

EUROPEAN DIGITAL TELEVISION: FUTURE REGULATORY DILEMMAS

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Abstract

The development of digital television (DTV) has encountered many problems in Europe. The recent collapse of terrestrial digital channels in Spain and the U.K., financial problems of even major satellite players, and slow or stagnated user interest in most European countries demonstrate only one part of the difficulties. The combination of technological determinism, market

optimism and inconsistent "light touch" regulation in the EU has accelerated the early development of digital television in Europe, but it has not been able to guarantee sound development in the long run. One of the major problems has been the standardisation. Industry led standardisation successfully developed the common digital transmission standards but the implementation of common "middleware" standards needed for interactive services and pay-TV access has not succeeded.

Different standards are further segmenting European digital television markets. The development of European digital television is dominated by a few satellite broadcasters whose proprietary standards are preventing viewers from accessing a full range of digital channels with one device, thus causing unnecessary costs and delays both in the use and production of interactive DTV services. At the same time there is a constant threat of media concentration and competition problems.

This article deals with past failures and future challenges and dilemmas in the European regulation of digital television development. Along with problems in standardisation, it discusses other policy dilemmas connected to DTV, such as interactive advertising, the "Listed Events" policy and the remit of public regulation in general.

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As it is often noted, contradictions and conflicting goals have marked European Union audio-visual policy for some time. Since the early 1990s there has been a clear shift from sector specific content regulation to cross-sectoral competition policy, with an increasing role for European competition authorities and a decreasing role for national content regulation. At the same time, there has been growing interest in simplifying, harmonising and minimising media and telecom regulation to create commercially a more competitive single market environment. Commercial interests are in the foreground in European media and telecom policy, even though the Amsterdam Protocol (1997) represented a certain symbolic turning point, when the neo-liberal “marketisation” trend had to face its cultural opposition and accept continuing political support for public service broadcasting (Papathanassopoulos 2002, 71-79; Harrison and Woods 2000; 2001).

In principle, DTV has the potential to be one of the most concrete platforms of user-end technology and market convergence. In digital broadcasting, television may be used as a platform for a variety of networked electronic services too — home banking, teleshopping, e-mail, chatting, gaming and on-demand information services. The production of DTV programmes which allow viewers to use a mobile or wired return channel, are bringing about new kinds of affiliations, alliances and revenue sharing models between broadcasters and telecom operators. But as Iosifidis demonstrates (2002), it has been difficult to converge European broadcasting regulation, where cultural issues have traditionally been important, and telecom regulation, where economic concerns and market structures have been the major agenda. In the regulation of digital television, a need for this kind of “converged” regulation has been evident but too much lacking.

I argue that in more than one way, European Union policy has failed to face the regulatory challenges of digital television or to support its reasonable development. One reason for this is that European media policy in general has been crippled by neo-liberal principle, where regulation is considered potentially harmful for the emerging new markets. Contrary to that viewpoint, the lack of coherent regulation has itself been one of the reasons why the early DTV development has been so unpredictable and unsuccessful. Reasonable public interest principles and policy goals have been put forward in the rhetoric of many EU policy documents and speeches but these good intentions have not been effectively implemented into directives. This has affected negatively the emergence of digital television in Europe, both in terms of public interest and in terms of market prospects.

A Short History of Neo-liberal Audio-Visual Policy

Ever since the Treaty of Rome (1957), the idea of free trade and efficient market competition without national subsidies on the European common market has been constitutive of European co-operation. The goal to build a single, competitive and commercial European audio-visual market has long inspired policymakers in Brussels. A series of subsidy programmes proposals and directives have been aimed at overcoming Europe's segmentation into national markets and to create a genuinely European audio-visual industry. Within this frame, national public service broadcasting has often been treated as an economically inefficient exception to the rule and also as a potential disadvantage for the development of European identity (Levy 1999, 41-43; Harrison and Woods 2001).

TVWF Directive (1989/1997), the cornerstone document of EU television policy, was actively deregulating the market by forbidding Member States to prevent reception of a TV channel licensed elsewhere in the EU (thus regulating the power of national regulators). But the same directive was also regulating media, even if only quite minimally: advertising times and the placement of the slots were legislated, protection of children and prohibition of racial or religious hatred were mentioned and the famous European content quotas were included. The quotas oblige broadcasters to reserve a majority proportion of their transmission time (excluding news, sports, games, advertising and teletext) for programmes of European origin. The effectiveness of this potentially important requirement was at any rate halted by provisions specifying that member states only need apply quotas “where practicable and by appropriate means” (*ibid.*, article 4). The national implementation of content quotas directives have also been quite irregular.

David Levy estimates that instead of the overall competitiveness of the European TV industry, the TVWF directive has supported the UK based non-domestic satellite services and the free circulation of American programmes (Levy 1999, 41-44, 161-164). When Commission President Jacques Delors spoke to the European Parliament in 1989, he emphasised that European television policy is necessary, both in the name of competitiveness and in the name of cultural defence: “the Community refuses to leave the monopoly of audio-visual techniques to the Japanese and that of programmes to the Americans” (Levy 1999, 42). If the ambition of European audio-visual policy really was to build an unified European television market which could better compete with imported American programmes, then the policy has failed. Throughout the period of neo-liberal television policy, the European Union audio-visual trade deficit with the USA has only grown larger (Tongue 1999, 106-9; Hancock 1998, 137-8; Papathanassopoulos 2002, 17-18). The European Commission has estimated that in 1999 the share of US import on the audio-visual markets of the member states was between 60 and 90 percent with a total value of 7,000 million Euro, while the share of European import on the US markets was only 1-2 percent (COM(1999)657, 7). New competition and television market growth has not taken place on the pan-European or international level but on national markets only.

There are several reasons for US dominance of the global television content markets that I can only refer here. Originally American dominance can be traced back to European nationalism and the World Wars that ruined both the general economy and that of the film industry in Europe. At the same time Hollywood studios developed the most efficient commercial production delivery chain, using both vertical and horizontal integration (Jowett and Linton 1981, 36-37). American film drama tradition, based on stories of individual heroism and heterosexual romance using internationally understandable stereotypes, has appealed to audiences all around the world (Higson 1989). This drama tradition has shifted to US television drama production, where it has capitalised the world's largest domestic market and developed efficient international delivery chains using the world's largest second language. Thus US companies have been able to sell programmes to foreign exhibitors at prices below that of domestic exhibition (Corcoran 1999, 77-79; Doyle 2002, 90-100). Because of these deep rooted structural and cultural reasons, the inability of European audio-visual drama to compete with American im-

ports is not surprising, and probably cannot be changed merely by commercialising European television production along the lines of the American model.

Loose Hands on Digital Television Standardisation

Ever since the launch of general Information Society strategies (COM (93)700), the dominant European ideas of IS development have been interwoven with the ideas of common market liberalisation and media convergence — the technological and economic integration of telecommunications with information systems and broadcasting networks. The Bangemann Report (1994) especially gave further support to the liberalisation of both telecom and audio-visual sectors in the context of IS and convergence. The importance of common pan-European standards as the essential precondition for harmonious pan-European market evolution was strongly emphasised (*ibid.*, 12-13), as it was accentuated in the Council Resolution at the same time too (Council Resolution 1994). These ideas were later filtered into the EU Green Paper on convergence (COM (97)623) which further supported the idea of a more “technology-neutral” competition regulation instead of content regulation. The viewpoint of the Commission ever since has been that to avoid market distortions in developing new media markets so vital for European competitiveness, the EU should minimise its regulatory interventions (Levy 1999, 129-130; Goodwin and Spittle 2002; Kaitatzi-Whitlock 2000).

The first EU policy documents considering digital television also stressed the single market and common standards rhetoric. In spite of this, the first piece of regulation tailored to digital broadcasting, the Advanced Television Standards Directive (ATSD 1995), was drafted in a way that did very little to facilitate the emergence of a single European digital TV market supported by common standards. The directive stipulated that the member states should promote the accelerated development of the DTV (*ibid.*, article 1), but gave no clear guidance on standards. The directive gave the DTV operators liberty to combine proprietary Conditional Access Systems (CAS) with proprietary Application Programming Interface (API) systems. The directive was only requiring that the operators should licence their technology to other operators “on fair, reasonable and non-discriminatory terms” (ATSD 1995, article 3c). While the national implementation was again quite heterogeneous and the control of “reasonable terms” proved to be difficult, it was soon apparent that the lack of common standards in these “middleware” solutions created a bottleneck technology. Different API and CA systems, which must be installed in the set-top box (STB), makes it impossible for digital television viewers to access all the digital channels available on the market with one receiver. In practise, this has been a rather efficient obstacle to developing pan-European digital television market and created potential competition problems too (Levy 1999, 63-67; Nolan 1997; Llorens-Maluquer 1998; Galperin 2002).

The immediate reason for this non-regulative policy was that standardisation issues for digital television were consigned to the Digital Video Broadcasting Project, an industry-led European consortium of over 300 broadcasters, manufacturers and operators (see www.dvb.org). Although the DVB group had succeeded splendidly in creating common European transmission standards for satellite, cable and terrestrial broadcasting by the end of 1993, the standardisation of API and CA systems proved far more difficult. In these areas the conflicting interests of different

broadcasters came forward. It was, notably, in the interest of pay-TV satellite broadcasters to extend control over their existing customers in the transition from analogue to digital markets, not to open the market to new competitors via common standards solutions (Galperin 2002; Levy 1997, 667-671).

Although the prospects for voluntary industry consensus on API and CA systems faded, the Commission refused to intervene in standardisation. European digital broadcasting started in 1996 with a rush. The pioneers were DStv (Telepiù) in Italy, Canal Satellite Numérique (Canal+) in France, and DF1 (Kirch Group) in Germany, soon followed by three other French players — each of which launched using independent middleware standards. UK followed in the second phase and it was the first country in the world to have DTV in all three forms, satellite, cable and terrestrial. In all the “early adopting” countries, including Italy and Spain, expensive hardware wars erupted between different players, who wanted to win the major market share with subsidised, incompatible STB receivers. The absence of common middleware standards meant that although broadcasters could transmit their digital signals across Europe, audience access to those signals would be strictly limited to households equipped with the “right” set-top box receiver. Due to this, the already nationally segmented European TV markets are further fragmenting into rival blocks operating incompatible STBs even within the same national or linguistic market (Murdock 2000, 47; Papathanassopoulos 2002, 40-53; Levy 1999, 64-65).

Since then the arena has been filled with mergers and acquisitions, hardware and software wars, increasing competition in broadcasting rights, increasing costs, and finally, in Spring 2002, major collapses. Only the strongest conglomerates seem to survive in the digital pay-TV business. The German Kirch Group fled the arena in bankruptcy. ITV Digital had to shut down its multiplex in the UK in spite of its 1.5 million customers (Prebble 2002). The competing Spanish digital satellite platforms announced plans to merge in May 2002 after the collapse of the digital terrestrial operator, Quiero (Fernández 2002). Even Canal+, the most successful terrestrial pay-TV channel in Europe (4.3 million subscribers) has faced serious troubles. Rupert Murdoch with his Sky Digital (BSkyS) in the UK is probably the only player who has reason to be quite satisfied.

Without open middleware standards, operators have made some efforts to share technology and to create national standards by mergers and joint launches. In some cases, most notable of which have been Kirch Group's d-box-technology in Germany, the European Commission Merger Task Force has blocked these alliances, for the reason that proprietary common standard can arguably act as a de facto national cartel and prevent new entrants from entering the DTV market. The response of the EU competition regulators — as well as national governments — has been different in some other cases. In the absence of open common standards, the regulators have been forced to decide case by case, whether to enhance competition with technologically fragmented TV islands or to allow dominant market forces to create a common standard at the price of creating monopolies (Dransfeld and Jacobs 2000; Papathanassopoulos 2002, 115-124).

The economics of pay-TV broadcasting is not the most important issue here; it only demonstrates the scale of the problem. Uncertainties created by interoperability and in some cases technical problems (see Prebble 2002) largely account for the

poor public reputation of the whole European digital television project. The multiple standards situation has also made the production of interactive applications for DTV platforms prohibitively expensive and risky, given that each application must be tailored separately to fit different proprietary STB platforms. This will also retard the development in interactive television applications for non-commercial public interest (and public service) purposes and their chances of travelling easily across Europe. In general, terrestrial free-to-air broadcasters, who started digitisation only after the satellite companies, enjoy none of the material benefits in controlling the proprietary set-top boxes that the pay-TV companies do. They are facing only the troubles.

No wonder there have been more calls for the implementation of open middleware standards, especially from the terrestrial television industry sector.

Common Platform for the Second Generation?

After many difficulties and delays, the DVB group succeeded in creating an open API standard called Multimedia Home Platform (MHP) in 2000. As an open solution, MHP can in principle be used as a platform for pay-TV and interactive TV services, Internet browsing and other applications on different user end platforms. MHP is now most eagerly supported by German and Nordic TV operators (for more on the MHP issue, see Näränen 2003).

The problem is that MHP does not interest the digital satellite broadcasters who already have gained a substantial market share with their proprietary middleware technology. This makes the hardware manufacturers also less keen on MHP. MHP also requires more efficiency in the processor and more Flash/RAM memory from the STB hardware than the first generation platforms, like MediaHighway (Canal+) and OpenTV (BSkyB) (Flynn 2001). This is probably one of the reasons the STB manufacturers have not been hurrying to start mass production of MHP standard boxes: they will be more expensive to produce than the proprietary ones in the early phase.

Finland announced in 2001 that it would be the first European country to start DTV broadcasting using the MHP standard. In practice, this has not happened because by the time digital broadcasting started in Finland (27 August 2001) there still weren't any MHP boxes on the consumer market. So the initiative has been lampooned in the press, and seriously diminished the credibility of DTV in the eyes of the viewers. Few consumers are willing to invest in a technology that may be outdated when the MHP boxes finally enter the market.

Over a year after the digital start, there are 31,000 terrestrial or cable set-top boxes sold in the Finnish market and twice that number of digital satellite boxes, most of which are from Canal+. With 2.2 million television households in the country, this amounts to a digital penetration of under 4.5 per cent. Most of the digital terrestrial broadcasters have serious economic troubles. Of the total of 13 channels originally licensed to start digital broadcasting, four have refused to start (all pay-TV channels), two (youth channel SubTV and the Sports channel) gain most of their audience in analogue cable, and the remaining channels, five of which are public service, simulcast or recycle their analogue content in the digital platform with only some "digital exclusive" content. No new interactive services are yet available for the public. MHP boxes are now entering the market, and some inter-

active services are ready to be launched, but without new national or international channels the consumer interest is bound to remain modest.

DTV has been heavily promoted by the Finnish government with the Information Society argument that the digital set-top box may well provide everyman's affordable access point to the Internet, public Information Society services and e-commerce. Now, this public policy project is delayed because it was not supported by feasible strategies and open access ITV standards on the European level.

The European Commission has been supporting the MHP standard in recent years, but only symbolically. Declarations by the Commission on the principles for the Community's audio-visual policy in the digital age promised that the Commission would closely monitor API standards development, but did not propose any specific action "at this early stage, when market and technological developments are highly unpredictable" (COM (1999)657, 15). In December 2001, the Commission promised the European Parliament that it would communicate, "as soon as possible," the concrete steps the Commission will take to ensure the rapid adoption of interoperable and open systems for digital TV services in the European Union (Paasilinna 2001a and 2001b; COM(2000)393, 12, 25)

Paradoxically, in the new emerging market, private enterprises may also gain economic advantages by depending on an open standard not controlled by them alone. But private institutions do not use this strategy if they have a chance to gain advantage by dominating the markets with proprietary technology. Pyungho Kim, studying early interactive television systems in the USA, has emphasised that a closed, proprietary system of interactive television was a failure in the USA not only economically but also culturally because it inhibited active involvement and participation on the user's part and was fundamentally restricted to a consumerist information retrieval system (Kim 1999). We may ask if this kind of failure can still be avoided on the European continent with an open interactive DTV standard only. Maybe not, but without it, the chances are even worse. With loosely regulated digitisation we seem to be getting more television, but not better or enhanced interactive television.

Next year will show if there will be enough support for MHP from the regulators or from the broadcasters — or if it is too late. It may well be that the "legacy" of already installed incompatible set-top-boxes (over 15 million units) will make full interoperability a long and difficult process for the European DTV regulators, operators and consumers. And the regulatory challenges do not end at this.

Future Regulatory Challenges Associated with the DTV

In addition to standardisation and interoperability issues, there are many important future regulatory dilemmas in the development of DTV. These challenges should be faced and widely discussed before the next revision of the TVWF directive (1989/1997) takes place. This was actually supposed to happen in late 2002, but was postponed for at least another year (see Reding 2002).

Advertising Regulation and the EPG

Digital television offers new possibilities for advertising. With split screen advertising (allowed in the United Kingdom and Germany at the moment) ads can be shown in a separate picture-in-picture space without breaking the programme

stream. Ads can also be presented in the form of sponsors' logos, which remain on the screen along with the program. Small clickable ad-buttons may give the viewer access to Internet-type microsites where the viewer can get more information or with a return channel even ask questions or book an opportunity to test a product. Ads can be connected to T-commerce applications where one can buy products. Consumer Relation Management (CRM) systems implemented in the set-top box may gather information for the channel and service preferences to allow targeted advertising.

These new advertising applications make it difficult to apply TVWF (1989/1997) advertising regulation, which is based on regulating time slots. These regulations state only that commercials have to be readily recognisable as such and kept quite separate from other parts of the service by optical and/or acoustic means (*ibid.*, article 10; Sims 2001). The European Commission has already considered this issue, since there is an obvious need to clarify some of the advertising provisions in the TVWF directive (Commission MEMO/02/130). This area will be difficult to regulate in a way which could allow the development of new, innovative forms of advertising which will generate the new revenues urgently needed by most free-to-air broadcasters, while at the same time protect consumers from unwanted exploitation.

One difficult area for regulators is the design and use of Electronic Programme Guide (EPG) which gives detailed information on programmes. EPG can be used to combine commercial information alongside programme information. What is more problematic is that in a multi-channel environment, EPG can and has been used to promote some forthcoming programs more than others. In the standard terrestrial television set, the public service channel is usually "number one on the dial" but in an EPG, it may be relegated to any other number, which could disadvantage it vis-à-vis competing channels (Papathanassopoulos 2002, 80). National co-operation and self-regulation on EPG information has been established e.g. in Finland, but the consensus may be more difficult to achieve in many other countries.

Listed Events Policy

The so-called "Listed Events" policy was introduced in the 1997 revision of the TVWF Directive (1989/1997). The background to this was that increasing competition in the European TV market after liberalisation had led to drastic price increases in the broadcasting rights of the most attractive sports events. There was real public concern that nationally important events like the Olympics could in future be televised by pay channels only (Papathanassopoulos 1998). Listed Events policy gave the Member States permission to prevent pay channels from acquiring exclusive broadcasting rights to events regarded as of major social importance, officially listed well before the event (*ibid.*, article 3a). The purpose was to guarantee that the televising of specific public events remains available free-to-air.

Huge prices paid for exclusive sports broadcasting rights in advance was one of the reasons for the collapse of both ITV Digital and Kirch pay-TV. The Listed Events policy will not solve the problem of increasing broadcasting costs, but it will remain helpful in the future when increasing digital channel quantity is further increasing the competition on broadcasting rights. Listed Events policy may slow

the speed of price escalation, as does EBU co-operation in purchasing sports rights, and they both thus benefit the general public. However, the details of Listed Event regulation are often difficult to anticipate because they are considered on a national level and within different market structures. Thus this regulation is detrimental to pay-TV companies, especially for digital pay-per-view (PPV) programming (Papaathanassopoulos 2002, 204-213). It may be wise to try to harmonise and minimise the national use of the lists, and also to apply the list to events other than sports.

Spectrum Allocations and Analogue Switch-off Strategies

In many media sectors, digitisation and convergence make room for time-dependent regulation, especially when there are major changes happening. Switch-off time for terrestrial analogue broadcasting is definitively this kind of issue, even if not yet in sight in many Member States.

DTV enthusiasm in Europe can be partly traced back to the overheated market expectations of the third generation mobile industry (3G). There has been an assumption that after the analogue shut-off date, the freed-up spectrum would be auctioned off to 3G-operators, which could generate financial resources for governments and more room for competitive advanced services on UMTS markets. In this policy, Europe has followed the lead of New Zealand and the USA, where spectrum sale is best established and where the Federal Communication Commission's auctions have generated more than 20 billion dollars for the Federal budget since 1994 (Grünwald 2001). But the drawbacks to this policy can be seen now, after European telecom companies paid huge prices for 3G network licences in Central European markets and got into serious trouble trying to finance further development. The UMTS bubble demonstrated once again that hype is good neither for business nor for providing a backbone for public regulation.

A European switch-off strategy is needed to avoid overheated expectations but also to set a date for analogue switch-off well in advance, to give the markets and consumers enough time to react. The disadvantages of spectrum auctions should be considered in detail. Auctions are a more transparent and a faster way to share-out the use of the electromagnetic spectrum than so-called "beauty contests," but on the other hand auctions may limit access to the market by giving the major affluent corporations all the spectrum (*ibid*). This means that if auctions are used, they should be counterbalanced by secure competition regulation and maybe lowering barriers to entry by reserving free space for minority and community programming. Switch-off auctions could also be used to implement positive regulation, like to subsidising open standard set-top boxes for the remaining analogue viewers.

Spectrum allocations are national issues but should be co-ordinated at European level because, as McPherson (2002, 87) has noted, digital signals are essentially more constrained within the parameters of the nation state than analogue ones. Receiving and hacking analogue channels across national borders has been a "common man's Pan-Europeanism," and it is in danger now in the digital era. At least the European free-to-air broadcasters, well before the analogue switch-off date, should negotiate contracts to make foreign signal reception possible when clearly needed.

Community radio and television may in general encounter problems with

digitisation. Access by citizens and communities to broadcasting content production is a regulatory question that has got too little attention in European licensing policy. This question should be addressed both on national and European level along with spectrum allocation, and maybe implemented in the remit of public service corporations.

The Future Remit of PSB

EU is requiring Member States to distinguish clearly between defined public broadcasting activities and activities in the competitive domain. The budgets for license-fee financed corporations should also be more transparent, so that it is possible to assess whether public money is being used to subsidise new services. While Member States are now in principle free to define the extent of the public service remit and the way it is financed and organised, they need to establish a precise definition of the remit, formally entrust it to one or more operators and have in place an appropriate authority to monitor its implementation (Commission on Public Service 2001; COM (1999)657).

There is a great danger that public service remit definitions will imply more narrow definitions than before. In Denmark, a new draft media law for radio and television outlines plans to privatise the public network TV2 and in Portugal the government is considering transforming the current public network RTP into a single channel without advertising (IFJ 2002). Definitions of remit can also become very different in different Member States. Simple genre based definitions stand against the prevailing European tradition. There have also been suggestions that PSB functions could be split up and provided by a range of different broadcasters, not only state funded ones (Harrison and Woods 2001).

What is needed is some measure of European harmonisation of PSB definitions, which should ensure a wide enough general remit, define the PSB role in online activities, DTV and pay-TV services, and guarantee funding principles that can make PSBs independent from direct political control and commercial interests. Broad public access to free-to-air services should be ascertained both before and after digitisation with e.g. well defined “must carry” rules. Harmonised support for public service will be ever more important when new Member States are entering the EU, otherwise it will be most difficult to develop European public service policy further or even to use the term “public service broadcasting” accurately.

Advocates of “the digital future” (e.g. Biggam 2000) often indicate that the future of television lies in limitlessly available on-demand channels serving niche audiences, actively serving critical consumers with individual needs. This, it is argued, will inevitably force the PSBs to abandon mixed scheduling, stop the striving for maximum audience share and make them content with providing public service niche programs that are non-profitable for commercial broadcasters — and accept a decline in public funding.

We can also propose the opposite and argue that channel proliferation, combined with cultural and technological fragmentation and increasing pay television services, will actually make the role of PSBs even more important. PSBs can still stand for universal and equal service, social cohesion, democratic public debate, national and European identity and cultural values. As Lievrouw (2001, 22) puts it: “Reliance on highly fragmented or targeted information sources ... may reinforce

people's identification with narrow interests, their sense of difference from other groups and indifference toward larger social concerns" (in Harrison and Woods 2000, 487-490).

Most significantly in journalism and democratic debate, the abundance of information sources — whether in “pull” or “push” media — underlines the importance of the work of seeking out information and analysing it. Journalists should be able to make their judgements of what is important and what is not as independently as possible from commercial and political pressures. National PSBs have a most important role here, just as the role of public libraries, schools, health communication, media education and other important areas of public life should also not be dismissed.

Most Important: The Remit for Regulation

What the EU Commission should learn is that regulation is not harmful for business. On the contrary, at times commercial market actors desperately need regulation too, especially the ones who are not monopolising the market. Stuart Prebble, former chief executive of ITV Networks, made this point very clearly in his remarkable article in the *Sunday Telegraph*, written only days after the collapse of ITV Digital. Without avoiding self-criticism, he also blamed absent or tardy regulatory action in the UK, which allowed BSkyS to eliminate competition (Prebble 2002). As Cammaerts (2000, 48) notes, public regulation and state intervention can function as enabling factor in the economic process.

In the prevailing EU approach to media policy and regulation, emphasis is placed on cross-sectoral competition and anti-trust regulation to prevent players with significant market power — including public service corporations — from dominating the market and disrupting competition. Self-regulation, co-regulation and proportionality are favoured. Regulation should be minimal and take place only when market failure is evident (Reding 2001; 2002).

The Commission has been foregrounding the view that an increase in media platforms and channels and in “pull media” use (like video-on-demand or pay-per-view television use) makes it possible to minimise regulation (see Commission on Audiovisual Content Regulation n.d.). But what this technocratic optimism is ignoring is that the quantity of channels and interactivity available in the delivery networks does not itself guarantee free consumer choice. Broadband networks are capable of multiple functions, from mass media delivery to personal communication, but broadband is not a magic tool for skipping regulation, rather it requires a different kind of regulation from analogue free-to-air broadcasting.

There will always be technical, financial and contractual limits and bottlenecks in audio-visual services both in terms of consumer access and in terms of barriers to market entry. The need for spectrum allocation will prevail in digital broadcasting. Broadband networks also have material limitations in terms of bandwidth, router and media server resources. The major bottleneck on both television and broadband markets will be content, including broadcasting or netcasting rights, copyright ownership and content production economics in general. “There is only one Premier League, only one Wimbledon and only one World Cup,” as Nolan (1997) puts it. The concentration of ownership in the converging digital world may further decrease the diversity of content despite the increasing number of delivery

channels. The “Audio-visual Xanadu,” offering free choice of all the television content in the world, will never materialise on this planet, even if there were no spectrum scarcity at all.

Competition regulation works best in a market with no de facto monopolies and with significant numbers of players with equal opportunities in their territories. In emerging new markets dominated by well-established transnational players — like DTV markets — the situation is totally different. The presence of economies of scale and scope implies a natural gravitational pull towards oligopoly and dominance by the most active large-scale players (Blevins 2002; Doyle 2002). In his recent book Papathansopoulos (2002) shows in details how difficult it is for European competition regulation to tackle the issue of media monopolies and concentration (see also Iosifidis 2002). These difficulties were demonstrated once again in October 2002, when the Court of Justice of the European Communities annulled two Commission decisions prohibiting mergers and also once again annulled the exemption the Commission had granted for the European Broadcasting Union (EBU) for the joint acquisition and sharing of television rights to international sporting events (ECJ 2002). Complaints and disputes on these “Eurovision rights” have been on the agenda ever since 1987. Cross-sectoral competition regulation is an important tool but it may often be a very slow mechanism and decisions reached may be difficult to anticipate by the market players.

More programme output and delivery platforms in Europe may have some positive effects in terms of public interest and consumer choice. Increasing pay-TV output may find strong audience support because it measures the intensity of viewers' preferences, which may both increase diversity in programme output and also guarantee better services for minority audiences. But there are problems in this model, such as the comparative inefficiency of the pay TV system and the fact that segmented audiences will only be targeted by commercial operators in so far as they have the potential to be profitable. Commercially less attractive (i.e. poorer) target groups will get no more choice unless free public television can offer it (Stemers 1998, 103; Brown 1996). Because of the high fixed costs of content production, more television in Europe is likely to mean either more American content or less European quality (Corcoran 1999, 84), or maybe both. All in all there is both theoretical and empirical evidence that more competition does not automatically lead to more choice and cheaper consumer prices. Abundance in programme output is not the only precondition for content diversity in the televisual marketplace of ideas (Blevins 2002; Tongue 1999, 131-2; Picard 1998, 213; Hellman 2001, 182-4).

Fair competition assumes free choice by consumers. One problem with this is that digital television services are connected with technological structures that may remain “behind the wall,” to use a metaphor by John Taylor. The technologies in front of the digital wall are the ones that people see and use (user end systems). The technologies behind the wall are the structures of technology, systems of services, standards and other aspects of design that affect how technologies can be used (Mansell 2000, 43). Consumer choice cannot easily regulate this area, so there will be a need in the future for EU regulators to intervene more actively in standardisation issues both in the audio-visual and the telecom sectors, even if it will be always difficult to know when and where to intervene. Cross-sectoral competition regulation is an important tool for market regulation, but it is not enough. Euro-

pean failure in regulating digital television middleware standards proves that sector specific regulation is still urgently needed, because problems may be too complicated and technical to be resolved at a cross-sectoral level only (Levy 1997, 676).

Cammaerts (2000) describes Information Society public regulation issues in the following chart:

	ACCESS	PROTECTION
SECTOR-SPECIFIC	<ul style="list-style-type: none"> • universal service • interconnection • standardisation 	<ul style="list-style-type: none"> • universal access • right to information
CROSS-SECTORAL	<ul style="list-style-type: none"> • anti-trust policies • consumer protection 	<ul style="list-style-type: none"> • data protection • illicit content regulation

This chart provides a good basis for further discussion, but it is still missing one important question: what should be the division of regulatory responsibilities in the national, European or more international level? This question needs serious consideration, especially at a time when the European constitution and enlargement process are in preparation. The issue is not only about the remit of European regulation, but also about its guiding principles, whether these follow along the lines of negotiated intergovernmentalism or federal supranationalism. The European Round Table of Industrialists (ERT 2002) is supporting an even stronger Commission “with a clear remit,” as an institution fully capable of articulating the common European interest above national / regional interests. The opinion of ERT is no surprise, considering that the Commission has lately been subordinating public interest policy to industrial policy. But Member State governments and regulators should not give way to one-sided industrialism in the Commission without looking for alternatives. Global negotiations on the further liberalisation of audiovisual services is still on the agenda of the World Trade Organisation and deregulation is traditionally deemed “not only ‘common sense’ but also the only viable alternative,” as Simpson and Wilkinson (2002) emphasise. Surely national governments should be more actively involved in shaping the role of the EU in the WTO process too.

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