

CHAPTER VII

BROADCAST WHOLESALE SERVICES TO BROADCASTERS

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INTRODUCTION

The proposed new regulatory framework seeks to respond to the challenges created by technological convergence by establishing a common, harmonised framework for the regulation of all electronic communications services and networks,¹ as well as facilities associated with such networks.² This type of approach is necessitated by the application of the concept of technology neutrality,³ which would require the equivalent regulatory treatment of broadcasting and telecoms networks to the extent they satisfy the definition of “electronic communications networks”. By way of contrast, content delivered over such networks falls outside the scope of the new regulatory framework.⁴ Community harmonisation measures in the field of content are currently restricted to the obligations set forth in the so-called *TV Without Frontiers* Directive of 1989 (as amended).⁵

In conducting a relevant market analysis for *ex ante* regulatory purposes, the draft *Framework Directive* acknowledges, however, that the separation between the regulation of transmission and the regulation of content should not prejudice the links which exist between them being taken into account.⁶ The Study Team is of the view that the provision at the wholesale level of broadcast transmission services (carriage), as well as broadcast ancillary services such as Conditional Access and technical/administrative services (transmission-related services) are not content services and, therefore, fall within the scope of the new proposed regulatory framework for electronic communications networks.

¹ According to Article 2(a) of the *Framework Directive*, the scope of electronic communications includes: “...transmission systems and, where applicable, switching or routing equipment and other resources which permit the conveyance of signals by wire, by radio, by optical or by other electromagnetic means, including satellite networks, fixed (circuit- and packet-switched, including Internet) and mobile terrestrial networks, networks used for radio and television broadcasting, and cable TV networks, irrespective of the type of information conveyed.”

² Article 1(1) of the *Framework Directive*.

³ Article 8(1) of the *Framework Directive*.

⁴ This is clearly confirmed by Article 2(b) of the *Framework Directive*, where it is stipulated that electronic communications services are services: “...normally provided for remuneration which consist wholly or mainly in the transmission and routing of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting, but excluding services providing, or exercising editorial control over, content transmitted using electronic communications networks and services.” In other words, Information Society services, as defined in Directive 98/341 EC, are excluded unless they satisfy this definition.

⁵ Council Directive 89/552/EEC of 3 October 1989 on the coordination of certain provisions laid down by Law, Regulation or Administrative Action in Member States concerning the pursuit of television broadcasting activities, OJ No L298 p. 23, 1989/10/17, as amended by Directive 97/36/EC of the European Parliament and of the Council of 30 June 1997 amending Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities OJ No L202 p. 60, 1997/07/30.

⁶ Recital 5 of the *Framework Directive*.

I. BROADCAST TRANSMISSION SERVICES

Summary:

1. Member State practice varies in the treatment of broadcast transmission services, falling between one of two extremes, namely: (i) a more aggregated relevant product market which embraces all delivery platforms; or (ii) a series of platform-specific product markets.

Competition law practice in the Member States has often been keen to identify narrower relevant product markets when dealing with individual access requests, while the telecoms NRAs have usually adopted the wider market definition which embraces all delivery platforms.

The greater deployment of xDSL technology over fixed telecoms networks across the EU raises the technological possibility that, in the short term, another alternative delivery platform offering ubiquitous territorial coverage will be available for the distribution of broadcasting transmission services.

The relevant geographic market is, in general, held to reflect the relevant geographic market at the retail level – namely, national.

2. The Commission's analysis under its competition powers of review of mergers and joint ventures under Article 81 EC or the *Merger Regulation* does not provide a definitive answer on whether or not broadcasting delivery networks in each Member State are to be considered in the aggregate when conducting an analysis of the relevant product market which governs broadcasting transmission services.

The Commission's view on the platform neutrality of the market for broadcast transmission services thus varies with respect to different Member States, given the relative levels of deployment of particular networks and the technological differences which may exist, at different times, between the respective platforms.

3. A range of broadcasting transmission platforms are available to content providers in each Member State. Not all platforms are available in every Member State, and the coverage of each platform differs significantly between Member States. However, there are at least two transmission platforms in each Member State. As such, there is no justification for treating any one particular delivery platform as the only potential route available to a particular viewer.

Cost differences at the retail level also have an impact on the choices made by content providers between competing transmission platforms and services at the wholesale level. In this context, the link between subsidies and other forms of funding of terminal equipment and the subscription model will have a significant impact.

Competitive factors at the retail level (e.g., costs of set-top boxes) which impact on the installed base of a particular network, and the willingness of viewers to

turn to a competing platform, will affect the level of effective substitutability of competing platforms at the wholesale level.

There does not appear to be any compelling economic evidence of which the Study Team is aware which would suggest that the links between the competitiveness of retail and wholesale levels should be disassociated.

4. The Study Team takes the view that, at least for *ex ante* purposes, cable TV networks do not constitute discrete relevant product markets any “triple play” characteristics because, *inter alia*: (i) the Study Team does not believe that a broadcast delivery platform is, in itself, a relevant market; (ii) individual retail service elements of a multi-service package (where network capacity can be used to provide both broadcasting and non-broadcasting services) can be subject to distinct patterns of supply and demand; (iii) changes in technology mean that any perceived technological ‘advantage’ is likely to be short term; and, even more fundamentally; (iv) the identification of a relevant retail market made up of three otherwise distinct retail services does not necessarily imply that the wholesale transmission market is similarly aggregated – this is neither borne out in practice nor in the Commission’s competition law administrative practice.
5. The relevant geographic market is usually considered to be national in scope, based on geographic coverage, regulatory obligations and social factors.

I.1 EU MEMBER STATE ANALYSIS

Issues:

1. The way in which the supply and demand characteristics of broadcast transmission services have been assessed.
2. The extent to which offerings for broadcasting transmission can be fragmented on the basis of individual platforms.

I.1.A. Summary of Main Relevant Markets Identified by Member States

Product Markets Identified	Sub-Markets or Market Segments Identified	Geographic Markets Identified
Broadcasting transmission facilities (the <i>United Kingdom</i> , <i>Finland</i> but not unanimously).	Satellite, cable TV, terrestrial networks, DSL (<i>Finland</i> , the <i>United Kingdom</i>).	National.
Satellite transmission services (<i>Germany</i> , <i>Finland</i> but not unanimously).	None.	National.
Terrestrial transmission networks (<i>Finland</i> , <i>France</i> , <i>Germany</i>).	<ul style="list-style-type: none"> • Terrestrial transmission of public, national, general channels (<i>France</i>). • Terrestrial transmission of private, national, general channels (<i>France</i>). 	National.
Terrestrial cable or Multipoint Microwave Distribution Systems (MMDS) (<i>Ireland</i>).	None.	Corresponding to the network reach.
Cable TV transmission services (<i>Belgium</i> , <i>Denmark</i> , <i>Finland</i> , <i>Germany</i>).	<ul style="list-style-type: none"> • Market for the feed-in and transmission of programme signals on network level 3 (<i>Germany</i>). • Market for the supply of programme signals from network level 3 to network level 4 (<i>Germany</i>). • Market for the supply of programme signals to end customers (<i>Germany</i>). • Free-to-Air TV Services (<i>Belgium</i>). • Pay-TV services (<i>Belgium</i>). • Distribution of film channels via cable or antenna networks for reception by analogue decoder (<i>Denmark</i>). 	<ul style="list-style-type: none"> • National (<i>Denmark</i>). • In the case of the <i>German</i> market for the supply of programme signals to end customers, one market is identified per each viewer. • Regional (<i>Belgium</i>). • Local area in which the cable TV network exists (<i>Finland</i>).
Platforms for the provision of services deriving from convergence of broadcasting and telecommunications networks (<i>Italy</i>).	None.	National, possibly wider.
Service platforms for digital distribution networks (<i>Finland</i> , the <i>United Kingdom</i>).	None.	National.
Terrestrial transmission (at final distribution level) (<i>Spain</i>).	None.	National.

All transmission networks (at contribution level) (<i>Spain</i>).	None.	National.
Satellite and terrestrial networks (at transport level) (<i>Spain</i>).	None.	National.
Radio broadcasting transmission networks (<i>Spain</i>).	None.	National.
Television broadcasting transmission networks (<i>Spain</i>).	None.	National.

I.1.B. Relevant Product Markets

a. General Conclusions

A number of factors, such as growing transparency at consumer level as between different digital platforms (whether terrestrial, satellite or cable), are tending towards a converged definition for broadcasting transmission capacity services in some countries (*e.g.*, *Finland*, the *United Kingdom*, and possibly *Italy*). Nevertheless, the existence of a number of particular regulatory and commercial factors mean that some national regulatory authorities continue to identify more fragmented markets (*e.g.*, *Germany*, *Ireland*, *Spain*).

b. Specific Analysis

The approach of the various Member States demonstrates fundamentally different perspectives on the analysis of “relevant markets” for the transmission of broadcasting signals.

In *Spain*, the CMT continues to identify fragmented markets, essentially on the grounds of the specific characteristics of delivery over each platform (*e.g.*, TDT multiplex operators are bound to contract with terrestrial operators, CATV operators deliver their own content services and cannot offer national coverage). Consequently, at the level of final distribution (from the final radio tower to the home), the CMT has identified a separate market for terrestrial transmission. At the level of contribution networks (delivering signals to editing centres), it has identified a separate market comprising all transmission networks and, at the transport level, it has identified a further sub-market made up essentially of satellite and terrestrial networks.⁷ The CMT also distinguishes between markets for radio broadcasting transmission and television broadcasting transmission, with the latter being subdivided into three separate geographic markets: national, regional and local (with different market actors present in each). Technologies such as xDSL are not currently widely used as alternatives for broadcasting transmission because of the technical limitations of these services⁸ (Internet-based audiovisual services are treated by the CMT as data services).

⁷ Section I.3.10.6 of the CMT’s 2000 Annual Report.

⁸ The *United Kingdom*’s Competition Commission considers that “[a]lthough ADSL is widely used in the USA (almost entirely for high-speed Internet access), the future impact of ADSL-based systems within the UK –especially for TV broadcasting- appears uncertain at this time”. See “Carlton Communication Plc. And Granada Group Plc. And United News and Media Plc.: A report on the three proposed mergers”, published on 16 June 2000, para. 4.11. However, it appears that at least some PSTN operators are considering using xDSL technology to provide broadcast content. At least one such operator is reported to consider that it will have the technical ability to do by the end of 2001 (See “BT may offer cable TV”, Total Telecom, 28 May 2001).

In *Germany*, the Bundeskartellamt does not consider that there is a single market embracing satellite, cable and terrestrial transmission, in light of the legal obstacles for satellite reception (in subscribers' lease agreements) and because of the absence of return path channels for satellite. Moreover, given the particular history of cable deployment and fragmentation in *Germany*, the Bundeskartellamt has further segmented broadband cable TV transmission into three different markets corresponding to different levels of the cable-TV network hierarchy, namely:

- transport of transmission signal from the content provider to cable amplification points;
- feed-in of the transmission signal in the cable head station and transport of the signal to the property lines; and
- supply of programme signals to end customers.

It should be noted that, for the supply of programme signals to end customers, the media regulator, the BGH has identified a separate market for each viewer.⁹

In *Ireland*, both the Competition Authority and the ODTR tend to differentiate between retail markets for terrestrial broadcasts through cable or Multipoint Microwave Distribution Systems (MMDS) from broadcasts over other platforms (*i.e.*, satellite and terrestrial networks). This is mainly the result of the historical development (and resulting penetration levels) of these networks, and because they are the only platforms currently licensed to provide digital TV services.¹⁰ The Competition Authority considered that the geographic scope of the market for terrestrial broadcasts through cable or MMDS coincides with “the State or more specifically the areas of the country that are served by the cable and MMDS systems”.¹¹ The ODTR has recently announced that it will consider the issue of competition in the market for television distribution.¹²

In *Italy*, the Competition Authority has not specifically addressed the issue of broadcasting transmission networks. However, when addressing the market for pay-TV services, it appears to have considered that the relevant market comprises all pay-TV services delivered over any platform; this implies that the upstream market for transmission facilities might be platform-neutral.¹³ This is supported in part by the fact that the Competition Authority has considered that fibre optic networks and Internet networks should be considered to be suitable platforms for the provision of “services deriving from convergence of broadcasting and telecommunications networks”, such as interactive television services or “Internet television” delivered using techniques such as “streaming” (allowing the transfer of the audio/video file

⁹ BKa, WuW/E 3058, 3062 (“Pay TV Durchleitung”).

¹⁰ Satellite DTH services available in *Ireland* are broadcast and regulated in the *United Kingdom*.

¹¹ See the Competition Authority's twin Decisions of 16 December 1994, Notification No. CA/6/91E – *Irish Music Rights Organisation Limited/UK Television Companies/Copyrights holders*; and Notification No. CA/7/91E – *Irish Music Rights Organisation Ltd/UK Television Companies and other Copyright holders/Cable Relay and MMDS operators*.

¹² See ODTR, “Licensing Regional or Locally Based Digital Television Delivery – Consultation Paper”, 31 August 2001.

¹³ See Decision of 12 September 2001, in procedure C4754 – *Groupe Canal+/Stream*, para. 10; Decision of 26 March 1999 in procedure A274 – *Stream/Telepiù*, para. 14. This conclusion might be influenced by the fact that satellite TV is by large predominant in *Italy*, with the other platforms being almost non-existent.

to the user's computer for the time necessary to be watched/listened). This approach blurs the distinction between broadcasting and telecommunications transmission networks, while emphasising the distinction between those networks with or without a return path.¹⁴ By contrast, the Italian Communications Authority has differentiated between terrestrial networks among Single Frequency Networks (SFN), Multiple Frequency Networks (MFN) and mixed networks (k-SFN), depending on whether such networks are configured using only one frequency or different frequencies, or a combination of both types of networks. Whether or not these technical differences should lead to this degree of regulatory market segmentation is, however, not clear.

A similar position currently exists in *Finland*, where the FCA has identified a market for the provision of **service platforms for digital distribution networks**. The configuration of this market is the result of the convergence of network technologies that can be used to deliver digital content to subscribers. The Finnish Competition Council has underlined that markets should no longer be differentiated on the basis of the type of platform. They should be differentiated by identifying the interface that allows the transmission of information to the viewer.¹⁵ This most recent position should be contrasted with earlier pronouncements of the FCA¹⁶ and the Competition Council.¹⁷

In *Belgium*, the Competition Council specifically identified in its *Telenet Bidco N.V.* Decision of 23 August 2001 a relevant product market for the transmission of broadcasting services, which can be further sub-divided into markets for free-to-air TV services and Pay-TV services.

In *Denmark*, the NCA has found a market for the distribution of services by cable in a case involving agreements entered into between TeliaStofa and six private antenna associations. Meanwhile, in the context of its review of a set of agreements between TeleDanmark and Canal+ Investments for a clearance/exemption, the NCA identified a specific market for the distribution of film channels via cable or antenna networks for reception by analogue decoder. The NCA found this market to be of limited economic significance because of the increasing digitalisation of networks.

In *Spain*, the NRA fragments broadcasting transmission markets according to the specific characteristics of delivery over each platform, due to a number of regulatory and commercial limitations that continue to exist. Consequently, the NRA has identified separate markets for (1) terrestrial transmission (at the final distribution level); (2) all transmission networks at the

¹⁴ See Decision of 23 January 2001, in procedure C4158 – *Seat Pagine Gialle/Cecchi Gori Communications*; see also Decision of 31 May 2001 in procedure C-4501 – *Cecchi Gori Communications/MTV Networks*, para. 4.

¹⁵ See Competition Council case (decision issued on 9.7.2000), reviewing FCA case 53/690/1999 (decision issued on 17.4.2000), regarding the contemplated staged acquisition by Sonera Oy from Yleisradio Oy of 34% of the shares and contractual control of Yleisradio's technical broadcast services subsidiary Digita Oy.

¹⁶ Which had taken again the view that there existed a single market for transmission capacity for both analogue and digital terrestrial, satellite and cable TV broadcast.

¹⁷ In 1999, the Finnish Competition Council took the view that, in the application of *ex post* competition rules, satellite cable and terrestrial networks were not substitutable in light of: (i) different network reach; (ii) different customer equipment required for programme viewing; and (iii) different costs borne by customers. See FCA Case 53/690/1999 (Decision issued on 17.4.2000), regarding the contemplated staged acquisition by Sonera Oy from Yleisradio Oy of 34% of the shares and contractual control of Yleisradio's technical broadcast services subsidiary Digita Oy.

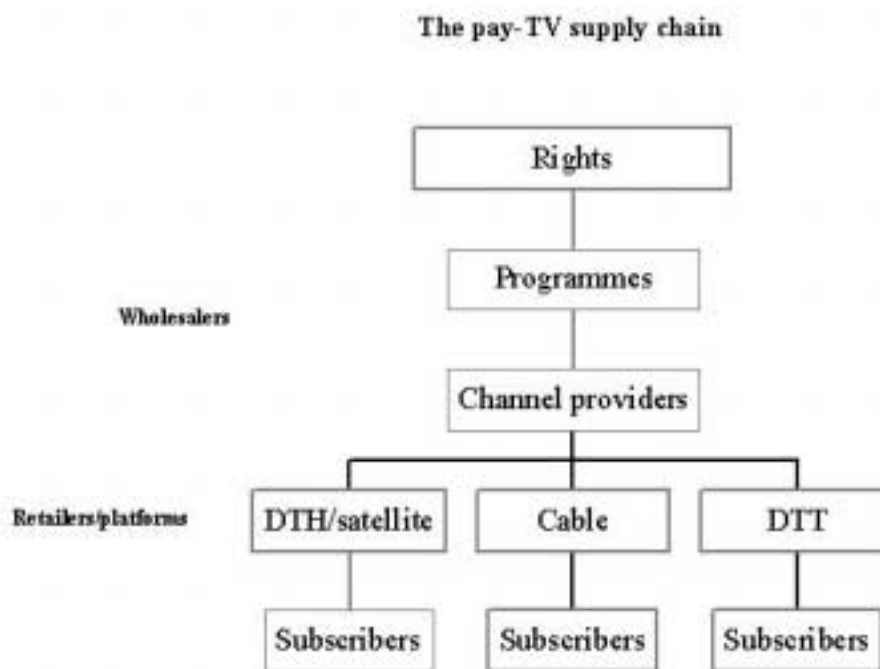
contribution level (*i.e.*, providing delivery of signals to editing centres); and (3) satellite and terrestrial networks, at the transport level. The NRA also distinguishes between the markets for radio broadcasting transmission and television broadcasting transmission. Despite these separate markets, the NRA even noted that, the year 2000 number of factors were tending towards a converged definition for broadcasting transmission capacity services, including the liberalisation of terrestrial transmission services and the growing transparency at the customer level between different digital platforms.

Transmission networks have been seen in the *United Kingdom* as a component of the wholesale market for the distribution of pay-TV. According to Oftel, the latter market “*involves those products and services needed by the broadcaster or pay television operator for it to enter the retail market i.e. principally, transmission, conditional access, subscriber management (i.e. control) and programming*”.¹⁸ It seems that the market for transmission capacity could be divided, according to the ITC, into digital and analogue segments.¹⁹ Transmission services in the *United Kingdom* are therefore not to be defined by reference to the IT delivery platform. Although the technical differences between the transmission networks are described in several decisions of the Competition Commission, the same decisions place the various platforms at the same level of the pay-TV supply chain, as shown below.²⁰ UMTS networks are expressly excluded, from the range of possible future substitutes, at least in the *United Kingdom*.

¹⁸ See “Bundling in the pay television market” Submission by the Director General of Telecommunications to the Independent Television Commission”, December 1997.

¹⁹ See reference to the ITC’s position in the Competition Commission’s “British Sky Broadcasting Group Plc. And Manchester United Plc.: A Report on the proposed merger”, published on 9 April 1999, p. 122.

²⁰ See, *inter alia*, “British Sky Broadcasting Group Plc. And Manchester United Plc.: A Report on the proposed merger”, published on 9 April 1999, para. 4.35.



The possibility has arisen more recently, as a result of the deployment of xDSL technology by BT, that upgraded fixed copper networks will also provide an additional competitive platform alternative for broadcast transmission.

I.1.C. Relevant Geographic Markets

In some Member States, the relevant geographic market for transmission networks is seen as being directly linked to the market for retail TV services and is therefore considered to be national in scope (*e.g., Finland*). In *Germany*, the market for the supply of cable TV programme signals to end customers has been configured by the BGH, the national media regulator, as being as narrow as the physical location of a single user (*i.e., a housing company or the one-family home*).²¹ On the other hand, the RegTP's preference, as expressed in a recent Strategy Paper, is for broad nation-wide markets. In *Spain*, the market for broadcasting transmission networks is subdivided into three separate markets which correspond to the national, regional and local levels.

The approach of regulators in *France* has shifted between a highly fragmented, platform-specific approach, to one which has more recently tended to view the relevant product as embracing all technologically substitutable networks; this shift in policy has largely reflected the current position taken under the European Commission's most recent administrative practice. For example, historically, the Competition Council has, in a number of decisions, identified separate product markets relating to the provision of broadcasting transmission capacity, and has distinguished between terrestrial, cable and satellite broadcasting. In the *TDF Decision*,²² the reasons invoked to justify a separate market for terrestrial broadcasting

²¹ BGH, WuW/E 3058, 3062 ("Pay TV Durchleitung").

²² Decision no 99-D-14 of 23 February 1999 – *Télédiffusion de France*.

were based on the differences between the means of financing used by pay-TV/thematic channels and national generalist channels (subscription free v. advertising), and its impact on the need for generalist channels to have access to the largest audience possible. In the view of the Competition Council, cable and satellite could not be considered to be substitutable with terrestrial broadcasting, given their low penetration rate in *France*. In view of the legal constraints applicable to public generalist channels in *France*, and in particular, the obligation for them to use TDF – a public company specialised in the technical operation of broadcasting – the Council distinguished further between the market for the terrestrial broadcasting of public national generalist channels and the market for the terrestrial broadcasting of private national generalist channels.²³

A separate market for the provision of cable transmission capacity for broadcasting was identified by the Competition Council in its opinion to the Government on the *CGE/Havas* merger,²⁴ as well as in a series of decisions relating to requests for interim measures. In *NC NumériCâble*,²⁵ the Council considered that, for each of the geographic “Plan Câble” sites²⁶ operated by NC NumériCâble, there was at the time only one cable network upon which NC NumériCâble could transmit its audio-visual programmes, which was owned and technically operated by France Télécom, and that NC NumériCâble had to obtain from France Télécom the provision of audiovisual signals transmission service on the cable network. The view that France Télécom controlled an essential facility with regard to NC NumériCâble was upheld by the Paris Court of Appeal²⁷ and by the Court of Cassation.²⁸ Similarly, in the *Planète Câble* Case,²⁹ the Competition Council considered that, with regard to each of the sites concerned, France Télécom Câble had exclusive rights over the operation of the cable network. Accordingly, Planète Câble could only be distributed on cable networks if France Télécom Câble agreed to include it in its service offering. The Competition Council noted further that, in such circumstances, France Télécom was in a dominant position given that it could not be circumvented since it had not been demonstrated that satellite or digital cable services constitute a viable alternative for the reception of an analogue service via cable. Most interestingly, however, the Competition Council took the position that the eviction of Planète Câble from five other cable networks operated by France Télécom Câble did not result in

²³ The Council held that TDF had a monopoly for the broadcasting and transmission, both within *France* and abroad, by any telecommunications means, of the programmes of the national channels (“national programme companies”). In addition, it operated, at the time, around 99% of the frequencies authorised by the CSA for terrestrial television. In view of the fact that a national channel holding a terrestrial broadcasting licence is strongly dependent on its exclusive provider for the technical means of broadcasting, as switching providers requires one to have an immediately available and operational alternative (any interruption in broadcasting would entail important losses for the channel), TDF was found to hold a dominant position on the market for the terrestrial broadcasting of public national generalist channels and on the market for the terrestrial broadcasting of private national generalist channels.

²⁴ Opinion no 98-A-14 of 31 August 1998 (Opinions do not have the same legal value as decisions).

²⁵ Decision no 99-MC-01 of 12 January 1999.

²⁶ For the cable networks of the “Plan Câble”, the technical operator of the network is (or used to be) different from the commercial operators of the cable TV network. Typically, France Télécom operates the network only on a technical basis, while its commercial operation is ensured by another operator.

²⁷ Judgment of 15 March 1999.

²⁸ Judgment of 18 April 2000.

²⁹ Decision no 99-MC-02 of 27 January 1999; Decision no 99-MC-05 of 23 June 1999; and Decision no 00-MC-05 of 3 May 2000.

Planète Câble losing its access to the market, as Planète Câble was still broadcast via satellite and distributed by other cable operators.

In a subsequent opinion rendered to the Government in the context of the acquisition by Vivendi of a 15% participation in Canal+,³⁰ however, the Competition Council followed the analysis of the European Commission in the *TPS* Case, where the Commission had considered that a distinction between a cable and a satellite market was not justified. The Council reports favourably in its opinion on the statement of the Commission to the effect that, in zones served by both cable networks and satellite, the regulatory constraints associated with the installation of a parabolic antenna do not constitute a sufficient justification to delineate separate product markets. The Commission took the view that, in areas where a cable network is available, satellite low penetration rates are consistent with a view that pay-TV by satellite and pay-TV by cable are substitutes, concluding that the market for pay-TV in France includes three means of broadcasting transmission, namely: terrestrial, satellite and cable. The Commission also considered that there was no reason to distinguish between analogue and digital broadcasting. This position appears to be consistent with the view of the Minister of Economy, Finance and the Industry which, in 1999, had identified a broader relevant product market for the distribution of pay-TV services.³¹

Conclusions:

- 1. Member State practice varies in the treatment of broadcast transmission services, insofar as market definition is usually seen as falling between one of two extremes, namely: (i) a more aggregated relevant product market which embraces all delivery platforms; or (ii) a series of platform-specific product markets. The approach in (i) is reasoned in terms of the principle of technological neutrality. The approach in (ii) is reasoned on the basis that the relative maturity, geographic availability and technological capability of networks is not fully substitutable in all cases, thereby creating separate “relevant markets” which are configured around each network. At a more extreme level, the media regulator in *Germany* has found that each customer constitutes a relevant “market” in its own right.**
- 2. Competition law practice across the Member States has often been keen to identify narrower relevant product markets when dealing with individual access requests, while the telecoms NRAs have usually adopted the wider market definition which embraces all delivery platforms. In *Finland*, the basis for segmentation beyond a market embracing all delivery platforms is said to be the existence of an interface which allows the transmission of information to the viewer.**
- 3. The greater deployment of xDSL technology over fixed telecoms networks across the EU raises the technological possibility that, in the short term, another alternative delivery platform offering ubiquitous territorial coverage will be available for the distribution of broadcasting transmission services.**

³⁰ Opinion no 00-A-04 of 29 February 2000 – *Vivendi/Richemont/Canal+*.

³¹ Letter of the Minister of the Economy, Finances and Industry of 2 September 1999 to the counsel of the Vivendi group, BOCCRF No. 17 of 14 October 1999.

4. The relevant geographic market is, in general, held to reflect the relevant geographic market at the retail level – namely, national. However, a minority of Member States have considered the relevant geographic market to be sub-national, essentially because some networks which provide competitive substitutes are limited to a local or regional franchise.

I.2 ANALYSIS UNDER EU COMPETITION RULES

The Commission's competition law analysis of mergers and joint ventures under Article 81 EC and the *Merger Regulation* does not provide a definitive position on whether or not all broadcasting network platforms are to be considered to fall within a single relevant product market. For example, the Commission has defined each TV transmission network as a separate product market in a number of decisions affecting the territory of *Germany*. In *MSG Media Services*,³² the Commission found that cable TV networks were not interchangeable with satellite and terrestrial TV networks in *Germany*, based on the following cumulative demand-side factors identified in the downstream retail market for pay-TV services:

- **Customer fees.** Cable television presupposes the maintenance of a cable network financed by the viewer through regular cable fees, while no such “maintenance” fees are paid by customers of satellite and terrestrial pay-TV services. By contrast, satellite viewers are confronted with the high up-front costs (as opposed to regular fees) for the purchase of a satellite receiver.
- **Legal restrictions.** Subscribers are quite frequently faced with the difficulty that the acquisition/installation of satellite dishes is prohibited on aesthetic grounds by landlords or owners' associations.³³
- **“Lock-in effect”.** A household that is already on cable or, in the alternative, owns a satellite receiver, is normally not prepared to make a further investment in another transmission platform.³⁴

In addition, the Commission found, in that case, that cable and satellite were also not interchangeable from the programme suppliers' point of view, principally for financing reasons. In particular, broadcasting solely via satellite (direct-to-home) was considered to entail “significantly higher costs, per household and per year”.³⁵ The Commission emphasised the importance of the costs associated with the demand for transmission capacity for television signals as the decisive factor for determining the existence of the corresponding relevant product market. The fact that digitalisation has removed the shortage of transmission

³² *MSG Media Services* (1999), Case IV/M.469.

³³ This difficulty is confirmed in the recent Commission's Communication on the application of the general principles of free movement of goods and services – Articles 28 and 49 EC – concerning the use of satellite dishes, COM(2001)0351 final.

³⁴ See *MSG Media Services*, para. 41. See also *BSkyB/Kirch Pay TV*, Case IV/M.0037, para. 62-63, where the Commission appears to be reaffirming the approach taken in *MSG Media Services*.

³⁵ See *MSG Media Services*, para. 42.

capacity was not considered by the Commission to be evidence that there is no longer a separate relevant product market for cable networks. In the Commission's words : "*Whether an economic item is available to customers in limited or sufficient numbers does not determine the existence of a relevant market for such an item*".

The Commission also noted, in *BSkyB/Kirch*, that TV signals can be broadcast by terrestrial transmitter, cable or satellite (with only the latter two options being available in *Germany*). In Recitals 62 and 63 of that Decision, the Commission appears to be reaffirming the approach that it took in the 1994 *MSG Media Services* Decision.³⁶ The Commission concluded that there was a separate market for television broadcast over cable television networks as a result of "*considerable differences between the three means of transmission, as far as the technical conditions and financing are concerned. While terrestrial... and satellite television only require the viewer to install an aerial or satellite dish... cable television presupposes the maintenance of a cable network financed through ... cable fees.*"³⁷ The Recital goes on to refer to the difference between a large one-off fee and regular subscription fees. It concludes by stating that the high level of German cable penetration, together with aesthetic restrictions on satellite dish installation, the lock-in of existing cable customers and the different programming, lead to the conclusion that the means of transmission are not interchangeable for competition law purposes. In addition, the Commission cites significantly higher costs to programme suppliers of satellite broadcasting.

Earlier, in *Nordic Satellite Distribution*,³⁸ the Commission had considered the market for "satellite TV transponder capacity and related services to broadcasters" to be a stand-alone market, which requires the separation of the delivery of TV signals over satellite from delivery over other physical means. In particular, the Commission stated that "*[d]istribution of TV signals via satellite (transponders) is a market distinct from TV distribution by terrestrial links, since considerable differences exist between the two modes of distribution both technically and financially*".³⁹

The same approach was adopted in 1998 in *Deutsche Telekom/BetaResearch* Case,⁴⁰ where the Commission stressed that the lack of substitutability between cable and satellite networks was further reinforced by the different degrees of network coverage of these networks. In particular, the Commission noted that, on the demand-side, satellite and cable networks were not substitutable in terms of network reach given that, in the geographic market under consideration (*i.e.*, *Germany*), the number of satellite TV-viewers was approximately half the number of cable TV viewers. As a consequence, from a content supplier's point of view, distribution through cable would be much more advantageous than satellite distribution. The Commission found that the differentiation between networks was also reflected in the costs associated with the provision of TV to each viewing household, *i.e.*, cable transmission proved much more profitable to a TV supplier than satellite transmission). The Commission also noted, however, that it is clear that these factors may differ from Member State to Member State. As a result, there is significant potential for quite different results flowing from an examination of the same factors across the various Member States.

³⁶ Case No. IV/M.469, OJ 1994 L364/1.

³⁷ At Recital 41.

³⁸ *Nordic Satellite Distribution* (1995), Case IV/M.490.

³⁹ See *Nordic Satellite Distribution*, para. 57.

⁴⁰ *Deutsche Telekom/BetaResearch* (1998), Case IV/M.1027.

Both the differences between the Commission's assessment of the situation in various Member States and the evolution of its views relating to various factors relevant to market definition, can be seen by contrasting the above cases with the *BiB/Open* and *TPS* Decisions.

In particular, in *BiB/Open*, the Commission stated that “[i]n the United Kingdom it is not appropriate to distinguish between pay-television markets on the basis of their mode of transmission. Pay-television services provided by one means of transmission act as a competitive constraint on their provision using other means. Historical data shows this to be the case in respect of pay-television delivered by satellite and cable. It is clear from end-user behaviour that the services are considered as substitutes”. The Commission also noted that the composition and price of the services broadcast are broadly similar, and referred to the churn rate experienced by BSkyB (as an indication that there was no lock-in effect militating against switching between platforms).⁴¹

Similarly, in its *TPS* Decision,⁴² the Commission concluded that, “the French pay-TV market currently comprises the three methods of transmission: terrestrial, satellite and cable.” It noted that most channels offered by operators of one of the transmission platforms were also marketed over the other transmission platforms. The Commission referred to the low level of cable penetration (with more than 10% of households with a television) and to the fact that satellite is subject to aesthetic constraints relating to the installation of dishes that are advantageous to cable. However, the Commission concluded that the “fact that the penetration of satellite in cabled areas is low or very low tends... to prove that, where cable pay-TV exists, it is a substitute for satellite pay-TV, with consumers preferring the convenience of cable connection to the formalities usually involved in the installation of a satellite dish”.⁴³ The rationale of the *TPS* Decision appears to rebut the very factors that were considered to be central to the Commission's market definition analysis in the *BskyB/Kirch* Decision.

More recently the Commission has recognised that “the competitive environment is changing rapidly” and that, therefore, the market for transmission capacity might aggregate all available platforms. However, the question was left open, being irrelevant for the purpose of the competitive assessment in those specific cases, even though they related to the German territory.⁴⁴

In contrast with these cases, which related to the acquisition of transmission services for the provision of retail broadcasting services, the task of defining underlying transmission markets has recently been further complicated by the conjectured identification in some merger review decisions of a potential new downstream market, namely, that for the provision of so-called “broadband/triple-play services provided over cable networks”. These services are listed as

⁴¹ See *British Interactive Broadcasting/Open*, (1999), Case IV/36.539, para. 26.

⁴² *TPS* (1999), Case IV/36.237.

⁴³ See *TPS*, para. 30. This view seems to be implicitly echoed in the recent Decision *SLDE/NTL/MSCP/NOOS* (2001), Case COMP/M.2137, para.29. See also *Telia/Telenor*, (2001) Case IV/M.1439, para. 279, where the Commission recognised that “there are a number of aspects which indicate that a certain degree of substitutability may exist between the cable, DTH and SMATV activities” as far as the downstream retail TV distribution is concerned.

⁴⁴ See the twin cases of *Blackstone/CDPQ/Kabel Nordrhein-Westfalen* (2000), Case IV/M.0046, para. 22; and *Blackstone/CDPQ/Kabel Baden-Württemberg* (2000), Case IV/M.0050, para. 20.

broadcast TV (analogue and digital), high-speed data in both directions (thereby providing high speed Internet access), interactive TV services and telephony. The only network currently capable of delivering this bundle of services is said to be the upgraded cable network. Accordingly, if a particular and distinct retail market for such a “triple play” bundle of services was identified, it is argued by some that cable networks could be isolated from other delivery platforms as the only transmission platform capable of supporting this particular retail service package. Such a result would suggest that markets for transmission on individual delivery platforms could be defined. The Commission has not yet taken a definitive position on either the retail or wholesale issues that this line of analysis raises. However, it has entertained the possibility of identifying such a retail market at some point in the future.⁴⁵

I.2.A. Relevant Geographic Market

The drivers for the geographic limits of the competitive conditions in relevant market at issue have been identified by the Commission in terms of the following factors:

- geography;
- marketing; and
- legislation.⁴⁶

Based on an assessment of these factors, the Commission has often concluded that the market for broadcasting networks (and broadcasting transmission services) is national in scope.⁴⁷ The Commission confirmed its view that the market for broadcast transmission networks is national in the twin cases of *Blackstone/CDPQ/Kabel Nordrhein-Westfalen* and *Blackstone/CDPQ/Kabel Baden-Württemberg*. On the other hand, in *Nordic Satellite Distribution*, the Commission considered that the geographic market for satellite broadcasting transmission capacity was wider than national and covered the “Nordic area” (comprising *Denmark, Finland, Norway and Sweden*). The Commission noted that the geographic market might be even broader in scope, but was limited to the Nordic area principally because the notified operation would have erected such significant barriers to market entry for providers of transponder capacity suitable for Nordic viewers that the operation itself would have created a “Nordic” market. As a result, other satellite operators would be foreclosed from leasing transponders to broadcasters wishing to target Nordic viewers.⁴⁸ The drivers for the creation of such a “Nordic market” were: (i) the control over transponder capacity; (ii) the links held by an important broadcaster and distributor of Nordic TV channels; and (iii) the links with important cable operators. Yet, again, the strong link between the retail market for pay-TV distribution and the (wholesale) market for transmission networks was confirmed.

Conclusions:

- 1. The Commission’s analysis under its competition powers of review of mergers and joint ventures under Article 81 EC or the *Merger Regulation* is divided as to whether or not broadcasting delivery networks in each Member**

⁴⁵ See *UGC:Liberty Media* (2001), Case IV/M 2222, para 15; see also *SDLE/NTL/MSCP/NOOS* (2001), Case COMP/M.2137, para.73.

⁴⁶ See *Nordic Satellite Distribution*, para. 73.

⁴⁷ See, for example, *Deutsche Telekom/BetaResearch*, para. 24; *MSG Media Services*, para. 45.

⁴⁸ See *Nordic Satellite Distribution*, para. 71.

State are to be considered in the aggregate when analysing the relevant product market for broadcasting transmission services. When specifically considering the wholesale market for broadcast transmission services in *Germany*, the Commission in the past has concluded that cable, satellite and terrestrial networks are not substitutable and therefore constitute separate relevant product markets. It has reached the opposite conclusion with respect to *France* and the *United Kingdom*. When considering the retail pay-TV services market, which is consistently considered by the Commission to be directly linked to the wholesale market for broadcasting transmission services, the Commission is increasingly taking the view that there is, in principle, a single relevant product market for broadcasting transmission, irrespective of the platform over which the service is provided.

The Commission's view in relation to platform neutrality in the provision of broadcast transmission services thus varies, given the relative levels of the deployment of certain types of networks and the technological differences which may exist at different stages of the market maturity of the respective platforms.

2. There has been speculation in a number of merger review cases that cable networks might constitute separate relevant product markets because of their allegedly unique ability to provide a so-called "triple play" of services (*e.g.*, voice services, Internet connectivity and media). The Study Team takes the view that, at least for *ex ante* purposes, cable TV networks do not constitute discrete relevant product markets due to their "triple play" characteristics because, *inter alia*: (i) the individual retail service elements of the package are subject to distinct patterns of supply and demand across all market actors; (ii) changes in technology mean that any perceived technological 'advantage' is likely to be outlived in the short term; and, even more fundamentally; (iii) the identification of a relevant retail market made up of three otherwise distinct retail services necessarily implies that the wholesale transmission market is similarly aggregated – something which is neither borne out in practice nor in the Commission's administrative practice.
3. The relevant geographic market is usually considered to be national in scope, based on geographic, regulatory and social factors. However, some decisions have extended the scope of the geographic market beyond national borders, especially in areas characterised by a certain degree of social or linguistic homogeneity (*e.g.*, the Nordic Countries), as occurs in the case of retail markets in the broadcasting sector. Some others have narrowed the market to particular regions of Member States, in part due to linguistic and cultural differences and also because of the territorial reach of particular networks such as cable TV (*e.g.*, Flanders).

II. BROADCAST ANCILLARY SERVICES

Summary:

1. **The consistent approach across the Member States has been to treat the full range of services ancillary to digital broadcasting as falling within one relevant product market, even though they perform distinctly different functions.**

Member States have consistently defined the relevant geographic markets as being national in scope, reflecting the territorial scope of broadcasting services provided at the retail level.

2. **The Commission's administrative practice in its review of strategic alliances and mergers under Article 81 EC (formerly Article 85 EC) and the *Merger Regulation* has identified a distinct product market for ancillary and technical services for suppliers of both digital interactive television services and pay television. Thus far, only competition law investigations focusing on the German market have envisaged defining a narrower platform-specific relevant product market. The Commission has demonstrated its willingness, in merger review cases, to establish, on a case-by-case basis, behavioural rules to which CAS operators must conform.**

As regards geographic market definition, ancillary services are generally seen as being closely linked to the pay television market and are therefore considered to be national in scope.

3. **CAS, APIs (and related authoring tools) and EPGs are currently acquired by the vast majority of content providers from the same ancillary services provider. This suggests that they may currently constitute individual elements of a broader relevant product market embracing all of these services. Moreover, CAS, APIs and EPGs are also almost uniformly provided by the same entity in the form of a package, although not always by the operator of the associated transmission platform (e.g., CAS providers on satellite systems lease the transponder capacity).**

It appears that EPGs have the potential to become subject to supply-side competition when compared to other navigation tools. However, no such alternatives have as yet appeared in the marketplace. If the supply of EPGs were to evolve in this manner, their inclusion in a more aggregated market which included CAS and APIs should be reconsidered.

There is currently little uniformity in the standards used for technical services, either across platforms or across Member States. As demand for these services matures, it will be important to monitor whether this persists. If it does, this may, in time, require a broader re-examination of whether the broadcasting transmission market itself remains an aggregate of multiple platforms.

4. **While subscriber management services and financial management services can be acquired together, as a package with other ancillary services, from a single**

provider, there appears to be more likelihood that such services may be acquired from third parties. As such, it appears that they fall outside the relevant product market for the provision of digital broadcasting ancillary services.

II.1 EU MEMBER STATE ANALYSIS

Issues:

1. **The extent to which services ancillary to broadcasting services reflect particular supply and demand characteristics which differ from the dynamics of the broader market for broadcast transmission.**
2. **The extent to which individual services ancillary to broadcasting services constitute separate market segments which can be identified as “relevant markets” in their own right.**

II.1.A. Summary of Main Relevant Markets Identified by Member States

Product Markets Identified	Sub-Markets or Market Segments Identified	Geographic Markets Identified
Conditional access services (<i>Finland, Italy, Spain, the United Kingdom</i>).	<ul style="list-style-type: none"> • Access control services (<i>the United Kingdom</i>). • Basic and premium technical services (<i>Italy</i>). 	National.
Technical and administrative services (<i>Finland, Italy, Spain</i>).	The provision of set-top boxes, conditional access systems, including smart cards, EPGs, Subscriber Management Services (<i>Finland, Italy, Spain</i>).	<ul style="list-style-type: none"> • National (<i>Finland, Italy, Spain</i> - not unanimously). • International (<i>Italy</i> - not unanimously).

II.1.B. Relevant Product Markets

a. General Conclusions

The definition of relevant product markets for ancillary services, namely, administrative and technical services for suppliers of digital interactive television services and/or pay television, as delineated by the European Commission (*see* II.2 below), is reflected in the decisions and practice of some national authorities (*e.g., Italy, Spain*). National regulatory provisions generally reflect the definitions of Directive 95/47/EC on the use of standards for the transmission of television signals, and therefore tend to identify the ancillary services with those technical services that are normally supplied by providers of Conditional Access, as defined in the Directive.

In general, these services are considered to constitute a single relevant product market (*e.g., Spain*). However, there are also indications in some national administrative practice that each of these services might possibly be found to constitute distinct relevant product markets (*e.g.,*

Finland) or to reflect different bundles of services characterised by varying levels of performance or sophistication (*e.g.*, as reflected in some of the administrative practice in *Italy*).

b. Specific Analysis

In *Italy*, the Competition Authority has identified a market for technical and administrative services for pay-TV as comprising: making available, in set-top boxes, the provision of conditional access services, including smart cards; subscriber management services; and services relating to the accessing of Electronic Programme Guides.⁴⁹

Similarly, in *Spain*, the CMT⁵⁰ has identified a market for technical and administrative digital television services and has included within its scope the following services: set-top box equipment; conditional access systems; message processing services (permitting encryption and codification of signals); a decryption service; authentication services; selection/navigation services (*e.g.*, enabling EPG management); and subscriber management services (including smart cards).

In *Vivendi/Richemont/Canal+*, the Competition Council identified a separate relevant product market for the provision of technical services associated with the provision of pay-TV services. In doing so, the Council followed the analysis of the European Commission, notably in *Bertelsmann/Kirch/Première*, and noted that this market is strongly associated with the pay-TV market.

In *Finland*, the Competition Council has identified a market for broadcasting technical services that are related to one another, but are not necessarily supplementary, to each other. It is conceivable that these services may include encryption services, subscriber authentication services, research and development, testing, monitoring, maintenance, multiplexing control and integration services. Both the Finnish Competition Council and the FCA have found that, at least for the time being, these services are likely to constitute a single market, primarily because they are being provided as a package by a single operator.⁵¹

In the *United Kingdom*, Oftel differentiates between “Conditional Access Services” and “Access Control Services”. The latter services are seen as a sub-category of the former. Both types of services are considered to provide a means of controlling both the end user’s access to content and the access by service providers to end users. Oftel takes the position that Conditional Access Services include:

- encryption and decryption of audio and video signals;

⁴⁹ See, *inter alia*, Decision of the Italian Competition Authority of 12 September 2001 in procedure C4754 – *Groupe Canal+/Stream*.

⁵⁰ Section I.3.10.8D of the 2000 Annual Report.

⁵¹ See Competition Council Case (Decision issued on 9.7.2000), reviewing FCA Case 53/690/1999 (Decision issued on 17.4.2000), regarding the contemplated staged acquisition by Sonera Oyj from Yleisradio Oy of 34% of the shares and contractual control of Yleisradio’s technical broadcast services subsidiary Digita Oy. Digita Oy provides national TV and radio broadcast and programme transmission services to *Finland*’s major terrestrial broadcasters Yleisradio Oy, MTV Oy Ruutunelonen Ab, Oy Suomen Uutisradio Ab as well as telecoms technical services. With respect to broadcasting technical services, Digita Oy is the only national provider of such services in *Finland*.

- services which restrict or control access to broadcast data services, such as digital teletext; and
- services which restrict or control access to interactive applications embedded within television programmes.

In particular, these services are said to consist of:

- the scrambling of video signals;
- the issuing of smart cards or other essential components;
- the origination and encryption of messages authorising subscribers to receive a particular service or services;
- the receipt and processing of impulse pay-per-view services; and
- the listing of EPGs, insofar as the EPG is linked to the Conditional Access System, or is itself a mechanism for controlling the viewer's access to television services.

Both Oftel and the DTI take the view that, because the regulatory requirements on conditional access (*i.e.*, fair, reasonable and non-discriminatory access to conditional access services) apply only to 'technical services', they do not apply to subscriber management services (*i.e.*, the taking of subscribers' orders and the processing of subscriptions). This view is shared by the Competition Commission, which has expressed the view that: "*Customer management services (CMS) are distinguished from technical conditional access services, in that the latter comprise the physical technical means by which a broadcaster may access decoders containing proprietary technology, and customer management services are simply the provision of services for the telemarketing and billing of subscription customers*".⁵² Oftel considers that technical Conditional Access Services fall within the scope of 'telecommunications services', which control the viewer's access to digital television services.⁵³ This view is, however, contrary to that taken by the Independent Television Commission (the ITC, which is the primary regulator for broadcasting matters in the *United Kingdom*).

Oftel also considers that access control services include:

- services enabling the viewer to send and/or receive messages via the modem; and
- 'signing' (*i.e.*, granting of authorisation to run) interactive applications not associated with television programmes;

such as:

- testing of interactive applications and the application of digital certificates;
- verification of applications by the receiver to check that they have satisfied the testing and certification process successfully ; and
- authentication of the subscriber's smart card to enable the set-top box to communicate with these servers that form part of the system operated by the provider of access control services.

⁵² See "British Sky Broadcasting Group Plc. And Manchester United Plc.: A Report on the proposed merger", published on 9 April 1999, Appendix 4.1, para. 19.

⁵³ See "Ensuring access on fair, reasonable and non-discriminatory terms", Statement issued by the Director General of Telecommunications, 1999.

In several Member States, regulatory authorities are increasingly investigating whether regulation of the various technical services identified above should take place. For example, in *Italy*, the NRA adopted a decision⁵⁴ establishing the principle of the 'single decoder', according to which operators of Conditional Access Services must ensure that all consumers be able to use a single "set-top box" in order to access all available terrestrial digital services, satellite or cable (both encrypted and non-encrypted).⁵⁵ The Decision allows conditional access providers to use either simulcrypt or multicrypt systems, consistent with the DVB standards. Also, in order to ensure that all decoders can receive all EPGs, the Decision mandates the use of the DVB-SI standard in transmission and, where the set-top box utilises a proprietary API, requires that Conditional Access Providers assist TV operators in developing applications for digital TV on fair, reasonable and non-discriminatory terms.

Moreover, in its concern to liberalise the provision of Conditional Access Services, the CMT in *Spain* has initiated a public consultation on decoders examining the alleged "bottleneck" created by proprietary systems used by vertically integrated digital TV broadcasters, and on the level of competition in general in the provision of Conditional Access Systems.⁵⁶ Although the legal definition of Conditional Access Systems is tied to the delivery of digital TV, the scope of the consultation relates to access to both television and interactive services provided over the same platform. In this regard, the CMT has identified a number of ancillary services which may be required to be subject to sharing obligations: CASs, APIs, navigation tools, return paths and other ancillary technical elements of the decoder.

For its part, the ITC in the *United Kingdom* has issued a Code of Conduct on EPGs, which requires that EPG providers ensure that the terms of access to EPGs and agreements with broadcasters for the provision of EPG services be fair, reasonable and non-discriminatory.

The regulatory authorities in *Italy* are starting to entertain the possible existence of two separate markets for technical products, namely: (i) the "basic set-top box and IDTV", normally rented by customers and allowing basic services such as the reception of basic television programmes and the EPG; and (ii) the "premium set-top box and IDTV", normally purchased by customers, allowing access to all of pay-TV services, access to interactive services (*e.g.*, home banking, e-commerce), the local recording of programmes, *etc.*⁵⁷ It is not clear whether it is envisaged that the existence of these two "markets" for technical purposes will be reflected in a comparable market segmentation for regulatory purposes.

⁵⁴ Decision 216/00/CONS of 5 April 2000, implementing Directive 95/47/EC.

⁵⁵ It has to be noted that the decision of the Italian Government to require a single decoder for the Italian market was also the result of the Commission's warnings against the establishment of a single, common digital platform in *Italy*. In fact, during 1997 and 1998 there were suggestions that both pay-TV platforms (Telepiù and Stream) were to merge or to collaborate into a single platform. This has been confirmed by the recently notified intention of the two companies to merge. The decision of the Italian authorities is aimed therefore at ensuring interoperability, in order to encourage infrastructure competition. See "The Development of the Market for Digital Television in the European Union", Communication from the Commission to the European Parliament, the Council of Ministers, the Economic and Social Committee and the Committee of Regions, COM (1999) 540.

⁵⁶ Pursuant to the powers vested in it under Law 17/1997, which transposes Directive 95/47/EC on standards for the transmission of television signals into Spanish law.

⁵⁷ See Italian Communications Authority, "Libro bianco sulla televisione digitale terrestre", p. 82.

II.1.C. Relevant Geographic Markets

This relevant market is generally seen to be inherently linked to the market for pay-TV, and is therefore generally considered to be national in scope, as in the case of the market for pay-TV (*e.g., Finland*). However, in some decisions, national competition authorities have considered that cultural, linguistic and regulatory differences might not influence customers' decisions relating to conditional access; therefore, the relevant market could be considered to be, at least potentially, international (*e.g., Italy*).⁵⁸

Conclusions:

- 1. The consistently held approach across the Member States has been to treat the full range of services ancillary to broadcasting as falling within one relevant product market, even though they perform distinctly different functions. This aggregated view of the market reflects the fact that operators inevitably “offer the full palette of ancillary services” (regardless of how many services might be required by various broadcasters or service providers), and the services are invariably supplied by the same network operator to its customers.**
- 2. In the *United Kingdom*, it is felt that any regulatory regime adopted with respect to “technical services”, such as conditional access which control access to the customer, should not extend to “subscriber management services” (*e.g., services which facilitate the billing and telemarketing functions to existing customers*); the necessary implication is that both sets of services fall into different relevant product markets.**
- 3. Member States have consistently defined the relevant geographic markets for ancillary broadcast services as being national in scope, reflecting the territorial scope of broadcasting services provided at the retail level. Nevertheless, the possibility has been entertained in certain quarters that the geographic market might extend beyond national boundaries.**

II.2 ANALYSIS UNDER EU COMPETITION RULES

Under the competition law analysis of mergers and joint ventures respectively under Article 81 EC or the *Merger Regulation*, the Commission has identified a potential market for administrative and technical services for suppliers of digital interactive television services and pay television, which includes:

- the making available of set-top boxes;
- the provision of conditional access services, including smart cards;
- subscriber management services;

⁵⁸ See Decision of the Italian Competition Authority of 30 January 1997 in procedure C2689 – *Canal Plus/Nethold*.

- services relating to accessing Electronic Programme Guides;
- services relating to accessing the writing of applications compatible with application programming interface included in the set-top box; and
- the provision of a system allowing financial transactions to be conducted in a secure environment (a “Transaction Management System”, or TMS).⁵⁹

The Commission has sometimes limited the scope of the services falling within the relevant product market to those services that are needed for the provision of pay-TV services.⁶⁰ In *BiB/Open*, the Commission defined the scope of this relevant market as those services that are needed for both pay-TV and digital interactive television services in light of the recognised “*very large area of overlap between the technical services*” needed for pay-TV and digital television services.⁶¹ The Commission, however, did note that “*the skills and technologies underlying each of the individual services necessary for pay-television and/or digital interactive television services are different in some aspects*” and that, therefore, “*narrower product markets may exist*”.⁶² In that case, it was not necessary to define the market more narrowly, and the point was left open. Implicitly, this suggests that the Commission may be considering distinguishing between:

- the market for technical services for digital interactive television services; and
- the market for technical services for pay-television.

Of course, it is possible that an even more segmented approach to market definition for the individual technical services themselves might be taken. For example, there is some possibility that separate product markets for the following might be identified in the future under an *ex post* competition rules analysis, namely:

- a market for SAS;
- a market for SMS;
- a market for authoring applications for use on the API;
- a market for access to the API;
- a market for access to the EPG; and
- a market for access to the set-top box.

The possibility of such an approach was foreshadowed in *MSG Media Services*, where the Commission recognised that the services involved such as subscriber management systems or

⁵⁹ *BiB/Open*, para. 30.

⁶⁰ *See, inter alia, Bertelsmann/Kirch/Première*, paras. 19-21. This view has been recently confirmed in the twin cases of *Blackstone/CDPO/Kabel Nordrhein-Westfalen*, para. 23; and *Blackstone/CDPO/Kabel Baden-Württemberg*, para. 21.

⁶¹ *BiB/Open*, para. 31.

⁶² *See BiB/Open*, para. 32.

programme packaging (*i.e.*, in the putting together of packages of programmes from different programme suppliers), might constitute separate relevant product markets.⁶³

A further possible division in the market for ancillary services was also identified, *based on the platform used for the delivery of broadcasting content*. In particular, in *Deutsche Telekom/BetaResearch*, the Commission considered that a subdivision of markets for technical services for cable pay-TV on one hand, and satellite pay-TV on the other, might be possible, given the intrinsically different technologies needed to provide such services in connection with satellite and cable networks; however, this was also expressed to be not “imperative” (ultimately, with the issue not being investigated further).⁶⁴

In reviewing mergers in the media sector, the Commission has been particularly concerned to ensure that emerging markets cannot be foreclosed through the leveraging of dominant positions in existing markets into new digital markets, notably through the control of proprietary technology. For example, the *MSG Media Services* Case involved the creation of a joint venture to develop “technical and administrative” services, including conditional access, subscriber management, and decoder boxes for digital pay TV service in *Germany*. The Commission prohibited the merger on the ground that it would have resulted in the foreclosure of the emerging market for digital pay-TV, by bringing together the most significant players in the German media industry, namely, the only German pay-TV supplier at the time (*i.e.*, Premiere, controlled by Bertelsmann, Kirch, and Canal Plus), *Germany’s* largest media company (*i.e.*, Bertelsmann) and the incumbent telecoms and cable TV operator (*i.e.*, Deutsche Telekom). The proposed joint venture would have also resulted in significant vertical relationships relating to programming rights, conditional access, and cable distributors.

In the twin cases of *Deutsche Telekom/BetaResearch* and *Bertelsmann/Kirch/Premiere*, two concentrations were assessed, namely, the restructuring of the pay-TV operator Premiere, so as to become a digital pay-TV programme and marketing platform using the d-box technology made available to Kirch, and the acquisition of control by DT of Beta Research. Both concentrations were prohibited by the Commission. In *Deutsche Telekom/Beta Research*, DT was to acquire a share of Beta Research and, by jointly controlling it with CLT-UFA and Kirch, would gain access to the d-box technology. DT controlled access to most of the 18.5 million German cable subscribers. Following the acquisition of joint control in Beta Research, it would exclusively use Beta technology for its d-box decoders, and secure a dominant position on a lasting basis on the German market in technical services for pay-TV. The Commission considered that the undertakings proposed by the parties, which related to the disclosure of the d-box’s API interface or to the introduction of a compulsory conditional access licence, did not alter the fact that Bertelsmann, Kirch and DT would control the development of decoder technology in *Germany*. In *Bertelsmann/Kirch/Premiere*, the Commission also took the view that Beta Research would gain a monopoly in the provision of technical services for satellite services, thereby posing a long-term obstacle to the introduction of new technology. The Commission found that Beta Research would have been in the position to misuse its licensing policy to discriminate against other potential pay-TV entrants competing with Premiere.

⁶³ See *MSG Media Services*, para. 31.

⁶⁴ See *Deutsche Telekom/BetaResearch*, para. 18.

The Commission's views in these cases concerning the German market have not been supported by subsequent administrative practice relating to other Member States, which has taken a much broader view of the implications of inter-network competition.⁶⁵

In its Decision in *BiB/Open*, the Commission considered the possible implications of the creation of a joint venture between BSKyB, British Telecom, Matsushita and Midland Bank. Open intended to provide digital interactive services to pay TV subscribers. The joint venture, was exempted under Article 81(3) EC for a period of seven years. The Commission found, however, that because of the market positions of BT and BSKyB in markets related to the one in which BiB would be active, the restriction of competition was appreciable. The Commission, accordingly, subject the exemption Decision to a number of conditions, designed to ensure that BSKyB would not leverage its market power into the technical services market for conditional access services and access control. The conditions related, in particular, to third party access to BiB set-top boxes.

Similar conditions were imposed by the Commission in the *BSkyB/Kirch Pay TV* merger. In particular, the notifying parties undertook to allow third party access on a fair, reasonable and non-discriminatory basis to technical services (encryption and EPGs). They also undertook to introduce accounting separation, and allow access to their decoder in order for third parties to develop applications. Moreover, the parties guaranteed to ensure the interoperability of applications and of competing technical platforms, and to offer licences for the d-box network to interested third parties. Finally, BSKyB undertook, with respect to bidding for programme rights in the UK, not to request from the rights holder that they also hold the rights for *Germany* granted to KirchPayTV. KirchPayTV gave a similar undertaking with respect to the *United Kingdom*.

II.2.A. Regulatory Environment

The importance of regulating conditional access is expressly recognised in Directive 95/47/EC on the use of standards for the transmission of television signals⁶⁶ (“the *TV Standards Directive*”). Generally speaking, the *TV Standards Directive* establishes a regulatory regime adapted to the initial phase of new digital television services being introduced into the EU, while at the same time ensuring continuity with the regulatory environment for advanced television services based on analogue technology.

The *TV Standards Directive* regulates three particular elements of relevance to digital Conditional Access Systems (CAS), namely:

- (1) rules relating to the standardisation of transmission systems;
- (2) mandatory provisions for digital CAS; and
- (3) minimum requirements with respect to the specifications and capabilities of digital set top boxes on digital television sets.

In particular, under the *Directive* Member States are obliged to ensure, *inter alia*, that:

⁶⁵ See discussion on *TPS*, *BIB*, and *BSkyB/Kirch Pay TV* cases in Section I.

⁶⁶ Directive 95/47/EC of the European Parliament and of the Council on the use of standards for the transmission of television signals, [1995] OJ L281/51.

- operators of conditional access: (i) offer their technical services to all broadcasters on a fair, reasonable and non-discriminatory basis; and (ii) keep separate accounts regarding their activities as conditional access providers;
- conditional access-related intellectual property rights (IPR) holders license their rights to manufacturers of consumer equipment on fair, reasonable and non-discriminatory terms. (In particular, Member States must ensure that IPR holders do not unduly restrict the conditions attached to the use of their rights in receivers containing embedded conditional access systems, in favour of proprietary solutions. Specifically, IPR holders must not be permitted to block the inclusion of the Common Interface in decoders using also their proprietary technology);
- conditional access systems allow cost-effective transcontrol at cable head-ends; and
- easy, inexpensive, fair, appropriate and transparent dispute resolution procedures are established to resolve the disputes deriving from the violation of the rights and obligations established by the *Directive*.

II.2.B. Relevant Geographic Market

In *BiB/Open*, the Commission concluded that the geographic market of the market at issue is “closely linked to the pay-television market”, and is therefore national in scope.⁶⁷ The direct link between geographic coverage of the pay television market and that for ancillary services was reiterated by the Commission in *Bertelsmann/Kirch/Premiere*, where the market was found to comprise the German-speaking region, consisting of *Germany, Austria, Luxembourg* and the German-speaking parts of *Belgium* and *Switzerland*.⁶⁸ In *Deutsche Telekom/Beta Research*, the Commission linked the geographic scope of the market for ancillary services to the scope of the market for broadcast transmission.⁶⁹

However, in *MSG Media Services*, the Commission seemed to abandon the view that the market at issue should necessarily reflect the geographic scope of the markets for pay-TV/transmission of pay-TV. In that Decision, the Commission considered that a market wider than national could be envisaged for the market for ancillary services. This market configuration was justified on the basis of the ability of suppliers of ancillary services to extend their services to multiple countries, possibly in cooperation with local partners.⁷⁰

Conclusions:

- 1. The Commission’s administrative practice in its review of strategic alliances and mergers under Article 81 EC (formerly Article 85 EC) and the *Merger Regulation* has identified a distinct product market for administrative and technical services for suppliers of both digital interactive television services**

⁶⁷ See *BiB/Open*, para. 44.

⁶⁸ See *Bertelsmann/Kirch/Premiere*, para. 22. See also the twin cases *Blackstone/CDPQ/Kabel Nordrhein-Westfalen*, para. 29; and *Blackstone/CDPQ/Kabel Baden-Württemberg*, para. 27.

⁶⁹ See *Deutsche Telekom/BetaResearch*, para. 23.

⁷⁰ See *MSG Media Services*, para. 45.

and pay television. The Commission has implicitly recognised that this market might be susceptible to segmentation into the markets for ancillary services for pay TV and digital interactive television services on the one hand, and ancillary services for other interactive services on the other.

2. Thus far, only competition law investigations focusing on the German market have envisaged the possibility of a narrower platform-specific relevant product market definition. This might be the result of a particular historical pattern of inter-network competition in *Germany* which, until recently, was characterised by the fixed incumbent telecoms operator also being the virtual monopoly cable TV provider. Subsequent administrative practice concerning other Member States has not borne out similar results (*see TPS, BiB and B SkyB/Kirch Pay TV Cases*).
3. The Commission has demonstrated its willingness in merger review cases to establish, on a case-by-case basis, behavioural rules to which CAS operators must conform. In tandem with the existing regulatory obligations imposed under the *TV Standards Directive*, these behavioural undertakings have been considered to be sufficient to overcome a range of concerns regarding market foreclosure, except in those cases where dominance has been held to exist at multiple levels of the value chain.
4. As regards geographic market definition, ancillary services are generally seen as being closely linked to the pay television market and are therefore considered to be national in scope.

III. MARKET ANALYSIS

III.1 BACKGROUND

In the view of the Study Team, there are no retail markets falling within the ambit of “electronic communications services” which justify inclusion as a Candidate Market.

III.1.A. Broadcasting Transmission Networks

The transmission of signals to the subscriber’s home is one of the key elements in the broadcasting value chain. At present, this is provided via a number of transmission media, both analogue and digital – namely, terrestrial transmission, satellite transmission, cable networks and the traditional telephone network which, after DSL enhancement, can also provide a variety of broadcasting and other services on a switched basis. Most of these transmission media can carry other, related or otherwise stand-alone, services such as telephony, interactive broadcasting services and Internet access services, with varying degrees of efficiency.⁷¹

⁷¹ See “The Development of the Market for Digital Television in the European Union”, COM (1999)540 of 9 November 1999, para. 2.2.5. Refer also to the discussion of delivery platforms in Chapter III.

III.1.B. Broadcasting Ancillary Services

The broadcasting ancillary services concept (a sub-set of which is also known as technical services for digital interactive television and pay-TV) is a broad one. It includes, essentially, the full range of technical and other services that are required to provide digital television services (excluding those services which merely deliver the performance and marketing functions provided to customers with respect to whom access has already been obtained). A “set-top box” generally includes the elements (made up of hardware and software) that are needed for conditional access services (including the facilitating smart cards), subscriber management services, EPGs (access to an EPG controlled and administered by the transmission service provider or access permitting the operation of multiple EPGs) and access to the APIs (and other authoring tools) included in the set-top box and a system which ensures that financial transactions are secured. The various elements of set-top box functionality are discussed below:

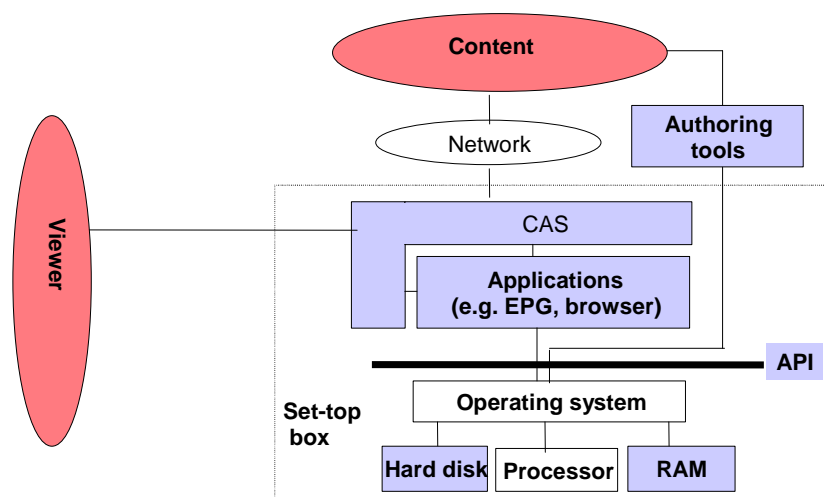
- **Conditional access**⁷² is the technical system that ensures that only viewers who are authorised to acquire a service (whether as part of a subscription or on demand) are able to do so. It also prevents unauthorised signals from corrupting the decoder population as such corruption would render the population unaddressable). It includes authorisation signals (*i.e.*, entitlement control messages, entitlement management messages and verification) in the multiplexed digital data stream.
- The **Application Programme Interface (API)** is, effectively, an operating system that incorporates both a low-level (basic) operating system and an API. It enables, limits and controls the interactive services that run over the operating system. In each set-top box, the API is linked to the CAS. Access to the API is necessary for a content provider to develop applications that will run on the operating system of the particular set-top box. It is, as the name suggests, the interface between the applications and the operating system on which they run. Applications are developed using authoring tools that are compatible with the API. Information on, and compatibility with, the API is essential to develop applications that will operate across the API (*e.g.*, EPGs, email and Internet access).
- An **Electronic Programme Guide (EPG)** is a navigation service which lists channels and services and facilitates viewers selecting the programmes and services that they wish to receive (and to change channels and services). EPGs are currently provided by the platform providers; platform providers ensure that set-top box manufacturers install the hardware and software necessary to support their EPGs. As such, there are EPGs for each cable (regional and national), digital terrestrial and satellite platform.
- The completion of transactions requires **security measures** that provide content providers and viewers with sufficient comfort that they will be willing to disclose personal data. The transaction management system is the mechanism for authorising and undertaking financial transactions on a platform, and which connects to on-line servers and database records.

⁷² In a number of cases, the conditional access concept is used to refer to digital broadcast services, and the term “access control” is used to describe the same functionality used in relation to on-line and other “non-broadcast” data services.

Subscriber management services (SMS) and smart card provision are services that are effectively derivative of conditional access services.

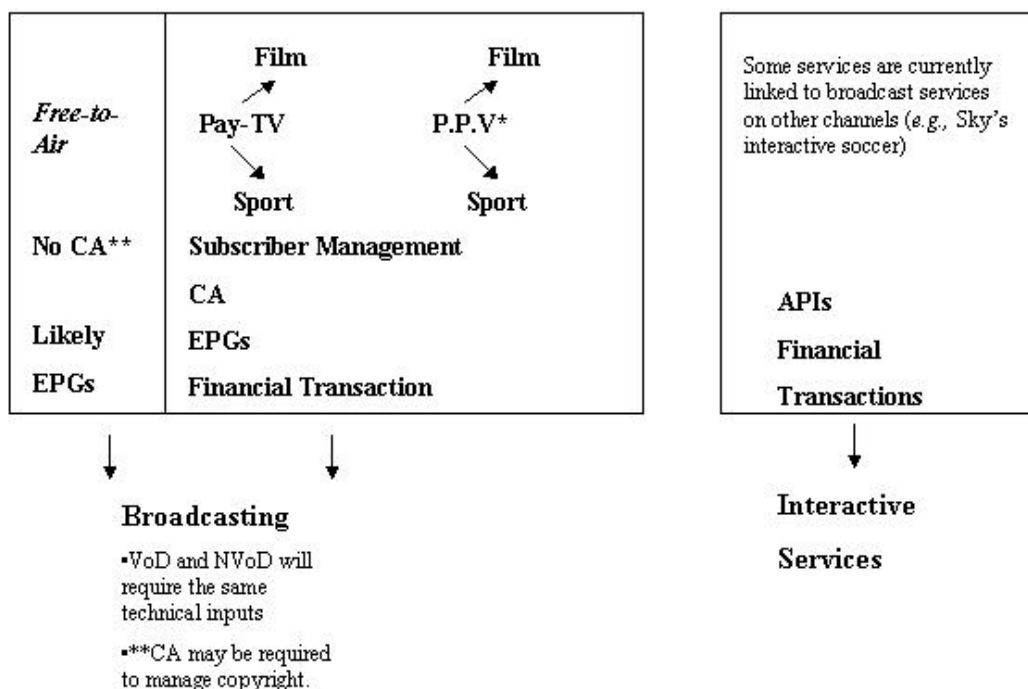
However, one of the important resources inherent in an SMS is the customer database, including information on subscriptions and preferences. In virtually all cases, the SMS provider is the platform provider (or is the database provider affiliated to or selected by the platform provider). The SMS is linked to the CAS and the API. Content/service providers (not affiliated with the platform provider) have no alternative means of supply. A number of commentators have observed that, coupled with their technical characteristics, the economies of scale in managing an SMS may operate as barriers to entry for competitive providers. They have gone on to note the risks of excessive pricing and leveraging (into other retail services available over the platform).⁷³

Not all of these services are “technical services” (e.g., subscriber management services and financial transaction services are ancillary, but not technical). The following diagram illustrates how the technical services identified above are (or are not) integrated within the set-top box:



In addition, as illustrated by the Table overleaf, not all of these services are always required by individual content providers to provide certain types of retail services:

⁷³ See Martin Cave & Cowie, “Not Only Conditional Access. Towards a Better Regulatory Approach to Digital TV”, *Communications & Strategies*, Issue 30, 1998; Martin Cave & C.T. Marsden, “Convergence, Competition and Regulation”, *International Journal of Communications Law and Policy*, Issue 1, Summer 1998.



This range of ancillary (or technical) services, either individually or in various combinations, is necessary for the provision of various retail digital broadcasting (including interactive) services. The skills and technologies underlying each such service are quite different in many respects.

Manufacturers of set-top boxes (e.g., Pace, Motorola and Philips) develop set-top boxes in close co-operation with the providers of the software for the key ancillary services (e.g., OpenTV, Liberate and Microsoft), the transmission platform providers (e.g., Sky, Canal+, UPC) and the transmission network operators (where the latter two entities are not vertically integrated). The transmission platform providers usually provide all of the ancillary services and, consequently, have strong incentives to supply set-top boxes to end users, along with their subscriptions.

III.2 BROADCASTING TRANSMISSION SERVICES

III.2.A. Demand-side Factors

Content providers require access to broadcasting transmission services that will allow them to reach the audience that they require to generate either the subscription or advertising-generated revenues necessary to support their particular business model.⁷⁴ As such, they do

⁷⁴ It is important to ensure that any proposed wholesale regulation of broadcasting transmission services (effectively regulation of access to customers) does not impose open access or similar obligations merely to support particular types of business plans. The imposition of such wholesale regulation should only follow from the identification, through a quantitative market analysis, of the absence of effective competition at the retail level.

not necessarily need to be able to reach all potential viewers on all platforms, although access to the broadest range of customers clearly enhances the business model.⁷⁵ The number and type of viewers (and potential viewers) to which they require access varies on a case-by-case basis, as a result of the differences in the businesses of broadcasting content providers, their degree of vertical integration, and so forth. However, the Study Team takes the view that the relevant product market should not be defined by reference to the specifics of individual business structures, as there is no identical mapping between the broadcaster's financing model and its chosen transmission media.⁷⁶

It should also be noted that the access requirements underpinning the “must carry” obligations imposed (currently) on certain providers of broadcasting transmission services have the potential to distort what appears to be demand for broadcasting transmission services, thereby significantly altering the commercial bargaining positions of those content providers with the right to be carried. However, care should be taken in conducting a relevant markets analysis not to equate the right conferred on some content providers to be carried with the demand for carriage on all platforms.⁷⁷ In addition, many of the controllers of desirable content do not benefit from such rights.

The key issues in identifying demand-side drivers for broadcasting transmission services are:

- viewer coverage (both “homes passed” and actual numbers of viewers), including cost differences to viewers at the retail level (including equipment costs) that have an impact on viewer penetration and, accordingly, wholesale costs per viewer;
- price on which access to transmission capacity can be acquired; and
- non-price terms on which access to transmission capacity can be acquired.

III.2.B. Available Platforms and Substitutability

Across all Member States, there are a number of transmission media that can be used to deliver broadcasting content.⁷⁸ However, the geographic coverage of these media differ significantly, both within and across Member States.

In most Member States, there is a ubiquitous analogue terrestrial television network. However, these networks by and large cannot as yet be used to deliver digital content. The digital terrestrial networks in many Member States are still embryonic or fragmented, with low (albeit growing) penetration levels. Content providers can provide either individual programmes to digital terrestrial broadcasters (*i.e.*, those with multiplexers) to be included in the broadcasters’ own channels, or entire channels to be included in broadcasters’ retail

⁷⁵ It should also be noted that the “package” in which particular content or channels is supplied at the retail level also has a substantial impact on coverage. For example, inclusion in a “basic” package ensures that content reaches all viewers on the relevant platform. In contrast, inclusion of an elective package reduces this coverage.

⁷⁶ The danger of relying upon any particular business model as the driver for a “relevant markets” analysis is illustrated in the relatively recent demise of advertising revenues as the basis for many Internet-based services.

⁷⁷ The market-skewing effects of “must carry” obligations might be further exacerbated should the scope of such obligations be extended to a broader range of transmission networks.

⁷⁸ It should be recalled that, to provide interactive services, a return path is required. The return path may be provided over the same network or separately.

bouquets. It should also be recalled that the availability of multiplex capacity imposes an absolute capacity constraint on any digital terrestrial broadcaster. Moreover, given that terrestrial broadcasting networks (both analogue and digital) are uni-directional, any provider of interactive broadcasting content must acquire return-path capacity on another network.

The extent of satellite coverage depends primarily on the actual location of the transponders on geostationary satellites. Most of the Member States have at least 90% coverage by at least one broadcasting satellite system. It should be noted that satellite broadcasters do not actually “control” the platform; rather, they lease transponder capacity from the satellite operator. Accordingly, to the extent that a satellite with appropriate coverage has unused transponder capacity, content providers with sufficient scale can acquire their own transponder capacity and become satellite broadcasters in their own right. Where satellite transponder capacity is fully utilised, the lack of available transponders can act as a barrier to entry.⁷⁹ In addition, content providers can provide individual programmes to satellite broadcasters to be included in the broadcasters' own channels, or entire channels to be included in broadcasters' retail bouquets (*e.g.*, the carriage of entire channels programmed by other licensed broadcasters but marketed by integrated broadcasters such as Sky and TPS).

The satellites currently used to provide broadcasting transmission services are effectively uni-directional, although technological developments may change this in the near future. As such, any provider of interactive broadcasting content currently still needs to acquire return-path capacity on another network.

The coverage and ubiquity of cable TV networks (and, accordingly, the availability of broadcasting transmission capacity on such networks) vary significantly across the Member States. In the *Benelux* countries, coverage is almost ubiquitous. In the *United Kingdom*, approximately 60% of potential viewers are covered by cable networks. In contrast, there is no cable coverage in *Greece* or *Italy*. It should be noted that cable network operators effectively only supply broadcasting transmission services to themselves (in addition to meeting their must carry obligations). They acquire content and then transmit it in their own right. As noted in the technical description of cable networks at Chapter III above, analogue cable network operators have used their control of the limited capacity of their networks to manage it. It is not yet clear how the capacity management issues will be alleviated or altered in the digital environment.

With limited exceptions, existing cable networks in the Member States have been upgraded over the past five years so that they are bi-directional, facilitating the provision of the return path for interactive services on the same platform as the out-bound path, and are either already digitised or will be digitised in the short-term.

Clearly, the commercial terms (including price) on which content is acquired by the broadcasters (*i.e.*, the terms on which the content provider acquires access to the transmission services leased by the broadcaster)⁸⁰ will vary from Member State to Member State,

⁷⁹ Refer to discussion on satellite platforms in Chapter III.

⁸⁰ In this context, it should be remembered that the flow of payment is generally to the content providers. Platform providers can reduce the amount paid for content using inducements such as tiering, EPG positioning and the terms of access to middleware and other software, for example.

depending on the particular content, its “value” in terms of attracting audiences⁸¹ (the competition between platforms for content that attracts retail subscribers should not be underestimated),⁸² the availability of alternative content and the relative bargaining power of the parties.⁸³ In some Member States, the historical advantage of one platform or its control of valuable content appear to have shifted the relative bargaining powers of the parties.⁸⁴

It is not possible to draw any probative non-Member State-specific conclusions about the number or coverage/ubiquity of the alternative platforms providing broadcasting transmission services. However, it is clear that there are some technical and functional differences between the networks which, together with other factors such as coverage, may affect the extent to which they are substitutable for interactive content providers.

III.2.C. Price (and other terms) of Access

There are no consistent terms and conditions which apply for access to transmission broadcasting capacity within Member States, let alone between the Member States. There have, historically, been differences in the costs borne by broadcasters for transmission over different platforms. In addition to absorbing subsidies relating to hardware supply (discussed below), the costs of ensuring that content is in a broadcastable form over the relevant platform have differed. To a large extent, the current access terms are driven by the dynamics of the vertical relationship between content suppliers and capacity suppliers. Where content is scarce, valuable, closely controlled by a limited number of entities or there are significant amounts of unused broadcasting transmission capacity, some broadcasting transmission service providers pay for content (*e.g.*, *Flanders* and *Germany*). Where there is more content, more diversity in the identity of the entities controlling valuable content, vertical relationships or inter-relationships between content providers and broadcasting transmission service providers, and less unused transmission capacity, the negotiating positions of content providers and transmission service providers are more equal. However, it is worth noting that, in some Member States (*e.g.*, the *United Kingdom*), an *ex post* competition-based analysis of the conduct of particular entities, particularly those that are vertically integrated, has led to the

⁸¹ While broadcasting content is beyond the scope of this study, content is an extremely powerful factor in the acquisition (and retention) of retail customers. This, in turn, has a direct impact on the negotiating dynamics at the wholesale level. However, it is important to remember that retail subscribers are not “perfectly price sensitive”, in that they are not able to select exactly the channels or programmes that they wish to buy. Broadcasters provide packages of channels that are, to varying degrees, bundles. Empirical data about subscriber preferences is becoming increasingly sophisticated, allowing preferences for, at least, individual channels to be identified with increasing degrees of accuracy. In fact, at the retail level, there is a real move towards smaller packages, allowing subscribers to acquire a greater number of channels through extra subscriptions.

However, at the wholesale level, content providers tend to wish to bundle channels for the purpose of wholesale negotiations, leveraging stronger channels to protect weaker channels. As a result, the effect of retail price signalling and preferences is not directly reflected in wholesale negotiations.

⁸² The size and nature of the platform's installed customer base will also affect the attractiveness of the platform to the content provider.

⁸³ See “The Whole Story on Wholesale”, 21 February 2001.

⁸⁴ For example, cable TV operators by and large dictate the terms of carriage of satellite operators’ content on their networks, given their relatively high rate of penetration in *The Netherlands*. The historical advantage of existing platforms is well illustrated by, for example, the situation in *Spain*, where the new ‘greenfield’ cable TV operators rely on the Canal Plus joint venture for significant elements of their content packages.

introduction of a “rate card” for wholesale content provided by Sky, to address a perceived risk of abusive conduct.

III.2.D. Cost Differences to Viewers at the Retail Level

Historically, there have been substantial differences in the retail costs borne by consumers in acquiring broadcast content over different platforms. Analogue terrestrial broadcast services were not subscription-based and were funded by advertising and other transmission-generated revenues. It appears that digital broadcast service provision will potentially entail some additional cost to viewers (at least through the costs of acquiring or leasing of set-top boxes or an integrated digital television (IDTV)), to the extent that these costs are not absorbed by the broadcasters themselves. The potential requirement for viewers to invest in hardware may alter the attractiveness of transmission services over a particular platform to content providers, depending on their assessment of how viewer numbers will be affected by this new investment required of viewers.

Retail satellite and cable broadcasting have always required some level of subscription from viewers. The level of subscription charges varies widely between Member States. For example, in the *Benelux* region, cable broadcasting subscription charges are very low, reflecting the viewer belief that broadcasting services are almost “utility services” (it should be noted that there is only *de minimis* free-to-air terrestrial transmission in these countries). In contrast, the retail subscription levels in the *United Kingdom* are driven by the increasing inter-platform competition between cable and satellite networks (the form, extent and ferocity of this competition has, in no small part, been driven by regulation of wholesale programming pricing).

In addition to subscription charges, both satellite and cable subscribers have historically acquired or leased their set-top boxes. There is a growing divergence across Member States in relation to the terms of which these set-top boxes are acquired. In some countries (*e.g.*, the *United Kingdom*), broadcasting transmission providers are absorbing either all or the vast majority of the costs of this equipment through either heavy subsidies or giving the boxes to subscribers.⁸⁵ In others (*e.g.*, *The Netherlands*), subscribers pay for the full cost of their set-top boxes, but do so over an extended period through a leasing arrangement. In most other countries, subscribers are required to make a one-off up-front purchase of the set-top box. These issues have an important impact on the extent to which new customers are attracted to, or are “captive to” or part of the “installed base” of, any particular medium of broadcasting transmission (given that the set-top boxes currently used on the different platforms are not interchangeable and require content providers to re-author their content for each platform). As such, they will inevitably have an impact on content providers’ choices at the wholesale level as regards the platform on which they will acquire broadcasting transmission services.

III.2.E. Supply-side Substitutes

As noted above, the xDSL-enabled PSTN is capable of providing broadcasting transmission services. Given the near-ubiquity of the PSTN and the ability of new entrants to take advantage of the incumbents’ local loop unbundling obligations, such transmission services may present an increasingly attractive new platform for content providers. In addition, a number of incumbent fixed line operators have licence obligations requiring them to provide

⁸⁵ This was in the past prompted by the terms of the Commission’s Decision in the *BiB* Case, *supra*.

to competitors carriage services which they use for their own retail services. Accordingly, xDSL-enabled networks may acquire sufficient market share over time to provide competition at the margins with the more established transmission service platforms.

III.2.F. Relevant Geographic Market

As noted above, very few platforms on which broadcasting transmission services are currently available provide complete national coverage in any given Member State. Satellite platforms provide close to ubiquitous coverage (subject to topographical, planning and aesthetic constraints). Cable networks range from *de minimis* to almost ubiquitous coverage across the Member States. Terrestrial networks, again, display the same range of coverage across Member States. However, market evidence suggests that the presence of a single ubiquitous (or close to ubiquitous) network providing transmission services on uniform terms (both price and non-price) in the relevant geographic area tends to create terms and conditions for access to transmission services that are similar within the geographic area where these features exist across the range of platforms that are present in that area. The conditions of competition might vary, however, if the networks are regionalised and content is not provided nationally (*e.g.*, in a multi-lingual environment), in which case the geographic market for the provision of transmission services to those content providers may be other than national in scope.

Conclusions:

- 1. A range of broadcasting transmission media are available to content providers in each Member State. Not all media are available in every Member State, and the coverage of each platform differs significantly between Member States. However, there are at least two transmission platforms available in each Member State.**

The alternative platforms provide a number of “any-to-many” media over which broadcasting transmission services can be acquired by content providers (there is almost always more than one route to viewers). As such, there is no justification for treating any one particular platform as the only potential route to a particular viewer.

- 2. Content providers require access to broadcasting transmission services that allow them to reach the audience required to support their business model. The number and type of viewers that need to be reached varies on a case-by-case basis.**

There are a number of different commercial models (resulting in different terms) upon which transmission over different platforms is provided. To a large extent, the commercial terms are driven by the value of the content. The relative scarcity of content, the level of concentration of control over rights to content and the vertical relationships between transmission and content providers, are key factors in shaping this commercial dynamic.

- 3. Cost differences at the retail level also have an impact on the extent to which content providers compete for the provision of wholesale transmission services. In this context, the link between subsidies (and other funding for terminal equipment) and the subscription model will have a significant impact.**

Competitive factors at the retail level (*e.g.*, costs of set-top boxes) which impact on the installed base of a particular network, and the willingness of viewers to churn to a competing platform, will affect the level of substitutability of competing platforms at the wholesale level.

4. While there are differences in the costs and other terms of the provision of broadcasting transmission services (both between platforms and between Member States), these do not appear to be of such magnitude so as to justify the definition of separate relevant product markets for broadcasting transmission over individual platforms.

Unlike the issue of termination on mobile networks, which is arguably characterised by a level of price inelasticity on the part of consumers which emanates from the “calling party pays” principle, the retail consumer of broadcasting services is highly price sensitive to the final price (*i.e.*, the costs borne by the consumer are wholly transparent). Consequently, in such an environment, it would appear to be wholly consistent that the relevant product market consists of the aggregate of delivery networks, rather than individual networks. Moreover, the Study Team is not aware of compelling economic evidence which suggests that the links between the competitiveness of both the retail and wholesale levels should be disassociated.

5. The relevant geographic market appears to be national in scope.

III.3 BROADCASTING ANCILLARY SERVICES

Articles 5 and 6 of the *Access Directive* permit Member States to continue the existing fair, reasonable and non-discrimination obligations on all CAS operators (and to extend these obligations to APIs and EPGs). However, Article 6.3 allows Member States to permit NRAs to undertake a market analysis at broadcasting ancillary services. Accordingly, the Study Team has conducted the following analysis.

III.3.A. Demand-side Factors

The choice of platform over which transmission services are acquired does should not affect whether or not a type of ancillary service is required (although it will have an impact on the particular form of ancillary service required). Further, there is no necessary connection between the operation of a delivery platform and the supply of digital broadcasting ancillary services. For example, Sky in the *United Kingdom* leases capacity on a satellite that it neither owns nor operates, while providing CAS, an API and an EPG (together with the other ancillary services). Similarly, Canal+ is the digital platform provider on some cable platforms in *Belgium*, with Kirch playing a similar role with respect to some cable platforms in *Germany*.

All entities (*i.e.*, not only those designated to have market power) which produce and market CAS are currently required by regulation to offer to all broadcasters, on a fair, reasonable and non-discriminatory basis, technical services which enable such broadcasters' services to be received by viewers authorised by means of decoders. In addition, all consumer equipment capable of descrambling digital television signals must allow descrambling according to the common European scrambling algorithm and must display signals transmitted in clear. Finally, CAS must have the technical capability for cost-effective transcontrol at cable head-ends to make it possible for cable television operators to have full control at local or regional levels of services users such CAS.

As a result of the mandated access obligation, it is difficult to determine in the abstract how demand in an unregulated environment would have otherwise developed in the circumstances where access is currently provided. However, there are a number of features on both the demand-side (*i.e.*, demand by third parties wishing to supply encoded services to end users) and supply-side (*i.e.*, the extent to which supply could be increased, by existing or new suppliers) which would be likely to be significant in an environment without mandated access.

In the view of the Study Team, the demand-side characteristics of the supply of CAS to third-party suppliers of services to end users are very similar to those for the supply of transmission capacity, since such third parties acquire CAS to ensure that end users do not receive scrambled, unauthorised and unmanaged content (or are not provided with the content at all, because they are incorrectly treated as un-authorised subscribers). The mandated access obligation, found in the *TV Standards Directive*, has not led in practice to the provision of access by all CAS providers, since some providers, particularly CAS providers who also operate "closed" networks (*e.g.*, cable networks), do not "produce and market" CAS.⁸⁶ Where

⁸⁶ As such, the current and new CAS regulatory regimes effectively do not acknowledge the link between broadcasting transmission services and CAS (*i.e.*, that if the transmission platform is closed, mandated open access to CAS has limited impact).

the transmission network is itself “closed” (as is currently the case with the cable TV networks), access to CAS is not (as a practical matter) effectively mandated.

Interoperability between set-top boxes is a key issue for content providers (effectively determining whether they have access to only one or, alternatively, competing CAS in one set-top box). Interoperability requires the implementation of simulcrypt agreements. The essence of such agreements is that they generally provide the means for each party to retain complete control of its subscriber base, limiting inter-party data exchange only to the minimum necessary technical data. No information concerning subscriber identity or patterns of service acquisition is exchanged. European experience suggests that such agreements are difficult to reach. Multicrypt is intended to be an “open” system which uses a common interface to allow multiple CASs in one set-top box, thereby allowing content providers to use the CAS system that they prefer.⁸⁷ However, set-top boxes with the common interface tend to be more expensive and the platform operator (usually also the provider of one CAS system) has less incentive to subsidise end user acquisition.

There are a number of API platforms currently competing in the rather fragmented European environment. They are all proprietary systems that are not (or are only partially) interoperable. With a view to creating an open API, the DVB project is developing the Multimedia Home Platform (the MHP). An open API allows the other set-top box services to be unbundled, in turn allowing the provision of other ancillary services (e.g., EPGs) in the same form on different platforms.

The mandated access obligation does not currently extend to access to the API.⁸⁸ There is mixed evidence as to possible market failure in relation to the provision of access to APIs. Content providers in some Member States, for example, have noted the high costs of reauthoring content.⁸⁹ However, the commercial incentives for CAS providers to provide access to the API (and authoring tools) appear to be strong; this seems to be the case because, without attractive content that will interface with the CAS provider’s operating system, the CAS provider’s services will be less attractive to subscribers. The involvement of a wide range of both large and small players in the DVB project’s MHP initiative can be seen as providing at least some evidence of the potential for the entire “market” to benefit, not necessarily at the expense of the market share or position of an individual player, through the incentives for innovation and overall market growth provided.

Commercial access to APIs and authoring tools is still in its embryonic stage in most Member States. It will be important to monitor commercial developments, to ensure that a balance is struck between facilitating content production (given that it is universally acknowledged that

⁸⁷ However, some multicrypt operators use software verification to block the use of other CAS systems (similar in effect to the SIM-locking of a mobile handset).

⁸⁸ CAS regulation in the *United Kingdom* extends to APIs. The *United Kingdom* is one of the Member States in which digital service provision is the most advanced. As a result of the extension of CAS regulation, it is difficult to determine how access would have been granted (and evolved) in a commercial environment.

⁸⁹ These same providers have also been vocal proponents for changing the nature of the access to APIs (and EPGs) sought. For example, in relation to APIs they have sought active co-operation in the development of interactive services (and have requested a role in determining development of APIs, to facilitate interactive services that they may wish to develop in the future). In relation to EPGs, they have sought a greater role in determining positioning and descriptions of channels on EPGs.

content will drive the take-off of retail services) and distorting the commercial negotiating relationships of the market players.

EPGs are beginning to, and will increasingly become, marketing tools that can influence the way in which consumers choose their programmes and services (through factors such as prominence, attractiveness or ease of access). As such, they operate as a “shop window” for platform operators, used as part of the development of the “look and feel” of their brand. An EPG provider can (and, arguably, has incentives to) discriminate between services and programmes provided by the EPG provider or an affiliate.⁹⁰

Technically, it is possible to provide EPGs (given that they are essentially an application) separately from CAS (*e.g.*, a content provider unaffiliated to the platform provider can author an EPG in the same way as any other content). However, given the way EPGs are currently used, and the absence of operating system standardisation, there are limited incentives to develop generic EPGs that are not customised for a particular platform. Some set-top box suppliers’ boxes include an open system that allows the exchange of adequate amounts of programme and service information. To the best of the Study Team’s knowledge, there are very few multiple EPGs currently running on any set-top box in any Member State. However, as the number and range of programmes and services increase, more generic EPGs may start to become viable. They might be provided by pure EPG providers or affiliates of either platform or content providers. It seems that interoperability and access will be more important to the development of such services than the forging of an industry-wide “standard”. The critical issue that needs to be monitored in relation to EPGs is whether it becomes appropriate to characterise an EPG as a facility or functionality which is “essential” to the provision of content.

The more immediate question in terms of market analysis is whether the demand patterns for such services are such that all or some ancillary services form part of a single relevant product market. There are particular combinations of services that are commonly acquired by content producers, programmers and broadcasters. It appears that, in virtually all Member States, there is demand for the acquisition of access to CAS and APIs (and authoring tools) in combination. It also appears that few, if any, EPGs that are not operated by the CAS provider have been established to date. It may be that, as retail digital services markets develop, generic, non-platform – specific ancillary services will also be developed in tandem.

In addition, there are some services (*i.e.*, subscriber management services) which, while they are acquired by some entities as part of the broader package of services, are also acquired separately by some entities (*e.g.*, there are a number of broadcasters in the *United Kingdom* which acquire CAS from Sky but acquire their subscriber management services elsewhere). It is also likely as the provision of interactive services (both stand-alone services and those services that are provided with a broadcasting service) develops, and financial transaction services begin to develop, that a range of providers (*e.g.*, banks) may themselves seek to become significant providers of such services. It appears that the demand patterns for subscriber management services and financial transaction services are still acquired from the platform (and CAS) operator.

⁹⁰ In some Member States, *e.g.*, the *United Kingdom*, regulation (whether through a Code of Conduct or some other means) restricts the ability of EPG providers to discriminate in this way.

III.3.B. Standards

The approach to standardisation issues in the digital television environment (currently embodied in the mandated access obligation identified above) differs from the prescriptive approach traditionally seen in the telecommunications environment. Rather than enforcing open systems, in recognition of first mover advantages, competing broadcast bouquet operators were given fair, reasonable and non-discriminatory access. However, in the evolving digital environment, there is pressure to review this approach, and consider whether it meets the interoperability needs of both systems and services. The industry itself (in part, at least) has devoted (and continues to devote) considerable time and resources to developing an open system for the set-top box components (*i.e.*, the MHP).

There are currently real differences between delivery platforms in relation to the standards currently used for ancillary services. If such differences persist as the markets mature, it is possible that different demand patterns for ancillary services on different platforms might develop over time. However, it appears to be premature to reach such a conclusion at this point in time, given the current state of market development. The extent to which ancillary service providers would be able to abuse any market power that they might derive from being able to set a *de facto* standard must be assessed by reference to the power held by producers of desirable content to author their content using particular standards. How the exercise of such power would be counterbalanced is ultimately unclear, and the market is far too immature to inform speculation.

Currently, the three main distribution platforms use different, incompatible middleware standards in their set-top boxes (*e.g.*, in the *United Kingdom*, satellite uses Open TV, cable uses HTML/Java and digital terrestrial uses MHEG). Middleware producers are currently aggressively seeking to garner support from the widest possible range of content producers (*e.g.*, many are giving free instruction courses as to how to write to their APIs) in order to make their middleware offers more attractive to network operators. It is generally expected in the industry that the current situation of “duelling standards” will begin to rationalise within the next 18 months. There is some evidence to suggest that at least some content producers have adopted a “wait and see” attitude towards the development and actual deployment of API standards, before selecting the standards to which they will produce their content.

III.3.C. Relevant Geographic Market

The geographic scope of the provision of CAS, APIs and EPGs appears currently to be inherently linked to the geographic coverage of the delivery platform in relation to which the ancillary services are provided. There is currently no inter-platform competitive pressure of which the Study Team is aware.

Conclusions:

- 1. The provision of digital broadcasting ancillary services is still embryonic in many Member States. However, it is clear that some form of access to CAS and APIs (and authoring tools) is essential for content providers. Without access to CAS, content producers cannot provide services to, or form retail relationships with, consumers, in their own right. Without access to APIs (and authoring tools), content that is compatible with, and will run on, the operating system in the set-top box cannot be produced. As such, these facilities have (although for different**

- reasons) the potential to develop certain “gateway” characteristics.
2. The incentives for providers of broadcasting technical services to facilitate access to their various ancillary services on commercial terms differ significantly. The authoring of attractive and valuable content is important to the API provider. As a result, there appears to be less need to mandate the provision of access to authoring tools. However, there is less commercial incentive to allow access to CAS on commercial terms (since the CAS provider has significant incentives to maintain control over the relationship with subscribers).
 3. CAS, APIs (and related authoring tools) and EPGs are currently acquired by the vast majority of content providers from the same ancillary services provider. This suggests that they may constitute elements of a broader relevant product market embracing all of these services. Moreover, CAS, APIs and EPGs are usually provided by the same entity as a package by the platform provider, although the platform provider is not necessarily the operator of the network (*e.g.*, CAS providers on satellite systems lease transponder capacity).
 4. EPGs (and access to EPGs) are currently provided by CAS providers. It does not appear that *ex ante* regulatory control of the terms on which access to EPGs is provided is currently warranted. However, further developments in the provision of such services should be monitored. It appears that EPGs have the potential to become subject to supply-side competition. However, no such alternatives have as yet appeared. If the supply of EPGs were to evolve in this manner, their inclusion in a more aggregated market which included CAS and APIs should be reviewed.
 5. There is currently little uniformity in the standards used for technical services, either across platforms or Member States. As demand for these services matures, it will be important to monitor whether the platform-specific nature of these services persists. If it does and the costs of accommodating multiple standards are sufficiently high, this may indicate a lack of inter-platform substitutability that might eventually justify the definition of platform-specific technical services markets. Such a development would, however, require a broader re-examination of whether the broadcasting transmission market itself remains platform-neutral.
 6. It appears that other broadcasting ancillary services (*e.g.*, subscriber management services and financial transaction services) are in practice provided by CAS providers, regardless of whether there are any technical reasons underpinning such a practice. Subscriber management services and financial management services are usually acquired together as a package with other ancillary services, from a single provider, who may be the platform provider or the provider’s delegate. It does not appear that *ex ante* regulation of the terms on which they are provided is warranted on any broader public policy grounds or for reasons of anticipated market failure.
 7. It appears that the relevant geographic market is national in scope (unless the standardisation issue raised above leads to the development of platform-specific product markets, where the relevant platforms may not be national in scope).