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Paper Title: Growing Pains? The Transition to Digital Television in Europe

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Introduction

This paper argues that Digital Television (DTV) has been developing rapidly in Europe since the late-1990s but that it currently suffers reversals in many parts of Europe and its growth is uneven. National policies are largely determined by markets, political contexts and supra-national influences, notably European Union (EU) audiovisual policy, which puts pressure on Member States to speed up digital switchover. This creates a tension between the push of the EU to harmonise the switchover process and set target dates and the struggle of some of the Members to comply with this policy. In terms of the strategies that could be employed to accelerate digital uptake the paper points to adopting free-to-air DTV. The wide reach free-to-view model, in which public broadcasters have a leading role, ensures that the universality principle is maintained in the digital age. However, anti-competitive concerns have been raised concerning public broadcasters' expansive strategy on digital media platforms.

Digital switchover and the development of DTV

Television, as a broadcast medium, is a cornerstone of modern democracy and cultural diversity, enhances our identity and capacity to live together and therefore contributes to social cohesion. In the digital era with an unprecedented proliferation of sources of communication, most people still mainly rely on television in order to be entertained and informed. There have been three major phases in the development of television broadcasting over the past three decades in Europe. The first phase dates back to the early 1980s with the end of public service broadcasting monopolies and the development of commercial television transmitted via terrestrial means, cable or satellite. The second phase starts in the early 1990s with the appearance of the first pay-TV platforms and the establishment of subscription as an alternative means of funding alongside advertising and public funding. The introduction of digital television in the late 1990s marked another major phase, which was subsequently followed by announcements of individual national analogue switch-off plans. These were shortly followed by a European Commission initiative to harmonise analogue switch-off dates with the year 2012 as a target.

The switchover has the potential to impact positively on consumers and citizens, the broadcasting sector, related industries, the government and the society as a whole. Before embarking upon the benefits of switchover for the public it is worth defining the terms ‘citizen’ and ‘consumer’, as thinking about this distinction will provide a useful tool for assessing the way new DTV services cater for their audience. Since the opening up of the media and communication markets during Europe’s second phase of transition there has been an overtly terminological debate on these matters in the context of wider concerns about the ‘public interest’. It can be argued that the European experience reveals

some ambiguous evidence with regards to whether the arrival of a competitive market in broadcasting brings identifiable benefits. Though the modern multi-channel era, with its apparently wider range of choice on offer, may seem attractive from a consumerist perspective, it may also seem to pose substantial challenges to the citizenship-oriented values of the previously dominant public service tradition (Feintuck and Varney, 2006: 40-1). Left wing scholars have argued that in a purely market-driven system more media outlets do not necessarily mean more public argumentation and rational discourse. On the contrary, it means more ways to address people as consumers (Garnham, 1986: 31).

In this respect, there is some reason to believe that media commercialisation and more media outlets brought about by DTV may not upgrade or strengthen the space for political and social discussion. A broadcasting system based on free market mechanisms has little incentives to provide diversity of content, for free market systems broadly cater to the interests of the majority at the expense of minorities. Under such a non-interventionist system, individual viewers and listeners are treated as customers and there is a prevailing culture of purchasing of commodities as a means both of pleasure and escapism from reality. The differences between an interventionist and non-interventionist approach could be shown by comparing the traditionally heavily-regulated European broadcasting system with its emphasis on the triad education, information and entertainment with the American commercial system, prioritising individual freedom of speech and characterised by minimal regulation. While the US broadcasting model is based on the free market principles of demand and supply as the appropriate means of providing universal access and content that would satisfy all consumers, the European model in its ideal typical form pays more attention to the obligation of the citizen as an

active member of a collective society, rather than consumer choice and individual freedom. The 'public interest' in European broadcasting has been based on the following principles: programming diversity; availability of quality, innovative and risky programming; reflection of national identity and culture; catering of minority interests; provision of impartial news and current affairs; and universality of coverage. In the profit-driven and highly competitive US system minorities are underserved, whilst proven formulas and programming formats are prevailing, thereby jeopardising the ideal of freedom of individual choice.

More recently the semantic terrain of terms has been enriched to incorporate 'customers', 'users' or 'end-users' of telecommunications, computing and online services which reflects the difficulty in addressing people's collective relation to digital media. So what is meant by 'public interest' or citizen interests' today? Can the interest of the public be furthered by the development of new communication technologies and market competition, such as that represented by digital TV? Livingstone et al. (2007: 614) offer a close reading of the use of terms that define 'the public' in policy documents in order to comprehend the ideological and practical dilemmas that beset media policy and regulation. To structure their analysis the authors follow the narrative of the passing of the Communications Act 2003 in the UK, focusing on the clause that sets out the general duties of the new powerful and converged media regulator Ofcom and argue that the convergence-diversity agenda was encapsulated in the moves to place the 'citizen-consumer' at the heart of a new regulatory regime.

In fact, the Communications Act of 2003 stated, in Clause 3.1, that the principal duties of Ofcom should be to further the interests of both citizens and consumers in

relation to communication matters. Ofcom recognises that ‘these interests are often different’, which means that it may be necessary to ‘resolve tensions between them’ and that ‘protecting these interests may involve distinct regulatory approaches’. But over the years it has become clear that one of the regulator’s main concerns is ‘serving the citizen-consumer in the digital era’, thereby conflating of the identities of citizen and consumer. In its Second Public Service Broadcasting Review, titled ‘Putting Viewers First’, Ofcom (2009) showed signs of a commitment to expansive notions of the public interest and public service, but similar to its first stage of consultation (see Hesmondhalgh, 2005) it argued for further marketisation of media and communications. The Digital Britain report (DCMS/DBERR, 2009) confirmed the introduction of market principles into public service broadcasting, which echoes the Labour government’s policies more generally (see Iosifidis, 2010a).

Whether conceived as citizens or consumers, audiences or users, customers or communities, there is growing momentum behind the argument that ordinary people are being—and must be—repositioned, by technology, the market, society and, hence, by the regulator (Livingstone et al., 2007: 616). The above scholars argue that it is a struggle to resolve the notions of ‘the public’ into ‘citizen’ and ‘consumer’ as ambiguities re-emerge and boundary disputes problematise proposed regulation. The study suggests that this has been achieved, problematically, by combining the terms to produce the ‘citizen-consumer’. However, as they demonstrate, this elision of terms matter, for it may bring a new balance of market relations and civic interest, or it may be part of a broader agenda of implementing centralized regulation. However, as new technologies open up possibilities beyond broadcasting, one could argue that audiences may embrace new

modes of engagement with audiovisual products, with many seamlessly shifting from the role of consumer to that of producer. Meikle and Young (2008: 67-70) have noted that new modes of distribution and consumption are emerging and new media technologies empower users in unexpected ways and increasingly recast TV as something that audiences create as well as watch. In this regard content, distribution channels, business models, cultural habits and indeed regulatory approaches are changing in ways that suggest a fixed dichotomy between 'consumer' and 'citizen' may be unhelpful.

Nevertheless, returning to the benefits of switchover, some outcomes of switchover are clearly cast as positive to the consumer, with consumer choices increasing with regard to distribution mode, technology and content as a result of digitalization. Consumers are able to watch more television channels with enhanced quality with technologies such as High Definition (HD), wherever (at home or on the move), and whenever (thanks to DVRs and Video on Demand). But while the benefits for 'consumers' are visible there is some doubt as to whether all 'citizens' benefit. Meanwhile broadcasters can adopt a multichannel strategy driven by reduced costs resulting from digitalization. The digital switchover has positive effects on related industries such as technology providers, manufacturers, TV retailers and installers. Spin off effects for governments are triggered by the freeing up of frequencies which can be sold at premium rates to mobile TV or mobile telephony companies. Finally, societies as a whole are benefited with the increase in bandwidth for digital media, the digital upgrade of households and the possibility of participating in a pan-European, communal digital television culture.

The downside, however, is that not all of these services are likely to be available to everyone. Whilst not all consumers have equal purchasing power, citizens' interests are poorly served in terms of access to a universal service. Notions of universal service and access are typically related to sectors such as health care, education and essential services including water, electricity and the telephone service. Universal telephone service, for example, was adopted as a policy objective in both the United States and Europe to encourage economic and social interaction within the country as a way of promoting national unity (Melody, 1990). As mentioned above, most European countries have imposed similar public service obligations on their broadcast media. In contrast to the US broadcasting model, the Western European model developed outside the market. The European broadcasting model, the so-called public service broadcasting model, in its ideal form consisted of a nation-wide public monopoly which would universally distribute information, facilitate public debate and contribute toward a common identity in return for a basic, initial payment, usually in the form of an annual license fee. In the course of time institutions entrusted with these tasks have expanded their activities by venturing onto online media platform. These expansions help the public channels to maintain the universality principle in the digital age, but as will be shown below these activities have caused controversy and encountered increasing scrutiny from competitors. Meanwhile public channels' development of their web activities is testing the applicability of traditional regulation. As Moe (2008a: 220) asks, 'how do regulatory frameworks relate to the wider remits?' – 'Is it public service media online?'

Today the universal access paradigm can be applied to a wide array of communications and information services, traditional activities or new ventures, offline

or online, with the definition of basic access varying from country to country. In countries such as France and Italy, for instance, there is a push for ‘universal broadband’ while in the UK there is a push for a ‘digital Britain’ (DCMS/DBERR, 2009). The issue of universality is part of the wider debate over what is in the ‘public interest’ in today’s competitive and liberalised digital world of media and communications. Media marketisation, privatisation and concentration bring forward important questions on positive freedoms, such as the citizens’ right to have equal access to the technologies and to receive a wide range of opinions and information at affordable prices. Potential conflicts between private profit motivations and social goals like universality, affordability, diversity of views and political pluralism now, more than ever, need to be considered and resolved. The problem remains one of designing media regulation in the public interest, in particular of shaping the technological form and accessibility of digital television. Nevertheless, as the discussion below suggests, given the changing position of the audience, such policy objectives can arguably only be reached by addressing the needs of both citizen and consumer, with both commercial and public service media outlets entwined in such provision.

Governments play an active role in regulating the transition to digital, for they consider it a public policy concern. Adda and Ottaviani (2005) argue that the transition to Digital Terrestrial Television (DTT) is a public policy problem and governments take an active role in the transition because of the interplay of two motives, one economic and the other non-economic. First, DTT technology uses a publicly owned, rather than a privately provided network. Here the government acts as the ‘private’ owner of the network, and is interested in solving the coordination problem associated with switching standard.

Second, most governments perceive the transition to DTV as having important non-economic consequences, due to the social role of the media. An increased and more competitive supply of television channels should improve the overall flow of information in the society, with positive economic, social and political effects. Operationally, universal access to the traditional TV channels is seen as a minimal condition to avoid social inequalities. The universality principle implies that switch off of analogue TV will not be feasible and socially acceptable until almost all viewers have migrated to DTV.

The UK, with over 92 per cent penetration of digital television services by the end of 2009 (of which around 17.7 million UK homes had access to DTT via Freeview), stands as a forerunner when it comes to the adoption of DTV services but, as will be shown below, other European countries are lagging behind in terms of both penetration of digital services and awareness of the process of digital switchover. Despite the uneven national developments of DTV, digital switchover is promoted vigorously by the European Commission. According to the e-Europe action plan, all Member States were required to disclose their national strategies for the switchover from analogue to DTV by the end of 2003.¹ In June 2005 the European Commission published a Communication 'on accelerating the transition from analogue to digital broadcasting' which urged EU Member States to bring forward the likely date of analogue switch-off and called for a coordinated approach to making freed-up spectrum available across the EU. The EC (2005) suggested the year 2012 as a possible target for the completion of switchover. Following this, many Member States have published plans to terminate analogue terrestrial broadcasting and some have already done so, but there is uneven pace of digital TV transition across Europe.

The dates for the analogue switch-off that have been set by national governments vary greatly depending, among other factors, upon penetration of digital services, the technological infrastructure and public awareness of the process to switchover (Iosifidis, 2005: 59). Table 1 shows that DTT roll-out has taken place in the majority of EU countries, while most countries have stated their intention to switch-off the analogue frequency between 2009 and 2015. However, Luxemburg and the Netherlands completed analogue switch-off in September and December 2006 respectively, whilst analogue terrestrial in Finland was switched-off on 31 August 2007. Belgium (Flanders), Denmark and Germany complete the list of Member States which have already ceased analogue terrestrial transmission. The large British market has started regional switch-off of analogue signals, for the switchover started from the Border region in 2008 and will be completed with the Meridian, London, Tyne Tees and Ulster region in 2012 (see Table 1).

At the other end of the scale, national governments that have not committed to a prompt fixed date for analog switch-off include some of the Southern European countries as well as the new EU Members, who joined in 2004 and 2007. Analogue switch-off in the Mediterranean countries of Spain, Italy and Greece is not expected to complete before 2013, while the largest Eastern European country, Poland, set 2015 as the date for analogue switch-off. Other new Members such as Slovakia, Lithuania and Slovenia have called for a late digital switchover on their terrestrial platform. Eastern Europe has its own character in terms of DTV developments. With roughly half of TV households in Eastern Europe relying on terrestrial television, the region represents a large market for free-to-view multichannel television. However, analogue switch-off in this part of Europe

has been hampered by political issues, governments' lack of a political priority and lack of political consensus that makes it difficult to reach an agreement. There is a lack of sufficient understanding of the issues involved in the digital switchover by regulators and broadcasters, especially with regards to the programming and market issues involved. Public broadcasters in many transition countries have still not consolidated in terms of the transition from state into public service television. Efficient communication practices on the process of digitalisation and switch-off is largely unknown to the general population. The digital switch-over process has even been dubbed as 'premature' by some analysts who claim that the countries are not ready yet for this transformation (see Jakubowicz, 2007: 21). It seems that digital switch-over is a top-down operation, imposed by government policy (where there is one), responding to decisions being taken by the European Union (ibid: 35-6). This situation provides a striking example of the way in which the EU's push for the digital economy may result in ill-timed operations, as set out below in relation to the roll out of DTT in Spain, Sweden and the UK, for digital switchover is not likely to be an easy or smooth and trouble-free operation.

Table 1: DTT roll out and switch-off dates of analogue terrestrial TV in selected EU countries and Norway (2009)

COUNTRY	DTT ROLL OUT	SWITCH-OFF DATE
Austria	2006	2009
Belgium (Flanders)	2005	2012
Britain	available since 1998	2008-12
Denmark	31 March 2006	1 November 2009
Finland	available since 2001	31 August 2007
France	31 March 2005	2011
Germany	2002	2009 (Berlin/Postdam region switched in 2003)
Greece	March 2006	2012
Hungary	2007	31 December 2012

Ireland	2008	2012
Italy	available since 2003	31 December 2012 (Cagliari switched 1 March 2007)
Lithuania	2006 in Vilnius	2012
Luxembourg	April 2006	September 2006
Netherlands	since 2003 in Amsterdam	11 December 2006
Poland	no decision yet	2015
Portugal	2009	2010
Slovakia	2006	2012
Slovenia	2009	2012
Spain	available since 2000	3 April 2010
Sweden	available since 1999	5 October 2007
Norway	N/A	2009

Source: Author's analysis based on the MAVISE database (available at <http://mavise.obs.coe.int>) developed by the European Audiovisual Observatory

Table 2 shows that most of the countries with advanced levels of DTV penetration have also set early dates for analogue switch-off. Finland and Sweden for example, which were committed to making the switchover to digital in 2007, had in 2007-8 a DTV penetration of above 50 per cent. Norway, with a 2009 switch-off date, also ended 2008 with more than half of its households accessing DTV. Exceptions to this are Britain, arguably the most advanced European country with a DTV adoption well above the European average despite a switch off date of 2012, and Ireland, which in 2008 had a digital household adoption of 60 per cent but has fixed a late date for switchover. The deployment of DTT in Ireland has had a long history, with the first tests being carried out in 1998, but no public trials until August 2006. The system is not expected to fully launch until the end of 2009, although the state is committed to a 2012 analog switch-off date.

Table 2: Top 10 European Countries by DTV Household Adoption (2008)

Ranking	Country	DTV penetration rate (%)
1	UK	89

2	Finland	75
3	Ireland	60
4	Iceland	59
5	Norway	57
6	Sweden	55
7	France	52
8	Spain	50
9	Italy	47
10	Malta	46

Source: Author's analysis based on the following market report: European and US

Digital TV, by Strategic Focus, 16 July 2008

Note: includes the four DTV platforms - satellite, terrestrial, cable and DSL

It is clear that the European market in 2009-10 remains fragmented with regard to the adoption of technologies and there is little sign that Europe is developing a homogeneous DTV industry. These variations in the national structure of the television industry create a dilemma for EC regulators in terms of the feasibility of introducing common digital switch-off dates. There is clearly a tension between the macro and the micro levels. At the macro level there seems to be pressure from the EC for Member States to hurry toward digitalisation in order to create a workable internal market. In effect since 2003, the European legal framework for electronic communications has covered different technological platforms and provided for integrated regulation (EC, 2002). The Television without Frontiers Directive (renamed Audiovisual Media Services Directive-AVMSD)², which is the cornerstone of EU's audiovisual policy, has broadened its scope in response to digitalisation and convergence and endorsed the view that a common approach to digital switchover and digital dividend³ will reinforce the overall competitiveness of Europe in the global marketplace, strengthening the position of its media, telecommunications and IT sectors. The AVMSD created the legal framework and

the legal certainty which new business models and technological services need in order to achieve full consumer acceptance and to successfully deploy new services, including digital TV, in the internal market. Without doubt, switchover will bring about benefits to viewers and broadcasters, stimulate innovation and growth of the consumer electronics sector, and therefore contribute to the renewed Lisbon agenda, which was conceived in March 2000 and aimed to make the EU ‘the most dynamic and competitive knowledge-based economy in the world’. Hence the earlier the switchover process is started and the shorter the transition period, the sooner these benefits are realised.

However, EC policy toward DTV and switchover stands in tension with the micro level, that is, strategies adopted by individual Member States. The EC’s proposal for the 2012 deadline for completing terrestrial analog switch-off may lead some Member States to an ill-timed, insufficiently planned and unduly rapid introduction of DTT services to catch up with other more advanced territories (Iosifidis, 2006: 264). Each country’s policy orientation and market dynamics lead to different development paths to a DTV market. Local TV infrastructure, strength of incumbent service providers, aggressiveness of emerging operators, differing markets and political contexts, and both citizens’ and consumers’ attitudes toward new services either expedite or slow down the uptake of digital services in these countries. Strong DTT uptake in countries where commercial deployments or trials are taking place impact positively on their ability to expand subscriber base, but launching the process prematurely for reasons relating to the EU’s internal market in countries that are not ready for it may result in the adoption of hazy and inappropriate decisions with regards to programming, financial support mechanisms or the use of frequency spectrum. A main problem is that public broadcasters in most of

the countries of the region can hardly play a special role in accelerating the switchover process or raising citizen awareness (see Iosifidis, 2010b).

With further exploration along these lines we may question the extent to which European policy has been effective in driving DTV, particularly geared around universality and a common standard, as central principles. For it is not only the speed of switchover that matters for an effective EC switchover policy; but also the inclusiveness and the principle of universality for achieving a ‘European Digital Citizenship’, which can be realised by supporting communities in sharing experiences through digital media and by designing inclusive technologies that have the potential to support public communication in a networked European society. One possible way to ensure universal digital services in the new era is to empower public broadcasters to introduce online services and extend their portfolio of platforms and channels. Both national and EU politics are not unfavorable to this, provided that the new services fit with the public remit, add potential value in a public service context and do not distort competition (Bardoel and d’Haenes, 2008: 342). Public broadcasters who have traditionally been important conveyors of freely accessible and reliable information should fully use the opportunities offered by digital media. As Nissen (2006) noted, in a report to the Council of Europe’s public service broadcasting advisory body, to achieve this they need to operate three types and levels of services: traditional linear program services for the general public; linear services targeted at special audiences; and personal interactive services. Online services are not acknowledged as an autonomous part of the PSB remit (Moe, 2008b: 320-1), but some public broadcasters’ websites, such as the BBC’s, offers a fine example of the extension of the ‘public service’ model into the new media. As

Christophers (2008: 253) argues in relation to programme access and product scarcity, we can read initiatives such as the BBC's Creative Archive project - whereby clips of BBC factual programmes were made available online for free download for noncommercial use - and its interactive iPlayer (offering 'catch-up TV' online) as an acceptance that conventional methods of arbitrating access are approaching their sell-by date.

A Council of Europe report (2008) called PSB 'a vital element of democracy in Europe' and argued that it should be free to use the new interactive technologies and the Internet in order to level social divisions and combat political and social disengagement. Broadly speaking, there are four areas in which public broadcasters can make a social and cultural difference in the digital world and contribute to the public interest and enhanced civic participation in a democratic society: information (as trusted media brands these institutions can create an online environment and launch web sites where reliable and accredited information proliferates); decentralisation and interaction with the citizens (contribute to creating a civic society at the local, regional, national and international levels. A fine example is the BBC Trust's collaboration with the *Audience Councils* in England, N. Ireland, Scotland & Wales, which help it understand the audiences' needs, interests and concerns); mobilisation (this category focuses on services that assist citizens to be activists with regard to social movements and involvement. A good example is the BBC's Action Network service offering advice and tools to those who wish to run campaigns on mainly local matters; and accessibility. Here, DTT is paramount in facilitating the delivery of public service content across various channels and platforms allowing broadcasters to tailor content to meet specific needs and preferences.

Freeview, Universality and DTT

The above discussion illustrated that EU attempts to create a coherent and cohesive European digital market stands in tension with Member State's own policies, their ability to conform, readiness for digital and desire to be part of that market. This section, as already hinted in the previous paragraph, will focus on the specific strategy of DTT adapted to speed up digital uptake which can both be considered as socially acceptable since it ensures universality and a 'killer application' since it rockets the pace of digital uptake.

Britain in 1998, Sweden in 1999 and Spain in 2000 were the first to launch DTT with platforms heavily reliant on pay television, but all experienced start-up problems, particularly the British and Spanish platforms which failed financially. In Britain, the digital switchover policy was conceived at the end of the 1990s, in the middle of the dotcom euphoria. The take-up of DTV services was then relatively high, but following the collapse of DTT pay-TV platform ITV Digital in 2002, the initial high rate was not maintained. This financial crisis was the result of a poor management policy, overbidding for football rights, technical problems (picture freezing and poor geographical transmission coverage) and the decision to give away free set-top boxes to emulate the strategy of pay satellite broadcaster BSkyB (Iosifidis et al., 2005: 112-14). The simultaneous closure of the Spanish DTT platform, Quiero TV, due to huge debts put the viability of the technology in serious doubt (ibid: 115-16). Given the low subscriber base of the Swedish pay DTT platform Boxer, a new strategy across European countries was urgently needed to target more viewers. Until 2002 the economic model for DTV had been largely based on pay television services, which lured customers with exclusive

sports and film content. However, saturation of the pay television market re-focused attention for DTT platforms to the free-to-view market and with the launch of the BBC-led Freeview service in September 2002, DTT in Britain has turned into a free-to-air only platform.

BBC-led Freeview is aimed at an audience confused by DTV and hostile to subscription services. The re-direction of DTT towards a primarily free-to-air system has proved compelling to many households with the platform's share of the DTV market increasing from 10.6 per cent in 2003 to more than 55 per cent in mid-2009. The subscription-free platform helped both to rebuild public confidence in DTV and combat the common misconception that DTV is necessarily pay-TV. Since the launch of Freeview, DTV has become considerably more affordable as competition between manufacturers and retailers of Freeview receivers resulted in significant price reductions in the cost of hardware. Perhaps more importantly, Freeview appeals to those who reject satellite and cable pay-TV services and to whom, as a BBC (2004: 10) report states, 'a terrestrial free-to-air service is a welcome bonus'. In fact, the popularity of free digital service Freeview has contributed in DTV take-up from previously sceptical groups. Early analysis of the demographics of Freeview subscribers reinforces the notion that free-to-air digital customers are largely additional to pay-TV subscribers. In March 2003 a Quest survey gave demographic data on the types of households that were using each platform and concluded that Freeview had a different profile to other platforms. In particular, the findings suggest that many of Freeview's customers are affluent, older people who have no interest in purchasing satellite or cable pay-TV services.

Following the British example, other European countries considered launching subscription-free DTT services. The service has been available in Spain since November 2005, when Quiero TV was re-launched with approximately 30 free-to-air national and autonomous regional television and radio services. By mid-2009 about 11 million DTT receivers were sold and DTT viewership represented 16 per cent of all television households. The popularity of the DTT platform is very significant given that approximately 82 per cent of the 9.3 million Spanish TV households rely on the terrestrial platform for their primary television reception. France, another European country with a large number of analogue-reliant homes (12 million), launched free DTT services in March 2005. Despite the rather late introduction of DTT (attributed to the debate over the choice of standards), the technology is already being adopted widely, thanks to a long tradition of terrestrial TV reception. The roll-out of free DTT has been aggressive and by the end of 2009 it reached 95 per cent of the French population. For the five per cent of households that will not be technically feasible to access DTT the latest French Audiovisual Bill, passed on 5 May 2007, requires that a satellite subscription-free bouquet should be put in operation, much the same as is the case with Freesat in the UK, a free satellite service jointly launched in early 2008 by the BBC and ITV. In contrast Germany could meet much easier its ambitious target of early analogue switch-off and universality in coverage because barely five per cent of German homes rely on analogue terrestrial only, as low cost cable TV and free-to-air satellite dominate the market. Germany has a strong cable infrastructure - Kabel Deutschland is the country's biggest cable operator and uptake is relatively high at 60 per cent of television households. A similar, although less pronounced situation prevails in the Benelux and Nordic countries.

However the development of DTT has not been a success story uniformly across Europe, particularly in the smaller European countries of Greece, Portugal and Ireland. In January 2006, the Greek public broadcaster ERT launched free-to-air services with three 'pilot' channels, but by the end of 2009 these services attracted negligible numbers of viewers. ERT does not seem capable of adapting to its new role as leader of digital TV services and private channels have not as yet been involved in DTT services. Market size and the social and political context embedded in Greece, for example - where television took its first steps under a dictatorship regime and was openly used for propaganda purposes - plays a defining role in the decision to enter new, unfamiliar and commercially risky activities. Portugal launched its DTT service in the end of 2009 also with the public broadcaster PTP providing free-to-view services in partnership with commercial broadcasters, but it is still too early to judge its success. DTT in Ireland is not yet launched. Under subsequent legislation in May 2007, public broadcaster RTÉ and the separate broadcasting (BAI) and spectrum regulators (ComReg) were mandated to invite applications during 2008 under the Broadcasting (Amendment) Act 2007. Italy, which has the largest number of homes in Europe relying on the terrestrial platform at nearly 14 million, launched subscription-free DTT services in 2003 operated by Berlusconi-owned commercial channel Mediaset and in 2004 by public broadcaster RAI. However, the country has to make strenuous efforts to convert the 14 million analog-reliant homes in order to meet its target switch-off date of 2012, given that in the end of 2009 less than a quarter were digital homes. The abundance of free terrestrial channels in Italy creates a culture of antipathy towards digital TV as a pay-TV-led offering, which is typical in all Southern European countries.

This is one of the main reasons as to why other means of accessing digital television have not gained similar momentum to that of DTT. For example, in the UK Sky, alongside other market payers like Virgin Media, is now offering a triple-play package to its customers, featuring free entry level broadband access, digital TV and telephony. In Italy Fastweb was one of the first players to offer IPTV, but until recently it was held back by its limited reach and Italy's low propensity for pay-TV services, a characteristic of most of the Southern European countries where there is an abundance of free terrestrial TV services. True, the drivers which have created the favorable conditions - industry convergence and on-demand services - are expected to continue. However, it is notable that triple play services suffer from drawbacks for both citizens and consumers: for consumers, companies incur considerable costs in offering such services, particularly in the initial stage of their development until economies of scale are realised, and hence jeopardise the universality principle in accessing digital television; for citizens, therefore, DTT offers a viable universal alternative at the national level but does restrict their membership to a networked 'European digital citizenship'.

Conclusion

As the dominant audiovisual medium, television plays a major role in forming our cultural identity by determining not only what we see of the world, but also how we see it. Universally available terrestrial channels have hitherto ensured access to quality output, often incorporating innovative programming and new forms of creativity. The makeup of the platform environment has now shifted, but DTT offers a unique chance for the public service providers to continue this trend and grant consumer-citizens access to

media services of their own choice, *and* on fair terms. From this point of view, the establishment of DTT is important, for it makes DTV accessible to a large part of the population, minimising the number of households which cannot access TV services when switchover takes place. Public broadcasters generally have an important presence on the DTT free platform as a result of ‘must-carry’ rules adopted by governments, but with the exception of the BBC - which has considerably extended its portfolio of platforms and channels - the rest of the public channels are still trying to adapt to their new role as leaders of digital television services and primary contributors to switchover. The BBC may be the ‘Noah’s Ark in the digital world’ (to quote its current Director General Mark Thompson); the German public broadcasters ARD and ZDF may be encouraged to take an active part in the emergent digital world; and in Norway there might be a broad political consensus to approve an expansive strategy for public institution NRK facing new media platforms (Moe, 2008a), but in the Mediterranean region and Eastern Europe public broadcasters are in a much weaker financial condition than their Northern and Western European counterparts and this factor, coupled with political indecision, causes delays in launching DTT services.

Whilst policy intervention to boost DTV uptake may be justified at an EU level to guarantee a coordinated approach to the switchover process and to the use of the available spectrum, the pressure put on at the macro level for new Member States to be part of the ‘digital economy’ may not result in positive change, for it could lead to ill-informed policies that are short-sighted. This danger is particularly apparent in countries where DTT penetration rates are low and awareness of the digital switchover process is lagging behind. While countries adopting a DTT policy, such as Germany and the Nordic

countries, seem to conform most closely to EC ideals, in terms of speed of switchover, the smaller and Mediterranean European territories as well as Eastern European countries do not seem capable of catching up with the EC's target date of switch off. In the UK the BBC's aggressive digital strategy clearly reflects the government's mandate to the BBC to promote digital television to all citizens as part of a policy for a 'digital Britain'. Meanwhile, some models may be understood to be at odds with universalism. The market, through for instance the latest triple play offerings, can boost DTV adoption, but public policy could also be seen as a necessary precondition to set the switchover process in motion and to implement it from a socially acceptable perspective. Internal market measures must also take 'public interest' aspects into account and DTT policy should aim to conform to universal accessibility.

The free-to-air model of television, in which public broadcasters have a leading role, has therefore played a significant part in Europe's digital TV strategies in two areas: to enhance consumer interest in DTV services and make the EC's target of analogue switch-off across Europe in 2012 seem achievable. Perhaps more importantly the launch of DTT services has made digital services more affordable, addressing citizens' interests by maintaining the universality objective in accessing television services in the digital era. For public service broadcasters to remain prominent content providers, in turn enhancing accessibility and promoting digital citizenship, they should expand their activities to more platforms and introduce online services that have truly public value and are available for the whole national population. This way EU's drive towards switchover as promoting a 'European digital citizenship' may relate to the paradigm of universality.

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¹ The e-Europe 2005 Action Plan was launched in the Seville European Council in June 2002 and endorsed by the Council of Ministers in the e-Europe Resolution of January 2003. It aimed to develop modern public services and a dynamic environment for e-business through widespread availability of broadband access at competitive prices and a secure information infrastructure.

² The TWF Directive was first adapted in 1989 (Directive 89/552/EEC) and amended in 1997 (Directive 97/36/EC). The new Audiovisual Media Services Directive 2007/65/EC was published in the Official Journal L 332 December 18 2007 and came into force on December 19 2007.

³ The digital dividend can be described as a spectrum over and above the frequencies required to support existing broadcasting services in a fully digital environment.