medium-term prospects for film

The most important requirement for the physical production of films remains the ability to finance a production budget.

The contribution of a given market sector to film funding will, all things being equal, be in proportion to its share of the consumer market, since that will determine the level of guarantees from distributors and sales agents. In the following sections, we look at the key film markets.

Theatrical

Theatrical exhibition remains a fundamental part of the film landscape and a major source of film funding. It is impossible to assess fully the risks and benefits of other distribution platforms without first looking at the future of cinema.

Film-makers and distributors recognise the continuing importance of the theatrical market and most agree that they would like theatrical release to remain an exclusive first window. The theatrical release is the focus of the launch of new films and of press relations activity, and of the army of reviewers and gossip columnists who are an integral part of boosting a new release.

There have been some well-publicised experiments in 'day-and-date' releases (where a film is released simultaneously on other media to coincide with its theatrical release), but these appear to be mainly experiments or marketing exercises rather than serious business models ⁽⁹¹⁾.

However, fear of piracy is driving the Hollywood studios to rethink release windows, while remaining reluctant to inhibit the theatrical window any more than is necessary. This suggests that there will be a dilution of the exclusivity of the theatrical window over the next few years.

It is hard to assess whether the consumer is already responding to digital developments by reducing cinema visits. Some argue, for example, that the young people who are the core audience for new films are spending more of their time with computer games or chatting on the Internet. Others have surmised that the growing popularity of large screens and home cinema have diluted the 'special' features of a cinema visit.

Cinema admissions in Europe suffered a well-publicised decline in 2005. A number of factors were identified to us as possible causes, including:

- a lack of high-appeal films;
- overcrowded release schedules;
- competition from other forms of media;
- a shortening of release windows; and
- piracy.

⁽⁹¹⁾ An example of a 'day-and-date' release is the Steven Soderbergh low-budget film *Bubble* (2005), which was released simultaneously in cinemas, on DVD and on cable television.

In addition, a decline in one year could be the result of external factors, such as a dip in the economy or even exceptional weather conditions.

Table 2: Cinema admissions (millions)

	2003	2004	2005	% change 2004–05
Austria	17.7	19.4	15.7	– 19.1
Belgium	22.7	23.3	21.0	– 9.9
Cyprus	1.04	1		
Czech Republic	12.1	12.0	9.5	– 20.8
Denmark	12.9	12.8	12.2	– 4.7
Estonia	1.3	1.2		
Finland	7.7	6.9	6.0	– 13.0
France	174.2	195.3	175.7	– 10.0
Germany	149.0	156.7	127.3	– 18.8
Greece	15.0			
Hungary	13.5	13.7	10.8	– 21.2
Ireland	17.4	17.3	16.4	– 5.2
Italy	87.5	97.9	90.6	– 7.5
Latvia	1.1	1.7		
Lithuania	1.4	1.5		
Luxembourg	1.4	1.4	1.2	– 14.3
Malta	1.1	1.0		
Netherlands	24.9	22.3	20.4	– 8.5
Poland	23.8	33.3	23.0	– 30.9
Portugal	18.72	18.8		
Slovakia	3.0	2.9	2.3	– 20.7
Slovenia	3.0	2.9		
Spain	137.5	143.9	126.0	– 12.4
Sweden	18.2	16.6	14.6	– 12.0
UK	167.3	171.3	164.7	– 3.9

Source: OBS/Screen Digest.

Across the industry, opinions differ on the exact cause of the 2005 decline. Germany was one of the countries most affected, with admissions falling 20 % from 156 700 in 2004 to 127 300 in 2005 (the lowest level in 13 years). Hans-Joachim Flebbe, CEO of German multiplex operator Cinemaxx, believed the reason was that ‘the audience just didn’t like the films’ ⁽⁹²⁾. Camille Trumer, head of distributor UIP France, shares this view. ‘Our analysis points to the films themselves, both French and US.’ Paul Steinschulte, general manager of UIP’s German operation, blamed the decline on a lack of strong German films, such as *Seven Dwarves*, *Dreamship Surprise* and *Downfall* (all released in 2004).

⁽⁹²⁾ *Hollywood Reporter*, 10 January 2006.

FAPAE, the Spanish producer's association, took a different view, pointing to a change in the ways films are consumed and the growth of DVD in particular. However, this view is at odds with research carried out in the five largest European markets by the French National Centre for Cinema (CNC) in November 2005. The survey of 1 000 DVD households in each country found that people who attend the cinema frequently also watch the most DVDs, while those that never visit the cinema watch few DVDs.

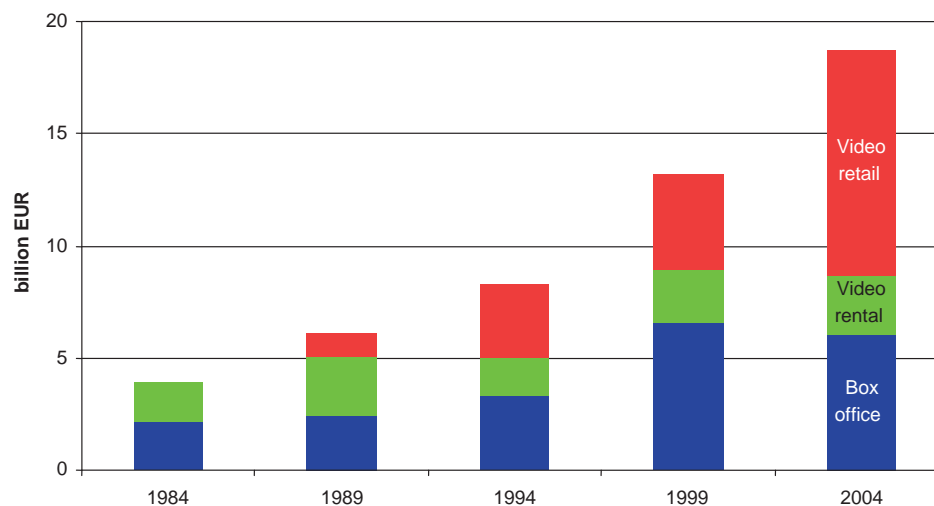
Table 3: DVDs viewed per month

	UK	France	Germany	Spain	Italy	Average
Frequent cinema-goers	14.4	4.9	8.3	8.6	8.4	8.4
Regular cinema-goers	8.1	4.8	6.4	7.8	6.0	6.5
Occasional cinema-goers	6.8	5.1	5.0	4.8	5.1	5.4
Non-cinema-goers	6.1	3.2	4.0	8.4	4.8	5.2
All respondents	7.1	4.8	5.0	6.8	5.6	5.8

Source: CNC.

The decline in cinema attendance comes too early to be attributed to the effects of digitisation, yet the emergence of new forms of direct delivery of feature film to the home (such as broadband VoD) is unlikely to reassure theatrical distributors and exhibitors, who are already under pressure.

Figure 13: Video versus box-office spend in Europe



Source: Screen Digest.

On balance, we do not feel that the 2005 slump in theatrical revenues can be attributed to digitisation. We believe the explanation is more likely to be with external factors, such as a lack of strong domestic films in key markets.

Over the longer term, we expect to see dilution of the exclusivity of the theatrical window via releases to the VoD market. The fear of piracy may be the driver of early experiments, but there is a larger economic reason for exploring an alternative to theatrical release. Consum-

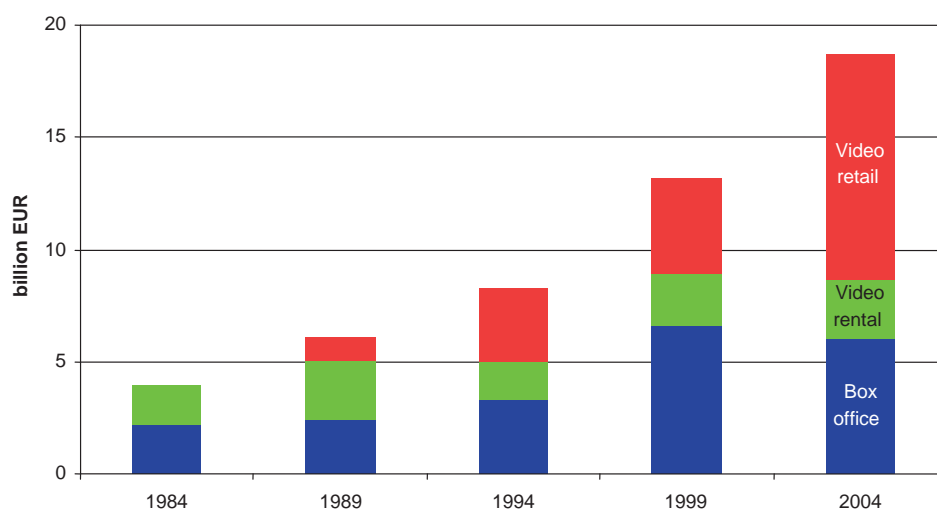
ers pay a premium for early access to a new film: today a cinema ticket costs more than a DVD rental. If those who control film rights believe they can capture more of the premium by releasing early, particularly if they take a higher proportion of the sales cost, they will have an incentive to do so.

The exhibitors will fight back. The rise in cinema attendance over the last decade is down to the building of multiplexes with more screens, surroundings that are more comfortable with better sound and picture quality, thereby offering something significantly better than a stay-at-home experience. Multiplexes are still upgrading and adding screens.

Digital cinema offers scope for a different mix of films. Digital projection is a cost to the cinema but a potential cost saving to the distributor, who no longer has to create multiple prints. This anomaly has held back digital projection. If this is resolved, perhaps because digital projection reaches a tipping point at which cinemas need to switch over, perhaps because the distributors will no longer make prints available, then it changes the economics of theatrical distribution.

On balance, we believe box office will recover from the 2005 downturn and show steady growth throughout the rest of the decade. Forecasts from PriceWaterhouseCoopers suggest that box office in Europe will be worth USD 9.2 billion in 2010, compared with USD 7.2 billion in 2005 ⁽⁹³⁾.

Figure 14: Box office in Europe



Source: PWC.

Consumer rental and retail

The sale and rental of DVDs now provides the dominant revenue stream for films, something easily forgotten given the higher profile of theatrical revenue. Across Europe the relationship between theatrical and non-theatrical revenues varies widely. The UK is the largest buyer of DVDs. Indeed, in English speaking countries it seems that the DVD has become a major item on the domestic bookshelf, something to own and display in a way that video never was.

⁽⁹³⁾ *Global entertainment and media outlook: 2006-10*, PriceWaterhouseCoopers.

Both rental and purchase have been highly profitable to the Hollywood studios, who recover a much higher proportion of sales revenues from non-theatrical than from theatrical revenues. Unfortunately, we have not been able to find data on the proportion of sales accounted for by European films. In theory, a film that has found it hard to get a theatrical release has more chance in the non-theatrical market because of lower distribution costs. However, this benefit has not been fully exploited, largely because the marketing of films is so closely bound to their theatrical success and because physical stores need to limit their inventory and make best use of their shelf space.

Most analysts feel that the non-theatrical market is most at risk from VoD and digital delivery: if you can stream or download a film without leaving your home, there is a big convenience gain. Moreover, cutting out the middleman should reduce costs, resulting in better value.

However, there are many confounding factors to consider here. People like to own a physical film: a DVD on a bookshelf is part of the home environment. Will people feel the same way about films stored on a domestic server? At a more basic level, download speeds for films are still extremely slow. Downloading a film on a 2 MB broadband service is not a realistic consumer proposition and the number of homes receiving higher bandwidths in the medium term is going to be small.

If high-definition becomes the de facto standard for home cinema, will domestic broadband be able to handle its file sizes? If not, high-definition media will have to be rented or purchased. Perhaps we will see a multi-phase catch-up process where the file size of the latest version of a physical disk is always ahead of the average capacity of the domestic broadband link that carries the streamed or downloaded video. Currently there is a standards battle going on for the next generation of portable media, which will replace the DVD as a carrier of entertainment. One has been created by Toshiba, the other by Sony. The Sony candidate, Blu-ray, represents a completely new generation of technology, while the Toshiba product is close to the existing DVD standard and will play DVDs from a current library. Both, and Blu-ray in particular, offer functions that will be hard to match on a downloaded or streamed file.

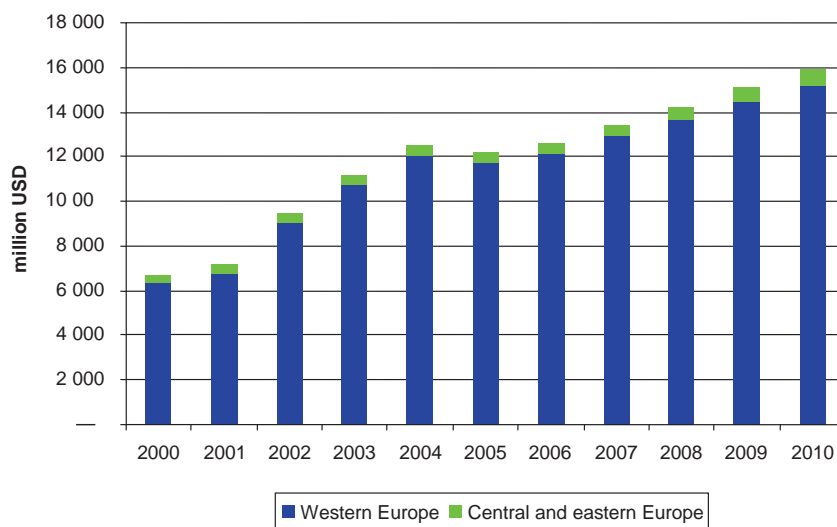
The rental market is being revitalised by online rental as the Internet stimulates changes in the rental business.

The experience of Netflix in the USA suggests that online consumers have a more varied taste in films than in-store customers, who typically go to a store to rent a major new release. In addition, a subscription-based model may encourage consumers to try films they may not have elected to pay for on an individual basis, particularly when such films can be rented alongside more mainstream titles. In this way, the advent of online rental stores may already be benefiting European film-makers.

Research carried out by LoveFilm in the UK also suggests that online stores are attracting a different customer from physical stores. The research showed that 54 % of LoveFilm subscribers had not rented a title from a video store in the year prior to joining the service, and so their monthly subscription to LoveFilm was essentially 'new' money to the UK film industry, rather than a redistribution of existing spending.

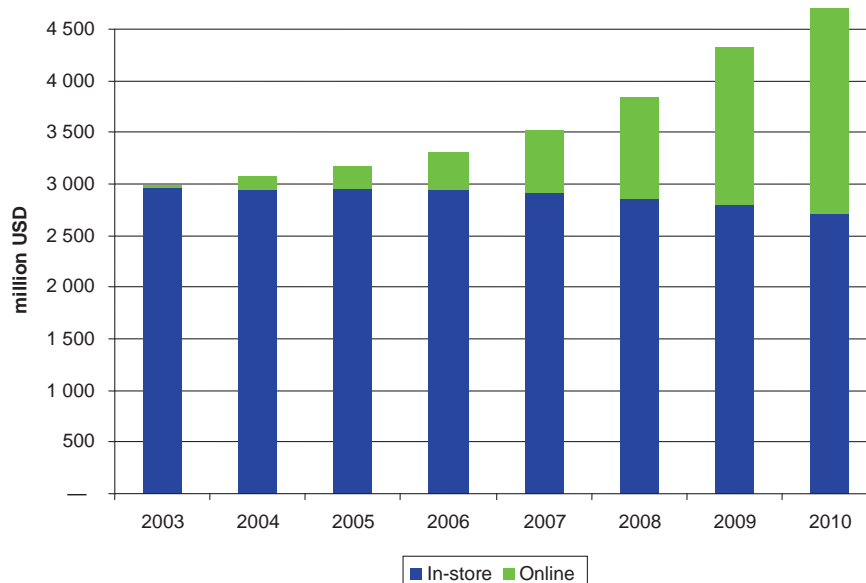
The following charts therefore reveal quite a positive story. While the sell-through DVD market continues to grow, the falling in-store rental market is more than compensated for by the growth in online rentals. PWC estimates suggest that the combined rental market in Europe, the Middle East and Africa (EMEA) will be worth USD 4.7 billion in 2010, compared with USD 3.2 billion in 2005 ⁽⁹⁴⁾.

Figure 15: Sell-through market



Source: PWC.

Figure 16: Rental market (EMEA)



Source: PWC.

⁽⁹⁴⁾ *Global entertainment and media outlook: 2006–10*, PriceWaterhouseCoopers.

Television

Today's primary television channels support most of the investment in new audiovisual content. Where TV does not invest in film production, it is a very important contributor of revenue to film production from its licensing activity.

As the primary funder of new content, television has an incentive to extract the maximum value from it before it passes through to other outlets. In the past, as we have said earlier, new content was often released only once, and through a single channel. Because viewers attach a premium value to recency (i.e. new content), broadcasters will now want to reach as many viewers as possible as soon as possible, and control as many new content rights as possible.

The service they deliver may therefore look quite different from what it is today. They may include simultaneous release on side channels, various 'catch-up' services, and a variety of other options, including an 'early bird' pay-TV option. This will put them into conflict with other players. For example, downstream channels, which have, in the past, offered mainly repeats and second-runs, may find the demand for these has severely diminished. This is already leading to arguments and resentment ⁽⁹⁵⁾.

Many of today's public channels are funded from taxation or mandatory fees paid by the public. These always come under pressure when public channels lose audience share. Most have done so, over recent years, as a result of audience fragmentation, resulting from an increase in competition from secondary channels on digital platforms and the arrival of commercial competition in some countries. National governments will continue to see public channels as a repository of national cultural values, and many will see them as a key to the protection of minority languages. We can therefore expect to see governments continue to support traditional public channels, though there may be a move to support them from general taxation. However, we foresee a relative decline for this group, who have traditionally been strong supporters of domestic film in many instances.

Many primary channels rely on spot advertising revenues, a model that is certainly under threat in the medium term. The primary channels that fund most content today get a premium price from advertisers because many advertising campaigns need fast access to a mass audience. This is because many advertisers, particular those selling wide consumer brands, want to reach a large part of the population in a short time. This premium will come under pressure if audiences fragment further, and they will almost certainly do so. However, we believe that controllers of content rights will find other ways of extracting revenues from advertising, which will need to strengthen its links with key content brands.

Traditional broadcasters with large audiences and prominent programme brands will have the option of introducing pay services or licensing their content to other carriers. In the main, though, they will strive to retain national branded services, emphasising strong links to the national community via national news and popular domestic programmes.

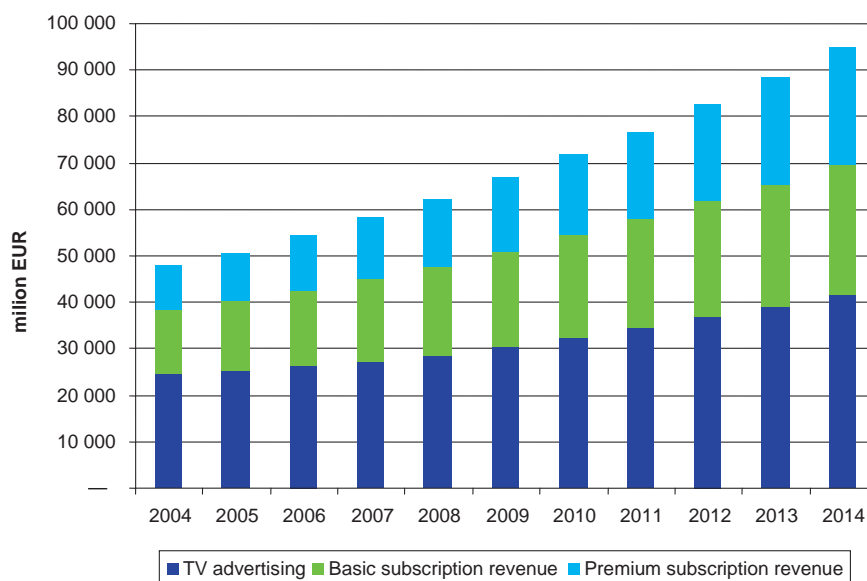
What can we say, then, in general, of the prospects of film on TV, where a film is, usually, released two years or more after its cinematic debut and after it has gone out on DVD?

⁽⁹⁵⁾ For example, in the UK, the BBC has withdrawn access to its archive from secondary channels like Discovery and Nickelodeon.

On the one hand, film is relatively inexpensive, since its funding is shared; on the other, since it has already been released elsewhere it does not help the broadcasters' new content strategy. Over time, broadcasters will also lose the benefits they get from the TV release of big Hollywood films to those many viewers who are not cinema-goers and do not have pay-TV services. These films will have been more widely exposed than in the past, and others will be bidders for archive rights.

However, the latest forecast figures from Zenith Optimedia ⁽⁹⁶⁾ show a continuing increase in commercial television revenues (advertising, basic subscription and premium subscription) going forward to 2014, with an overall increase of around 7.5 % per year.

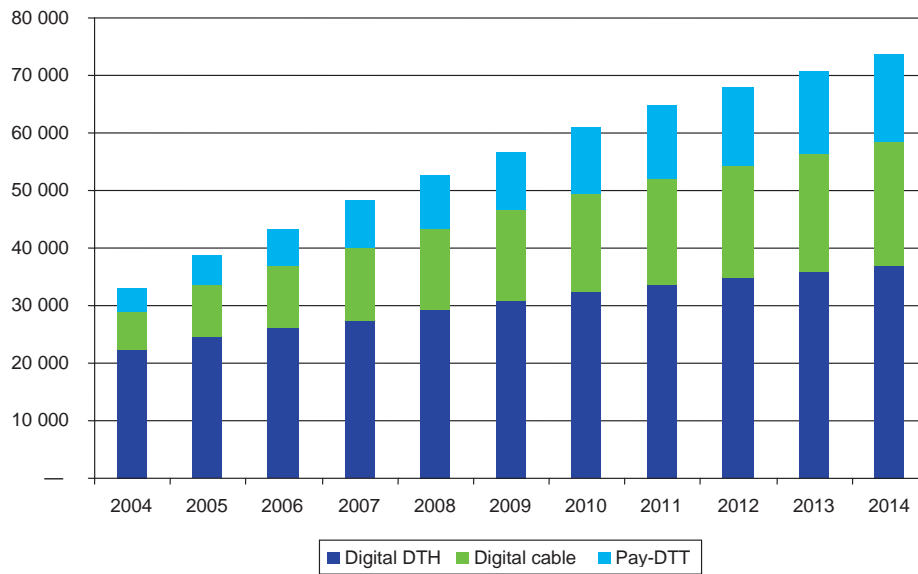
Figure 17: Commercial TV revenue in western Europe to 2014



Source: Zenith Optimedia/DGA.

Pay-TV revenues will be boosted by digital switchover, and from 2005 onwards it looks as if subscription revenue will be worth more than advertising revenue. By 2014, Zenith Optimedia forecasts 73.5 million digital pay-TV homes in western Europe, more than double the number in 2004.

⁽⁹⁶⁾ *Television in western Europe to 2014*, Zenith Optimedia, February 2006.

Figure 18: Digital pay-TV households in western Europe to 2014

Source: Zenith Optimedia/DGA.

It is clear that television will continue to be a dominant part of Europe's audiovisual landscape for the near future, and a major source of revenue. Some of this will continue to flow into feature films. However, fragmenting audiences and paranoia about the impact of new media is likely to lead broadcasters to either argue for a reduction in the price paid for feature films or (as appears to often be the case at present) seek to acquire additional new media rights for the same value.

Appendix 3: The long tail theory

One key benefit of new digital platforms is that they support the so-called ‘long tail’ theory as originally described by Chris Andersen in *Wired Magazine* in October 2004 ⁽⁹⁷⁾. Anderson’s theory argues that low-demand products (such as arthouse films) can collectively account for a market share that equals or surpasses the relatively low number of best-selling products (such as blockbuster films), provided the store and/or distribution channel is large enough to support a high volume of products.

The benefit will be enhanced by intelligent recommendation systems. Amazon online bookstore provides an example of how the long tail has already changed consumer behaviour. In 1988, British mountaineer Joe Simpson wrote a book called *Touching The Void* about his near-death experience in the Peruvian Andes. It was modestly successful, but soon forgotten. Ten years later Jon Krakauer wrote a best-selling book called *Into Thin Air*, also about mountain climbing. *Touching The Void* started to sell again until it eventually outstripped *Into Thin Air*. The driver behind this was Amazon’s recommendation feature, which suggested *Touching The Void* to people who bought *Into Thin Air*. Many of them posted glowing reviews and started a cycle that pushed *Touching The Void* up the sales charts.

The Amazon case study can be seen as an early example of a new kind of economic model. The same basic principle can be applied to all types of media, from books to films to television and music. Online rental companies such as Netflix in the USA and LoveFilm in the UK have started to change the habits of film viewers, introducing the long tail effect to video rental. These ‘virtual’ stores can stock many more titles than any physical video store, and all the DVDs can be stored in a central warehouse. According to Andersen, the average Blockbuster store in the USA stocks less than 3 000 titles, but a fifth of Netflix rentals are of films outside the top 3 000, having an interesting effect on consumer behaviour:

People are going deep into the catalogue, down the long, long list of available titles, far past what’s available at Blockbuster Video ... As they wander further from the beaten path, they discover their taste is not as mainstream as they thought (or as they had been led to believe by marketing, a lack of alternatives, and a hit-driven culture)’ ⁽⁹⁸⁾.

According to this theory, Hollywood films adopt the ‘lowest common denominator’ out of economic necessity. If a film costs USD 50 million to produce, it has to have a broad audience appeal to ensure commercial success. As Andersen puts it, ‘We equate mass market with quality and demand, when in fact it often just represents familiarity, savvy advertising, and broad if somewhat shallow appeal’.

In the physical world of ‘old media’, a film would be shown in cinemas, then sold and rented through stores, each of them drawing on a local population. If the film was thought not to appeal to a sufficient proportion of that local population, the cinema wouldn’t screen it and the shops wouldn’t sell or rent it. However, over a much wider area (say an international or even a national market) the film may appeal to enough people to make it reasonably successful.

⁽⁹⁷⁾ ‘The long tail’, Chris Andersen, *Wired Magazine*, October 2004.

⁽⁹⁸⁾ Op. cit.

New digital platforms could provide the means of making a large number of films available to a broad area, perfect conditions for fostering the 'long tail'. Leaving aside the issue of rights management, there are also no technical constraints on the geographic delivery of that content. The Internet knows no borders, so a consumer in France could view a Polish film via an online VoD service based in Germany. All those niche viewers (regardless of where they live) are brought to one place (albeit virtually) through a digital platform.

Andersen concluded his article with two new 'rules' for the entertainment economy. Rule 1 is to make everything available. All films should be accessible somewhere, and most will find an audience. The second rule is to 'cut the price in half — now lower it'. This refers to the effect digital distribution could have on pricing strategies. This second point is very relevant to European film production.

Here, a parallel is drawn with the music industry, which (thanks mainly to smaller file sizes) has embraced digital distribution before the screen industries. The price of music tracks on digital download services such as iTunes is set to match retail CD prices to avoid so-called 'channel conflict'. If the download price was significantly lower, the music labels would alienate their physical retail outlets and CD sales would drop. The price points for the online retailers are effectively set by the record labels (through high wholesale prices), and are not linked to the actual cost of manufacturing and delivering a track over a digital network. Thus pricing has been set to protect the existing business model.

In reality, it costs less to sell music through a download service than it does to produce CDs and sell through a physical music store. Economic theory (and common sense) suggests that, if a price point is lowered, more units will be sold. Using the cost savings of digital platforms to reduce pricing would further encourage 'long tail' behaviour. Indeed, Andersen suggests that consumers can be 'pulled' down the tail with lower prices for content not in heavy demand.

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