Confidential

Extension of the Television Without Frontiers Directive

An Impact Assessment

Final report for Ofcom

Indepen, Ovum and fathom

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1 Introduction and Summary

1.1 Scope of the study

The recent communication on the i2010 strategic framework[1] recognises the need for an integrated approach to information society and audiovisual media policies in the EU and refers to the need for a consistent set of rules to govern all audio visual content (AVC) services. One way to do this is to extend the rules of the Television Without Frontiers (TVWF) Directive, which currently apply to broadcast TV services, to all AVC services – either wholly or in part. This document is the Final Report for a study which provides a top down impact assessment of such an extension . The precise nature of any extension of the Directive is not known, but for the purposes of this report we have assumed that the revised Directive could cover new areas, including radio and audiovisual content (AVC) delivered over the internet and mobile services. The objective of the project is to inform the debate on any extension of the Directive.

To assess the impact of an extension of the Directive we need to compare future situations with and without an extension. In practice, it will take several years for changes to the Directive to be implemented. However, we expect that the changes will be anticipated by businesses and so could change behaviour from 2006 on. We therefore assume that any changes to the Directive apply from 2006 on[2] and we project impacts for the period to 2010. While, in principle, the analysis should be undertaken over a longer time period market uncertainties make projections beyond 2010 highly debatable.

The analysis focuses on the four largest economies in Europe, France, Germany, Italy and the UK and, as an example of a smaller country, Sweden. We also contrast the regulatory situation in the EU with that in the US and Japan.

1.2 Background

The TVWF Directive provides the legal framework for television broadcasting within the European Union (EU). It is intended to promote freedom of transmission in broadcasting by setting down minimum rules for the regulation of the content of television broadcasts by Member States. The rules are also intended to ensure that the interests of television viewers are fully and properly protected and to promote European and independent production.

EU law distinguishes between “television broadcasting services” subject to the TVWF Directive, and “information society services”, subject to the e-commerce Directive.[3] The TVWF Directive applies only to television broadcasting services.

The TVWF Directive was last amended in 1997. In May 2002, the Culture and Audiovisual Affairs Council decided that the TVWF Directive should undergo an in-depth review, and this

[1] Commission of the European Communities, *i2010-A European Information Society for growth and employment*, COM(2005) 229, 31 May 2005

[2] The Commission plans to propose a revision to the TVWF Directive by the end of 2005. “i2010 – A European Information Society for growth and employment”, COM(2005) 229 final, 31 May 2005.

[3] Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000

was followed in 2003 by series of discussion papers and public hearings.[4] In response to the consultation process, the Commission published a Communication on the subject.[5] The Communication proposed a two-step approach to reviewing the Directive. In the short term, the Commission undertook to provide more clarity on the application of the Directive to new advertising techniques, which was achieved with the publication of the 'Interpretative Communication on certain Aspects of the Provisions on Televised Advertising'.[6]

In the medium term, while noting that no information society service had reached the importance and impact of television broadcasting services, the Commission nevertheless considered that a thorough revision of the Directive might be necessary to take account of technological developments and changes in the audiovisual market.[7] The key question in the review is whether the Directive should be extended to cover new audiovisual services. To provide a better basis for assessing this issue the Commission initiated several studies concerning the impact of controls on advertising and measures to promote European TV production, and the application of co-regulatory measures.[8]

The review of the TVWF Directive has been supported by a European Parliament resolution[9], which noted amongst other things the need for a more flexible and less prescriptive approach to the regulation of applications of new technologies, taking account of user choice and control options.

Finally, the recent Communication on the i2010 strategic framework[10] has recognised the need for an integrated approach to information society and audiovisual media policies in the EU and refers to the need for a consistent set of rules. Papers produced by the Commission for the Liverpool Audiovisual Conference set out many of the issues to be considered in extending the Directive.[11]

1.3 Approach to the impact assessment

This study involves a top down regulatory impact assessment of the possible extension of the Directive. Regulatory impact assessments comprise an assessment of the costs and benefits, risks and stakeholder impacts of a regulatory proposal and consideration of whether the proposal is proportionate to the detriment identified. In the time available for this study we have only been able to quantify a subset of the impacts. Others are addressed qualitatively.

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[4] Commission of the European Communities, *Fourth Report from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on the application of Directive 89/552/EEC "Television without Frontiers"*, COM(2002) 778

[5] Communication from the Commission "The Future of European Regulatory Audiovisual Policy", COM(2003) 784 final, December 2003.

[6] Commission of the European Communities, *Commission Interpretative Communication on certain aspects of the Provisions on televised Advertising in the 'Television without Frontiers' Directive*, COM(2004) 1450

[7] Commission of the European Communities, *The Future of European Regulatory Audiovisual Policy*, COM(2003) 784

[8] Hans-Bredow-Institut, *Study on co-regulation measures in the media*; Carat S.A and Koan, *Comparative study on the impact of control measures on the televisual advertising markets European Union member states and certain other countries*; David Graham and Associates, *Study on the impact of measures concerning the promotion of the distribution and production of TV programmes (Community and national) provided for under Article 25(a) of the directive on television without frontiers* [for more information see http://europa.eu.int/comm/avpolicy/stat/studi_en.htm]

[9] European Parliament resolution on Television without Frontiers, (2003/2033 (INI))

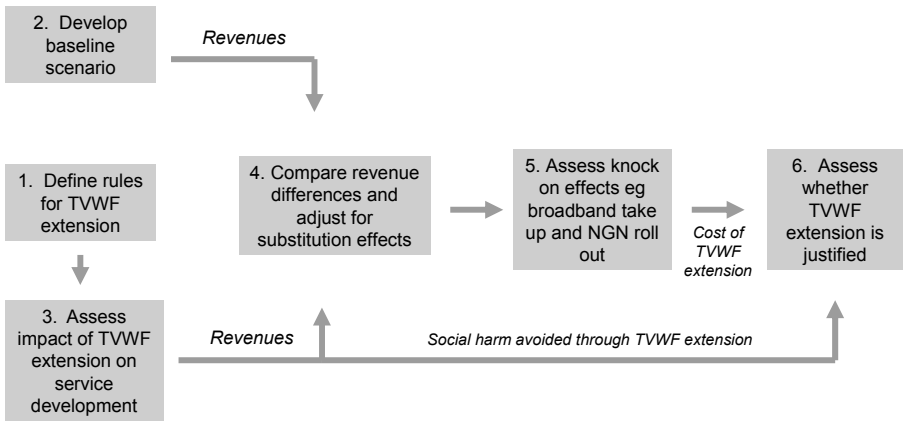
[10] Commission of the European Communities, *i2010-A European Information Society for growth and employment*, COM(2005) 229, 31 May 2005

[11] http://europa.eu.int/comm/avpolicy/regul/regul_en.htm

In principle, an economic appraisal of an extension of the TVWF Directive would seek to quantify the impact on welfare where this comprises the sum of consumer and producer surplus. In practice, this requires detailed information on, and modelling of, the demand for and supply of services. This is not feasible because of lack of suitable data. Our approach therefore is to focus on the potential financial impacts of an extension of the Directive on service development, costs and revenues. The work involves the following steps (see Figure 1.1)

- Step 1: define rules for an extension of the TVWF Directive and the services it might apply to
- Step 2: define the baseline scenario for the development of non-linear audiovisual services in the absence of an extension of the TVWF Directive
- Step 3: consider the impact of extending the TVWF Directive on the baseline scenario in qualitative and quantitative terms
- Step 4: compare the outcomes of the baseline scenario with a scenario involving extension of the Directive and allow for substitution effects. The baseline scenario assumes that the Directive only applies to traditional broadcast TV services and IPTV[12]
- Step 5: assess possible knock on economic and social effects from extending the TVWF Directive
- Step 6: compare the costs generated by this extension with the costs avoided.

Figure 1.1 Overall approach



The analysis is based on secondary data, including published market data, industry commentary and recent studies undertaken for the Commission. In addition, we held discussions with nine industry representatives in the UK.

[12] Internet Protocol Television (IPTV) refers to systems where audiovisual content is distributed to subscribers or viewers using a broadband connection over Internet Protocol.

1.4 Summary of findings

Industry trends

Current developments in the audiovisual sector indicate a number of major trends

- there is a proliferation of digital platforms for delivery of audio-visual content to consumers, including delivery over satellite, cable, terrestrial broadcasting, the Internet, and mobile and DSL platforms. It is far from clear which platforms will succeed. These developments are happening in Asia and the US as well as in Europe

- after many years in which observers have predicted it, convergence between telecommunications and traditional audiovisual platforms is finally beginning to happen and will accelerate over the next five years.

- as part of this convergence there is a move to more interactive television services (with a variety of return channels). This trend should, over time, lead to innovative new forms of both programmes and advertising

- the new AVC services provide opportunities for greater control by both end users and service providers of the content which is viewed. Such functionality could provide ways, other than an outright ban, to protect minors from undesirable content

- in the fixed telecommunications environment, there is a clear business model for the delivery of TV services which largely emulates that of the traditional broadcast media. In the mobile environment, it is not yet clear whether there will be mass consumer demand for video services. However, there is significant investment in services and networks

- there could be a general move away from real time viewing of linear audiovisual content to use of digital recorders (e.g. PVRs, storage in mobile devices) which allow viewing on a time shifted basis. Such devices not only allow the consumer to choose when to view but also give the consumer control over what is viewed and what is deleted before viewing

- increased viewing of pre-recorded material poses a potential threat for advertising funded services, in that advertisements may be skipped. However, there are ways of reducing the extent to which advertisements can be skipped and digital recorders offer the prospect of increasing the value of any advertising through personalised and interactive advertising.

Taking these trends into account Figure 1.2 projects the total monthly number of hours of viewing, listening, or use of the main AVC services in 2010 for five member states[13]. The estimates are based on projections which Ovum has undertaken independently of this study for its commercial clients, and cross checked against other independently produced projections where possible. Figure 1.2 indicates that traditional TV and radio remain the dominant media over the period to 2010, whether this is viewed in terms of people's use of

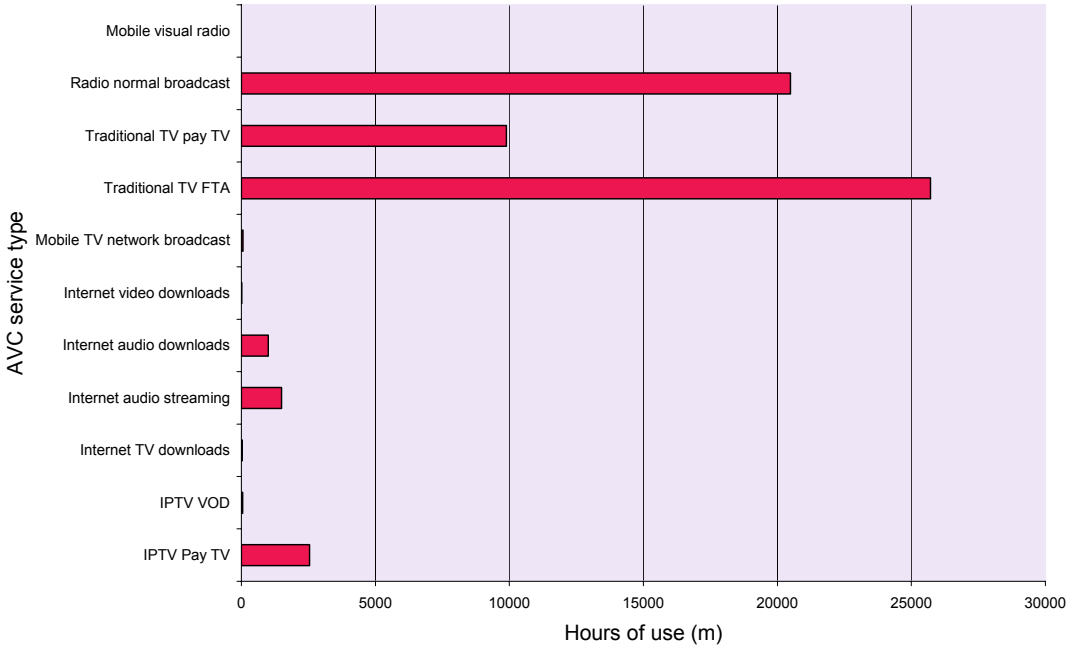
[13] France, Germany, Italy, Sweden and the UK

time or in terms of revenues. New services are starting from a very low base in 2005 relative to traditional TV and radio, but are forecast to grow rapidly. As with any new technology, signs of mass market penetration would not be expected to be seen until at least five years after the services entered the market. All of the new AVC media have relatively low use by 2010 with the exception of

- Internet audio downloads. This is in essence a new form of distributing content traditionally delivered in physical form.
- Internet audio streaming. We note many of these services comprise either rebroadcasts or simulcasts of traditional broadcast radio, and as such will comply with national radio regulation.
- IPTV. This service offers linear pay TV and pay per view services together with non-linear services (such as video on demand) over broadband networks.

Figure 1.2 suggests that both the benefits and the costs from extending the TVWF Directive are likely to be small in the short term.

Figure 1.2 Projected monthly hours of use by AVC media in 2010 for the five study countries



Source: Indepen, Ovum and fathom analysis

Extending the TVWF Directive

There is some debate about the extent which the existing TVWF Directive already covers new AVC services. In some countries this directive is interpreted in a way which excludes IPTV services; in others it is interpreted in a manner which includes them and, under certain interpretations, includes other new AVC services as well. Such uncertainties are not good for investment and market development. Any revision to the TVWF Directive gives the European Commission an opportunity to remove this uncertainty.

We have assumed that the current TVWF Directive covers traditional TV and IPTV services but does not currently affect other AVC services. We have then assessed the impact of extending the TVWF Directive in a low and a high impact scenario, as shown in Figure 1.3 and Figure 1.4 respectively. The shaded areas in the figures indicate extensions of the Directive and the unshaded areas indicate the baseline scenario. The main difference between the high and low scenarios is that radio is covered by the full set of TVWF rules in the high scenario but not in the low scenario.

In both the high and low scenarios, we assume that non-linear services[14] will be subject to the basic tier of rules which address

- Protection of minors and public order and respect for human dignity
- Identification of advertisements
- A ban on tobacco and prescription drug advertisements
- Right of reply
- Identification of the content provider

We assume all linear TV services[15] will be subject to both the basic tier and more detailed rules concerning

- Quotas on EU content and independent production
- Advertising frequency restrictions and limits on advertising minutes per hour
- Restrictions on alcohol advertising
- Restrictions on sponsorship
- Access to events of national importance.

[14] All on demand point-to-point services such as downloads of TV programmes and video on demand services

[15] Traditional TV and radio broadcast services and radio or TV content streamed over the Internet

Figure 1.3 Low impact extension scenario

	Rules for service format	
Platform	**Linear**	**Non linear**
Traditional TV	Full TVWF	Basic TVWF
IPTV	Full TVWF	Basic TVWF
Internet – TV	Full TVWF	Basic TVWF
Internet – radio	None	None
Mobile cellular TV	Full TVWF	Basic TVWF
Mobile TV network	Full TVWF	Basic TVWF
Radio broadcast	National rules equivalent to TVWF basic rules + 15% limit on advertising time	None

Figure 1.4 High impact extension scenario

	Rules for service format	
Platform	**Linear**	**Non linear**
Traditional TV	Full TVWF	Basic TVWF
IPTV	Full TVWF	Basic TVWF
Internet – TV	Full TVWF	Basic TVWF
Internet – radio	Full TVWF	Basic TVWF
Mobile cellular	Full TVWF	Basic TVWF
Mobile TV network	Full TVWF	Basic TVWF
Radio broadcast	Full TVWF	Basic TVWF

1.5 Assessing the costs and benefits of the extension

There are a number of potential benefits and costs from extending the TVWF Directive. We set out our conclusions on each of them below – dealing first with possible benefits and then with possible costs.

1.5.1 Potential Benefits

1.5.1.1 Single market completion

Extending the TVWF directive could generate substantial benefits in terms of completing the single market if the services affected were largely Pan European in nature[16]. But in practice the new AVC services are either national (eg IPTV) or global (the various Internet based AVC services). So the single market benefits of extending the TVWF directive are likely to be weak.

We also note that single market objectives are largely met through the e-commerce Directive and/or require other measures (such as a degree of harmonised spectrum use) for their achievement.

1.5.1.2 Promoting competition in AVC services

Proponents of an extension argue that it is important to regulate all the AVC services in the same way to allow the development of 'technology neutral' competition. We conclude that:

- extension of the TVWF Directive of itself would not promote competitive equality between service providers on different platforms. Rather it would strengthen the position of incumbent service providers relative to new entrants by making entry more costly.
- the EU framework for regulation of electronic communications networks and services provides for new entrants and emerging markets to be treated differently from incumbent services and networks because of differences in market importance and influence. We suggest these same concepts should be applied in the context of the TVWF Directive discussions.

1.5.1.3 Measures on protection of Minors/Public Health/and surreptitious Advertising

There are clear benefits in applying the basic tier of regulation to protection of minors, to uphold public order and public health and to guard against surreptious advertising. But we are concerned that the application of these rules by an outside body might unduly restrict market development. We suggest that these rules are best applied through a process of co-regulation.

1.5.1.4 Supporting EU and independent content production

In the case of detailed rules concerning EU and independent production quotas we consider there are likely to be few benefits from an extension. This is because the rules would either be considered not practicable and so not implemented or, if implemented, would raise operators' costs and reduce their programming flexibility, and thereby inhibit new service development. This in turn means there would be little stimulus to the EU production sector. In addition the regulations would favour large service providers that can afford to pay for EU content in particular and/or locate outside the EU. This could lead to a reduction in diversity and plurality of audio-visual content when compared with the baseline scenario.

[16] This was a major reason for introducing the directive in the first place so as to allow the development of a Pan European satellite TV industry

1.5.1.5 Right of reply

An extension of right of reply to online services is unlikely to offer many benefits in practice. The law of defamation already provides one route for right of reply and the new media themselves provide many new opportunities for reply. At the same time extending the right of reply is likely to increase legal uncertainty and to raise substantial operation problems – given the billions of websites now accessed from the EU.

1.5.2 Potential Costs

1.5.2.1 Compliance costs

An extension of the basic tier of regulation to non-linear services would lead to additional compliance and enforcement costs. For example, regulatory costs could be at least ten times those of currently administering the TVWF Directive because tens of thousands of service providers would be subject to regulation. Many of these costs could be avoided if a self-regulatory approach was adopted. Such an approach is already being used to deal with consumer protection issues in some Member States for video on demand and mobile services.[17]

1.5.2.2 Costs of legal uncertainty

Extending the TVWF Directive to new AVC services would generate considerable legal uncertainty. For example the legal obligations of service providers on right of reply is unclear. More generally the distinction between linear and non linear services is already blurred and further technology changes will rapidly blur this distinction, or any other the Commission may make, further. There are major costs associated with this legal uncertainty. For example:

- service providers are likely to take a more cautious approach and develop services more slowly than their counterparts in the US where the AVC regulatory regime is, in most aspects, more liberal
- global service providers are more likely to shift investment from the EU to other, less highly regulated, parts of the world.

1.5.2.3 Costs for specific services

We have identified the following cost impacts for specific services:

- application of the EU quota rules could have a significant negative impact on the development of IPTV and mobile TV services. The traditional TV service providers have acquired many of the most attractive programme rights. So entrants will need considerable flexibility in sourcing content in the early years of service development. Quota rules would substantially reduce this flexibility
- application of EU quota rules could lead to a loss of niche format radio stations such as those specialising in jazz or country and western music

[17] See, for example, http://www.imcb.org.uk/

- application of the advertising frequency rules[18] could significantly constrain the use of interactive advertising on IPTV services. Such techniques require frequent advertising breaks to work effectively.

On the face of it the advertising frequency rules do not seem appropriate for mobile TV, where the attention span of the viewer is 5 to 10 minutes. But in practice we expect mobile TV content to consist of short programmes[19] and the rules of the TVWF Directive already allow advertisements between programmes, however short.

1.5.2.4 Costs of ISP compliance

If, as we assume, EU ISPs are required to ensure that content supplied from EU located servers complies with TVWF rules, then it is possible that:

- large ISPs will move their operations outside the EU to escape regulation
- small ISPs, who cannot purchase low cost backhaul from (say) the US to the EU, will restrict the AVC services they offer.

1.5.2.5 Indirect costs – the impact on broadband rollout

Extending the TVWF Directive to new AVC services could make it more difficult for entrants to develop compelling content - both by raising their costs through legal uncertainty and additional compliance and removing flexibility e.g. through EU quota rules on content. This in turn would weaken the case for the last 40% of households purchasing broadband and lead to a slow down in broadband take up. Such effects have serious economic consequences. We estimate that the net present value of EU GDP forgone by a one year delay in broadband adoption could be up to €125bn.

Our analysis suggests that there is a potential conflict between two of the objectives of the European Commission's i2010 programme. On the one hand, it seeks to extend the TVWF directive to include all AVC services. On the other, it seeks to maximise broadband roll out across the EU. Achieving the first objective will make it more difficult to achieve the second.

1.6 Overall Conclusion

Table 1.1 summarises our findings in tabular form. We conclude that the cost of an extension could outweigh the benefits unless aspects of an extension are limited. In particular:

- the net benefits of extending the regulations are likely to be negative if the detailed tier of regulation is applied to linear TV services (IPTV, Internet TV and mobile TV)
- there may be net benefits from applying the basic tier of regulation if it is done through co-regulation

[18] Which require that adverts are inserted into programmes at intervals of 20 minutes or more

[19] Eg 5 minutes slots

Table 1.1 The costs and benefits of extending the TVWF Directive

Category	*Area of impact*	*Assessment of impact*
Direct benefit	Single market completion	Little benefit. New AVC services are national or global rather than pan European in character
	Protection of minors, public health etc/	Significant social benefits for applying basic tier of rules. But best done through self or co-regulation
	Support for EU and independent production	Few benefits while extending quota rules would reduce diversity and plurality of content
	Right of reply	Few benefits and potentially significant costs
Indirect benefit	Promote competition in AVC services	Opposite effect to that intended. Extension would weaken rather than strengthen competition
Direct cost	Compliance	Compliance costs would be raised by at least an order of magnitude as Directive captures tens of thousands rather than hundreds of service providers
	Legal uncertainty	Greater legal uncertainty would lead to slower service development in the EU
	Specific service costs	Application of quota rules would make development of new linear TV services more difficult
		Application of quota rules would lead to loss of niche radio stations
	Costs of ISP compliance	Large ISPs would move outside EU and small ISPs would restrict AVC services offered
Indirect cost	Impact on broadband roll out	Extension would slow development of compelling AVC content by fixed network operators and so weaken the case for the last 40% of households buying fixed broadband connections

Convergence means that we are about to see an explosion in the number of AVC services available to end users. It is clearly important that basic rights are protected when consumers use these services. But our study suggests that, in an attempt to provide these safeguards, an extension of the TVWF Directive could reduce the pace at which new AVC services and competition with traditional AVC service providers develops. For example, the rules of an extension could apply to tens of thousands rather than hundreds of service providers. The cost of applying these rules varies relatively little with the size of the service provider while the benefits are proportionate to the size of the service provider's audience. This inherent characteristic of the future supply of AVC services means that the aggregate benefits of an extension are unlikely to outweigh the aggregate costs.

1.7 Report structure

The remainder of this report is structured as follows:

- Chapter 2 provides a description of the market context for the work
- Chapter 3 sets out the regulatory scenarios to be investigated
- Chapter 4 gives the baseline market scenario

- Chapter 5 discusses the likely impacts of extensions to the TVWF Directive.

Annex A discusses alternative ways of classifying services as linear and non-linear.

2 Developments in the Audiovisual Sector

The audiovisual sector is changing rapidly, primarily as a result of the advent of digital networks which can support a wealth of data, voice and audiovisual services. Services are also increasingly interactive. These developments provide the context for the review of the TVWF Directive.

In this chapter, we provide a brief review of developments in the traditional broadcast industry, broadband IP networks and services, mobile networks and services, and advertising.

2.1 Traditional TV broadcast sector

Of the countries covered by this analysis, the UK and Germany are the two largest television markets in the EU, while France and Italy – with similar size economies to the UK – are somewhat smaller. The UK and Italy have the most developed advertising markets, while France and the UK have the largest pay TV markets with over 35 per cent penetration (compared to 17 per cent in Germany). The size of the television broadcasting industry in proportion to GDP ranges from 0.55 per cent (Italy) to 0.85 per cent (the UK).

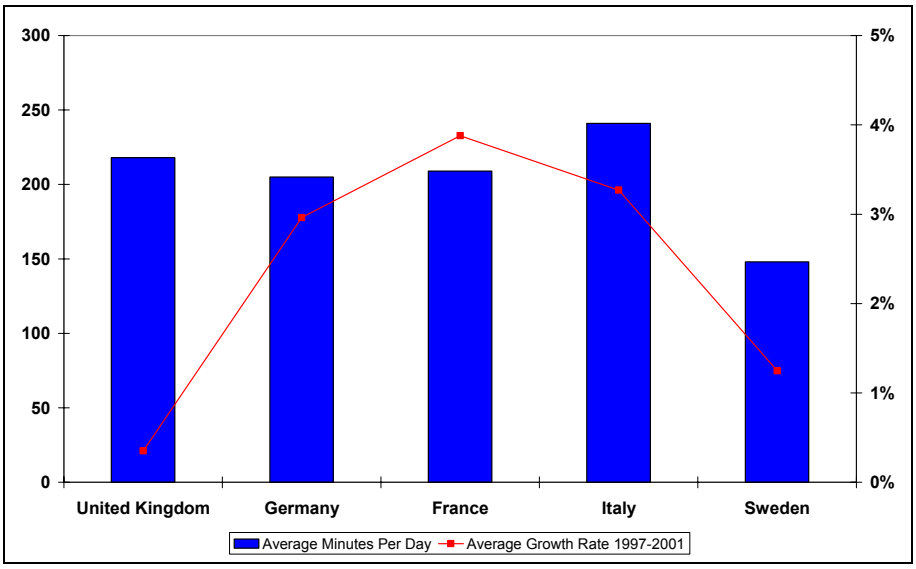
2.1.1 TV viewing

The numbers of channels available to viewers has grown considerably over the past 15 years, but this has not been an accompanied by similar growth in viewing levels.[20] Rather audiences have fragmented, with the incumbent terrestrial public service and commercial broadcasters losing audience to multi-channel TV.

The levels of TV viewing (as measured in average minutes watched per day) and annual growth rates for the five countries we are considering are shown in Figure 2.1. As can be seen, viewing levels are much lower in Sweden than elsewhere, and are generally higher in Italy.

[20] The number of primary channels in the EU increased from 68 in 1993 to 86 in 2002. Similarly, the number of secondary channels has increased from 85 in 1993 to 432 in 2002. Source: David Graham and Associates Limited, *Impact Study of Measures (Community and National) Concerning the Promotion of Distribution and Production of TV Programmes Provided for Under Article 25(a) of the TV Without Frontiers Directive*, 24 May 2005, p. 45

Figure 2.1 Television Viewing - Average minutes per day (2001) and average annual growth rates (1997-2001)

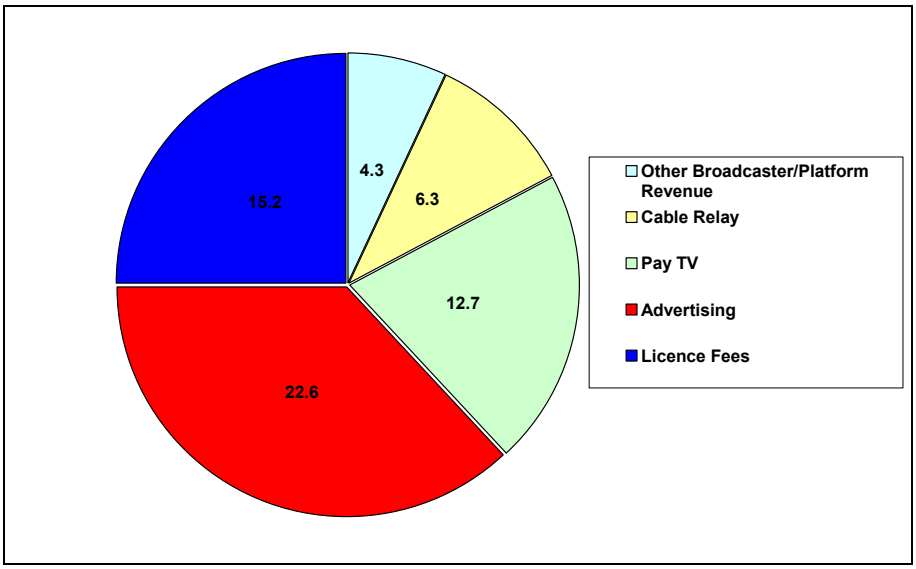


Source: Eurostat in *Cinema, TV and radio in the EU – Statistics on audiovisual services* (2003 edition)

2.1.2 TV revenues

Revenue for the EU television sector totalled €61.1billion in 2002, with over 90 per cent of this revenue derived from three main sources – licence fees; advertising; and consumer payments.[21] Figure 2.2 indicates that the largest source of revenue for the television sector is advertising.

Figure 2.2 TV revenue by source in the European Union (2002) €bn

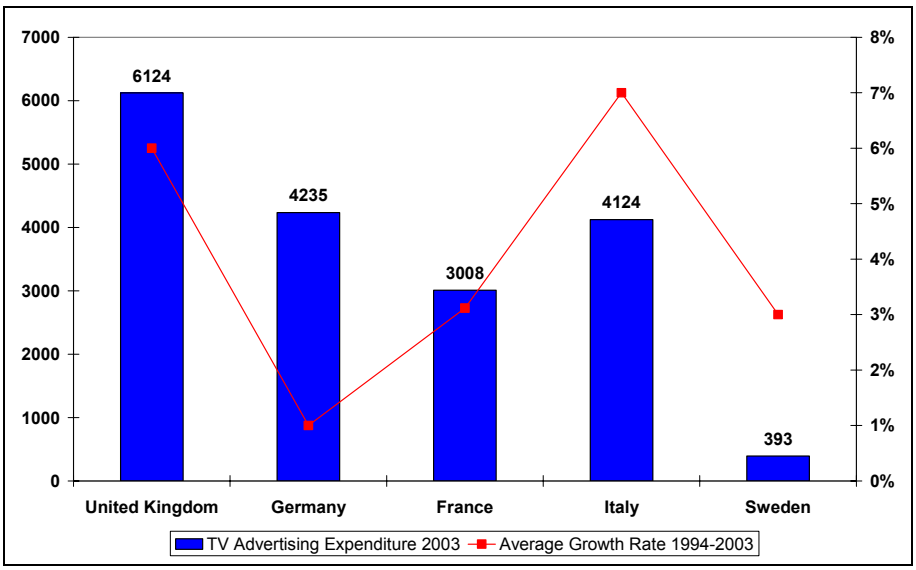


[21] David Graham et al (2005) op. cit.

Source: David Graham and Associates Limited, *Impact Study of Measures (Community and National) Concerning the Promotion of Distribution and Production of TV Programmes Provided for Under Article 25(a) of the TV Without Frontiers Directive*, 24 May 2005, p. 35

Figure 2.3 shows the total television advertising expenditure for the EU countries considered as part of this study.

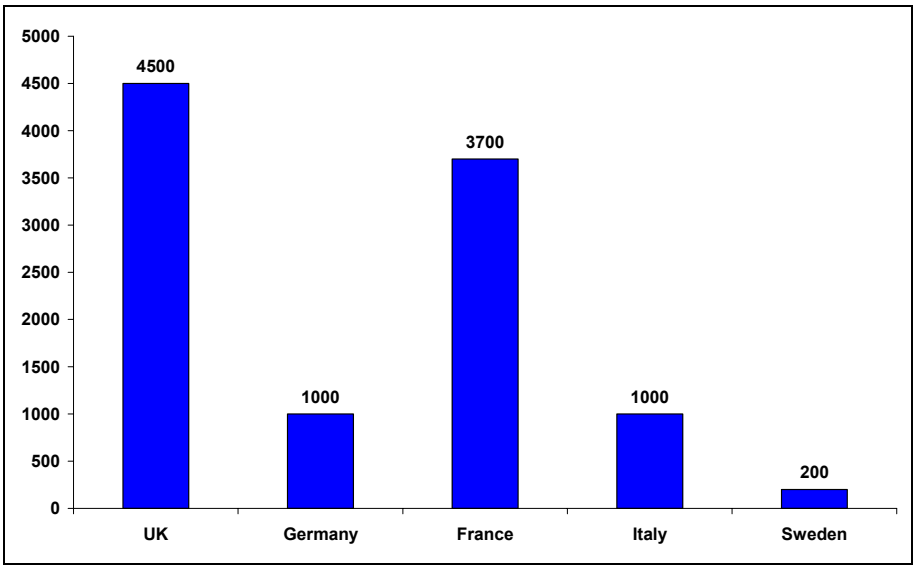
Figure 2.3 Total Television Advertising Expenditure 2003 (€ million) and average annual growth rate (1994-2003)



Source: UK – The Advertising Association (converted from UK£ using an average exchange rate of 1.4); Zenith Optimedia, *The European Advertising & Media Forecast* (Swedish figures converted from SKr using an average 2003 exchange rate of 0.11)

Television advertising revenues are particularly high in the UK and low in Sweden. This is also the case when the data are considered on a per capita basis, with the UK highest, at €112, and Sweden the lowest, at €44. Between 1994 and 2003, the highest growth in TV advertising revenue occurred in Italy and the UK at 7 and 6 percent respectively. However, between 1995 and 2002, subscription revenues grew at a much faster rate of 15 per cent (compared to overall industry revenue growth of 6.5 per cent). Figure 2.4 shows pay TV revenues are particularly important in France and the UK.

Figure 2.4 Pay TV Revenue (Subscriptions) 2002 (€ million)



Source: David Graham and Associates Limited, *Impact Study of Measures (Community and National) Concerning the Promotion of Distribution and Production of TV Programmes Provided for Under Article 25(a) of the TV Without Frontiers Directive*, 24 May 2005, p. 35

Pay TV channels also account for a growing proportion of advertising revenues. Evidence from the UK suggests that advertising on multi-channel TV competes with that on traditional public broadcasting but that audience fragmentation is likely to have a neutral effect on TV advertising revenues overall – the fall in traditional channel revenues being offset by the rise in multi-channel revenues.[22]

2.1.3 Move to digital

Each of the three main delivery systems – satellite, cable and terrestrial – has been moving from analogue to digital transmission. By 2002, digital satellite had more or less replaced analogue satellite in countries such as the UK and France. Cable and terrestrial upgrades are happening more slowly, with some operators still being largely analogue (e.g. cable in Germany and terrestrial in Italy).

In the case of terrestrial transmission, the European Commission has taken the view that switchover from analogue to digital terrestrial TV (DTT) should be completed in Member States by 2012 and that Member States' spectrum plans should be flexible enough to allow the introduction of other electronic communications services, in addition to DTT.[23] Four of the five countries under study have announced switchover dates of 2012 or earlier, and only France has still to indicate a switchover date.

The conversion of broadcast platforms to digital content and transmission gives their operators new opportunities to broaden the range of services to include many non-linear audiovisual services which both complement and compete with the services of new media

[22] See "Economic Analysis of the TV Advertising Market", PWC for Ofcom, December 2004

[23] "Communication on accelerating the transition from analogue to digital broadcasting", COM(2005) 204 final, 24 May 2005.

players. In particular, CATV operators will compete with telecommunications network operators to supply bundles of digital services such as the triple play bundle of voice telephony, fast Internet access and TV.

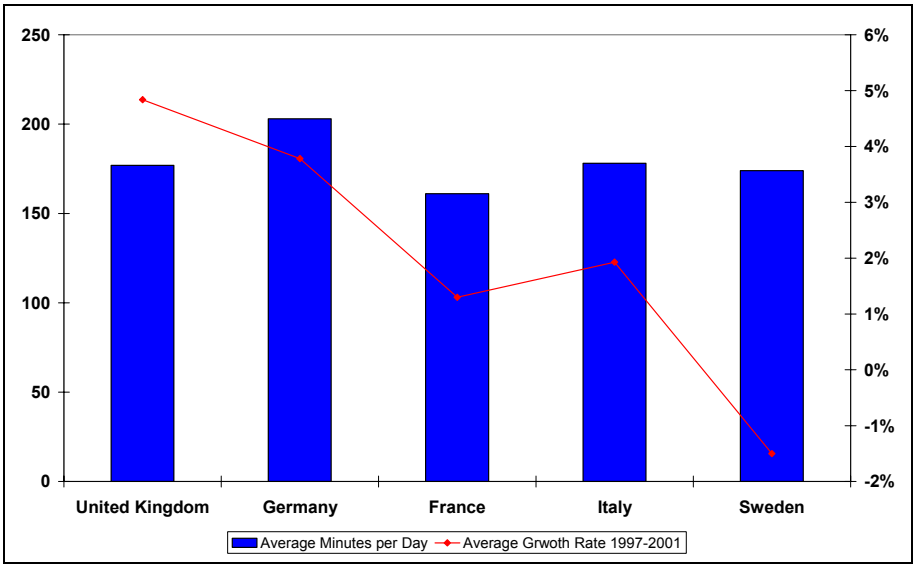
2.2 Radio

2.2.1 Radio listening

Figure 2.5 shows the average minutes per day spent listening to the radio in 2001 for the countries included in this analysis, together with average annual growth rates for the period 1997-2001. While levels of listening are similar across countries growth rates differ considerably.

In this regard, we note that it is becoming increasingly important to capture listening to radio via alternate technologies. In the UK, for example, 42.4 per cent of adults now listen to the radio over the internet, on their television sets or via their mobile telephones. This is even more significant among 15-24 year olds, with 61.2 per cent using new delivery platforms to listen to radio. Between 2004 and 2005, the number of people listening to the radio via new technology grew by 22.1 per cent indicating a trend that is likely to continue.

Figure 2.5 Radio Listening – Average minutes per day (2001) and average annual growth rate (1997-2001)

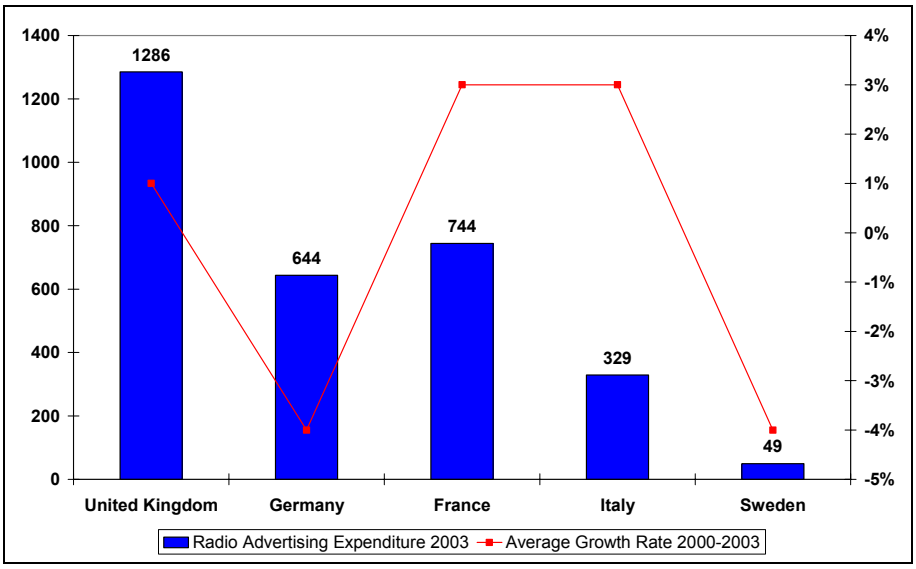


Source: Eurostat in *Cinema, TV and radio in the EU – Statistics on audiovisual services* (2003 edition)

2.2.2 Radio revenues

Radio advertising expenditures in 2003 in the five countries studied are shown in Figure 2.6. This shows the UK radio advertising market is much more developed than that elsewhere, despite (or perhaps in spite of) the fact that the BBC (which is licence fee funded) attracts more than half the audience. France and Italy had the highest average growth in radio advertising expenditure between 2000 and 2003 at 3 per cent, while both Germany and Sweden had 4 percent decline in the average annual growth in radio advertising expenditure between 2000 and 2003.

Figure 2.6 Radio advertising revenues 2003 (€ million) and average annual growth rate (2000-2003)



Source: UK - WARC in *The European Marketing Pocket Book 2005* (converted from US$ using an average 2003 exchange rate of 1.5); Zenith Optimedia, *The European Advertising & Media Forecast* (Swedish figures converted from SKr using an average 2003 exchange rate of 0.11)

2.2.3 Move to digital

There are a number of different standards for digital radio. Digital audio broadcasting (DAB) services have been launched in many European countries (including the five countries covered by this study) though the coverage of services varies widely. Only in the UK has there been rapid growth in the purchase of DAB receivers and so noticeable levels of listening to DAB services. In the UK, over 1.5 million DAB digital radio sets have been sold and sales forecast to reach around 10 million by 2008.[24]

A digital standard for AM frequency bands, called Digital Radio Mondiale (DRM), has been developed and services are expected to be launched using the standard in Continental Europe later this year. Joint DRM/DAB receivers are also expected to be on sale before the end of 2005.

In parallel with these developments, TV broadcasters are making radio services available on their digital platforms to supplement TV services. In Germany digital multi-media broadcasting (DMB) services, broadcasting video as well as audio content to cars, public transport and portable devices, are being piloted. As DMB is an enhancement of the DAB[25] standard, it can use the existing DAB network and might in time replace it.

2.3 Broadband IP networks and services

Fixed broadband services are being rolled out in Europe over existing infrastructure. EU-25 broadband penetration (lines per 100 population) has risen from almost zero in 2002 to 9% in

[24] Radio Advertising Bureau, *Radio listening via new technologies – Q1 2005* (www.rab.co.uk)

[25] It adds MPEG4 video quality to the T-DAB standard.

January 2005, and is 11% in France, 8% in Italy, 8% in Germany, 15% in Sweden and 10% in the UK.[26]

Fixed operators are replacing their circuit switched networks with an all IP network and extending fibre from the core network into parts of the access network. Networks will then be able to support a wide range of multi-media interactive services, including IPTV, and faster broadband access speeds. Wireless technologies such as WiFi and WiMax will also allow consumers to access these services when on the move. Already we observe extensive development of internet radio services; in future we can expect similar formats for TV services delivered over IP, as networks are enabled to support higher speed services and as new compression technologies are deployed.

In this report, we make a clear distinction between IPTV networks and TV-over-the-Internet. The former platform is engineered by the network operator to ensure acceptable quality of service for real time IP transmission of TV content to customers with broadband connections to their network. Servers are located close enough to the customer to prevent congestion and consequential poor quality of service through real time viewing. In contrast, TV-over-the-Internet is provided on a best efforts basis. This means that real time viewing is likely to encounter quality of service problems. TV-over-the-Internet is therefore more suitable for downloading AVC for later viewing rather than for real time viewing.

2.3.1 IPTV

IPTV platform operators offer both linear pay TV and pay per view services together with non-linear services such as video on demand. For example

- in Italy, FastWeb offers a bouquet of free terrestrial, satellite TV, premium thematic channels and live coverage of Italian championship league football matches, together with video on demand services.

- in Sweden, TeliaSonera has launched a digital television service for its broadband subscribers which provides access to a number of TV packages, video on demand and an electronic program guide (EPG).

- in the UK, Homechoice offers combined linear TV, VOD and broadband internet services, giving subscribers a set-top box offering 1 Mbps broadband access and over 40 channels of broadcast and on-demand television.

Experience to date by IPTV service providers suggests that commercial services need to be centred on traditional linear pay TV services, with video on demand offered to differentiate services from rivals offering pay TV over satellite and terrestrial transmission platforms.

In theory, there are differences between linear TV offered on traditional broadcast platforms and over IPTV platforms. While the former offers identical content to all who receive the broadcast, IPTV linear service viewers can receive personalised content during the advertising breaks - with different sets of advertisements going to different IP addresses on the network according to the viewing habits or postcode of each viewer. In practice,

[26] "Broadband Access in the EU: situation at 1 January 2005, Communications Committee, European Commission, COCOM05-12, June 2005.

traditional broadband platforms may be able to provide some personalisation of advertisements e.g. using PVRs. The move to personalise advertisements has substantial potential, but use of this technique is, as yet, limited.

2.3.2 Internet based AVC services

The Internet now offers a wide range of both linear and non-linear AVC services. These include:

- video streaming of live events e.g. live feeds from television programmes such as Big Brother
- streaming of radio programmes over the Internet, including new free and subscription radio services, and existing free services that could be of particular interest to listeners who cannot receive the programme by terrestrial transmission
- services such as Launchcast where personalised linear music radio programmes are streamed to the listener. [27]

Streaming of TV broadcasts is also possible in theory. But, as discussed above, quality of service problems make this an unattractive option commercially when compared with non-linear alternatives. Significantly, broadcasters typically do not acquire or own internet rights to the programming broadcast on their channels. Therefore their options for streaming these services are currently limited.

Non-linear Internet services include:

- downloads of TV programmes and films to PCs or possibly personal video recorders. The BBC is now experimenting with services where, once the first ten downloads are made from the broadcaster's server, distribution is then done using peer to peer services. In the US a film down load service is provided by Movielink.
- downloads of radio programmes for immediate listening or storage for replay on an MP3 player. For example, the BBC plans to trial its Interactive Media Player in September 2005. The Interactive Media Player allows viewers to catch up on TV and radio programmes they may have missed up to seven days after they have been broadcast, using the internet to download programmes to their computers
- music downloads for a fee e.g. iTunes
- PODcasts. Here the Internet user browses sites offering PODcast content and subscribes to those of interest. PODcast software, downloaded to the users PC, searches the subscribed sites on a regular basis and downloads new content to the PC for subsequent listening[28] or viewing. Current PODcasts are restricted mainly to talk-based radio content, where the download times are short and there are no digital rights issues. But, once digital rights management systems and payment mechanisms are established, PODcasts could extend to films, music and TV programmes.

[27] Customers use the Internet to rate favourite genres and then to refine their choice by rating artists and albums.

[28] e.g. on an MP3 player

2.4 Mobile networks and services

Content currently offered over mobile networks primarily comprises music, edutainment, games, video, news, transport information and adult entertainment. It is expected that there will be frequent, short duration, viewing of AVC on mobile devices while the user is on the move rather than the extended "sofa based" viewing model of traditional TV.

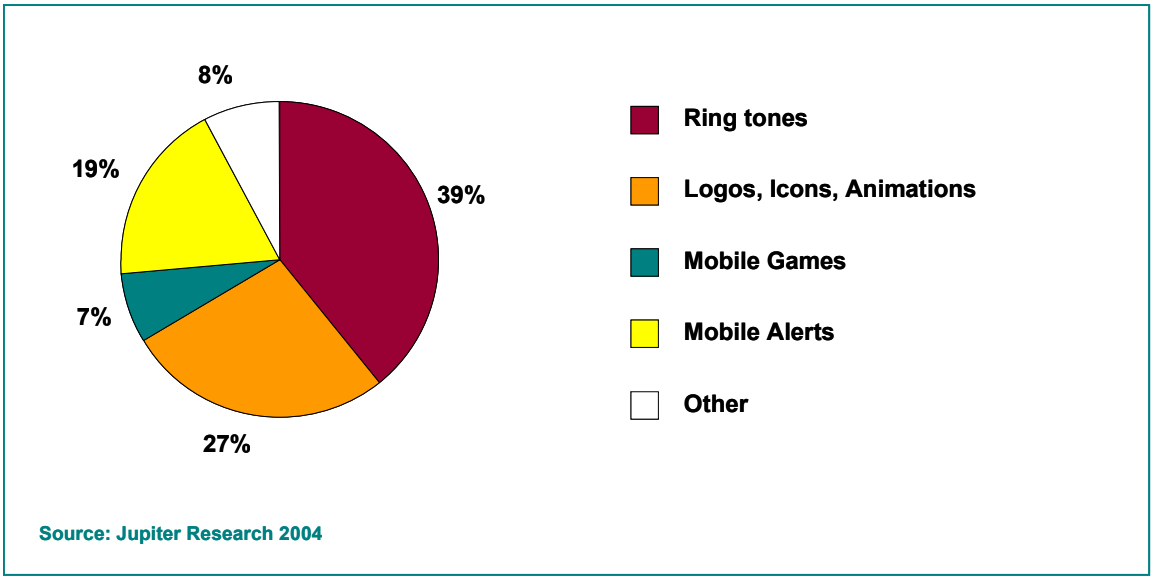
The OECD has reviewed potential developments in mobile content and a summary of their reported estimates of the current and projected size of the mobile content market is given in Table 2.1. As can be seen, the estimates vary widely but all forecast substantial growth in the mobile content market – roughly a five-six fold increase in the market by 2010. The majority of revenues come from ring tones, logos and other personalisation content. Figure 2.7 shows the breakdown of mobile content revenues for the UK.

Table 2.1 Projections of mobile data and content revenues

Current estimate	Forecast
Global	
Total market: EUR 13bn (2003)	Total market: EUR 60bn (2007)
Gaming: EUR 0.8bn (2004)	Gaming: EUR 5bn (2010)
Mobile content EUR 4.5bn (2003)	Mobile content: EUR 10bn (2006)
Western Europe	
Not available	Mobile content: EUR 6bn (2008) (1)

Source: Digital Broadband Content: Mobile Content, OECD, DTSI/ICCP/IE(2004)14/REV1, March 2005.
(1) These estimates show the wide variety of predictions from different sources

Figure 2.7 Breakdown of UK mobile content revenues (2004)



Source: Jupiter Research 2004

2.4.1 Mobile cellular networks

Most cellular operators already offer a range of short TV clips to subscribers especially on their 3G networks. Content here includes news, sports clips and entertainment. The service is funded through a mix of advertisements, pay per view and traffic charges levied by the network operator. Some operators are now starting to offer continuous TV, with streaming of a range of linear programmes – almost all re-transmissions of traditional TV channels. For example

- In Germany, Vodafone offers video clips from popular RTL programmes to customers. In January 2005, Vodafone became the first German mobile telecommunications company to show a complete feature film on 3G phones, one day before the film was broadcast on television.

- Orange's 3G customers in France can watch more than 20 live TV channels, as well as a selection of live football and rugby games. Orange estimates that four fifths of its French 3G customers watch live TV over their phones. On their UK 3G network, Orange plans to offer Orange TV whose initial channel line-up includes: ITN News, CNN International, Cartoon Network, Toon World, Extreme Sports Mobile, Comedy Time, Fashion TV and exclusive 24/7 access to reality shows.[29]

- In the UK, the mobile network 3 provides a video jukebox service which enables customers to watch music videos on their mobile phones and an "At the races" channel for horse racing enthusiasts.

- In the US, Sprint is currently offering two TV services to its cellular phone customers. One (MobiTV) offers real time broadcasts TV and the other (Sprint TV) offers short clips of news, sports, weather and entertainment services. The services each cost $9.99 per month and there is an option to buy additional channels of clips, each of which costs $4.95 per month.

In the US, there is rapid growth in the production of video material especially made for mobile phones. A mobile division of NBC produces as many as 20 news broadcasts a day for phone viewing, tailored for a 2 inch screen with anchor close-ups and oversized graphics. ABC is expanding a 24 hour digital news channel available on mobile phones, among other platforms. 20th Century Fox has already launched a series of "mobisodes" – television programs whittled down to one-minute episodes. Similar developments are happening in Europe. For example, Vodafone has created one minute mobisodes for its existing 3G services based on the successful TV program '24'.

As well as viewing video clips online via the cellular network, users can also download video clips for subsequent viewing on their mobile phones[30] - for example for viewing on public transport when travelling to work.

[29] Customers can download the application free from the Orange World portal and subscribe to the service for £10 per month, which includes approximately 20 hours of viewing. (Source: Infobites 27/05/2005)

[30] In March 2005, Microsoft launched a service that lets users download videos to mobile devices – MSN Video downloads at a cost of $19.95 a year. Content includes news, sports, music videos and entertainment.

Mobile cellular networks can also provide mobile visual radio services. These services rely on two platforms in combination. The radio broadcast network, analogue or digital, provides the radio signal to the terminal while the cellular network provides images to the terminal screen which are linked to the radio signals being transmitted.

2.4.2 Mobile TV Networks

Businesses in the five study countries are now in the process of considering whether or not to invest in broadcast transmission networks which will transmit TV and radio services to mobile devices (e.g. 2G/3G terminals, portable games consoles, in-car entertainment devices and PDAs) that also integrate one of the following technologies: DVB-H, DMB or DAB. Services have the potential to be interactive through the use of the 2G/3G network for the return path.

For example

- In Korea, SKT launched a satellite DMB service in Korea in May 2005 and 20,000 subscribers signed up in the first 2 weeks.
- Trials of DVB-H services are or are about to be conducted in a number of European countries, including Finland, France, Germany, the Netherlands, and the UK. The UK trial offers 16 video channels and a number of radio and data services.[31]
- In the UK, BT Livetime is undertaking trials using DAB technology to deliver three TV and 50 radio channels to mobile handsets and media players with built-in DAB receivers.
- In the US, Qualcomm is planning to launch TV services delivered to mobile devices using its proprietary “Mediaflo” technology and spectrum in the traditional TV broadcast bands.

Mobile TV networks will primarily provide linear AVC services. They will probably offer a number of free-to-air advertising funded channels, and potentially public service channels as well as bouquets of subscription television channels. Although the services are linear the user will be able to download content to storage devices within the mobile terminal so as to give an on-demand experience. However, it is currently uncertain whether there will be sufficient demand for mobile TV content to justify building the transmission network that would be required as compared with using existing capacity on 3G networks.[32]

Viewing sessions on mobile TV are shorter than those for traditional TV. A 2 year mobile television trial undertaken in Finland found that most mobile television watching session lasted less than 10 minutes.[33] Figure 2.8 illustrates the distribution of session lengths during

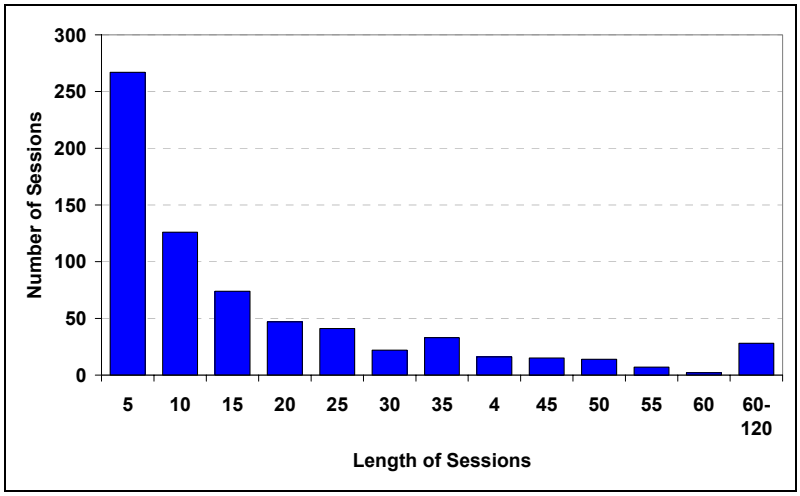
[31] Content partners/channels announced so far include: BSkyB (Sky News, Sky Sports News, Sky Travel); Chart Show Channels Ltd (Chart Show TV); Discovery Networks Europe (Discovery Channel); Shorts International (Shorts TV - a bespoke short film channel); and Turner Broadcasting (CNN, Cartoon Network).

[32] One advantage of using DAB to transmit the video service is that much of the transmission network may already exist to provide radio services. The downside is there is potentially less capacity as compared with use of DVB-H.

[33] Caj Södergård (ed.), *Mobile television – technology and user experiences: report on the mobile-TV project*, VTT Information Technology 2002

the study. A smaller Berlin study[34] conducted in 2004 found that the average user spent between 11-15 minutes per session watching mobile television.

Figure 2.8: Distribution of session lengths on mobile TV in Finland (minutes)



Source: Caj Södergård (ed.), Mobile television – technology and user experiences: report on the mobile-TV project, VTT Information Technology 2002

2.5 Advertising

Fragmentation of audiences has led traditional broadcasters to consider increased use of advertising methods that may be more attractive to advertisers than simple spot advertising (e.g. sponsorship, product placement). At the same time the development of digital media allows new forms of advertising (e.g. interactive advertising and virtual advertising).

The distribution of media spend by European advertisers is slowly shifting towards new platforms. Television remains the largest area of media spend for global advertisers: accounting for 37.6% of display advertising revenue in 2004.[35] However, the Internet is taking a large and increasing share of spend as user numbers increase and advertising techniques develop: Zenith Optimedia forecast an increase in the Internet's share of advertising spend from 3.5% in 2004 to 4.4% in 2007. However, it appears that the growth in the Internet's share is, to a large extent, at the expense of non-audiovisual media such as newspapers and magazines, which are forecast to see their share of total media spend decline from 43.5% in 2004 to 42.5% in 2007 (see Table 2.2).

[34] BMCO Friendly User Trial

[35] Source: Zenith Optimedia, 2005

Table 2.2 Global shares of display advertising revenue by medium (%)

	2003	2004	2005	2006	2007
Newspapers	30.5	30.1	29.8	29.6	29.3
Magazines	13.8	13.4	13.3	13.2	13.2
TV	37.0	37.6	37.7	37.9	37.8
Radio	8.9	8.7	8.6	8.4	8.3
Cinema	0.4	0.4	0.4	0.4	0.4
Out-of-home	5.4	5.3	5.3	5.3	5.4
Internet	3.2	3.6	3.8	4.1	4.4

Source: ZenithOptimedia. The shares sum to 99% because a few countries (Denmark, China and the Philippines) group have a category for 'other' advertising

At the same time, increasing numbers of spot television advertisements are being enhanced through interactive television. In the UK, where the BSkyB digital satellite television platform has achieved a high user base, the number of interactive advertisements increased from 17 in 2000 to over 400 anticipated in 2005.[36] In May 2004, 23% of digital television viewers had interacted with an advertisement.[37]

The majority of spend is still focused on advertising (television spots, Internet banners) with sponsorship being a relatively low area of spend – with the exception of sports events. For example, in the UK ITV gained £37m or 2.3% of its total advertising revenue from sponsorship in 2004.[38]

Table 2.3 provides summary description of different forms of advertising. We anticipate that spot advertising will continue to be the dominant form of advertising in linear TV environments, but that interactive and other new forms of advertising will grow particularly if PVRs undermine the efficacy of spot advertising.

A development that could have a significant impact on the advertising industry over the next five years is the increased used of PVRs by consumers.[39] There is evidence that most PVR users skip advertisements[40] leading some to predict a significant loss of advertising revenues for linear broadcasters. However, theoretically there are several ways to advertise to viewers who use PVRs to fast-forward through commercial breaks during programmes

[36] Source: Zip Television

[37] Source: BMRB International, Third Audience Interaction Monitor report, May 2004

[38] Source: ITV annual report

[39] PVRs are easier to use than VCRs because recordings can be set directly from the electronic programme guide rather than needing to programme a VCR timer.

[40] Accenture in *'TV ad-skipping losses to hit $27 billion over five years',* April 14 2005 (www.Adage.com)

- Advertisers can place interactive billboards on top of fast-forwarded advertisements which viewers will see as a logo and a call to action prompting them to interact.

- Advertisers can place infomercials on the PVRs, usually on the programme or scheduling menu, which viewers can voluntarily watch.

- PVRs collect information on what viewers watch and this information can be used to send programme recommendations as well as customised advertiser messages to them based on their choices. These advertisements may be presented in conjunction with the programme recommendations or elsewhere on the platform.

- To the extent that PVRs are platform-integrated devices marketed by pay-TV operators, as is mainly the case at present in the US and Europe, then the provider has an incentive to limit the capability for skipping advertisements.[41]

- Our research suggests that most EU supplied PVRs do not have a facility to skip advertisements.

It remains to be seen whether and how European digital TV operators will integrate these features into their platforms. However, if PVRs become mass entertainment devices, it seems likely they will change the nature of advertising over linear services. Advertisers will seek new ways of reaching consumers and at the same time look for methods to enhance spot advertisements. The former is likely to support the growth of advertising on the Internet and other new platforms.

Learning from the development of Internet advertising in the US, it is likely that sponsorship will account for a more significant proportion of spend than it does on television. Excluding search, classifieds, slotting fees and email (to focus on true 'media spend'), sponsorship accounted for 24% of spend compared to 54% for display advertisements and 22% for rich media advertisements.[42] It is likely that this balance will be carried through to emerging audio-visual content on the Internet where sponsorship in the form of in-programme sponsorship, infomercials and product placement are likely to benefit. Split screen advertising, in which an advertisement is displayed within the same viewing window as the audiovisual content will pick up the equivalent of display advertising in Internet audiovisual advertising.

It is probable that advertisers will exploit interactive features that can be used in conjunction with spot advertisements in audiovisual content across all platforms. These features will include direct response advertising, secondary advertising – both of which are currently supported by interactive television advertising, and as the market progresses targeted and personalised advertising.

[41] Some broadcast networks in the US have developed methods of "tricking" PVRs into not recognising an ad when it is recorded by placing a small portion of the programme into the middle of a pod of commercials or by irregularly programming the commercial breaks. Another method of altering a PVRs accuracy once used by NBC is to schedule a programme a few minutes before or after the hour, cutting off a portion of the programme.

[42] Interactive Advertising Bureau / PricewaterhouseCoopers, IAB Internet Advertising Revenue Report, Q2 2004, fathom analysis

2.6 Implications

These developments in the audiovisual sector indicate a number of major trends:

- there is a proliferation of digital platforms for delivery of audio-visual content to consumers and it is far from clear which platforms will succeed. These developments are happening in Asia and the US as well as in Europe

- after many years in which observers have predicted it, convergence between telecommunications and traditional audiovisual platforms is finally beginning to happen and will accelerate over the next five years. But, as Table 2.4 indicates, the level of use of new AVC services is currently at a very low level when compared with use of traditional AV platforms

- as part of this convergence there is a move to more interactive television services (with a variety of return channels). This trend should, over time, lead to innovative new forms of both programmes and advertising

- the new AVC services provide opportunities for greater control by both end users and service providers of the content which is viewed. Such functionality could provide ways, other than an outright ban, to protect minors from undesirable content.

- In the fixed environment, there is a clear business model which largely emulates that of the traditional broadcast media. In the mobile environment, it is not yet clear whether there will be mass consumer demand for video services. However, there is significant investment in services and networks.

- there could be a general move away from real time viewing of linear audiovisual content to use of digital recorders (e.g. PVRs, storage in mobile devices) which allow viewing on a time shifted basis. Such devices also give the consumer control over what is viewed and what is deleted before viewing.

- Increased viewing of pre-recorded material poses a potential threat for advertising funded services, in that advertisements may be skipped. However, there are in principle ways of reducing the extent to which advertisements can be skipped and digital recorders offer the prospect of increasing the value of any advertising through personalised and interactive advertising.

Table 2.3 Types of Advertising and trends in use

Type of Advertising	Description	Growth potential
Spot	Advertising spots, including isolated single spots	Grows with GDP. Future risk due to PVR adoption
Split screen	AV or static advertising displayed in a discrete part of or around the programme window	Growth on the internet where browsers and media players are inherently split screen
Sponsorship, around programme	Sponsor and programme brands shown side-by-side in content that is displayed immediately before and after a programme (bookends). Includes break bumpers and vignettes.	Growth in line with spot advertising (1)
Sponsorship, in programme	Sponsor's branding is shown on physical elements of the programme (e.g. set) and virtual ones (e.g. on-screen graphics). It is incidental to the editorial.	Advertiser funded programming expected to increase (1)
Sponsorship, infomercial	The programme is about the sponsor's product or the product plays an integral role in the editorial of the programme as a whole.	Significant for internet content (1)
Product placement	Includes traditional product placement – incidental to the editorial, integration – placement of a product in a position that is integral to the editorial, and verbal reference – mention of a product by on-screen talent (actors / presenters).	Small potential opportunity – growth expected Assuming no separation requirements
Features		
Direct response advertising	Advertising with a call-to-action to prompt response by telephone, SMS, interactive television or the Internet to find out about or purchase a product.	Rapid growth expected
Secondary advertising	Second layer of advertising (separate from the main service) that viewers click through to from an initial advertisement.	Growth stimulated by take-up of interactive TV
Targeted (push) advertising	Advertising that is pushed to viewers according to their preferences or viewing / usage habits.	Growth opportunity on non-linear TV and IPTV
Personalised advertising	One-to-one advertising that is personalised for the specific viewer	Growth opportunity on non-linear TV
Virtual advertising	Advertising that is inserted during production (e.g. virtual billboards at sports events). It does not physically exist. Games offer a significant virtual advertising opportunity.	Likely to grow as digital production techniques increase in sophistication

(1) Mainly applies to new media services

- Audiovisual services offered on new platforms are likely to be consumed by younger viewers more than any other age group. The profile of broadband users is bias towards younger users. In 2004, 18-24 year olds made up 28% of the broadband user base though they accounted for only 16% of the population.[43] Experience from the US shows that the Internet is the medium of choice for 51% of 18-24 year olds compared to 43% of 35-54 year olds. The same pattern is repeated on mobile: for example, 17% of 18-24 year old mobile users browse the mobile Internet, compared to only 7% of the mobile population as a whole.[44]

Table 2.4 Level of use of AVC service platforms in the five study countries – 2005

Platform/service	Number of users (m)
Traditional TV	239
Traditional radio	181
IPTV	1
Internet TV	0.1
Internet audio	<10
Mobile cellular TV	1
Mobile TV networks	0

Source: Table 4.2 in this report. Note Internet TV excludes downloads of video clips.

[43] Source: Enders Analysis, Broadbanders, OPA

[44] Source: Forrester Consumer Technographics, 2003

3 Regulatory Scenarios

3.1 Introduction

This chapter answers three basic questions:

- how might the European Commission propose to extend audio visual content (AVC) regulation by extending the TVWF Directive?
- which AVC services would be covered by this extension?
- for which AVC services would an extension restrict market development?

We then focus in Chapter 4 on developing a baseline scenario for the evolution of those AVC services where the TVWF extension introduces significant new regulatory constraints. This forms the basis for assessing the likely economic impacts of an extension in Chapter 5.

3.2 How might the TVWF Directive be extended?

3.2.1 The existing TVWF Directive

The current TVWF Directive[45] was enacted in October 1989 and amended in 1997. It provides the main instrument for regulating audio visual content in Europe. It was designed to remove barriers to interstate trade in TV services while, at the same time, establishing a minimum set of rules on what TV programmes can be broadcast within the EU. Member states can apply stricter rules to broadcasters who come within their jurisdiction if they wish.

In summary, the main rules of the current directive are as follows:[46]

- access to designated events of national importance on free television may be mandated by Member States (Article 3a)
- excluding news, special events, games, advertising and teletext, broadcasters should transmit more than 50% of EU works and more than 10% of works coming from independent producers (Articles 4 and 5)
- advertisements should be separately identified and surreptitious or subliminal advertising is banned (Article 10)
- there are limits on when and how frequently advertisements can be inserted in programmes with a minimum of 20 minutes between advertisements (Article 11)
- advertisements should not exceed 15% of daily transmission time or 20% of transmission time in any one hour (Article 18)
- the duration and frequency of teleshopping windows is restricted to 15 minutes and eight windows respectively (Article 18a)
- advertisements must not prejudice respect for human dignity; discriminate on grounds of race, sex, or nationality; or encourage behaviour prejudicial to health, safety or the protection of the environment (Article 12)

[45] 89/5552/EEC

[46] Where we refer to advertisements or advertising, read advertisements and teleshopping

- advertisements for tobacco products and prescription drugs are banned (Articles 13 and 14)
- there are restrictions on advertisements for alcoholic beverages (Article 15) and to protect children (Article 16)
- there are restrictions on sponsorship with a ban on sponsorship by tobacco or drug companies, and a ban on sponsorship of news and current affairs programmes (Article 17)
- the content of sponsored television programmes must not be influenced by the sponsor and must not encourage the purchase or rental of the sponsor's or a third party's products. Sponsored programmes should be clearly identified as such (Article 17)
- broadcasters should not transmit programmes which might seriously affect the well being of children (Article 22)
- broadcasts should not contain any incitement to hatred on grounds of race, sex, religion or nationality (Article 22a)
- anyone defamed by a TV programme should have a right to reply (Article 23).

There is some debate about the extent which the existing TVWF Directive already covers new AVC services. In some countries this directive is interpreted in a way which excludes IPTV services; in others it is interpreted in a manner which includes them and, under certain interpretations, includes other new AVC services as well. Such uncertainties are not good for investment and market development. Any revision to the TVWF Directive gives the European Commission an opportunity to remove this uncertainty.

We have assumed that the current TVWF Directive covers traditional TV and IPTV services but does not currently affect other AVC services. We have then assessed the impact of extending the TVWF Directive in low and a high impact scenarios as described below.

3.2.2 Our understanding of the proposed extension

Given the market developments set out in Chapter 2, broadcast TV is now only one of many ways in which the public can receive AVC services. So the Commission proposes to extend the scope of the TVWF Directive to cover all AVC services, however delivered. AVC services are defined to include all services which are made up of moving pictures and sounds and which can be delivered to the general public[47] by electronic communications networks[48]. We assume that text services (such as teletext) are outside the scope of an extension.

In discussing possible extensions to the TVWF Directive the European Commission distinguishes two tiers of regulation – a ***basic*** tier which applies to ***all*** AVC services and a ***detailed*** set of rules which applies only to ***linear*** services.[49] We refer to the combination of the basic and detailed rules as the ***full*** set of rules from now on. Figure 3.1 illustrates and specifies which rules from the current Directive are in which tier.

[47] The term the "general public" is for each member state to define

[48] As defined in Article 2 of the Framework Directive 2002/21/EC

[49] Rules applicable to Audiovisual Content Services, Issues Paper for the Liverpool Audiovisual Conference, EC, July 2005

Figure 3.1 The proposed extension to the TVWF Directive

Tier	Linear services	Non linear services	Rules applying in tier
Basic rules	Yes	Yes	Protection of minors and public order (Arts 22, 22a) Respect for human dignity (Art 12) Identification of adverts (Art 10) Ban on tobacco and prescription drug adverts (Art 13 and 14) Right of reply (Art 23) Identification of content provider (new)
Detailed rules	Yes	No	Quotas on content (Art 4 and 5) Advertisement spot frequency and max % of transmission time (Art 11 and 18) Restriction on alcohol adverts (Art 15) Restrictions on sponsorship (Art 17) Access to events of national importance (Art 3a)
Services included	Traditional TV services Traditional radio services	Downloads of AVC AVC on Demand	

This proposal requires the Commission to distinguish between:

- ***linear*** AVC services. The Commission includes traditional TV and radio broadcast services and radio or TV content streamed over the Internet under this label
- ***non-linear*** AVC services where the Commission includes all on demand point-to-point services such as downloads of TV programmes and video on demand services[50].

The position of radio is unclear. The European Commission has stated that radio will not be covered by the extension, but it is possible that the European Parliament will argue that radio services, and especially those provided over TV sets, DAB receivers and mobile handsets where radio is linked to visual images, should be included within the scope of the new Directive. It is also difficult to see how legislators could justify applying the full set of rules to traditional TV broadcast without also applying it to radio. We therefore consider radio in our discussion on AVC services and look at the impact of the TVWF extension on radio as one of our regulatory scenarios.

The rules set out above would also appear to cover the downloading of games with AVC and the playing of such games on-line. This is a fast growing market. For example a recent PriceWaterhouseCoopers study[51] estimates that the market for mobile and on-line games

[50] In the report by David Graham and Associates of 24/5/05 non linear services are defined as "*AVC on demand so that the viewer picks what they want to watch and when. Non linear viewing may be achieved by a variety of means including the PVR, which enables the viewer to store and recall programmes, and video on demand services via cable networks and the Internet, where material is stored remotely and delivered to the viewer on demand*"

[51] Global Entertainment and Media Outlook, 2004, PriceWaterhouseCoopers

generated $2.2 billion in revenues worldwide in 2004 and that this will grow to $29 billion by 2008. However the Commission has explicitly excluded this service from the scope of the new Directive and there are fewer arguments to suggest that the European Parliament will demand extension to this market. So we do not consider it further in our analysis.

In addition to extending the rules of the TVWF Directive to new media services, the European Commission also proposes some jurisdictional constraints. In particular it suggests that ISP should be obliged to ensure that all AVC delivered over the Internet from servers located in the EU complies with the basic tier rules of the extended Directive. This includes servers which mirror content hosted outside the EU.

3.3 Which AVC services would be covered by the extension?

There is a rapidly growing number of AVC services which are covered by the extension. We can classify the services according to:

- the platform/network over which they are delivered. The major platforms include the traditional terrestrial, satellite and cable TV platforms (analogue and digital), the Internet, the fixed network of the main telecommunication operators, mobile cellular networks and mobile TV networks
- whether the AVC service is linear or non-linear in nature. This enables us to identify which services would be affected by the basic rules of the proposed TVWF extension and which by the full rules as described in Figure 3.1.

Figure 3.2 summarises the results of this process. We discuss each of the services in more detail, platform by platform, in Chapters 2 and 4.

Figure 3.2 The main AVC services covered by the scope of the proposed TVWF extension

Platform	Linear services	Non linear services
Traditional TV: terrestrial broadcast satellite CATV	Publicly funded TV Advertising funded TV Pay TV NVOD Radio over TV platform	VOD e.g. from CATV ops Services for download for later consumption Interactive services
IPTV networks	Pay TV Pay per view	VOD Interactive services
Internet – radio	Simulcasts Launchcasts	PODcasts Music downloads eg iTunes Radio programme downloads
Internet – TV	Simulcasts	Services for download to PVR POD casts in future
Mobile cellular network	Video streaming Mobile visual radio	Download video clips Interactive services
Mobile TV network	Pay TV Pay per view	Download to mobile terminal
Radio broadcast	Publicly funded radio FTA advert funded radio Mobile visual radio	Services for download to storage device

3.4 Where might the extension constrain commercial development?

In some cases, national regulation could already constrain the development of AVC services to the same or a greater degree than an EU wide extension. Based on research material supplied by Ofcom, our review of national regulations in the five study countries indicates that:

- there is considerable variation in the national rules which constrain what editorial content and what advertisements can be included in TV broadcasts. For example:
    - in France there are French local language quotas and rules setting minimum levels for the proportion of French films which should be shown;
    - in Sweden the rules on advertising aimed at children are especially strict and in the UK the proportion of time for advertising on public service channels is significantly lower than that required by TVWF rules
    - in Germany and the UK there are rules to promote regional identity.

  But overall national regulations align reasonably well with the TVWF rules

- national rules on radio broadcasts are equally varied. Overall these rules align reasonably well with TVWF rules. In addition, all of the study countries, excluding the UK, impose limits on the proportion of advertisements[52] which are allowed. There are no quotas for EU content except in France, where more than 40% of music played should be French.

In evaluating the impact of an extension of the TVWF Directive we propose to assume that:

- the full set of TVWF rules (with no relevant additions from national regulations) currently apply to TV broadcast services
- national regulations mean that the basic tier of TVWF rules already applies to radio broadcast services. In addition, there is a 15% limit on the amount of advertising time which radio broadcasts can transmit.

Given these assumptions, we can summarise the impact of the proposed TVWF on the various categories of AVC services as shown in Figure 3.3, Figure 3.4 and Figure 3.5. The shaded areas in Figure 3.4 and Figure 3.5 highlight the services where an extension might constrain commercial developments.

Figure 3.3 Baseline regulatory scenario

Platform	**Rules for service format**	
	Linear	**Non linear**
Traditional TV	Full TVWF	None
IPTV	Full TVWF	None
Internet – TV	None	None
Internet – radio	None	None
Mobile cellular	None	None
Mobile TV network	None	None
Radio broadcast	National rules equivalent to TVWF basic rules + 15% limit on advertising time	None

Figure 3.3 presents our ***baseline regulatory scenario*** in which we assume that the scope of the TVWF Directive remains unchanged. For the purposes of this report, we assume that the starting point for services running on mobile TV network platforms is one of no regulation though we recognise this might not be the case in practice. Given the embryonic nature of these services the question as to whether the TVWF Directive already applies to them has not yet been resolved in different Member States. The way in which we expect the services to be used suggests that application of the full TVWF rules would be inappropriate. By assuming no regulation in the baseline scenario we can test this hypothesis.

[52] Which are in line with TVWF rules.

We also assume that there no regulations, other than basic horizontal laws plus the e-services Directive apply to non linear services. In practice there are varying regulations in member states. So, in some cases, the effect of extending the TVWF Directive, both in terms of both costs and benefits, would be less than our assessment.

Figure 3.4 then presents the ***low impact extension scenario*** in which we assume that, in line with European Commission statements, only the TVWF basic rules apply to radio.

Finally, Figure 3.5 presents a ***high impact extension scenario*** where we assume that the full extension of the TVWF rules will apply to radio broadcast services.

Figure 3.4 Low impact extension scenario

	Rules for service format	
Platform	**Linear**	**Non linear**
Traditional TV	Full TVWF	Basic TVWF
IPTV	Full TVWF	Basic TVWF
Internet – TV	Full TVWF	Basic TVWF
Internet – radio	None	None
Mobile cellular TV	Full TVWF	Basic TVWF
Mobile TV network	Full TVWF	Basic TVWF
Radio broadcast	National rules equivalent to TVWF basic rules + 15% limit on advertising time	None

Figure 3.5 High impact extension scenario

	Rules for service format	
Platform	**Linear**	**Non linear**
Traditional TV	Full TVWF	Basic TVWF
IPTV	Full TVWF	Basic TVWF
Internet – TV	Full TVWF	Basic TVWF
Internet – radio	Full TVWF	Basic TVWF
Mobile cellular	Full TVWF	Basic TVWF
Mobile TV network	Full TVWF	Basic TVWF
Radio broadcast	Full TVWF	Basic TVWF

Comparing Figures 3.4 and 3.5 with Figure 3.3 suggests that there are three main questions to answer in setting the impact of the TVWF:

- does the application of basic TVWF rules to non-linear AVC services cause significant commercial damage?
- to what extent does the application of full TVWF rules cause commercial damage to the new TV services running on the Internet, on cellular mobile networks and on mobile TV networks?
- does the application of full TVWF rules cause significant commercial damage to radio services?[53]

In addition we need to ask whether the requirement on ISPs to ensure that all AVC originating on servers located in the EU complies with the basic tier TVWF rules raises ISP costs significantly.

We discuss these issues further in Chapter 5.

[53] High impact scenario only

4 Baseline Market Scenario

4.1 Introduction

In this chapter, we set out our baseline market scenario for the development of the major AVC services between now and 2010 in the five study countries[54] in the absence of any extension to scope of the TVWF directive. Table 4.1 lists the services considered.

Table 4.1 The AVC services covered

Platform	Service category	Section	Projections?
IPTV	Pay TV Video on Demand	4.2 4.3	yes yes
Internet	TV streaming TV downloads Audio streaming Audio downloads	4.4 4.5 4.6 4.7	no[55] yes yes yes
Mobile cellular networks	Video streaming Video downloads	4.8 4.9	yes no[56]
Mobile TV networks	Video broadcast Video downloads	4.10 4.11	yes no[57]
Traditional TV broadcast platforms	Publicly funded + Advertising funded + Pay TV	4.12	Yes
Traditional radio broadcast platforms	Public funded Advertising funded Subscription radio	4.13	Yes
Traditional radio plus cellular mobile	Mobile visual radio	4.14	Yes

In each case we:

- Provide a description of the service and the nature of the content it delivers. We also assess whether it is likely to meet TVWF quota rules.
- Make an assessment of the target audience for the services, and whether AVC is pushed to the audience (push service) or actively selected by the consumer (pull service).
- Consider the likely funding models for the service and the degree to which the service depends on advertising revenues

[54] France, Germany, Italy, Sweden and the UK

[55] Projections have not been provided because we expect this market to be small in the period to 2010 because the quality of service will be poor.

[56] Projections are not provided because we expect this market to be small because of the cost of downloads over 3G networks.

[57] Projections for this service are included in those for mobile TV.

- Consider the main rivals so that we can consider whether differential AVC regulation might distort competition between service providers
- Provide an assessment of the drivers and barriers to take up of the service
- Provide estimates of current levels of use in the five study countries combined and projections of expected levels of use by 2010. These estimates and projections are presented in Table 4.2
- Highlight, where appropriate, differences between the five study countries in terms of their use of the services and the way take up might grow
- Provide order of magnitude estimates of the hours of viewing/listening per month. We can then combine these estimates with projections of overall levels of use of each service to see how important the new AVC is in comparison with mainstream TV services. Again Table 4.2 presents our estimates.

Table 4.2 Projected use of AVC services in the five study countries

Platform	*Services*	*Variable*	*2005*	*2010*	*Source*
IPTV	Pay TV	Households (000)	1181	9419	Ovum Digital On-line advisory service
		Revenues (€m)	322	2058	Ovum Digital On-line advisory service
		Hours viewed per month	112	118	As for traditional pay TV
IPTV	VOD	Households (000)	383	3665	Ovum Digital On-line advisory service
		Revenues (€m)	35	347	Ovum Digital On-line advisory service
		Hours viewed per month	6	6	Ovum Digital On-line advisory service
Internet	TV downloads	Users (000)	100	4000	Ovum estimate based on revenues of Real Networks
		Revenues (€m)	20	420	Ovum estimate based on revenues of Real Networks
		Hours viewed per month	6	6	Ovum Digital On-line advisory service
Internet	Audio streaming	Users (000)	N000	N0000 (8)	Ovum estimate
		Revenues (€m)	Small	Small	Ovum estimate
		Hours listened per month	25	28	25% of traditional radio broadcasts assumed
Internet	Audio downloads	Users (000)	1200	5000	Ovum estimate
		Revenues (€m)	140	450	Ovum Digital On-line advisory service
		Hours listened per month	20	20	Ovum Digital On-line advisory service
Mobile cellular	Video downloads	Users (000)	3650	37909	Ovum Wireless Multimedia advisory service
		Revenues (€m)	98	1730	Ovum Wireless Multimedia advisory service
		Hours viewed per month	0	0	Ovum Wireless Multimedia advisory service
Mobile TV network	TV broadcast	Users (000)	0	19272	Ovum Wireless Multimedia advisory service
		Revenues (€m)	0	963	Ovum Wireless Multimedia advisory service
		Hours viewed per month	0	5	Ovum Wireless Multimedia advisory service
Traditional TV	FTA	Households (000)	82300	86020	Total TV households (2) x % FTA (3)
		Turnover (€m)	36285	40639 (5), (7)	Total TV revenues (2) x % FTA (3)
		Hours viewed per month	112	118	Total average hours (2) for 2005 then assumes 1% pa growth
Traditional TV	Pay TV	Households (000)	31670	33080	Total TV households (2) x % Pay TV (3)
		Turnover (€m)	11483	14928 (6)	Total TV revenues (2) x % Pay TV (3)
		Hours viewed per month	112	118	Total average hours (2) for 2005 then assumes 1% pa growth
Traditional radio	Normal broadcast	Users (000)	180807	182945 (4)	Population times 67% who listen to radio (4)
		Turnover (€m)	8511	9843 (2), (7)	Public and commercial radio turnover
		Hours listened per month	99	112 (2)	
Traditional radio plus cellular mobile	Mobile visual radio	Users (000)	0	1000	Ovum Wireless Multimedia advisory service
		Revenues (€m)	0	16	Ovum Wireless Multimedia advisory service
		Hours listened per month	10	11	10% of traditional radio listening assumed

(1) Revenues converted from $ at $1.21 per €
(2) Eurostats "Cinema, TV and radio in the EU" for 2001 projected at average grwoth rate for the previous 5 years
(3) From David Graham and Associates study
(4) From Radio Advertising Bureau - UK %
(5) Assumes 12% growth in revenues in nominal terms from 2005 to 2010
(6) Assumes 30% growth in revenues in nominal terms from 2005 to 2010
(7) Includes public funding eg licence fees
(8) Indicates an order of magnitude estimate in the range 1000 to 9000 (Internet audio streaming 2005)

For each AVC service Table 4.2 presents estimates for the five study countries combined of:

- The number of users in 2005 and 2010. In the case of IPTV and traditional TV platforms the term users refers to households. For other platforms it refers to individuals. To estimate viewer hours in the former case we need to multiply by the number of people per household
- The revenue generated by each service. Traditional free to air service revenues include both advertising revenues and public funding
- The number of hours of viewing or listening per user. In the case of pay TV services this measures the total number of viewing hours regardless of whether the user views pay TV or free to air TV.

We can see that the number of TV households is projected to continue to grow at around 1% per annum and this is the major source of revenue and user growth for the traditional services. We have not taken account of changes in household size or any substitution effects between the new services and the traditional ones. This means there is an element of double counting in the table and so the revenue estimates are on the high side.

The bulk of this chapter provides a more detailed assessment of each of the services listed in Table 4.1. We then provide a summary of findings and commentary upon them at the end of the chapter.

4.2 Pay TV Services over an IPTV platform

4.2.1 Service Description

Telecommunications operators will offer broadband customers TV services over an IP network where the servers are located close enough to the customer to avoid congestion and allow delivery of broadcast quality video services. The operator's primary product is a linear format pay TV offering with enhanced two-way interactivity plus optional video on demand. The service is often bundled with voice telephony and fast internet access to provide a triple play offering in competition with CATV operators. The main target market for the service is those customers already using or considering purchase of a pay TV service. The service is mainly a push service.

Since this service is already considered as broadcast TV in most study countries EU content should exceed 50%, though we note that Graham et al (2004) found that most of the pay TV services they surveyed did not achieve the EU content levels specified in the existing rules.[58]

4.2.2 Funding Model

The main funding for the service comes from subscribers, with a subsidiary revenue stream from advertising. Service providers may offer a small number of free channels for market entry purposes. Some service providers charge by the day[59] or on a pay-per-view basis.

[58] P137, Impact of Measures Concerning the Promotion of TV Programmes (Community and National) Provided for under Article 25(a) of the TV Without Frontiers Directive, Workshop 14 October 2004. David Graham Associates.

4.2.3 Main Rivals

Pay TV services delivered over traditional platforms are the main direct competitors. IPTV may also be an alternative to free-to-air terrestrial television.

4.2.4 Factors affecting market take-up

Growing acceptance of the concept of pay TV and a desire for wider choice are shifting consumer tastes in favour of the pay-TV services offered on IPTV platforms. Higher broadband penetration and lower storage costs mean that the cost of supply is falling rapidly.

The main barriers to take up are:

- The existence of competing pay TV services from satellite and cable TV operators (and some off-air broadcasts)
- Difficulties in getting access to premium content such as recent films and live sports events
- Lingering concerns about the price and performance of the technology.

4.2.5 Country Differences

France, Italy and Sweden are the three study countries where the IPTV market is most developed. In France, France Telecom and two of its main rivals now compete strongly for customers, while FastWeb and Telecom Italia do the same in Italy. We expect these countries to maintain their lead. In the UK concern about the strength of Sky in the pay TV markets delayed BT's entry into the market until recently. In Germany Deutsche Telekom is pushing TV over the Internet rather than IPTV. This reflects restrictions in Germany, which prevent organisations owned by the Federal Government, such as Deutsche Telekom, from providing broadcast TV services.

4.3 Video on demand over IPTV Platforms

4.3.1 Service Description

To complement their pay-TV services, IPTV network operators supply video on demand services which help to differentiate them from satellite pay-TV rivals. The service requires the customer to actively select the AVC and is aimed at the mass market.

There is a high probability that such VOD services will provide less than 50% EU content, given their reliance on films, music videos and popular TV entertainment much of which comes from the US.

[59] Eg Top Up TV in the UK

4.3.2 Funding Model

The service is funded primarily on a pay-per-view basis. Subscription models[60] are also likely and there may be some advertising revenues.

4.3.3 Main Rivals

The service competes directly with VOD services offered by CATV operators. It is also an alternative to DVD and video cassette rental and purchase, and to visits to the cinema.

4.3.4 Factors affecting market take-up/country differences

VOD over IPTV platforms is a complementary service to pay TV offered over the same platform. So the drivers and barriers to take-up, and the country differences, are the same as those discussed above.

4.4 Video streaming over the Internet

Here TV is streamed over the Internet to the user for immediate viewing. This is likely to remain a small market through to 2010, largely because the quality of service is poor. Streaming of high quality TV requires large amounts of bandwidth, which is unlikely to be available throughout a programme when using a "best efforts service" such as the Internet. Live events, such as video streaming of Big Brother, will generate some traffic. But use is likely to be two to three orders of magnitude less than that for IPTV services. So we exclude this service from further analysis, although we note that beyond 2010 the situation could change as broadband speeds increase significantly.

4.5 Video downloads over the Internet

4.5.1 Service Description

With this service the user downloads content from the Internet to a PC for subsequent replay[61]. This trickle down of information overcomes the quality of service problem inherent in the TV streaming services. A "user pull" service, the content includes:

- New release films
- Selected and archive content from mainstream TV channels
- Specialised content aimed at niche market segments
- Targeted advertisements
- Non-commercial content.

At the same time the low barriers to entry in establishing these services mean that we can expect a large number of specialist service providers with a wide range of content. Inevitably

[60] e.g. select three movies per month for €12

[61] Once home networking is established the AVC might also be viewed on a TV in the user's living room

many of them will provide substantially less than 50% EU content. At the same time many service providers will not come under EU jurisdiction and there are issues of whether and how to regulate such AVC. The target market for the service currently consists mainly of:

- technically literate broadband users
- niche markets such as ex-pats and members of ethnic minorities wanting to view home country content
- niche interest groups looking for specialist content.

4.5.2 Funding Model

The main funding model is pay per view or subscription. Advertising is a potential source of further modest revenue.

4.5.3 Main Rivals

IPTV is the main rival service (see also country differences below). Alternatives include DVD rental and purchase, pay-TV and free to air TV broadcasts.

4.5.4 Factors Affecting Market Take Up

Growth in broadband and the development of products such as Microsoft's Mediacentre will fuel take-up. But the service is one which currently requires technical knowledge to implement and which is viewed on a PC in the study rather than on the TV in the living room. This limits take-up - at least until home networking is well established. We do expect home networking to be present in 30% of households by 2010.

Market development will also be dependent on rights holders releasing rights for exploitation on the platform with attractive release dates (e.g. comparable to DVD release dates).

4.5.5 Country Differences

In Germany Deutsche Telekom is promoting this service instead of IPTV based services[62]. So the take up of this service could be significantly higher in Germany than in the other study countries.

4.6 Audio streaming services

4.6.1 Service Description

This service is aimed at Internet users who might listen to the service whilst web surfing or working. Services may be based in or outside the EU. Audio streaming services are of two main types:

- Simultaneous streaming of radio broadcasts which are pushed to the user.

[62] German Law does not currently allow a federally owned organisation like Deutsche Telekom to offer broadcast TV services

- Internet only radio services. These may offer a set menu or allow the user to personalise content[63]. In the latter case there is a mix of service provider push and user pull

In either case music is likely to dominate the content supplied. Given the popularity of American music there is a good chance that some of the EU based services will provide less than 50% EU content. Again the international nature of the Internet means that there are jurisdictional problems in ensuring that audio streaming services from outside the EU comply with any TVWF rules which are relevant to audio services.

4.6.2 Funding Model

Most commercial audio streaming services are funded through advertising – either in the audio stream or via the screen of a PC. Public service broadcasters, such as the BBC, also offer advertising-free services from their website. There are even a few Internet radio services which charge a subscription,[64] their revenue potential is likely to be modest.

4.6.3 Main Rivals

Audio streaming services primarily provide an alternative to radio listening and music downloads.

4.6.4 Factors Affecting Market Take Up

The simplicity of the service, combined with increasing broadband take-up, mean that audio streaming will become an increasingly common complement to Internet browsing. The service is very cheap to provide. But revenues are likely to be low, especially given the current lack of micro payment billing mechanisms.

4.6.5 Country Differences

The UK market for audio streaming services is more developed than those of the other study countries, reflecting the strength of the commercial and public radio sectors.

4.7 Audio download services

4.7.1 Service Description

Users download radio programmes or music to their PC or other devices[65] for subsequent listening. So the service is principally a pull service. In some cases, such as PODcasts, the user subscribes to sites which are then automatically searched for new content on a regular basis. Here there is more of a push element to the service which is nevertheless facilitated by a pull action. The main users of these services are teenagers and young adults who want to increase the range and convenience of their music listening experience. Given the popularity

[63] eg the Launchcast service
[64] eg Jazz FM in the UK
[65] eg MP3 players

of US music and the potential competition from physical product, such services may supply less than 50% of EU content.

4.7.2 Funding Model

Most audio downloads were, until recently, distributed using free peer-to-peer services. In many cases this involved illegal actions and rights holders have gone to considerable efforts to eliminate this form of distribution and the loss of revenues which it entails. Legal peer to peer services can be expected to grow, as evidenced by Ericsson's recent deal with Napster. The use of pay-per-download models is also growing e.g. iTunes.

4.7.3 Main Rivals

Audio download services compete primarily with CD purchase, radio listening and recording from CDs and radio programmes.

4.7.4 Factors Affecting Market Take Up

The development of portable MP3 players and the availability of peer-to-peer services, together with broadband take up, have made audio downloads relatively straightforward and cheap. At the same time more mobile and fragmented life styles mean that young people want more control over what they listen to, when, and how. The current main barrier to take up is the lack of digital rights management to protect the rights holders. This barrier should be removed in the relatively near future, leading to a considerable expansion in the market for audio downloads as a primary means of distributing music content to customers.

4.7.5 Country Differences

There are no major country differences because the market, which is dominated by music content, is international in nature.

4.8 Mobile cellular TV streaming services

There is currently considerable spare capacity in the 3G networks of most EU mobile operators. Many operators have started to offer streamed TV programmes as a way of using this spare capacity. Operators in Germany and Italy launched services in 2002 and France in 2004. Customer numbers remained in the low thousands. These services are likely to be a temporary phenomenon. We expect that the operators will phase them out as demand for higher revenue applications (e.g. short video clips) grows, in which case the streamed TV services may shift to dedicated mobile TV networks (assuming this is economic).

We therefore do not consider these services in this baseline market scenario.

4.9 Mobile cellular TV downloads

4.9.1 Service Description

Download services over a mobile cellular network are of two main types:

- Video clips which are selected by the user and either streamed or downloaded to the terminal for subsequent viewing
- Video content which is pushed to the end user overnight for use the next day[66]. Such services are available in Japan but not yet in the EU.

These services are aimed at all people on the move. The young will be the early adopters but eventually the services will be targeted at all age/demographic groups.

4.9.2 Funding Model

The funding model is still evolving. A funding model in which revenue is generated from a mix of traffic charges, advertisement and pay-per-view is likely. The mobile operator is the obvious party to bill and collect service revenues, with the content provider receiving a proportion of the revenue collected.

4.9.3 Main Rivals

Cellular mobile download services will compete for the consumer's attention with services offered over dedicated mobile TV networks.

4.9.4 Factors Affecting Market Take Up

The roll-out of 3G networks and purchase of 3G terminals are important pre-requisites for growth in demand here. There are a number of constraints:

- Lack of content optimised for a mobile device limits the range of AVC which is available. But the cost of repurposing video content is now falling.
- Availability of rights to attractive content
- Technical limitations on image quality and handset battery lives limit take up in the short term.
- The costs of providing capacity are substantial and it is unclear if TV services delivered over cellular networks are inherently profitable. So higher revenue use of the cellular network infrastructure could displace TV services.

4.9.5 Country Differences

There are no major country differences.

4.10 Mobile TV network broadcasts

4.10.1 Service Description

Dedicated mobile TV networks will broadcast audio, video and possibly data. Both satellite and terrestrial networks are possible, though terrestrial approaches are receiving most

[66] e.g. on the way to work

attention in Europe. The cellular network will provide a return path and could provide a billing mechanism. We expect some content to be specifically adapted for the mobile terminal. Live video for news, sport and concerts will be especially important and other content is likely to be similar to that shown on traditional broadcast platforms. This increases the chances that it will supply more than 50% EU content.

4.10.2 Funding Model

A pay-TV funding model is the most likely with supplementary advertising revenues. Service providers will probably also offer a number of free channels so that users can sample the service.

4.10.3 Main Rivals

Mobile TV network services are unlikely to compete directly with fixed location TV services. Instead they extend the situations in which people can watch TV.

4.10.4 Factors Affecting Market Take Up

It is still unclear whether people want to watch TV on the move but there is some market research to suggest that they do. The SKT satellite service, launched commercially in Korea[67] in May 2005, generated strong demand in the first few weeks following its launch. There are some significant battery life problems to overcome[68] and the service also requires significant investment in a dedicated network – with around 3000 transmitters at a cost of about £500m needed in a country the size of the UK or Italy.

4.10.5 Country Differences

Korea leads in world markets and Finland leads in the EU. Within the five study countries it is too early to say whether country differences will emerge.

4.11 Mobile TV network downloads

As well as providing broadcast TV, the mobile TV network will also provide downloads to the mobile terminal, which the terminal can store for replay the next day. These services supplement the broadcast services of Section 4.10. They are not stand-alone services, so we do not consider them further within this baseline scenario.

[67] This might not be a good indicator of demand in other parts of the world. Koreans are noted for their desire to own the latest gadgets.

[68] With battery lives reduced to 4 to 8 hours when watching mobile TV

4.12 Traditional TV

4.12.1 Service description

Traditional TV services are mainly linear TV services provided over terrestrial transmission, cable or satellite platforms. Video on demand services are also offered. Satellite services are already digital, and cable and terrestrial networks are migrating to digital operation.

As these services are already covered by the TVWF Directive the impact of any extension is likely to be indirect, in so far as an extension affects the degree of competition from new platforms to traditional TV.

4.12.2 Funding models

Advertising and subscription are the main private sources of funds. Licence fees are also important in some countries.

4.12.3 Main rivals

The main rival services are television delivered over IP platforms and alternative forms of entertainment and information, such as games and use of the internet.

4.12.4 Country differences

All countries are experiencing fragmentation of audiences as the numbers of channels supplied increases, and a relative decline in the significance of advertiser and licence fee funded services - both in terms of shares of audience and revenues. As indicated in Chapter 2, subscription revenues are particularly strong in the UK and France.

4.13 Radio

4.13.1 Service description

These are mainly linear audio services providing a mix of music and speech content. Services are primarily delivered over terrestrial transmission networks. Radio services are also distributed on all digital platforms and radio receivers are now built into a variety of mobile devices such as mobile phones and PDAs.

A substantial proportion of radio stations will provide less than 50% of EU content eg those that play US or New World music.

4.13.2 Funding models

Radio is almost entirely funded by advertising. Licence fee funding is important in some countries. A few subscription services have started over the Internet, and in the US advertisement free subscription services over satellite are growing in popularity.

4.13.3 Main rivals

Radio provides background entertainment while people undertake other activities. This means use of radio services is not necessarily displaced by use of other new media. The main alternative here is audio streaming services over the Internet, followed by pre-recorded music and music downloads.

4.13.4 Country differences

Radio stations in France are likely to comply with the Directive because of national content regulation, however, this is not the case elsewhere.

4.14 Mobile visual radio

4.14.1 Service Description

Mobile visual radio combines analogue or digital broadcasts of sound over traditional radio platforms with synchronised graphics delivered using a cellular mobile network. The graphics might include:

- Relevant illustrations to accompany a news broadcast
- Invitations to join in audience voting
- Invitations to buy a ringtone of the song currently playing
- Invitations to purchase tickets to an event associated with the radio broadcast
- An image of the artist currently being heard

Given the content of the graphics there are some interesting issues on the integration of advertisements with content which might test TVWF rules. The service is clearly pushed to its audience. This is mainly 10 to 40 year olds, with content such as classic music channels aimed at an older audience.

4.14.2 Funding Model

Funding comes from a mix of sources. These include subscriptions to visual radio, cellular mobile traffic revenues[69], premium SMS charges, charges per download and advertising revenues.

4.14.3 Main Rivals

The service is an alternative to the basic radio services now available on most new mobile terminals. It might also substitute for use of iPODs, mobile TV services and for other value added services offered by the mobile operator.

[69] Paid to the mobile operator for downloading graphics to the terminal

4.14.4 Factors Affecting Market Take Up

As yet it is unclear whether demand for mobile visual radio will become significant. 6% of UK mobile users have used their mobile phone to listen to the radio at least once[70]. Whether they will find mobile visual radio more compelling and worth the traffic charges involved in receiving the graphics is unclear.

4.14.5 Country Differences

It is too early to say whether individual markets will develop differently within the five study countries

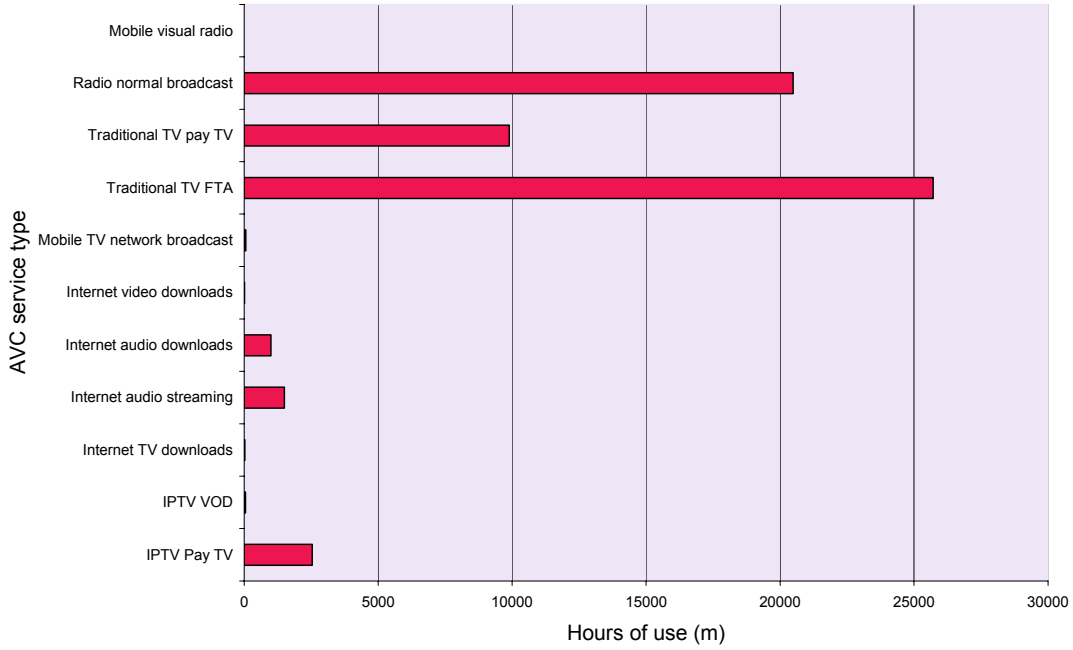
4.15 Summary

The baseline is summarised in Table 4.2 (above) and Table 4.3 (below). The main features of the scenario are that:

- Traditional TV and radio are the dominant media over the period to 2010, whether this is viewed in terms of people's use of time or in terms of revenues. See Figure 4.1.
- New services are starting from a very low base in 2005 relative to traditional TV and radio, but are forecast to grow rapidly. As with any new technology, signs of mass market penetration would not be expected to be seen until at least 5 years after the services entered the market.
- All of the new AVC media have relatively low use by 2010 with the exception of
    - Internet audio downloads. This is in essence a new form of distributing content traditional delivered in physical form, and given the physical content is not regulated there are no clear grounds for regulating the electronic equivalent.
    - Internet audio streaming. We note many of these services comprise either rebroadcasts or simulcasts of traditional broadcast radio, and as such will comply with national radio regulation.
    - IPTV. Here there are arguments on competition and influence grounds for having the same regulation as traditional pay TV.

[70] See www.rab.co.uk

Figure 4.1 Forecast monthly hours of use by AVC media in 2010 for the five study countries



In interpreting Figure 4.1 it is important to note that young people are more likely than others to use the new AVC services. But the very low levels of use of most new AVC services, even in 2010, suggests that imposing interventionist ex ante regulation would seem disproportionate given the likely limited influence of the sector. Also, it should be remembered that for new AVC services the opportunities for parental control via technological means are much greater than for traditional linear services. Only for IPTV would there likely to be a case for intervention on these grounds.

Figure 4.1 suggests that the economic harm from regulation of the sector will also be small in the short term. However, there is the risk that regulation could considerably slowdown the development of new AVC platforms and content relative to development in Asia and North America. This could put the EU at a significant economic disadvantage both because of the direct impact on AVC industry development and indirectly through the impact on network and ICT sector development more generally. If there were concerns about the influence of the new platforms at a later date, TVWF regulation could of course be imposed.

The same conclusions cannot be drawn in the case of the radio sector. The sector is significant in terms of use, revenues and so influence. As a consequence, the sector is already extensively regulated in member states in respect of listener protection issues. The main impact of extending the Directive to this sector is likely to be in terms of the EU content requirements.

Table 4.3 A summary of the baseline scenario

Platform	*Service*	*Main content*	*Pull or push?*	*Target market segments*	*Main funding*	*Main rivals*	*Users (000)*	
IPTV network	Pay TV	As for traditional pay TV	Push	All	Subscription	Traditional pay TV	1071	8504
IPTV network	Video on demand	Films and premium TV	Pull	All	Pay per view	VOD from CATV operators	192	3464
Internet	TV downloads	Films and specialist content	Pull	Various niches	Pay per view	IPTV	100[71]	4000
Internet	Audio streaming	Radio broadcasts and music	Push	Internet users	Advertising	Radio and audio downloads	N000	N0000
Internet	Audio downloads	Music	Pull	15 to 30 year olds	Pay per download	Buying CDs Recording from radio and CDs	N00	N0000
Mobile cellular	TV downloads	Sports and entertainment clips	Pull	Young initially, later all on the move	Mix of traffic + pay per view + advertising	Mobile TV network services	1096	37900
Mobile TV network	Broadcast services	Live events and news	Push	All	Subscription	Few	0	12000
Tradition TV broadcast	Free to air	Wide range	Push	All	Advertising and licence fees	Pay TV – traditional and IPTV	82300	86020
Tradition TV broadcast	Pay TV	Wide range	Push	All	Subscription	FTA TV and pay TV on IPTV platform	31670	33080
Traditional radio broadcast	Free to air	Wide range	Push	All	Advertising and licence fee	Audio streaming, CDs	180807	182945
Traditional radio broadcast plus cellular mobile	Mobile visual radio	Wide range	Push	All	Advertising	Traditional radio and mobile TV broadcasts	0	1000

[71] Excludes downloads of video clips

5 The Impact of Extending the TVWF Directive

In this chapter, we provide an assessment of:

- the impact of the TVWF Directive extension on advertising revenues from AVC services
- the regulatory position in the US and Japan compared with that proposed by the European Commission for the EU
- the likely benefits of extending the TVWF Directive
- the likely costs of extending the TVWF Directive.

We conclude with a summary of our findings. The purpose of this assessment is to inform the debate on a possible extension of the Directive.

5.1 The impact on advertising revenues

Figure 5.1 summarises our views on the importance of different forms of advertising for the main emerging AVC services. It shows that spot advertising will continue to be an important form of advertising for new media, especially for IPTV. Other innovative techniques, involving sponsorship and interactive and personalised/targeted advertising will be as important as spot advertising for Internet based services and some mobile services.

Figure 5.1 Importance of different forms of advertising on new AVC services

Service (1)	Type of advertising											Notes
	Spot	Split screen	Sponsorship – around prog.	Sponsorship – in prog.	Sponsorship - infomercial	Product placement	Direct response	Secondary	Targeted (push)	Personalised	Virtual	
1. IPTV – linear	High	None	None	None	None	None	None	None	None	None	None	Follows established pay-television model
2. IPTV – on-demand	Moderate	None	None	None	None	None	None	None	None	None	None	Opportunity for one-to-one interaction
3. Internet video – linear	Moderate	None	None	Moderate	Moderate	None	Moderate	Moderate	Moderate	Moderate	None	Opportunities to link to web content
4. Internet video – on-demand	Moderate	None	None	Moderate	Moderate	None	Moderate	Moderate	Moderate	Moderate	None	Opportunities to link to web content
5. Mobile video – linear	Moderate	None	Moderate	None	None	None	Moderate	None	None	None	None	Assumes redistribution of TV content
6. Mobile video – on-demand	None	None	None	Moderate	Moderate	None	Moderate	None	None	None	None	
7. Internet / mobile audio – on demand	Moderate	None	None	Moderate	Moderate	None	Moderate	Moderate	Moderate	Moderate	None	
8. Internet / mobile audio streamed	Moderate	None	None	Moderate	Moderate	None	Moderate	Moderate	Moderate	Moderate	None	

Level of significance: High Moderate Low None

Note: (1) This list highlights only the main emerging service areas – traditional television and radio broadcasting are not shown

Source: fathom. See Table 2.3 for a definition of the different types of advertising

5.1.1 Sponsorship and new AVC services

Article 17 of the TVWF Directive puts restrictions on sponsorship. In particular, the content of sponsored television programmes must not be influenced by the sponsor and must not

encourage the purchase or rental of the sponsor's or a third party's products. Imposing these restrictions on new AVC services could significantly reduce revenues from advertising. To see this we note that:

- in the US where there are no equivalent restrictions on sponsorship just over 10% of revenues from advertising goes on sponsorship rather than traditional advertising on TV
- in the UK, where the TVWF restrictions apply, the proportion is just over 2%
- new media AVC services offer a promising new vehicle for sponsorship. In the US 24% of advertising spent on the Internet goes on sponsorship[72] rather than on display advertisements. Without the TVWF Directive extension it is likely that this balance will carry through to other new media AVC services, so boosting revenues and improving the viability of the service providers concerned.

5.1.2 Advertising minutes and frequency

The impact of an extension of the Directive on interactive and personalised advertising is likely to arise mainly from limits on the frequency of advertising. These limits mean that advertising is grouped in a small number of breaks. This is not suitable for

- interactive advertising services (over the internet and other platforms), given that when a consumer responds to an interactive advertisement he is likely to miss any following advertisements in a break. Advertisers will seek short and so more frequent advertising breaks to avoid this problem.
- mobile services, where video programmes and the viewer's attention span are likely to be short. Given this short attention span, frequent single advertisements will be more effective than numerous advertisements grouped in a small number of breaks.

To the extent that current limits on the total amount of advertising in an hour on linear TV constrain advertising time they could have a negative impact on the revenues of new AVC services. Whether the current limits are constraining or not could vary from country to country depending on whether there are competing services offered without advertising (as is the case, for example, with the BBC in the UK). However, we note that in the US there are no controls on TV advertising minutes except in children's programmes where a limit of 12 minutes is applied. This suggests that an unconstrained market will provide more than 12 minutes advertising per hour.

A further significant issue concerns how, if at all, limits on advertising minutes might be applied to new AVC services where advertising is often displayed in text on the screen alongside the visual content.

[72] Of the programme, through infomercials and through product placements

5.1.3 Controls on the type of product advertised

New distribution platforms may advertise products not permitted on traditional media. Controls on the types of product that may be advertised, namely tobacco products, prescription medicines and alcoholic beverages, potentially have a direct negative impact on advertising revenues for AVC services. However, a number of factors are likely to moderate these impacts.

First, the Tobacco Advertising Directive took effect on 31 July 2005[73], banning tobacco advertising in print media, on radio and over the internet and tobacco sponsorship of cross-border cultural and sporting events. This means an extension of the TVWF Directive would have no effect on advertising of tobacco products.

Secondly, extension of the TVWF Directive to new platforms would most likely have no impact on the advertising practices on and revenues available from these platforms in relation to prescription medicines. The advertising of prescription medicines is already banned under Article 88 of European Directive 2001/83/EC. This article states:

> *1. Member States shall prohibit the advertising to the general public of medicinal products which:*
>
> - *are available on medical prescription only, in accordance with Title VI,*
> - *contain psychotropic or narcotic substances, [within the meaning of the international conventions] ...,*
> - *may not be advertised to the general public in accordance with the second subparagraph of paragraph 2.*
>
> *2. Medicinal products may be advertised to the general public which, by virtue of their composition and purpose, are intended and designed for use without the intervention of a medical practitioner for diagnostic purposes or for the prescription or monitoring of treatment, with the advice of the pharmacist, if necessary.*

Extension of Article 14 of the TVWF Directive would simply restate some of these prohibitions. There is, however, the potential for some forms of information provision to be allowed following a review of Directive 2001/83/EC, the relevant results of which are stated in Article 88a of European Directive 2004/27/EC:

> *Within three years of the entry into force of Directive 2004/726/EC, the Commission shall, following consultations with patients' and consumers' organizations, doctors' and pharmacists' organizations, Member States and other interested parties, present to the European Parliament and the Council a report on current practice with regard to information provision - particularly on the Internet - and its risks and benefits for patients.*
>
> *Following analysis of the above data, the Commission shall, if appropriate, put forward proposals setting out an information strategy to ensure good-quality,*

[73] "Tobacco advertising ban takes effect 31 July", IP/05/1013, 27 July 2005

objective, reliable and non-promotional information on medicinal products and other treatments and shall address the question of the information source's liability.

Though it remains to be seen how this consultation will proceed, regulatory relaxation could potentially allow the provision of audio-visual information funded by prescription medicine brands. In this case, extension of the TVWF Directive would create a small incremental restriction. At this stage, it is not possible to evaluate this potential restriction though we would expect it to be relatively insignificant.

However, it is interesting to note that in the US, following relaxation of restrictions on direct-to-consumer advertising in 1997, there has been rapid growth in advertising revenue relating to medicines. By 2004, spending on advertising of prescription drugs on all platforms had reached $4.45bn, equivalent to 3.15% of total advertising[74]. Recent concerns over potential regulation (if advertising is regarded as misleading) and the effectiveness of mass-media advertising for prescription drugs is leading pharmaceutical companies in the US to consider moving from product advertisements to educational advertising aimed at raising awareness of a disease.[75] The latter may be permitted under the Directive and in an interactive advertising environment could be followed by further interactions that lead to promotion of particular products.

5.2 Comparison with USA and Japan

The existing regulations contained within the TVWF Directive are, on the whole, more stringent than any similar regulation (or, in some instances, self-regulation) that exists in the US and Japan for traditional TV broadcasts. While the US requires advertising to be easily identified as separate from television programmes, there are no restrictions on the quantity of advertising allowed except with respect to children's programmes.

The treatment of minors is one area in which the US and Japan tend towards the approach contained within the TVWF Directive. In the United States, advertising in children's programmes may not exceed 10.5 minutes per hour on the weekends and 12 minutes per hour during the week. Japan does not apply any restrictions, although bans advertising in educational programmes intended for schools and requires that advertising cannot stimulate children's desire to obtain a product in an exaggerated way. In addition, while Japan does not prohibit the advertising of alcohol or tobacco, it requires that minors who are drinking or smoking are not depicted in a favourable manner.

In contrast to the TVWF Directive, the US and Japan allow advertising for prescription medicines accompanied by strict rules regarding information provided to the public. The US and Japan also allow product placement and sponsorship of programmes on the proviso that products and sponsors are identified. However, the US places legal restrictions on the type of sponsors allowed, banning political campaigns and tobacco companies. Television advertising for cigarettes and most cigarette products is also prohibited in the US.

[74] Source: TNS Media Intelligence

[75] "Changing Channels", MM&M, April 2005

In the US and Japan there is no specific regulation of TV over the internet or mobile platforms, unlike the situation proposed under an extension of the TVWF Directive.

The more liberal regulatory environments in the US and Japan could mean that provision of AVC services over new platforms will be more profitable in these countries as compared with in Europe, assuming all else is equal. This in turn could affect the relative pace of market development in the three regions.

5.3 The likely benefits of an extension

EU policy in the audiovisual sector, including the TVWF Directive, is intended to promote the development of the audiovisual sector, notably through the completion of the internal market and promoting aspects of general interest such as cultural and linguistic diversity, protection of minors and human dignity, and consumer protection. Issues concerning the protection of minors and human dignity for on-line AVC and information services are already addressed in a Recommendation on these issues.[76] The European Commission has noted that[77]

"The report on the application of this Recommendation, published in 2001, showed that its overall application was already quite satisfactory. Hotlines and awareness campaigns have been launched in nearly all Member States, and codes of conduct have been established. The industry has worked on the creation of reliable Internet filters and the Commission has intensified international co-operation in this field, as much illegal and harmful content originates outside the European Union."

The review of the TVWF Directive and its possible extension are intended to take account of the impact of technological developments and changes in the structure of the audiovisual market. In particular, the Communication on the i2010 strategic framework refers to the need for a consistent set of rules for information society and media that reflect digital convergence. The intention appears to be to ensure the rules are technologically neutral and fit for purpose, so as to provide "*legal and economic certainty that will encourage new services and more content*".[78] The issue of legal certainty is discussed in Section 5.4 where we suggest that an extension of the Directive is likely to reduce rather than increase legal certainty.

In this section, we first examine arguments concerning completion of the internal market and technological neutrality, and then go on to assess the specific benefits that extension of particular provisions might yield. We conclude that

- extension of the TVWF Directive would have little impact in terms of achieving internal market objectives.

- extension of the TVWF Directive of itself would not promote competitive equality between service providers on different platforms. Rather it would strengthen the position of incumbent service providers relative to new entrants by making entry more costly. It is

[76] Council Recommendation of 24 September 1998 on the development of the European audiovisual and information services industry by promoting national frameworks aimed at achieving a comparable and effective level of protection of minors and human dignity. (98/560/EC).

[77] Communication from the Commission to the Council, The Future of European Regulatory Audiovisual Policy, 15 December 2003, COM(2003) 784 final.

[78] Rules Applicable to Audiovisual Content, July 2005, Issues paper for the Liverpool Audiovisual Conference, EC

important to note that the EU framework for regulation of electronic communications networks and services provides for new entrants and emerging markets to be treated differently from incumbent operators and established services because of differences in market development and influence. These same concepts should be applied in the context of the TVWF Directive discussions

- the main specific benefits from an extension are likely to arise from the application of the basic tier of regulation, although there is an issue as to whether the rules might be best applied through self regulation so that they keep pace with the development of new media markets

- in the case of detailed rules concerning EU and independent production quotas we consider there are likely to be few benefits. This is because the rules will either be considered not practicable and so not implemented or, if implemented, could raise operators' costs and reduce their programming flexibility, and thereby inhibit new service development. This in turn means there could be little stimulus to the EU production sector.

5.3.1 Internal market

The issue to be considered here is whether an extension of the TVWF Directive to non-linear services and its application to new linear services, such as Internet TV and mobile TV, will aid completion of the internal market.

We first note that the e-commerce Directive is intended to address legal obstacles to the proper functioning of the internal market for information society services, and as such creates a legal framework to ensure the free movement of information society services. Information society services include non-linear AVC services and so there should not be any need for further legislation to create an internal market for these services.

In the case of mobile TV, the main barrier to the free movement of services is likely to be the absence of a harmonised approach to allocating spectrum for these services. For example, these services might be provided using DVB-H technology in UHF spectrum or at L-band, or DMB technology in VHF band III or at L-band. Use of common bands (broadly defined) could reduce equipment costs and enable consumers to roam across networks on a European basis. It is possible that different approaches will be adopted in different countries, depending on spectrum availability and national priorities for use of the spectrum by other services. In this regard, we note that the EC has proposed that Member States should switch off analogue TV transmissions by 2012 and their spectrum plans should be "*flexible enough to allow the introduction of other electronic communications services, in addition to digital broadcasting services*".[79]

Extending the TVWF directive could generate substantial benefits if the services affected were largely Pan European in nature[80]. But in practice the new AVC services are either

[79] Communication from the Commission to the Council, the European Parliament, The European Economic and Social Committee and the Committee of the Regions on accelerating the transition from analogue to digital broadcasting, COM (2005) 204 final, May 2005.

[80] This was a major reason for introducing the directive in the first place so as to allow the development of a Pan European satellite TV industry

national (eg IPTV) or global (the various Internet based AVC services). So the single market benefits of extending the TVWF directive are likely to be weak.

5.3.2 Technology neutrality

It is generally argued that regulation that is technology neutral is desirable because it helps promote competition – all technologies are treated on an equivalent basis. This argument for extending the Directive requires careful analysis. The following points are important.

First, the TVWF Directive was not devised as a measure to deal with competition problems. Rather it was designed to allow the development of a single market in the supply of TV broadcast services across the EU and to achieve certain general interest objectives. This required the authorities to establish a minimum set of rules for consumer protection.

Secondly, the technology neutrality principle requires authorities to regulate services within markets without regard to the underlying technology which supplies them. This avoids distorting competition between technologies. Taking the example of pay-TV services, these services should be regulated in the same way whether supplied over a traditional satellite/cable/terrestrial platform, a mobile platform, an IPTV network or the Internet. On its own this argument is not complete and other principles for regulating markets need to be considered. In particular:

- the EU regulatory framework for electronic communications networks and services requires authorities to consider whether service providers are competing in the same economic market before imposing any obligations. Pay TV and mobile TV service providers are not competing in the same market, according DG Competition's recent inquiry.[81] So it is not necessary to regulate these two sets of services using the technology neutrality principle.

- the EU regulatory framework applies regulatory obligations for competition purposes, as opposed to user rights or consumer protection purposes, to operators with significant market power. Under this principle IPTV service providers and TV over the Internet, as new entrants, would not be the subject to *ex ante* economic regulation in the pay TV market

- the EU regulatory framework advises against regulating services in emerging markets such as mobile TV unless there are compelling reasons to do so.

Finally, it is clear that any argument about a "level playing field" for competition, between AVC providers that are currently regulated and operators that are not, needs to look more widely than just the scope of the TVWF Directive. For example, service providers on new platforms would have competitive advantages over rivals using traditional TV platforms if they were not subject to the EU quota rules and advertising restrictions of the TVWF Directive. But they would compete at a disadvantage in other ways. For example, they would not enjoy public funding or privileged access to spectrum as many free-to-air broadcasters do. Nor would they

[81] "In the preliminary findings of the Sector Inquiry into New Media (3G)", DG Competition, May 2005.

have the advantages of incumbency (e.g. access to programme rights) enjoyed by some pay TV service providers using established platforms.

We conclude therefore that extension of the TVWF of itself would not promote competition between service providers on different platforms. Furthermore, the EU framework for regulation of electronic communications networks and services provides for new entrants and emerging markets to be treated differently from incumbent services and networks because of differences in market importance and influence. These same concepts should be applied in the context of the TVWF Directive discussions.

5.3.3 Specific impacts

The analysis set out below, and summarised in Table 5.1, provides an assessment of the potential specific benefits of the extension.

Table 5.1 Potential benefits from the TVWF Directive extension

Rules	*Potential benefit of extending TVWF to new AVC services*
Protection of minors and human dignity	Clear social benefit though already covered by the Recommendation for on-s TVWF extension the best method?
Advertising content	Clear public health benefits of tobacco ban and alcohol restrictions. Benefits of a ban on prescription drugs less clear cut
Right of reply and author identifications	Limited, if any, social benefits
Identification of advertisements	Clear social benefits
EU content quota rules	Unclear if extension will achieve TVWF objectives
Independent quota rules	Few if any benefits likely
Limits on advertising time	Some benefits likely, but relevance of the rule is questionable
Limits on frequency of adverts	Few benefits likely

5.3.3.1 Protection of minors and human dignity

There is a general consensus on the need to protect minors who use the new AVC services. Recommendation 98/560/EC is intended to provide such protections for minors and human dignity in an online environment. It might be argued that the Recommendation does not have the same force of law as a Directive and so should be bolstered by extending the TVWF Directive.

There is considerable debate as to whether the proposed TVWF Directive extension is the best way to achieve the objective of protection of minors and human dignity. Many in the industry argue that the application of end user access controls combined with self-regulation is more effective. In particular, industry participants argue that self-regulation is essential if measures to protect minors are to keep pace with other development in new media markets.

There are also issues over the applicability of certain measures to protect minors in the non-linear world. For example, the current rule in some member states, to set a time in the evening after which programmes unsuitable for children can be broadcast, may work for linear

services but it makes little sense when applied to non linear services such as VOD. To see this, we note that that the main competition to VOD services comes from physical product – rented or purchased videos and DVDs – which are not subject to any such controls.

5.3.3.2 Advertising controls to protect public health.

Research indicates there are public health benefits from restrictions on alcohol and tobacco advertisements.[82] But the benefits of a ban on prescription drug advertisements are less clear cut. The interactive nature of media services, in combination with advertisements which educate the public, could generate benefits in terms of the provision of information that could assist individuals with self diagnosis and treatment options (see section 5.1.3).

5.3.3.3 Right of reply and identification of the author of content

While, in principle, there may be benefits from right of reply and author identification measures, in determining whether this is the case in practice the following factors need to be taken into account

- In a new media environment aggrieved parties have new opportunities to "reply", for example by setting up a blog on-line.[83]
- The scope of the right of reply requirement is unclear – does it apply to content where the provider has editorial control or does it apply to all AVC? In this regard we note that under Article 12 of the e-commerce Directive the service provider is not liable for information transmitted where it acts as a mere conduit of that information.
- If it is intended that service providers are responsible for all information transmitted in respect of the right of reply then there will be significant practical problems in enforcing this requirement, given most websites provide some audio-visual content. In January 2005 there were estimated to be 11.5 billion websites globally.[84]
- Defamation law provides a route for right of reply.

We conclude therefore that extension of the right of reply to on-line services is unlikely to offer benefits in practice.

5.3.3.4 Identification of advertisements

There is a general consensus on the social benefits of distinguishing clearly between advertisements and editorial content and on banning surreptitious or subliminal advertising. We expect that such rules would also create clear social benefits if extended to new AVC services. Again implementation issues arise, particularly in relation to the separate

[82] The Economics of Tobacco Control, World Bank, 1999; "Under the Influence? The Impact of Alcohol Advertising on Youth, A McKenzie, ARAPO, 2000; "Alcohol Advertising and Alcohol Consumption by Adolescents". H Saffer and D Dave, NBER Working paper 9482

[83] Technorati (a specialist search engine for blogs) state more than 80,000 weblogs are created every day and 14.2 million were tracked in July 2005. Estimates of the number of blogs for the UK alone range from 200,000 to 900,000. "Every second a blog-but not for the long slog", J Perrone, Guardian, 3 August 2005.

[84] http://en.wikipedia.org/wiki/World_Wide_Web

identification of text advertisements in amongst other text messages that might be displayed alongside audiovisual content.

5.3.3.5 EU content and independent production quotas

These quotas are designed to protect local culture within the EU and to preserve funding for EU content production. According to Articles 4 and 5 of the current TVWF Directive the quotas are to be implemented where practicable. If the quotas affect adversely the financial viability of new AVC services then we assume that they will be judged not practicable and so have no effect. But it would be important to clarify this position in advance of any extension to the current rules so as to create investment incentives for new entrants.

In the case of independent production quotas, evidence from the Graham report[85] indicates that this rule does not constrain behaviour by traditional AVC providers and that most channels considerably exceed the 10% quota. However, this is not likely to be the case for new media services which are likely to rely initially on low cost acquired content. Only when successful are they likely to be able to afford to commission original content. Independent production quotas are therefore likely to inhibit new service development or not be implemented because they are not practicable. The regulation is likely to have little benefit in terms of new productions and potentially a significant cost in terms of slowing service development.

The benefits of extending EU quotas to new linear and non-linear AVC services, and perhaps to radio are also questionable. They will either have no effect or might result in outcomes that undermine the objective of the quotas i.e. fewer AVC services than would otherwise be the case. The discussion below assumes service providers seek to adhere to the quotas.

Linear AVC services

The new services caught by the Directive will be TV over the internet and mobile TV. Undoubtedly, quotas would preserve jobs in the EU content production industry in the near term. But there are a number of counter arguments to consider here, in particular that the quotas could inhibit the development of new services and so not achieve their ultimate objective in the longer term. Detailed bottom-up analysis of service revenues and costs and the impact of quotas on these would be required to quantify the impact of quotas.

Radio services might also be covered by these regulations. Europe already has a healthy music industry (relative to the situation for TV and film production) and so the benefits from applying EU quotas here are likely to be limited.

Non-linear services

Extending EU quota rules as they stand to non-linear services could substantially reduce the value of such services (i.e. the element of consumer choice) by requiring end users to select more than 50% EU content. It has been suggested, however, that non-linear services could be required to contribute to the promotion of European works, through say investment or

[85] Impact of Measures Concerning the Promotion of TV Programmes (Community and National) Provided for under Article 25(a) of the TV Without Frontiers Directive, Workshop 14 October 2004. David Graham Associates.

catalogue requirements.[86] These obligations could yield benefits in terms of European production and jobs only if

- they can be enforced and not easily evaded e.g. by catalogues being filled with low quality EU content
- the costs are not undue, so that service providers do not either relocate outside the EU or go out of business
- imposing EU quota rules did not damage the ability of the AVC industry to supply niche services which may be national in character.

We are not confident that these conditions will apply.

5.3.3.6 Advertising minutes and frequency

As discussed in Section 5.1, extension of limits on advertising minutes could constrain the supply of advertising time and so yield some consumer benefit.[87] However, the applicability of the rule in an environment where advertising may be displayed as text around visual content needs to be considered.

On the frequency of advertisement breaks, the objective of this rule is to preserve the integrity of programmes. This makes a lot of sense when applied to traditional TV services, but it makes less sense when applied to radio, which is mainly composed of 3 to 5 minute music tracks.

Consumers now have a rapidly growing choice of AVC services - so they can switch to another service if they find the advertisements annoying. This choice is substantially greater now than when the TVWF Directive was first published in 1989. These arguments suggest that the benefits of extending these rules to new AVC services are limited.

5.4 The likely costs of an extension

5.4.1 Cost categories

An extension of the TVWF Directive could generate the following direct economic costs:

- it could raise the costs of service providers
- it could reduce the revenue of service providers and so
- lead to lower content quality or fewer services being provided.

[86] Cultural Diversity and the Promotion of European and Independent Audiovisual Production, Issues for the Liverpool Audiovisual Conference, July 2005, EC

[87] This benefit arises because the controls act as a proxy for consumer preferences concerning the balance between advertising and programme content. Consumers cannot express their preferences directly when services are advertiser funded.

Table 5.2 lists the main direct effects for each of the TVWF rules. In assessing these direct impacts we need to consider the following questions:

- does the application of basic TVWF rules to non-linear AVC services cause significant commercial damage?
- does the requirement on ISPs to ensure all AVC originating on servers located in the EU complies with TVWF rules raise ISP costs significantly?
- to what extent does the application of full TVWF rules cause commercial damage to the new TV services running on the Internet, on cellular mobile networks and on mobile TV networks?
- does the application of full TVWF rules cause significant commercial damage to radio services?[88]

We consider each of these issues in turn and then assess potential indirect impacts on competition and the provision of broadband services in the EU. We conclude that the main economic costs associated with extending the Directive would be the negative indirect effects on service development, competition between AVC services and the knock-on impacts on broadband roll-out.

5.4.2 Costs for non-linear AVC services

Application of the basic tier of regulation to non-linear AVC services would primarily be felt through

- compliance costs
- the costs incurred by the regulator responding to enquiries and complaints, and monitoring and enforcing the regulations
- the impact of legal uncertainty
- the potential loss of revenues that might be earned from the provision of information concerning medicinal products. US experience suggests that this could comprise a significant revenue stream (see section 5.1 above).

It was also argued to us by some UK industry representatives that experience in the UK has shown that regulation of protection of minors and other elements of the basic tier should be undertaken by the industry itself (i.e. through self-regulation). Regulation of VOD services was moved onto a self-regulatory basis in part because the media regulator did not have sufficient resources to regulate VOD services. This meant there were long delays in agreeing regulation and this consumed valuable management time and, perhaps more importantly, slowed down the development of new services.

5.4.2.1 Compliance costs

In simple terms compliance costs will comprise the costs of educating staff about the rules, putting in place the necessary internal procedures and any costs associated with monitoring

[88] High impact scenario only

output and responding to the rules. Quantification of these costs requires a bottom-up analysis of the numbers of organisations affected and the costs they might incur, which is beyond the scope of this study. However, we note that tens of thousands of internet service providers and website providers could be affected. This suggests the costs could be large.

5.4.2.2 Regulatory costs

The counterpart of industry compliance costs are costs incurred by regulators to deal with enquiries concerning the application of the Directive, complaints against service providers, and to monitor and enforce compliance. At present, media sector regulators typically administer the regulation of (at most) hundreds of broadcasters. An extension of the TVWF Directive would mean they would have to regulate potentially tens of thousands of service providers. Their costs might not increase proportionately but they could plausibly be at least ten times what they are today.

Table 5.2: Mechanisms by which extension of the TVWF Directive will affect AVC service providers' revenues and costs

Regulation	*Service provider revenue impact*	*Service provider cost impact*
Basic tier		
Protection of minors and human dignity	For some providers positive impact from social acceptability of the service, though could be achieved through self regulation. For others, negative impact from limits on the service offering.	Costs of putting in controls and dealing with the regulator. Potential cost of delays when interacting with the regulator.
Advertising controls – tobacco and medicines	Reduces potential revenues	None
Advertising identification rules	Small negative impact, if the rule limits video advertising on mobile visual radio.	None
Right of reply	None	Compliance cost
Policing of content providers by ISPs		Compliance costs and risks
Detailed tier		
EU content quotas	If more popular programmes can be purchased from outside the EU, then this rule could reduce audiences and so lead to loss of revenue	Raises costs if cheaper material from outside the EU can be purchased
Independent production quotas	Could reduce revenues if more popular acquired content could be used	Raises costs compared with using acquired content
Amount of advertising	Revenue reduced if more minutes could yield more revenues. This depends on whether viewers will tolerate high levels of advertising.	Reduced time for advertising means more time for programmes and so higher costs for the service provider
Maximum number of advertising breaks	Revenue reduced if more ad breaks could yield more revenues. Could limit development of interactive advertising (as this works best with many short ad breaks.	None
Advertising content rules – alcohol	Reduces potential revenues	None
Sponsorship rules	Reduces potential revenues	None
Access to events of national importance	Not applicable as limited to free television	Not applicable as limited to free television
All regulations		Compliance costs, including costs borne by the regulator

5.4.2.3 Legal uncertainty

Legal uncertainty about whether services are to be regulated or not arises, for example, because distinctions between commercial and non-commercial services and linear and non-linear services are not clear. There is also uncertainty about how some of the rules might be applied – for example what is the legal standard on damaging content that must be met before a service provider is required to give a right of reply?

In the case of commercial versus non-commercial services – does the service have to paid for or make a profit or be run by a for profit organisation before it is judged to be commercial? A typical business model for the internet is that services are initially given away free and then, if successful, attract advertising revenues and then later may be offered on a subscription basis. This needs to be recognised in the application of the Directive.

In respect of linear versus non-linear services, it is debatable whether this distinction appropriately reflects the purposes of the regulation and whether it gives operators sufficient legal certainty as to whether they are subject to the basic or the detailed rules.[89] As far as we can tell there is no clear definition as to what constitutes a linear service and what constitutes a non-linear service. The EC states that

"*non-linear audiovisual services would cover on-demand services where users/viewers are able to choose the content at any time e.g. video on demand, web based news services etc, whatever the delivery platform.*

The notion of linear audiovisual services would only cover services that are scheduled i.e. where there is a succession of programmes arranged throughout the day by the responsible editor and the viewer does not control the timing of the transmission. Thus editorial responsibility would be part of the definition for the second tier. These services would include, for example, traditional television, web casting, streaming and near video on demand, whatever the delivery platform".[90]

But it is difficult to classify some new services using these definitions. For example:

- the Launchcast service meets the criterion of "ability to chose" despite the fact that it is a linear format service
- we might classify "trickle down" TV services (i.e. services delivered to storage devices at a low bit rate) using broadcast platforms as non linear on the grounds that the user can choose when and whether to watch it. But the content they provide is selected by the broadcaster rather than the consumer
- if controls on the time at which content is available are applied to non-linear services so as to protect minors, then even non-linear services are not available at "any time"

[89] See Annex A for further discussion of this point.

[90] P2, "Rules applicable to Audiovisual Content Services", July 2005, European Commission, Information Society and Media Directorate-General

- barker channels which promote VOD services are strictly speaking linear TV, though their prime intention is to provide information about VOD services and the viewer clicks through from the barker channel to the VOD service

- it is unclear whether non-linear services that contain multi-cast advertisements will be classed as linear or non-linear services.

The development of new services will lead to increasing difficulties in maintaining a meaningful distinction between linear and non-linear services.[91] In particular, consumers will in future view a wide range of linear and non-linear services on their mobile phones or home entertainment devices. It is unlikely that they will make a distinction between them as they switch between the various AVC services available. This will raise issues concerning the enforceability of the detailed rules and service providers will be uncertain as to the scope of regulation they face. In interviews with industry representatives it was suggested to us that this legal uncertainty will have the effect of

- stifling service innovation, as service providers will take a cautious approach to introducing new services and the costs of compliance could make some services uneconomic

- encouraging ISPs to move service development activity and investment funds away from Europe to less regulated markets

- deterring venture capitalists and private financiers from investing in the sector

- increasing the costs of service provision e.g. ISPs having to put up material from any individual unhappy with content they have encountered on the ISP's hosted site.

The issues here are arguably similar to those that arose with the e-Money Directive – those drafting the legislation did not take full account of the impact on new technologies and services. The e-Money Directive came into effect in 2002 but has had to be reviewed [92] because it imposes high compliance costs on small transactions using pre-pay mobile phone cards (e.g. paying for car parking and other small value goods and services) and more generally may block future transactional services offered using mobile phones.[93] If those developing the legislation had taken account of the potential costs of the Directive on the development of the mobile sector then this problem might have been avoided.

5.4.3 Costs of ISP enforcement

Under an extension

[91] Annex A discusses possible alternatives to the linear/non-linear classification.

[92] The Commission has held a recent consultation on these issues with a view to determining whether changes to the e-Money Directive are required. "Application of the E-money Directive to mobile operators, Consultation paper of DG Internal Market", 10 May 2004.

[93] For example, Nokia plans to test a system by which bus travellers can pay for tickets by passing their phone over a smart-card reader installed on buses. http://news.bbc.co.uk/1/hi/technology/3975419.stm

EU based ISPs would be required to ensure that content supplied from EU located servers complies with TVWF rules as appropriate. This includes content hosted outside the EU but cached in the EU. ISPs have argued that this will be expensive and is not practical.

There is one obvious way to circumvent this rule – by being established outside the EU and removing the EU cache and locating the server providing the content outside the EU. Opportunities to do this will depend in part on the cost of backhaul, and these costs are likely to differ between small and global operators. We anticipate that global operators will be able to purchase backhaul on much more favourable terms than small operators in which case they will be able to avoid the regulation by locating their operations outside the EU. Small operators on the other hand are likely to obtain less favourable terms for backhaul in which case they may have no choice but to locate in the EU and meet the terms of the Directive or not launch their service. To see this, published data suggests that the additional cost of backhaul for an hour of AVC content between Europe and the US would be about €7.[94]

5.4.4 New linear AVC (TV) services on the internet and mobile networks

Application of the basic tier of regulation to new linear AVC services would also lead to compliance costs as discussed for non-linear services. In respect of the detailed tier, EU content rules and independent production quotas could pose a major problem for services which rely on programming that is largely made outside the EU (e.g. children's cartoons). It is difficult to assess the specific impact for services such as Internet TV and mobile TV which are still in their infancy. However, if attractive programme rights are difficult to acquire, service providers will need considerable flexibility in sourcing content at least in the early years of service development. This will be at a time when there is likely to be considerable competition for valuable programme rights, given the potential explosion in platforms for delivering AVC services. Both revenues and costs could be affected significantly.

As we have discussed above interactive platforms are likely to be adversely affected by restrictions on the frequency of advertising breaks and sponsorship. On the face of it the advertising frequency rules do not seem appropriate for mobile TV, where the attention span of the viewer is 5 to 10 minutes. But in practice we expect mobile TV content to consist of short programmes[95] and the rules of the TVWF Directive already allow advertisement between programmes, however short.

5.4.5 Costs for radio broadcasters

National regulation of radio broadcasters over terrestrial, cable and satellite platforms in the five study countries generally requires compliance with regulations that cover the basic tier, while internet radio is generally unregulated.

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[94] This is derived as follows. Assume that 2 Mbit/s is required for good quality video and 35% utilization of transmission given busy hour and packing efficiencies. The price of 34Mbit/s half circuit from Sweden to US = €15000 per month (Teligen report on Price Developments for European Commission. October 2004), so annual rental on 34Mbit/s full circuit from EU to US = €15k x 12 x 2 = €360k pa. Additional cost to service provider of backhauling an hour of AVC from US server to EU = €360k x 2Mbit/s/(365 days pa x 24 hours per day x 35% x 34Mbit/s) = €7 per hour.

[95] Eg 5 minutes slots

5.4.5.1 Basic tier regulation

Application of the basic tier of regulation could in principle reduce the revenues available to internet radio (because of the ban on advertising prescription medicines). This impact is likely to be limited by the fact that many of the stations are rebroadcasts of off-air services. However, there could be a negative impact on mobile visual radio services if special measures were required to ensure sufficient separation of visual advertisements from the audio service.

5.4.5.2 EU content rules

Under the high impact regulatory scenario, the EU content rules in particular could have an impact, except possibly in France where national regulation requires a substantial proportion of French content.[96] We are not aware of any data showing the level of EU content on radio stations in the five study countries. However, we analysed the Top 20 music charts for June 2005 in the five study countries on the grounds that this gives an indication of the music that is typically played by commercial radio stations. This showed that that

- 85% of music in the French top 20 chart was of French or EU origin
- 75% of music in the Swedish top 20 chart was of Swedish or EU origin
- 70% of music in the Italian top 20 chart was of Italian or EU origin
- 45% of music in the German top 20 chart was of German or EU origin
- 30% of music in the English top 20 chart was of English or EU origin (although this percentage shifted to just under 50% for the official top 40 chart)

This, together with the fact that many stations will have some EU speech content (e.g. news, breakfast and chat shows) suggests that an EU content rule might not greatly affect the radio industry.

However, specific music-based stations broadcasting non-EU dominated music genres (such as jazz, soul, New World and country and western music) could fail EU content rules, assuming the station format does not change.[97] In these circumstances, compliance with the rules would almost certainly lead to business failure – thereby reducing service diversity available to listeners.[98] These consequences apply regardless of the platform used for the radio broadcast.

Even if station formats change to accommodate the new rules the industry as a whole would shrink (as measured by revenues), as some listeners switch to pre-recorded music or stations

[96] Depending on format, radio stations can choose one of the following options: 1)40% local content of which 50% is new material; 2) 50% local content of which 15% is new material; or 3)30% local content of which 75% is new material.

[97] Some though not all of these services may be exempt from EU content rules under Article 9 of the TVWF Directive which excludes broadcasts intended for local audiences and that do not form part of a national network.

[98] In some countries, station formats are written into licences for terrestrial broadcasters and in these cases the TVWF regulations would effectively undermine national broadcasting policies.

broadcast over the internet from outside the EU. Hence the revenues available to support speech content on radio (which is generally cross subsidised by listening of music) would shrink, again reducing service diversity. Finally, some internet-only broadcasters would have a clear incentive to locate outside the EU to avoid the EU content rules.

5.4.5.3 Other impacts

Of the other rules, we anticipate that only those concerning advertising frequency could have an impact on revenues. Radio stations are not currently constrained in the frequency of advertising breaks and so it is possible that they may have more short breaks than is permitted under the Directive, however, we do not have any data to support this. We also note that part of the rationale for controls on advertising frequency, namely integrity of the broadcast programme, is weak in the context of radio. This is because most of the content is relatively short music tracks and it would not be in a station's commercial interest to interrupt these with advertising.

5.4.6 Indirect impacts

In addition to the direct impacts shown in Table 5.2, there are three other indirect impacts:

- competition in AVC services would be weakened - with new AVC services offering less vigorous competition to traditional services as a result of the additional constraints. This might also lead to a reduction in diversity and plurality of audio visual content when compared with the baseline scenario

- an extension of the Directive could handicap or slow down the development of new AVC services in EU when compared with their development in the US and Japan and so reduce the global competitiveness of the EU. Section 5.2 shows that the level of regulation in these countries is significantly lower than that proposed for the EU

- an extension of the Directive could also slow the roll out of fixed broadband services, both fixed and mobile, in the EU. The uncertainty as to whether services are regulated or not and the potential reduction in revenues, are likely to weaken incentives for investment in broadband in Europe (as compared with other regions); and a reduction in compelling AVC as a result of the extension could weaken the case for consumers to purchase broadband access.

5.4.7 Fixed Broadband

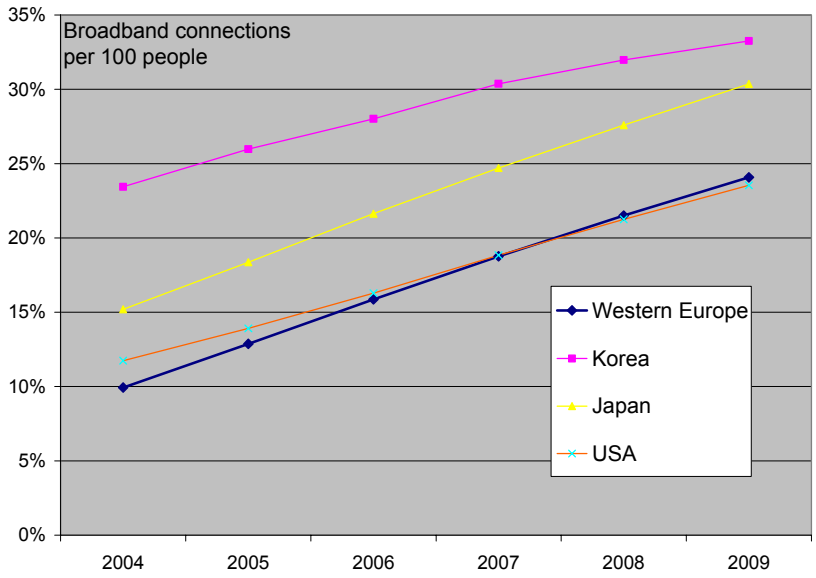
Fixed broadband is growing strongly in the EU as shown in Figure 5.2. But demand is still some way below that of trading rivals such as Japan, Korea and the US. While the EU is projected to catch up with the US it will remain behind Japan and Korea.

Currently one of the main reasons why consumers buy fixed broadband is to access the Internet from their PC. Operators see a major problem in getting broadband penetration beyond the percentage of EU households with PCs – currently around 60%.[99] One way to do

[99] This is a simple average for the EU 15. Penetration ranges from around 30% in Greece to about 80% in Denmark. See "Community Survey of ICT Usage in Households and by Individuals", Eurostat, February 2005.

this is to provide compelling AVC over broadband connections.[100] Once a substantial majority of households use fixed broadband, significant economic and social benefits are possible through the delivery of e-services by governments and business to consumers.

Figure 5.2 Broadband take up by world region



Currently the main platform for providing AVC content to households over fixed broadband is the IPTV network. But linear IPTV platforms are already subject to full TVWF rules which will constrain the speed with which they develop. For example quota rules will make it difficult for IPTV service providers to acquire the necessary content, given the strong position of traditional broadcasters in AVC content markets. This raises the issue of whether a TVWF extension should be confined to basic rules when applied to IPTV platforms.

We also need to consider the move to higher speed (above 2 Mbit/s) broadband. Right now it is unclear what applications would run on such connections for consumers but it is reasonable to assume that many of them would involve AVC. If these services were subject to full TVWF rules, and especially to the advertising and quota rules, then the likelihood of speedy roll out of higher speed fixed broadband would be reduced.

This analysis suggests that there is a conflict between two of the objectives of the European's Commission's i2010 programme. On the one hand, it seeks to extend the TVWF Directive to include all AVC services. On the other, it seeks to maximise fixed broadband roll out across the EU. Achieving the first objective will make it more difficult to achieve the second.

5.4.7.1 Potential economic impacts

A number of studies that have quantified the impact of broadband deployment on the economy. For example

[100] For example see "Propelling the broadband bandwagon", commissioned by Ofcom from Strategic Policy Research, August 2002

- Estimates for the US suggest that universal broadband adoption could yield annual consumer benefits of $300bn, while the internet could reduce business costs by $125-200bn annually.[101]

- Estimates for the state of Michigan (US), indicate that broadband adoption could contribute $300-500bn to the state economy over a ten year period[102]

- Estimates for the UK suggest that by 2015 broadband will increase UK GDP by up to £22bn, assuming penetration reaches 50% of households by 2010[103]

- Estimates for the state of Victoria (Australia) suggest that broadband adoption could contribute between 0.5% and 0.8% per annum to state GDP growth.[104]

It is clear from these estimates that delays in broadband adoption could have a significant economic cost. To give an indication of the scale of the cost of delaying broadband adoption growth by one year, we used the results from the UK study and have extrapolated these to the EU-25. We find that a one year delay could result in a loss in the net present value of UK GDP over the period 2005-2015 of up to £15bn.[105] The UK economy accounts for about one sixth of the GDP for the EU-25, hence the impact on the EU as a whole could be up to £90bn or €125bn.

5.5 Summary

Table 5.3 summarises our largely qualitative assessment of the costs and benefits likely to arise from an extension of the TVWF Directive.

As important as the direct effects are the indirect benefits and costs. One potential benefit of an extension would be to put all AVC service providers on a more equal footing. However, extension of the TVWF Directive would not promote competition between operators. Rather competition in AVC services would be weakened, with new AVC services offering less vigorous competition to traditional services as a result of the additional costs they would face. The regulations could favour large service providers that can afford to pay for EU and independent content. These effects could also lead to a reduction in diversity and plurality of audio-visual content when compared with the baseline scenario.

The largest costs are associated with the application of the detailed tier of regulation. But an extension of the basic tier to non-linear services also generates additional costs. For example, regulatory costs could be at least ten times those of currently administering the TVWF Directive. Many of these costs could be avoided if a self-regulatory approach was adopted. Such an approach is already being used to deal with consumer protection issues in some Member States for video on demand and mobile services.[106]

[101] This research is summarised in "Bandwidth for the people", R Crandall, R Hahn, R Litan and S Wallsten, Policy Review, AEI Brooking Centre, October 2004.

[102] "The Payoff from ubiquitous broadband deployment, Gartner Research Brief, July 2002.

[103] "The Economic Impact of a Competitive Market for Broadband", cebr, November 2003

[104] "Economic Impacts of Broadband Adoption in Victoria", ACIL Tasman, June 2004

[105] The net present value was calculated assuming a 3.5% discount rate.

[106] See, for example, http://www.imcb.org.uk/

Table 5.3 The costs and benefits of extending the TVWF Directive

Category	*Area of impact*	*Assessment of impact*
Direct benefit	Single market completion	Little benefit. New AVC services are national or global rather than pan European in character
	Protection of minors, public health etc/	Significant social benefits for applying basic tier of rules. But best done through self or co-regulation
	Support for EU and independent production	Few benefits while extending quota rules would reduce diversity and plurality of content
	Right of reply	Few benefits and potentially significant costs
Indirect benefit	Promote competition in AVC services	Opposite effect to that intended. Extension would weaken rather than strengthen competition
Direct cost	Compliance	Compliance costs would be raised by at least an order of magnitude as Directive captures tens of thousands rather than hundreds of service providers
	Legal uncertainty	Greater legal uncertainty would lead to slower service development in the EU
	Specific service costs	Application of quota rules would make development of new linear TV services more difficult
		Application of quota rules would lead to loss of niche radio stations
	Costs of ISP compliance	Large ISPs would move outside EU and small ISPs would restrict AVC services offered
Indirect cost	Impact on broadband roll out	Extension would slow development of compelling AVC content by fixed network operators and so weaken the case for the last 40% of households buying fixed broadband connections

The benefits associated with expanding regulation are limited. It seems likely costs will outweigh benefits unless the regulatory extension seriously constrained. In particular, the net benefits are likely to be negative if the detailed tier of regulation is applied to linear TV services. The negative indirect effects on service development, competition between AVC services and the knock-on impacts on broadband roll-out could be substantial. We estimate that the net present value of the EU GDP forgone from a one year delay in broadband adoption could be up to €125bn.

Our analysis suggests that there is a fundamental conflict between two of the objectives of the European Commission's i2010 programme. On the one hand, it wants to extend the TVWF Directive to include all AVC services. On the other, it wants to maximise broadband roll out across the EU. It seems that achieving the first objective will make it more difficult to achieve the latter.

The EU framework for regulation of electronic communications networks and services provides for new entrants and emerging markets to be treated differently from incumbent services and networks because of differences in market importance and influence. We suggest these same concepts should be applied in the context of the TVWF Directive discussions.

Annex A Categorising AVC Services for Regulatory Purposes

The EC has chosen to distinguish between linear and non-linear services. There are other ways of categorising AVC services for regulatory purposes and for the application of the more detailed TVWF rules. The choice depends in part on the weight put on different objectives, namely influence (and hence protection), EU content production, legal certainty and technology neutrality. For example

- Broadcast versus 1 to 1 services. This is the approach currently used to distinguish between services which are regulated by the TVWF Directive and those which come under the e Commerce Directive. This approach would maintain the status quo under which some of the basic rules would not apply to new AVC services – protection of minors and public order and respect for human dignity objectives would be met because of other legislation. Rules concerning public health, right of reply, identification of advertising and identification of the content provider (in the case of internet based services) would not be extended to new AVC services.

- Live versus recorded content. Live content is generally linear in nature. Multiple feed, pre-recorded capsules, rewind and fast forward functions can still be used with live TV broadcasts, meaning the service is not strictly linear. A further difficulty with this approach is that the consumer and not the service provider determines whether the content is viewed live or recorded and so the service provider has little control over or certainty about whether it complies with the regulations or not.

- Services for which customers pay a fee could be exempt from the detailed rules and, by implication, market forces would determine the level of advertising and EU content are supplied. This approach would appear to have the advantage of legal certainty, though has no clear link to the influence of difference media. It is likely to result in lower levels of EU content being shown (assuming the rules are enforced) but given public resistance to high levels of advertising the impact on the total amount of advertising is unclear.

- Discriminating in terms of the effort required from a consumer to find and select the audio visual content. In other words, is the audio visual content pulled by the consumer or pushed by the service provider? Free-to-air TV and radio broadcasts simply require the user to select a channel and then to watch or listen. In contrast downloading TV over the internet could require the user to search for the content, to set a PVR to record the material and then to view at a later date. The case for applying detailed TVWF rules in the latter case, where the consumer takes an active role in selecting the AVC, is significantly weaker than in the former case. However, defining whether a service is pushed or pulled is likely to be as problematic as defining whether a service is linear or non-linear. In particular the use of autonomous agents, such as intelligent PVRs, will make it increasingly difficult to determine who is selecting material for viewing. In many cases the rules programmed into the PVR, in combination with the viewing habits of the consumer, will determine what is easily available to the consumer for viewing.

- Categorising services according to the degree of influence they have over their audience. This is a function of audience size, the nature of the audience[107] and the extent to which the service compels attention. One problem with this approach is the degree of subjective judgement which is required in assessing the degree of influence exerted by each service and the legal uncertainty this creates.

[107] eg children versus adults