Controlling access to content : regulating conditional access in digital broadcasting
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Chapter 4

Conditional Access and Telecommunications Law

4.1. Introduction

Control over technical bottlenecks has become a pressing issue in today’s competition and public information policy. With the increasing sophistication and diversification of the distribution patterns for digital content, entering service markets is a matter of access to a growing number of different technical facilities and competing standards. These technologies are often owned and controlled by one or several market players who have their own vested economic interests in delivering electronic services through a specific infrastructure. This situation is characteristic of the pay-TV sector. In Chapter 1 we saw that monopolistic control over the technical pay-TV platform or elements thereof, such as the conditional access system, the EPG or the API, opens possibilities to impede the activities of potential and actual rival pay-TV service providers, particularly when the control is exercised by powerful vertically or horizontally integrated operators. The goal of this chapter is to provide a critical overview of the existing sector-specific solutions that deal with technical bottlenecks in pay-TV.

The regulator’s task is difficult: regulatory intervention should not discourage the proliferation of new facilities, such as conditional access, if they are to be seen as promising drivers of the future ‘knowledge-based economy’. Furthermore, regulatory intervention must leave sufficient room for market mechanisms to develop an efficient and functioning service environment, and for service operators to launch viable and profitable business models. On the other hand, the purpose of intervention is to prevent the abusive use of such facilities when they pose a threat to market contestability. Protecting and stimulating market contestability in this context means allowing for new market entries, disciplining the market behaviour of dominant players and stimulating functioning competition. Stimulating competition is, however, not the only task. Regulators must seek to strike a balance between relying on market mechanisms and realizing consumer rights and interests and non-economic goals, such as pluralistic and diverse service offerings. The overall goal is to stimulate the development of a rich service offering and optimal conditions for competitors and consumers.

632 See section 1.4.3.
At the transport level, the Access Directive shapes the framework for the regulation of access issues in Europe. The Access Directive is the outcome of a revision of the former European telecommunications law. It replaced, among others, the Standards Directive, which was the first European directive to address questions of access to conditional access systems. The Access Directive is part of the revised European Communications Framework from 2002. The overriding purpose of the revised Framework is to adopt a horizontal technology-independent approach to the regulation of access issues related to the telecommunications infrastructure. This should foster the convergence of broadcasting, telecommunications and information technology, and the gradual removal of sectoral provisions in favour of the application of general competition law. Accordingly, the Access Directive brings conditional access issues that were formerly regulated in separate directives under the umbrella of one common framework that regulates access to electronic telecommunications networks and associated facilities.

This chapter starts with an analysis of how Europe approaches the regulation of control over conditional access and other facilities of the technical pay-TV platform, notably the API and the EPG. The analysis will show that, despite its commitment to a technology-independent approach, the Access Directive still maintains two divergent access regimes for bottleneck situations: one regime applies to selected bottlenecks in pay-TV and is laid down in Articles 5 (1) b and 6 of the Access Directive. The other applies to all other telecommunications facilities and services, and is laid down in Articles 8 to 13 of the Access Directive. The fact that the Access Directive maintains two different access regimes can, as will be shown, lead to a number of frictions and problems in the practical application of the rules it covers. Second, the chapter demonstrates that the Communications Framework is strongly based on the concept of strict separation between the transport level and facilities that are affiliated with the transport of signals on the one hand, and the service level and content-related questions on the other. This chapter also explains why this approach fails to satisfactorily respond to the realities of digital pay-TV markets. It, furthermore, demonstrates that questions about individual consumer’s access to the pay-TV platform have been neglected.

The analysis starts with a brief introduction to the history of bottleneck regulation in pay-TV (section 4.2.) and to the goal and scope of the Access Directive (section 4.3.). This is followed by a description of Article 6 of the Access Directive (section 4.4.) and of Article 5 (1) b of the Access Directive, which deals with the regulation of access to other bottlenecks in pay-TV (section 4.5.). Next, the flexible approach to access regulation in telecommunications law, under the directive’s Articles 8 to 13 (section 4.6.) is described. The chapter continues with reflections on the likely impact of the different regulatory approaches on future market developments (section 4.7.), after which both access concepts are compared (section 4.8.) and conclusions drawn (section 4.9.). It is not the intention of this

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633 European Commission, 1999 Communications Review, p. iii.
chapter to present an exhaustive analysis of whether the Access Directive, in its present form, is the best solution to regulate the future telecommunications market. It is also not the intention of this chapter to comment in detail on matters such as the criteria of market definition, the identification of significant market power, the ‘toolbox approach’, etc. This chapter will bring forward some more fundamental points of criticism of the way the regulation of pay-TV services is approached under the Access Directive.

4.2. Regulating Access to Conditional Access—A Brief History

4.2.1. STANDARDS DIRECTIVE

The first European initiative to regulate pay-TV issues dates back to 1990/1991. The story of conditional access regulation began with a failed attempt at standardization. Then, the European Commission was actively promoting the HD-MAC standard for analogue satellite television, and along with it, a unique conditional access system called Eurocrypt as the sole satellite encryption standard. Eurocrypt was a joint initiative of Philips, Thomson, Bosch and the DG XIII (Information Society) of the European Commission. The plan was to incorporate the Eurocrypt standard in the HD-MAC Directive of 1991. The plan failed, among other things, due to the resistance of competing market forces among which were BSkyB and other enterprises. Ironically, BSkyB countered the Eurocrypt proposal with the suggestion to promote the use of ‘different decoders’ instead of one common standard. Subsequently, BSkyB was among the first to establish a proprietary conditional access standard.

In response to the HD-MAC debacle, the European Commission performed a volte-face and left the question of conditional access standards entirely up to the industry. Yet, the idea was to promote a standardized conditional access. In its Resolution on the Development of Technology and Standards in the Field of Advanced Television Services, the European Council emphasized the need for a ‘European non-proprietary encryption/conditional access system serving a number of competing service providers’. Meanwhile, Europe experienced the fragmentation

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634 Council Directive 92/38/EEC of 11 May 1992 on the adoption of standards for satellite broadcasting of television signals, 20 May 1992, OJ L 137, p. 17 [hereinafter ‘HD-MAC Directive’], Article 6: ‘In the case of all services using the D2-MAC standard, which are encrypted and employ a conditional access system, Member States shall take all the necessary measures to ensure that only a conditional access system that is fully compatible with D2-MAC, and standardized as such by a European standardization organization by 1 July 1993, is used.’


of the Internal pay-TV market into several national territories with incompatible conditional access systems and set top boxes.

The European Council entrusted the Digital Video Broadcasting (DVB) Consortium, an industry-led consortium of broadcasters, manufacturers, network operators, software developers, regulatory bodies, etc., with a mandate to resolve the controversial conditional access discussion and initialize an industry-led agreement to adhere to one common single conditional access system. Since it's founding in 1991, the DVB consortium has developed into a pan-European platform for major European media interest groups, consumer electronics manufacturers, common carriers and regulators. Its goal was, and still is, to oversee the development of digital television in Europe and promote this development through, among other things, its standardization activities. The DVB consortium develops specifications for digital television systems that are turned into standards by international standards bodies such as the European Telecommunications Standards Institute (ETSI) or the European Committee for Electrotechnical Standardization (CENELEC). The DVB consortium, however, failed to reach an agreement due to internal frictions and diverging interests between the DVB consortium members. The major operators in the early European markets for access-controlled services and conditional access systems objected heavily to the common interface solution that was proposed by the opposing interest groups within the DVB consortium (notably the European Broadcasting Union (EBU)).

The European Commission, still under the impact of the HD-MAC debacle and afraid of discouraging potential major investors from investing in the digital television infrastructure, was reluctant to enforce any standard that was not fully backed by the industry. Consequently, the Commission did not seize the chance to introduce the issue of conditional access interoperability into the drafting process for the successor to the HD-MAC Directive, the Standards Directive, despite the Council's call in its 1993 resolution for an open common interface. Equally, the European Parliament did not take the opportunity to promote a non-proprietary conditional access system and thereby affirm its commitment for content diversity and open access. The first drafts of the Standards Directive would even completely ignore the issue of conditional access regulation.

When it became apparent that the DVB consortium would fail to reach an agreement, the European Council indicated that

'it is willing, however, to introduce regulatory measures, if required, under the conditions that: (i) adequate and timely consensus among economic agents, including broadcasting organizations, to ensure the harmonious evolution of

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637 For more information see <www.dvb.org> (last visited on 20 March 2005).
641 Kaitatzi-Whitlock goes even so far as to suspect that the 'development of a proprietary system may have constituted part of a hidden agenda', Kaitatzi-Whitlock 1997, p. 106.
the market is lacking; and/or (ii) the requirements of fair and open competition, consumer protection or other significant public interest so demand, in order to facilitate the achievement of this objective and the protection of those interests’. 642

Equally, public broadcasters and other industry players voiced their fears that control over conditional access facilities might give major pay-TV operators a means to exclude other broadcasters from accessing consumers. It was argued that the vertical organization of pay-TV enterprises (which was already characteristic then) demanded the provision of additional legal safeguards to discipline pay-TV operators. Aspects of consumer protection were also put forward whereby, irrespective of the technical platform (encrypted or free-TV television), consumers must be offered a variety of content while being protected from incompatible equipment that would hinder the reception of other competing services.

As a result, Article 4c of the Standards Directive was introduced. The aim of Article 4c of the Standards Directive was to ensure open entry into the pay-TV market to third-party broadcasters by mandating open access to conditional access facilities on ‘fair, reasonable and non-discriminatory terms’. It was left to the Member States to further specify the access obligation.

Since then, EU Member States have implemented the Standards Directive. Article 4c of the Standards Directive, therefore, broadly influenced existing national regulations on access to the conditional access system. 643 The majority of Member States adopted the provisions almost identically. Only a few countries adopted further-reaching regulations, such as the UK, Germany and Italy.

4.2.2. ACCESS DIRECTIVE

In the course of the regulatory reform of the telecommunications sector, Article 4c of the Standards Directive was transformed into Article 6 and Annex I of the Access Directive. The Access Directive reflected the Commission’s view that the digital broadcasting sector still required sector-specific access regulation because markets were not yet sufficiently competitive. Despite a number of further-reaching proposals by the European Parliament, Article 6 and Annex I of the Access Directive took Article 4c of the Standards Directive over almost word for word. At the same time, the Access Directive revises the former framework that regulated issues of access to telecommunications infrastructures and facilities. Originally, the regulation of access to and the interconnection of other selected


telecommunications facilities fell under the former Open Network Provisions (ONP) Framework. The Communications Framework replaced the ONP Directives, and covers, together with the Access Directive, in far more general terms, access to all technical bottleneck facilities in the telecommunications sector (the so-called horizontal approach). It was argued that the distinction between access to networks and access to digital gateways was questionable since the two would raise similar problems and require comparable solutions. Moreover, it was said that separate regulatory frameworks for different telecommunications infrastructures and associated services would lead to inconsistencies and could potentially distort competition. Instead, there was a need for technology-independent regulation, the so-called horizontal approach. Consequently, part of the reform was to merge all of the existing initiatives on access issues into a single directive.

Correspondingly, the Commission observed that both technology and the digital broadcasting sector had evolved beyond the scope of the former Standards Directive. New services would take digital television beyond the scope of traditional broadcasting and into convergent markets, and service providers would extend their offerings to include non-broadcasting services such as interactive and online services. Correspondingly, new bottlenecks and gatekeeper functions that were not covered by the Standards Directive would develop. Examples given were the EPG and API functions, access to cable television networks or multiplexes.

4.2.3. Universal Service Directive

Some of the provisions that are or that, as will be shown in this chapter, could be relevant for the pay-TV sector were implemented in the Universal Service Directive. The Universal Service Directive deals with questions of consumer access in the telecommunications sector. The goal of the Universal Service

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644 European Commission, 1999 Communications Review, p. vi.
645 European Commission 1999 Communications Review, p. 13. The Commission explained 'technological neutrality' in the sense that legislation should define the objectives to be achieved, and should neither impose, nor discriminate in favour of, the use of a particular type of technology to achieve those objectives.
646 European Commission, 1999 Communications Review, p. 28.
648 The Communications Framework handles different notions that all can refer to 'consumers'. While 'consumer' is defined as any natural person who uses or requests a publicly available electronic communications service for purposes outside his or her trade, business or profession (Article 2 (i) of the Framework Directive), consumers, which are party to a contract with the provider of publicly available electronic telecommunications services, are also referred to as 'subscribers' (Article 2 (k) of the Framework Directive). Then there is the 'end user' according to Article 2 (n) of the Framework Directive, which can be either a consumer or a provider of broadcasting or information society services, as long as he or she is not providing public telecommunications networks or publicly available electronic telecommunications services. Occasionally, users are also referred to as 'citizens' and 'users' (Recital 12 of the Universal Service Directive). The use of the different notions throughout the Communications Framework seems to be random (see, for example, Recitals 7, 8, 12 of the Universal Service Directive). This chapter will continue to use the notion of consumer.
Directive is twofold. First, its goal is to protect the position of consumers. The rules of the Universal Service Directive are meant to combat exclusion and to create the conditions for the public availability of affordable and good quality services through effective competition and choice. Second, the directive deals with circumstances in which the needs of end users are not satisfactorily met by the market. The overall rationale behind the Universal Service Directive is to protect consumers and foster social inclusion in the knowledge-based society across Europe.

One underlying idea of the directive is that consumers drive competition in telecommunications markets. Enterprises with significant market power that charge excessive or predatory prices to consumers, apply unreasonable bundling strategies or show undue preferences to certain consumers, not only inhibit the realization of general public interests, they also inhibit entry or distort competition. Apart from strengthening the position of consumers in order to stimulate competition, there is also a need to strike the right balance between relying as much as possible on market mechanisms and competition to achieve a high level of choice and quality, and ensuring regulatory intervention to uphold a minimum number of consumers' rights throughout the European Union.

One part of the Universal Service Directive deals with the protection of consumer rights and interests in access to publicly available telecommunications services. It includes detailed provisions on the information that should be provided in subscription and similar contracts between service providers and consumers. It foresees a right to withdraw in the event of modifications to the original contract. It provides for comparative pricing information, quality controls and the public availability of directory services. It authorizes NRAs to remedy predatory pricing and unbundling strategies. Furthermore, it encourages Member States to

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649 See Universal Service Directive, Recitals 26, 33, 49 and Article 1 (1).
651 European Commission, 1999 Communications Review, p. 25.
654 Universal Service Directive, Articles 20 (1)-(3).
657 Universal Service Directive, Articles 22, 23.
659 In this Chapter, Chapter 4, if not said otherwise NRA refers to communications NRA, meaning the NRA responsible for the supervision of the communications sector.
660 Universal Service Directive, Article 17 (2).
ensure the accessibility and affordability of specific services where it is deemed necessary and desirable for public interest reasons.661

Another part of the Universal Service Directive deals with the so-called universal service obligations. Universal service obligations serve the goal of imposing obligations on designated operators to ensure that a defined minimum set of services of a specified quality are available to all consumers, including consumers with special needs, at an affordable price. This is the notion that certain services or facilities play such a fundamental role for society and competition that they must be available to everyone in good quality and at an affordable price.662 This is to avoid a situation in which parts of the population are excluded for practical, geographical or financial reasons from accessing telecommunications services whose universal accessibility is in the public interest.663 Providers on whom a universal service obligation is imposed have to provide upon request access to all end users at a constant quality and affordable price.664 So far, universal service obligations apply to fixed telephony networks, directory enquiry services and public pay phones. Internet access also falls under the universal service obligation.665

As far as the broadcasting sector is concerned, the Universal Service Directive provides for a broadcasting-specific variation of the universal service obligation in Article 31. This is the must-carry concept that was discussed in detail in Chapter 2.666 As Chapter 2 also mentioned, however, the must-carry rules do not deal with consumer access to a technical broadcast distribution platform and they do not apply to pay-TV platforms.667

It will be shown that the Universal Service Directive responds to a number of issues identified in Chapters 1 and 2,668 namely the need for market transparency, the adequacy and fairness of contractual conditions, consumer choice, technical and contractual lock-ins, the information problem, etc. Another question is whether the aforementioned provisions of the Universal Service Directive obligate conditional access platform operators, notably pay-TV operators. Where relevant, this chapter will take a closer look at this question.669 One provision in the Universal Service Directive, however, that is directly relevant for competition in pay-TV markets, is the provision on the interoperability of digital television consumer equipment in Article 24 of the Universal Service Directive (see section 4.4.2.).

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661 Universal Service Directive, Recitals 26, 29, 31, 33, 34, 49, Articles 19, 24, 25, 29 and 32, to name but some.
663 Universal Service Directive, Recital 25.
666 See section 2.3.3.
667 See section 2.3.3.
668 See sections 1.5.2., 1.5.3. and 2.2.
669 See sections 4.4.4. and 4.6.6.
4.3. Goal and Scope of the Access Directive

The goal of the Access Directive is ambitious: ‘this Directive harmonises the way in which Member States regulate access to, and interconnection of, electronic telecommunications networks and associated facilities’ (Article 1 (1) of the Access Directive). In other words, the Access Directive seeks to establish a uniform, harmonized approach towards the treatment of technical bottleneck issues at the transport level.\textsuperscript{670}

4.3.1. Definition of Access in the Access Directive

The term ‘access’ is understood in the widest possible sense as

‘the making available of facilities and/or services, to another enterprise, under defined conditions, on either an exclusive or a non-exclusive basis, for the purpose of providing electronic telecommunications services’ (Article 1 (1) of the Access Directive).

‘Access’ in the sense of the Access Directive refers to the relationship between the provider of electronic telecommunications networks, services and associated facilities, and the user of such technical resources.\textsuperscript{671} Article 1 (1) of the Access Directive reads:

‘The aim is to establish a regulatory framework, in accordance with internal market principles, for the relationships between suppliers of networks and services that will result in sustainable competition, interoperability of electronic communications services and consumer benefits’.

It regulates, for example, the relationship between the controller of a conditional access system and a broadcaster seeking access. It does not regulate the relationship between the controller of a conditional access system and a subscriber.\textsuperscript{672} In other words, the Access Directive does not deal with cases in which a pay-TV operator refuses access to a particular consumer or offers access on unfair, unreasonable or discriminatory terms.\textsuperscript{673} According to the Access Directive, the interests of consumers in access to diverse and numerous broadcasting services are safeguarded by the imposition of the obligation for conditional access operators to provide conditional access on fair, reasonable and non-discriminatory terms.\textsuperscript{674} In this way,

\footnotesize{\textsuperscript{670} European Commission, 1999 Communications Review, pp. 25-28.

\textsuperscript{671} Article 2 (h) of the Framework Directive defines user as 'a legal entity or natural person using or requesting a publicly available electronic communications service'.

\textsuperscript{672} In this sense also Bavasso 2003, p. 72

\textsuperscript{673} See also section 2.2.1.

\textsuperscript{674} Access Directive, Recital 6; Article 5 (1) b) of the Access Directive. In this sense also Bavasso 2003, p. 79.}
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the directive ensures that a wide variety of programming and services are available.675

Having said so much about the consumer side, it is time to take a closer look at how the Access Directive regulates competitor access to technical bottlenecks. The Access Directive676 distinguishes between two kinds of bottlenecks: Articles 8 to 13 of the Access Directive regulate questions of access to electronic telecommunications networks, services and associated facilities (section 4.6.), whereas the regulation of conditional access is treated as an exception under Article 6 of the Access Directive (section 4.4.).

4.3.2. ELECTRONIC TELECOMMUNICATIONS NETWORKS, SERVICES AND ASSOCIATED FACILITIES—DEFINITIONS

‘Electronic communications networks, services and associated facilities’ basically comprise all of the facilities at the transport level that can be involved in the process of transmitting signals. The term ‘communications networks’ means all of the resources at the network level that enable the transmission of signals by wire, radio, optical or other electromagnetic means, including satellite networks, fixed and mobile terrestrial networks, the local loop, the internet, networks used for radio and television broadcasting and cable TV networks.677 The Access Directive also regulates access to physical infrastructures including buildings, ducts and masts.

‘Associated facilities’ refers to the enhanced services at the upper levels of the technical distribution chain that support the provision of telecommunications services678 via networks.679 In other words, associated facilities are facilities that support the transport function (as opposed to content-related services that are associated with the service level). Associated facilities in the sense of the framework can be operational support systems, number translation systems or roaming and switching services as well as the conditional access system.

In practice, the notion of associated facilities still leaves many questions unanswered. The example of the EPG may illustrate that clear-cut distinctions can be difficult to make in an environment in which technical facilities are closely integrated into the process of making content accessible for consumers.680 According to the Access Directive, the EPG is considered an associated facility in the sense of

676 Article numbers without further reference are articles of the Access Directive.
678 The Framework Directive defines ‘electronic communications services’ as a service normally provided for remuneration which consists wholly or mainly in the conveyance of signals on electronic communications networks, including telecommunications services and transmission services in networks used for broadcasting, but excluding services providing, or exercising journalistic control over, content transmitted using electronic communications networks and services; Article 2 (c) of the Framework Directive.
679 Framework Directive, Article 2 (e).
680 See sections 1.2. and 1.4.3.
the Communications Framework. It is true that the EPG (as any other electronic information agent) also has a purely facilitative transport function by leading consumers to the content they wish to access. This function, however, is subordinate to its real task, namely to provide content, meaning information about content services. Having said that, Recital 2 of the Access Directive states, ‘[s]ervices providing content […] are not covered by the common regulatory framework for electronic communications networks and services’. Following this interpretation, one would probably not classify EPGs as an associated facility in the sense of the Communications Framework. The Framework Directive, however, listed the EPG explicitly as an example of an associated facility. It is apparent that facilities, or rather services, such as the EPG that operate at the interface between the transport and the service level can combine technical and content-related aspects. A strict distinction between content and technical facilities not only leads to considerable legal uncertainty, it is also difficult to practice. The Access Directive responds with a kind of ‘ostrich’ strategy: it simply excludes all content-related aspects of the EPG from the scope of the Communications Framework.681

The EPG is not the only borderline case. How about web browsers, programme lists and search engines that fulfil very similar functions? Are they ‘associated facilities’ even if their main function is to provide consumers with content? DRM solutions are also interesting. DRM protection schemes are designed to provide technical end-to-end protection for content at all levels of the process from the point of initial distribution to the point at which end users view and/or listen to the content. So far, however, the main function of DRM solutions is typically associated with the protection of content once it has been delivered to the consumer. This is a reason not to consider the DRM as an element of the transport level, but to categorize it as part of the service level, and hence as a facility that does not fall under the Communications Framework. However, DRM solutions can have functions and effects very similar to those of conditional access systems. More than providing pure content protection, they involve elements of identification, authorization and enforcement similar to a conditional access system. Often, DRM solutions will even integrate conditional access technologies or elements thereof.682 Does this mean that DRM systems must be qualified as ‘associated facilities’ in the sense of the Communications Framework? If DRM systems can be considered associated facilities in the sense of telecommunications law—and there are good reasons to argue in this direction—DRM system operators would face obligations and provisions regarding access, interoperability and consumer protection that apply to conditional access operators.

681 See, for example, Article 6 (4) of the Access Directive, see also below, section 4.5.
4.3.3. CONDITIONAL ACCESS (IN THE SENSE OF THE ACCESS DIRECTIVE)—DEFINITIONS

Contrary to the broad, technology-independent definition of telecommunications networks and associated facilities, the definition of conditional access for the purpose of the Access Directive is rather restricted and transmission-medium dependent. It refers to

‘any technical measures and/or arrangements whereby access to a protected radio or television broadcasting service in intelligible form is made conditional upon subscription or other forms of prior individual authorisation’.

It is interesting to compare this definition to the definition in the Conditional Access Directive that was drafted to protect conditional access against unauthorized circumvention. The Conditional Access Directive acknowledges the fact that conditional access solutions are also used within the context of the delivery of information society services, which is why it defines conditional access as ‘any technical measure and/or arrangement whereby access to the protected broadcasting or information society services in an intelligible form is made conditional upon prior individual authorization’. The definition in the Framework Directive does not reflect this.

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684 See also sections 1.1 and 2.2.
685 Article 2 (b) Conditional Access Directive.
Figure 9—Scope of the Communications Framework. Figure 9 provides an overview of the services and facilities that are covered by the Communications Framework. Services carrying content do not fall under European telecommunications law. At the same time, the technical aspects of the transmission of such services, meaning to the extent that service providers use teleservices, network and carrier services and the spectrum or physical network, are covered by the Communications Framework.

4.4. The Exception: Access to Conditional Access—An Absolute Approach

4.4.1. Scope of Article 6 of the Access Directive

Article 6 of the Access Directive gives a clear and exhaustive definition of the subject of its regulation; it exclusively refers to conditional access services for digital television and radio broadcasting services, anticipating the end of analogue broadcasting. The distinction between access to conditional access systems for broadcasters and for non-broadcasters could have far-reaching practical consequences. As will be shown, the regulatory regimes for broadcaster access to

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686 The former Article 4 c of the Standards Directive did not apply to digital radio services.
the conditional access solution under Article 6 and access to the remaining technical bottlenecks under Articles 8 to 13 differ considerably on some points. It is also likely that the divergent regulations will generate very different market outcomes (section 4.7.).

One consequence of the narrow understanding of conditional access in the Access Directive is that it explicitly addresses only selected aspects of conditional access. It does not apply to the other elements of the technical pay-TV platform such as the operating system, the return channel, the set top box memory, the billing and subscriber authorization infrastructure, the EPG or other technical information. The European Parliament suggested in one of its earlier proposals for the directive to include a more general clause that covers, in addition to conditional access, all of the facilities associated with digital television even if they are as far-related functions as the return channel and the storage capacity of decoders. But the proposal was subsequently rejected. Access to APIs and EPGs, however, is regulated in Article 5 (1)b and Annex I, Part 2 of the Access Directive (section 4.5.).

Article 6 of the Access Directive does not apply to conditional access devices that control access to non-broadcasting services, meaning IP-based (webcasting) or individualized telecommunications services that do not fall under the traditional definition of broadcasting even if the signals are transmitted together with the broadcasting signal and are received via the same consumer equipment device. Correspondingly, providers of webcasting, interactive services, e-commerce and similar services that do not fall under the definition of broadcasting do not benefit from access rights, with the effect that a broad range of potential competitors are excluded from the scope of the Access Directive. Here too, the European Parliament suggested to extend Article 6 to include at least interactive services that are an integral part of the TV services delivered to viewers. This proposal did not find its way into the final version of the directive either. Conditional access systems that control access to information society services services will fall, if at all, under another access regime than Article 6 of the Access Directive. However, it remains unclear what this regulatory regime will be. An option that this study will look into in more detail further on, is the applicability of Articles 8 to 13 of the Access Directive (section 4.6.).

The European approach to bottleneck regulation for digital television services highlights the difficulty of the theoretical distinction that is made between

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688 See insofar sections 1.2. and 4.3.3.
690 As to the discussion of the definition of broadcasting under the influence of new technical developments, see Helberger 1999, pp. 7-8 and 10-13. See also section 4.3.3.
conditional access solutions for broadcasting services and conditional access solutions for non-broadcasting services. This distinction makes it very difficult to classify services based on new transmission technologies or converging media. At the moment, the development of the service market is greatly affected by the phenomenon of convergence. The associated development of conditional access systems suggests that the future lies in advanced set top boxes that are capable of controlling access to broadcasting as well as to a wide range of interactive service applications. In response, some of the Member States have already moved towards a less technology-dependent approach.

**4.4.2. Access Obligation**

Article 6, Annex 1, Part 1 (b) of the Access Directive mandates an absolute, unconditioned ex ante access obligation:

'All operators of conditional access services... are to offer to all broadcasters, on a fair, reasonable and non-discriminatory basis... technical services enabling broadcasters' digitally transmitted services to be received by viewers or listeners authorised by means of decoders administered by the service operator'.

Article 6 is a behavioural rule that addresses the individual conditional access operator. As a rule, conditional access solution providers are not in a position to freely determine their contracting partners or the terms of access. The mere fact of having control over a conditional access facility triggers an unconditional access obligation—unconditional in the sense that Article 6 does not specify any reasons to legitimately deny access. Contrary to other existing concepts of access to facilities—notably in telecommunications and general competition law—the access obligation in Article 6 of the Access Directive is absolute. The application of Article 6 does not depend on a particular market structure, be it the existence of significant market power, entry obstacles or the level of vertical integration. All conditional access solution operators are obliged to grant access, providing they are not using the conditional access facility exclusively for internal purposes. Article 6 (1) and the Annex are based on the assumption that each conditional access is a potential obstacle to market entry.

Among other things, Chapter 1 illustrated why, from an economic point of view, this is a highly simplified assumption and that certain market conditions must be fulfilled before an enterprise can and will find it profitable to use monopoly control over a conditional access to hinder entry into the pay-TV market. Moreover, certain welfare and general interest arguments could justify a certain behaviour as

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692 See sections 1.2., 1.4.1. and 1.4.3.
693 For example the UK: Oftel (now: Ofcom) 1997.
694 See 3.4.1.
695 See section 1.5.3.
well as monopoly control over a conditional access facility. Article 6 of the Access Directive, however, does not leave room for NRAs to consider such aspects.

It should be noted, however, that unlike the former version of Article 4c of the Standards Directive, Article 6(3) of the Access Directive entitles Member States to withdraw or amend access obligations for operators that lack significant market power. In the event that a Member State chooses to permit its NRA to impose access obligations only on enterprises with significant market power, the NRA has to perform a market analysis according to Article 15 and 16 of the Framework Directive to define the relevant conditional access market. So far, the Commission, in its recommendation on relevant product and service markets, has only identified a

'market for wholesale ancillary technical broadcasting services across all relevant transmission platforms, unless specific national situations in respect of switching costs and available transmission platforms justify a narrower market definition'.

The Commission has not yet defined a wholesale market for conditional access or associated facilities, because, as the Commission argues, Articles 5 and 6 leave it for Member States to determine whether to place access obligations only on conditional access operators with significant market power. Only in the event that Member States decide to restrict access obligations to significant-market-power operators, must NRAs perform a market analysis.

In the Explanatory Memorandum to the Recommendation on Relevant Markets, the European Commission points out a number of aspects that can be taken into account when performing the market analysis. For example, one aspect is that enterprises seeking access to ancillary technical broadcasting services may be interested in delivering or negotiating access to a sufficiently high number of end users to sustain a viable business rather than accessing all delivery platforms or all possible end users. Hence, the relevant market does not have to consist of the whole sector for broadcasting or subscription services, but could consist of one pay-TV platform and its installed consumer base. The Commission draws attention to the fact that, in a perfectly convergent environment, consumers are, in principle, able to switch between different platforms and that in this case, the market would have to be defined with the corresponding broadness. On the other hand, where the switching costs are high, the conditional access that is associated with one particular platform would eventually have to be regarded as a separate market.

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697 See also Oftel (now: Ofcom) 2002, paragraph 45.
example, in Member States in which several pay-TV platforms compete with each other there are two possible scenarios. First, switching costs for consumers could be low, for example, because consumers can use the same set top box for all services and because consumers can choose according to an à la carte model rather than from a small number of large bundles. In this case, competing broadcasters could find substitute conditional access solutions on other platforms. The market would have to be defined with the appropriate breadth with the consequence that perhaps no pay-TV platform would have a monopoly position as far as conditional access is concerned. In areas in which the switching costs are high, however, the different conditional access solutions for the different platforms could not be considered substitutes. In this case, the conditional access system of one particular platform could constitute a market on its own, and the operator of that conditional access would be the operator with significant market power. This discussion is comparable to the discussion about the definition of mobile telephony markets: does the relevant market consist of one particular operator’s mobile telephony network and all of its subscribers, or of the network of all mobile telephony operators together?

Even if NRAs performed a market analysis and found that a particular conditional access operator did a) not have significant market power and that therefore, b) no access obligation should apply, NRAs would still have to observe certain conditions before they could withdraw or amend an access obligation. An access obligation can only be amended or withdrawn if doing so does not have a negative effect on the end users’ ability to access broadcasting services, or on the prospect of effective competition for retail broadcasting services and/or conditional access or other associated services. Parties affected by such an amendment would be given an appropriate period of notice so that they can bring forward and discuss potential concerns with the NRA. Taking a closer look, it seems that the requirement to not affect the end users’ accessibility might be rather difficult to apply in practice. Obviously, if a third-party broadcaster does not have the right to access a particular conditional access system, subscribers to the platform using that system would not be able to watch the broadcaster’s programme; at least not via the pay-TV platform they are subscribed to. The rival broadcaster would still have the option of operating its own system, using the system of another pay-TV platform in that market or delivering the services in free-TV format. Of course, it is possible that the rival decides that it is not attractive or viable to deliver in free-TV format or to install its own conditional access system. In this case, consumers would not be able to access the rival’s services. The end users’ accessibility would be affected,

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700 See sections 1.4.3., 1.5.2. and 1.5.3.
701 European Commission, Commission Guidelines on Market Analysis and the Assessment of Significant Market Power, paragraphs 68-69. See also section 3.4.1.
702 Articles 6 (3) a and b.
703 Were there no alternative system, the first platform would be the only pay-TV platform and would have a monopoly position, meaning that Article 6 (3) of the Access Directive would not apply.

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with the consequence that the access obligation could not be withdrawn according to Article 6 (3) of the Access Directive. This would mean that the permissibility of withdrawing an access obligation would depend on circumstances within the sphere of a competitor, namely its willingness or ability to operate its own conditional access system. The same would be true if there were several conditional access platform operators, none of which have significant market power, but all of which refuse the broadcaster access to their conditional access systems. In this case, no platform would benefit from a relaxation of the access obligations because of the uncooperative behaviour of the others.

Moreover, withdrawing the access obligation would change the form of competition between pay-TV operators. Two operators who distribute their programmes through the same pay-TV platform would be competing on one platform, the so-called intra-platform competition. Two operators who distribute their services through different platforms would be competing between platforms, meaning compete in inter-platform competition. It is very difficult to say what the effects of both forms of competition would have on the conditional access system or the pay-TV sector, and whether they would have a positive or negative effect on competition and consumer welfare. For example, a broadcaster’s inability to access a particular platform could be an incentive to develop its own platform. In other words, withdrawing an access obligation could have a negative impact on the prospects of competition within one platform, but it could stimulate competition between different pay-TV platforms, technical innovation and investment, as well as the development of new and more attractive service offerings. In conclusion, it is questionable if, and if yes, how, Article 6 (3) of the Access Directive can be applied in practice.

One improvement that Article 6 of the Access Directive brings compared to the former situation under the Standards Directive is that Article 6 acknowledges that it is not adequate to impose access obligations where alternative facilities are in principle available, or where it could be expected that competitors undertake adequate efforts to develop an alternative themselves. This was demonstrated in Chapter 3 when discussing the applicability of the Essential Facilities Doctrine. Compared to the former Article 4c of the Standards Directive, the revised version of the access obligation in Article 6, Annex I of the Access Directive is narrower in scope. It stipulates that the access obligations only concern conditional access systems upon ‘whose access services broadcasters depend on to reach any group of potential viewers’. This addendum approximates the concept of sector-specific conditional access regulation and the concept of access obligations under general competition law. For conditional access operators, this could mean that once alternative conditional access systems are offered, they could deny access with the

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704 See section 3.3.1.
705 See section 3.4.1.
argument that broadcasters can switch to another system. The exact scope of the
 provision, however, remains unclear. The provision recalls the jurisdiction of the
 European Court of Justice in essential facilities cases.707 Interpreted within the
 framework of the Court’s judgement in the Bronner case, Article 6, Annex 1 of the
 Access Directive could be understood in a sense that broadcasters would have to
 accept less favourable solutions or even undertake adequate efforts to establish
 alternative solutions themselves.708 Within the framework of the Bronner judgement,
 a conditional access operator would not be subject to the access obligation unless
 the broadcaster succeeded to show that it was not economically viable for him to
 install an alternative distribution scheme. Moreover, the individual incapacity to
 install such a system would not justify the imposition of an access obligation as
 long it was not impossible or unreasonable for any other broadcaster to implement
 its own conditional access system.

4.4.3. INTEROPERABILITY

Another issue that arises in addition to the question of open access to a third party’s
 conditional access facility, is that of interoperability. Interoperability is one of the
 issues that clearly demonstrate that the Communications Framework combines
 matters of competition and consumer protection policy while promoting general
 public information policy objectives, such as the free flow of information and
 media pluralism:

‘Interoperability of digital interactive television services and enhanced digital
 television equipment, at the level of the consumer, should be encouraged in
 order to ensure the free flow of information, media pluralism and cultural
 diversity. It is desirable for consumers to have the capability of receiving,
 regardless of the transmission mode, all digital interactive television services,
 having regard to technological neutrality, future technological progress, the
 need to promote the take-up of digital television, and the state of competition
 in the markets for digital television services’.709

The Communications Framework does not define the notion of interoperability.
 It only defines interconnection in the sense of the physical and logical linking of
 public telecommunications networks.710

‘Interoperability’ is commonly used to refer more broadly to the

707 See section 3.4.1.
708 See European Court of Justice, Bronner, saying that for the Essential Facilities Doctrine to apply
 neither would it be sufficient that it is not economically viable for one particular operator to install an
 alternative distribution scheme himself, nor would individual incapacity generate an access
 obligation, as long as it is not impossible or unreasonable for any other broadcaster to establish
 alternative facilities, paragraphs 44-46.
710 See Access Directive, Article 2 (b).
‘[c]apability to provide successful communications between end-users across a mixed environment of different domains, networks, facilities, equipment, etc. from different manufacturers and (or) providers. In this context the communication is meant between end-users or between an end-user and a service provider’. 711

Making services or different pay-TV platforms interoperable means creating a ‘harmonized’ environment in which different components are able to interoperate in a way that consumers are technically able to receive services from different providers using different technical facilities and technical standards.712 For pay-TV, interoperability primarily means that consumers are able to receive, with their reception equipment, services from different operators, irrespective of the software they use, be it the encryption software, be it the software with which applications are written and transmitted. In this respect, it is less the aspect of physical access or the linking of different networks, but rather questions of standardization of technical facilities at the higher level of the technical transport chain that are paramount. More specifically, this is first and foremost the aspect of standardization of such technical elements that are implemented in the consumers’ equipment, notably the set top box.

Standardization can be achieved in different ways: by mandating one particular standard (the HD-MAC or the Eurocrypt standard, for example), by stimulating the adoption of open standards (for example, open source software and middleware), by mandating a common interface (for example, MHP for the API) or by ordering enterprises to make their services or facilities compatible with each other (for example, interconnection obligations for public telephone networks).713 The public promotion of open standards714 is also an attempt to stimulate interoperability. Different examples of these different ways of achieving standardization and, more generally, the way standardization is approached in the pay-TV sector, will be provided in the following paragraphs.

In the next paragraphs, three different aspects of interoperability as regards conditional access platforms will be looked at more closely: the first aspect is interoperability between two different conditional access systems so that the consumer can be reached through one and the same set top box. The second aspect of interoperability concerns the interoperability of a set top box’s middleware, or

711 ETSI User Group STF228 Progress Report, Sophia-Antipolis, 9 February 2003, available at <portal.etsi.org> (last visited on 14 March 2005). Closely related is the notion of ‘compatibility’, which is often used to refer to the compliance of a facility with common technological specifications. Scheuer/Knopp 2003, p. 3.
713 For an in-depth discussion of policy options to realize interoperability, see the study prepared for the European Commission by Oxera 2003; also the study by Contest Consultancy 2003.
714 In the context of this study, open standard is understood as a standard for which the specifications are available to third parties to use, irrespective of whether this is done for free or for a licence fee, or whether the standard itself is proprietary or non-proprietary.
more specifically, the API. Here, interoperability means that a set top box's API can process its own applications as well as those provided by unaffiliated third-party service providers. This second aspect has received by far the most attention during the revision of the conditional access provisions. API interoperability is considered to be particularly important in conjunction with the processing of more advanced, interactive digital services. The third and last aspect of standardization, the standardization of consumer equipment for the reception of digital television signals in general (for example, the TV), is not dealt with in the Access Directive, but in the Universal Service Directive.

The Standardization of Consumer Equipment
Article 24, Annex VI of the Universal Service Directive deals with the standardization of consumer equipment for the reception of digital television signals in general. According to Article 24 of the Universal Service Directive, 'any digital television set' intended for the reception of digital television signals is to be fitted with at least one open interface socket to permit the connection of, for example, smart cards from pay-TV operators. Digital television sets should be able to pass all the elements of a digital television signal, including information relating to interactive and access-controlled services. As a result of Article 24, Annex VI of the Universal Service Directive, it should be possible to connect set top boxes to any digital television set in Europe. Note that the provision seeks to introduce a common interface—a solution that has also been discussed in context with the conditional access—for digital television sets so that set top boxes and other devices can be attached. It does not impose any obligation on set top box manufacturers to implement a common interface so that several different conditional access systems can be linked and made interoperable. Moreover, it does not require set top box manufacturers to provide for a common API standard.

Interoperability Between two Different Conditional Access Systems
Interoperability between competing conditional access platforms might be of even more practical importance than the 'access to the decoder' question. This is due to the fact that the majority of access-controlled service providers that are active on the European markets are affiliated with relatively large commercial content service providers who use a conditional access system to market their own services. Where an access-controlled service provider intends to operate its own conditional access platform, one main obstacle to market entry is interoperability with the established system. The more popular the established standard and the stronger the indirect network effects, the more difficult can it be for newcomers to get a foothold.

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715 See also section 1.4.1.
717 Universal Service Directive, Recitals 32 and 33.
718 See section 1.4.3.
in the market and convince consumers and third-party (content) service providers to switch to a new, non-interoperable conditional access platform.\textsuperscript{719}

Over the past years, a number of solutions to make rivalling conditional access systems interoperable in a way that all service providers could access consumers via one set top box were discussed, including:

- Mandating one common standard for all conditional access services.
- Ensuring that all operators can use the same encryption system, or
- Designing sufficiently open boxes to allow users of other conditional access technologies to dock.\textsuperscript{720}

After the failure of Eurocrypt,\textsuperscript{721} another serious attempt was never made at the European level to promote one common conditional access standard. It is likely that a common standard would have soon been outdated due to the developments in the conditional access technology sector. Within the context of the Communications Framework, standardization is considered a process that should remain a primarily market-driven process. The Communications Framework refrains from promoting explicitly one particular conditional access standard. Taking a closer look at Article 6 and Annex I, Part 1, however, one could also argue that the Access Directive indirectly continues to support the establishment of one common conditional access standard. Article 6 encourages all broadcasters to use the established conditional access system. Consequently, for broadcasters using the existing conditional access system there is no need to establish a second one. As a practical result, Article 6 promotes a kind of common standard for the conditional access system itself, namely, the standard of the first mover on the market that succeeds in establishing its conditional access system. Once an operator succeeds in establishing a conditional access system that operates with economic efficiency, it is likely that this system will evolve into a de facto standard.\textsuperscript{722}

The DVB consortium proposed the Simulcrypt and Multicrypt solutions as possible standards the industry could agree on. Both the Simulcrypt and Multicrypt solutions seek to make one and the same set top box fit to receive a choice of services using different conditional access technologies. The DVB consortium defines Simulcrypt as an

\textsuperscript{719} See the in-depth discussion in 1.5.2. and 1.5.3.
\textsuperscript{720} See also European Commission, Commission Staff Working Document on Barriers to widespread access to new services and applications of the information society through platforms in digital television and third generation mobile communications, 00.00.00, COM (0000)000, Brussels, [hereinafter 'Commission Staff Working Document on Barriers to Widespread Access'], available at \textless europa.eu.int/information_society/topics/telecoms/regulatory/publicconsult/documents/211_29_en.pdf \textgreater (last visited 20 March 2005), p. 9: '[O]peness (...) and interoperability can be achieved either by choice, by design or by law'.
\textsuperscript{721} See section 4.2.1.
\textsuperscript{722} See sections 1.5.2. and 1.5.3.
'architecture that allows a service to be transmitted with the entitlement messages for multiple CA systems. A decoder supporting a particular CA system can extract the relevant entitlement messages and ignore the others'.

Simulcrypt solutions require an agreement between different conditional access operators to use one particular conditional access system. The operator of the selected system agrees to process signals that are protected by another conditional access solution. In contrast, the Multicrypt solution is a built-in solution, meaning that the set top box is fitted with a common interface so that consumers can insert a number of security modules that belong to different conditional access solutions. So far, however, industry-driven interoperability solutions have not been very successful. Only a small number of systems have a common interface that makes systems interoperable. To the extent that interoperability solutions exist at all, they are predominantly Simulcrypt solutions.

The only provision concerning the interoperability between two different conditional access systems in the Access Directive can be found in Annex I, Part 1 (c) of the directive. Here, the Access Directive stipulates that the holders of intellectual property rights to conditional access products and systems must ensure that licences are granted to consumer equipment manufacturers on fair, reasonable and non-discriminatory terms. More importantly, holders of such rights may not subject the granting of licences to conditions that prohibit, deter or discourage the inclusion in the same product of a common interface allowing the connection with several other conditional access systems. Consumer equipment manufactures that intend to implement a Multicrypt solution should be able to do so. Whether they choose to do so is entirely up to them. Moreover, contracts covering the licensing of conditional access technology may not prohibit, deter or discourage the implementation of means that are specific to another access system under the precondition that the licensee complies with relevant and reasonable conditions concerning the security of transactions of conditional access system operators.

When one of the Member States, Spain, sought to go beyond the European Framework and mandate a particular interoperability solution, the European Court of Justice found this behaviour incompatible with Internal Market principles. The Spanish government had introduced a compulsory licensing regime for conditional

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725 See, for example, Article 24, Annex VI of the Universal Service Directive. See also section 1.4.3.
License registration required that the conditional access system complied with particular technical specifications and the Multicrypt standard. The Court ruled that national registration requirements would be a restriction to the freedoms guaranteed under Articles 28 and 49 of the EC Treaty. According to the court, those restrictions were neither necessary nor justified in attaining the objective, which is, according to the Spanish government, mainly to increase transparency and transpose the Standards Directive. Unfortunately, the court did not consider whether mandating a particular standard could have justified the regulation for public interest reasons. The Court simply stated that it is ‘incompatible in principle with the freedom to provide services to make a provider subject to restrictions for safeguarding the public interest in so far as that interest is already safeguarded by the rules’, referring to the Standards Directive, which, however, does not foresee any interoperability obligations.

Interoperability between Interactive Digital Services and the API or Operating System in the Consumer Device

Of the different ways of promoting API interoperability, the most widely propagated is probably the use of an open standard. This is amplified by Article 18 (1) of the Framework Directive, which speaks in favour of an open API standard. For the API, the DVB consortium promoted the MHP standard. The MHP standard defines a generic middleware, namely an interface between interactive or enhanced digital applications and the terminals on which those applications are executed. It decouples the providers’ applications from the hardware and software used for the set top box and the conditional access system. In so doing, it introduces an additional open operational layer that is principally independent of the underlying hardware. Because this additional layer is open to everyone, services can be run in different application environments. This means that a service provider who wants to write applications for a particular set top box environment does not need to know the specifications of the set top box, which operating system it runs or the programming language used. Instead, the provider only has to know the API specifications. Migration to the MHP standard, however, is still far from becoming reality. A number of important facility controllers do not support the MHP standard.

729 European Court of Justice, Canal Satélite Digital, paragraphs 33-43.
730 European Court of Justice, Canal Satélite Digital, paragraph 38.
731 For an in-depth discussion of different solutions to realize API interoperability, see the study prepared for the European Commission by Oxera 2003.
732 To view the progress of the MHP negotiations, visit <www.mhp.org> (last visited on 20 March 2005).
733 See for more details <www.mhp.org> (last visited on 20 March 2005).
and prefer their own standards. Moreover, MHP is not the only standard that is negotiated by industry players.

An interesting alternative, at least in terms of compatibility between applications and the middleware used in the hardware elements in a conditional access system’s set top box, is open source software.\textsuperscript{734} Providing the licensing conditions allow for an API to be developed as open source software, each broadcaster, application provider, etc., would have access to the source code and would be free to adapt applications and even write its own applications.\textsuperscript{735} In addition, open source software eliminates licence fees, which would lower the costs of market entry and service development/provision. Ideally, applications written with open source software would also be compatible with each other and enable the realization of indirect network effects.

API interoperability is high on the political agenda in the European Union. Recital 31 of the Framework Directive leaves no doubt that the interoperability of digital interactive television services and enhanced digital television equipment should be encouraged to ensure the ‘free flow of information, media pluralism and cultural diversity’. This is also explained by the need for technological neutrality and technological progress, and the need to promote digital television and competition in the digital television service markets.\textsuperscript{736} Accordingly, Article 18 (1) of the Framework Directive states:

‘In order to promote the free flow of information, media pluralism and cultural diversity, Member States shall encourage ... providers of digital interactive TV services for distribution to the public in the Community on digital interactive TV service platforms, regardless of the transmission mode, to use an open API; providers of all enhanced digital TV equipment deployed for the reception of digital interactive television services on interactive digital broadcasting platforms to comply with an open API in accordance with the minimum requirements of the relevant standards or specifications’.

Article 18 (2) of the Framework Directive also calls upon Member States to encourage API proprietors to make available on fair, reasonable and non-discriminatory terms, and against appropriate remuneration, all such information as is necessary to enable providers of digital interactive television services to provide services for that particular API.

At the time of writing, the issue of compatibility between digital interactive television services and enhanced digital television equipment had not given rise to more than declaratory, non-obligatory statements such as those mentioned in

\textsuperscript{734} See also European Commission, Communication on Barriers to Widespread Access, p. 11. Initiatives to design conditional access solutions with open source software can be found with major players, such as Nokia, IBM, Sun, Intel. See also Koelman 2000, 151pp.

\textsuperscript{735} The conditional access operator could then have to ensure that the individual applications are compatible with each other, for example by issuing a ‘compatibility certificate’.

\textsuperscript{736} Framework Directive, Recital 31.
Article 18 (1) and (2) of the Framework Directive. It has been argued that mandating one particular approach to compatibility could hamper technological and market development by imposing common standards prematurely.\textsuperscript{737} Instead, the development and implementation of common standards has been left entirely up to industry initiatives, such as the work of the DVD consortium, despite earlier proposals of the European Parliament to oblige operators to use a single open, interoperable API that is standardized by a recognized European standardization body.\textsuperscript{738}

Having said that, the Framework Directive clearly states that certain situations may make it necessary to enforce compliance with specified standards to ensure interoperability in the Internal Market and freedom of choice for consumers.\textsuperscript{739} More detailed conditions are laid down in Article 17 (2)-(7) of the Framework Directive. For this purpose, the Communications Framework required examining the extent to which compatibility and freedom of choice have been achieved in Member States by no later than July 2004. Had these objectives not been adequately met, the Commission was entitled to enforce a previously published standard after consulting with the public and obtaining the agreement of the Member States as is laid out in Articles 18 (3) and 17 (3) and (4) of the Framework Directive. In this context, the MHP standard was included in the List of Standards and Specifications to be published in the Official Journal under Article 17 of the Framework Directive.\textsuperscript{740}

The first consultation on API compatibility took place in the spring of 2004. The European Commission initiated this first consultation with the goal to examine the effectiveness of the Framework and determine whether compatibility and freedom of choice for users had been achieved. The European Commission invited market players and other interested parties to respond to a previously published Commission Staff Working Paper on the Compatibility of Digital Interactive Television Services.\textsuperscript{741} The result of the consultation was summarized in a communication from the Commission.\textsuperscript{742} Based on the contributions received from more than fifty-one entities, including manufacturers, network operators, broadcasters, API providers and consumer associations, the European Commission concluded that there was at that time no clear case for mandating standards. One reason that has lead to this conclusion was the Member States' belated implementation of the Communications Framework and the resulting lack of

\textsuperscript{739} Framework Directive, Recital 30, Article 17 (3).
\textsuperscript{740} European Commission, List of Standards and Specifications.
\textsuperscript{742} European Commission, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on interoperability of digital interactive television services, Brussels, 30 July 2004, COM(2004)541 final (hereinafter 'Communication on Interoperability of Digital Television Services').
practical experience. Another and more fundamental reason, was the difficulty agreeing on what interoperability really means and whether it had been achieved. One group defended the view that interoperability had not been achieved, because interoperability in the sense of Article 18 of the Framework Directive would be best interpreted in the sense of open, non-proprietary standards (for example, the MHP standard). This view was represented by, among others, free-TV, and in particular public broadcasters that had an interest in free market access, unhampered by proprietary standards and incompatibilities. In contrast, a second group interpreted interoperability result-oriented, meaning in the sense of the availability of the same interactive services on different distribution platforms. Due to, for example, technical solutions that support the portability of interactive applications across different platforms, interoperability would have been achieved. Consequently, the European Commission did not have to interfere. The latter opinion was represented by infrastructure operators, among others. The Commission decided that it would not interfere, and only suggested a number of supportive measures, including the establishment of a workgroup, the legal certainty of public subsidies for consumer equipment, the extension of the list of standards published in the Official Journal, and the monitoring of access opportunities to proprietary technologies.

The outcome of this first consultation shows that the challenges of effective API standardization consist of more than just finding ways to encourage the industry to agree on one API standard. Reaching a consensus on what interoperability actually means could postpone the standardization process indefinitely. Moreover, one must also wonder whether it would not have been justified for the Commission to interpret the lack of agreement as an indication of the need to undertake more proactive measures to promote API standardization. Article 18 (1) of the Framework Directive does not leave much doubt that interoperability in the sense of the directive refers to the proliferation of open API standards and not to proprietary standards and possible portability solutions.743

4.4.4. TERMS AND CONDITIONS

It is principally left up to the parties to negotiate and define the details of access, meaning the conditions under which it is to be granted, including the price, the beginning and the duration of access, the scope and related matters such as the confidentiality and protection of consumer data, the handling of security questions, dispute settlement, etc. The contracting parties in the sense of Article 6 of the Access Directive are the conditional access operator and the broadcaster, not consumers (subscribers).

It is reasonable to assume that equally strong negotiating parties will negotiate terms that both parties believe are fair, reasonable and non-discriminatory. This is different in markets in which there are still big differences in negotiating power

743 See also Framework Directive, Recital 31.
between enterprises. An example is the pay-TV sector, where smaller broadcasters might find it too costly to establish their own conditional access solution, but wish to have access to the first mover’s conditional access platform.\textsuperscript{744} Even if the latter agreed to the use of its conditional access system, the provision of access on unfair terms and conditions could have the same effect as simply refusing access. Tying practices, unfair pricing, the refusal to supply information or access to ancillary facilities or services, or simply lengthy procedures are typical forms of abuse of monopoly control.\textsuperscript{745}

In response, Article 6 of the Access Directive stipulates that access must be provided on a fair, reasonable and non-discriminatory basis, and must be compatible with European competition law. This is as concrete as the directive gets. Article 6 does not provide for any ex ante guidelines that would outline the scope of the actual access obligation, nor does it provide for accompanying ex ante measures (apart from an obligation of accounting separation) that would help make the sector more transparent and facilitate enforcement. Additionally, the Article does not envisage any ex ante price control for access to the conditional access, nor does it regulate the question of how prices are calculated and which principles may legally influence the price calculation. There are a few other points that Article 6 does not touch on, such as the boundaries of the obligation to share one’s facilities, and if the notion of ‘fair and reasonable terms’ leaves room to acknowledge investments, economic risks and limited technical capacities of the conditional access operator. It is therefore up to the Member States to adopt guidelines that are more detailed.\textsuperscript{746} The following paragraphs attempt to shed some light on how these guidelines would have to look if they were drafted according to existing European law and principles.

\textit{Fair and Reasonable Terms}

The appropriateness of access conditions is generally more difficult to prove in newly emerging markets where there is a lack of market information, reference data or comparable products and services. For the time being, the final assessment of the legitimacy of single conditions in access agreements in the context of Article 6 of the Access Directive is left to the courts, and possibly also to NRAs, on an ex post

\textsuperscript{744} See sections 1.5.2. and 1.5.3.
\textsuperscript{745} See sections 1.4.3. and 1.5.3., as well as 3.4.3. See also Schulz/Kühlers 2000, p. 60, 108, who suggest the adoption of sector-specific anti-tying rules also for conditional access and associated services and facilities.
\textsuperscript{746} Ofcom (then: Oftel) was one of the first NRAs to issue elaborate pricing principles for conditional access and publish them as common guidelines. The guidelines are flexible enough to allow pricing at different levels for different categories of broadcasters (for example, free-TV and pay-TV broadcasters or providers of interactive services) and open enough to allow economically efficient price strategies that maximize the usage of the system, while at the same time ensuring that these strategies do not have significant adverse effects on downstream markets, Oftel 1997, 1997a, 1998 and 2000.
It should be noted that this determination could be difficult in practice, in particular when the practical problems of identifying discriminatory practices as described in Chapter 3 are taken into account, and more particularly those that do not amount to a clear denial of access.748 The situation is rendered even more difficult by the often intransparent competitive environment that is characterized by various horizontal and vertical links between the market players.

Guidelines for the interpretation of the notion of ‘fair, reasonable and non-discriminatory’ can be found, if at all, only outside the provision of Article 6 of the Access Directive. It was not in the Access Directive, but in the European Commission’s Access Notice that the Commission provides an interpretation of the notion of ‘fair and reasonable’ access.749 The Access Notice interprets ‘fair and reasonable’ access to mean that facility providers may not unduly press broadcasters to purchase a bundled package of services nor refuse to provide separate services at less than the cost of the bundled package, hinder the exercise of single functions or even make the conclusion of the agreement subject to the acceptance of services that are not directly linked to the actual service through contractual provisions or discounts.750

According to this interpretation, ‘fair and reasonable access’ refers to unbundled access. For example, a service provider must be able to gain access to the conditional access platform without being bound to using the operator’s EPG or to being marketed under the operator’s brand name. In a broader sense, conditions may not a) influence or even impede the way in which parties exercise their business or b) serve the interests of the conditional access provider if they are not directly related to the business of providing access to conditional access systems. Ofcom has interpreted this to mean

‘a broadcaster should not be put at a competitive disadvantage by using the conditional access operator’s services. This applies especially where an associated business of the conditional access operator is competing with the broadcaster in a downstream market’.751

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747 As to the character and tasks of NRAs, see Articles 3 to 13 and Recitals 11 to 18 of the Framework Directive. For telecommunications networks and facilities, national NRAs can also be required to resolve actual access disputes between enterprises in the same Member State and, if no mutual compromise can be found, impose an adequate solution on the parties, Recitals 32, 33 of the Framework Directive. However, Article 6 of the Access Directive does not contain any corresponding explicit authorization for the NRAs to resolve access disputes.

748 See section 3.4.2.

749 The Access Notice is not restricted to access problems in the ONP framework. Instead it is intended to be more generally applicable to other types of access issues, and arguably conditional access, European Commission, Access Notice, paragraph 6: ‘As this notice is based on the generally applicable competition rules, the principles set out in this Notice will, to the extent that comparable problems arise, be equally applicable in other areas, such as access issues in digital communications sectors generally’.

750 European Commission, Access Notice, paragraph 103.

751 Ofcom (now: Ofcom) 1997a, paragraph A 41.
The Commission provided a similar explanation in one of its merger cases. Here, the Commission defined ‘non-discriminatory access’ in the sense that the licensee of the decoder technology is able to conduct business without being influenced by the technology controller.752

One major problem in this sector is unfair pricing, which can be facilitated by a high level of vertical integration. Unfair pricing for access to a dominant operator’s facilities consists often of excessively high or discriminatory prices.753 In practice, it is very difficult to determine what appropriate access prices are. Access prices must be determined in a way that it is economically viable for the regulated enterprise to operate the service and invest in its maintenance and innovation. Access prices must also remain at a level that neither prevents nor discourages the regulated enterprise from offering quality services to consumers. On the other hand, the price to access a conditional access platform must remain affordable to competing operators. The price to access the technical platform can also be influenced by the price that is charged to the subscribers of the pay-TV service. The price paid by broadcasters to access the technical platform and the price paid by consumers to access the pay-TV service are both parameters that the platform operator must take into account to define its pricing model.754 Another question is whether NRAs are entitled to take welfare issues into account, meaning that prices should not be so high that competitors are forced to offer their services to consumers at unaffordable prices.

Potential anti-competitive practices do not necessarily relate only to technical aspects. Where a vertically integrated conditional access operator operates the service platform at the same time, the terms and conditions can also contain conditions that refer to content-related aspects or aspects that are related to the marketing of content. Examples are a contractual condition that requires broadcasters to agree to being carried via a particular programme bouquet or to adapting his programme format, to disclose its customer database, or to agree to an exclusive relationship and refrain from offering the programme to other service platforms. The access-controlled platform operator may wish to adopt a particular format for all programmes and services delivered via its platform, to admit only popular programmes or programmes that fit into its editorial strategy, or structure the offer in different thematic bundles, etc. Are such considerations relevant when assessing whether conditions are ‘fair, reasonable and non-discriminatory’, and are telecommunications NRAs, whose competency only lies in the telecommunications sector, entitled to decide whether such practices are justified?

There are valid reasons to doubt this. The European Commission repeatedly stresses the need to ‘separate the regulation of transmission from the regulation of

752 European Commission, Bertelsmann/Kirch/Premiere, paragraph 111. Interestingly, the Commission also noted in this context that such influence could be exercised if the technology is controlled by enterprises that also have interests as programme suppliers, thereby drawing attention to the problem of vertical integration.

753 European Commission, Access Notice, paragraphs 105-106.

754 See section 1.4.3. Evans 2003, 47pp and 64pp.
content'. Services providing packages of sound or television broadcasting content are not covered by the Communications Framework. Content-related questions are, according to Recital 5 of the Framework Directive, covered by the TWF Directive. The Framework Directive only states in very general terms that the 'separation between the regulation of transmission and the regulation of content does not prejudice the taking into account of the links existing between them'.

On the other hand, the European Commission also indicated that the access obligation in Article 6 of the Access Directive should be sufficient to prevent any likely spill-over or leverage effects in the pay-TV market. In practice, this could mean that telecommunications NRAs will, in future, have to consider content-related aspects providing they are relevant for the realization of open access to the conditional access platform. Bearing in mind that the technical conditional access platform is closely integrated with the marketing platform for pay-TV content, this is probably also the interpretation that best takes the realities of the pay-TV sector into account.

One must bear in mind, however, that in most Member States media supervision is still organized in separate divisions and according to a distinction between transport and content aspects. Most Member States still distinguish between broadcasting and telecommunications NRAs. With the advancing economic and technological convergence of the transport and service areas, effective supervision requires that regulatory authorities in both areas step out of their traditional field of expertise and authority. Some Member States, such as the UK (Ofcom), Italy (AGCOM) and Austria (KommAustria), have already drawn the consequences and merged their regulatory authorities for the telecommunications and broadcasting sectors. In other Member States, such as Germany, doing this could raise complex constitutional issues due to the split competences between Bund and Länder.

**Non-Discriminatory Terms**

As explained in Recital 11 of the Access Directive, the principle of non-discrimination is also meant to ensure that enterprises with market power do not distort competition, in particular when such enterprises are vertically integrated and supply services to competitors with whom they compete in related markets. Article 10 (2) of the Access Directive defines (for access to telecommunications networks, services and associated facilities) non-discrimination as follows:

'Obligations for non-discrimination shall ensure that the undertaking applies similar conditions in similar circumstances to other undertakings providing

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756 Universal Service Directive, Recital 45. Critical section 4.3.2.
759 See sections 1.2. and 1.4.3.
760 See also European Commission, Bertelsmann/Kirch/Premiere, paragraph 111.
similar services, and provides services and information to others under the same conditions and of the same quality as they provide for their own services, or those of their subsidiaries or partners”.

This somewhat cryptic definition means that it is prohibited to treat third parties differently than one’s own or associated services unless there is an objective justification for doing so. For questions of access to a conditional access system, this could mean that a platform operator who offers access to its own or affiliated services must offer access to rivals at the same conditions providing the services in question are comparable. However, a number of practical questions remain unanswered, such as: when are services comparable? Do providers of pay-TV, free-TV, interactive-TV, special interest channels, foreign channels, etc., all fall under the same category? Does the transmission medium play a role? Do services transmitted through an IP protocol fall under a different category than services transmitted through ‘traditional’ means of broadcasting, such as satellite or cable? And again, are content-related arguments relevant? Are platform operators entitled to base their decision to grant access on the popularity of a third party’s programming content or on how well this content fits into their own editorial arrangement? Can operators ask a higher access price for programmes that are probably more difficult to sell to consumers?

Terms and Conditions—Retail
In Chapter 1, we saw that for pay-TV markets to be competitive not only the conditions under which rival broadcasters obtain access to a technical platform matter, but that the terms and conditions in subscription contracts also impact the sector’s competitiveness.\(^{761}\) The way in which access-controlled broadcasting services are marketed and advertised to subscribers, the composition of bundles and the prices charged—all of these are factors that directly influence the competitors’ chances of attracting the consumers’ attention.\(^{762}\)

It is worth noting that the Universal Service Directive acknowledges that there is a risk that an enterprise with significant market power can use control over end-users access to a service to impede competition, for example, by charging excessive prices, setting predatory prices, foreseeing the compulsory unbundling of retail services or showing undue preference to certain customers. Accordingly, NRAs are authorized to consider imposing retail conditions on an enterprise with significant market power, even if it is a last resort and only occurs after due consideration. The regulation of retail conditions is, according to the Universal Service Directive, only appropriate if it has been found that wholesale measures are not sufficient to reach what the directive calls ‘the twin objectives of promoting effective competition

\(^{761}\) See section 1.5.2.

\(^{762}\) Consumer attention as a relevant economic factor is addressed in 1.5.2. See also Larouche 2000, pp. 374-378.
whilst pursuing public interest needs, such as maintaining the affordability of publicly available services for some consumers.\textsuperscript{763} Providing these conditions are fulfilled, NRAs can impose requirements not to charge excessive prices, inhibit market entry or restrict competition by setting predatory prices, show undue preference to specific end users or unreasonably bundle services (Article 17 (2) of the Universal Service Directive). NRAs can also impose retail price caps and control individual tariffs or measures to orient tariffs towards costs or prices on comparable markets. In addition, the Universal Service Directive includes, as explained further above, provisions on the fairness of consumer contracts and transparency for consumers, as well as on the quality of services.\textsuperscript{764} Applied to the example of pay-TV, this could mean that NRAs are entitled to control the conditions in subscription contracts and if predatory pricing or bundling strategies have an anti-competitive effect.

It is, however, very questionable whether the provisions in the Universal Service Directive, which apply to electronic telecommunications service providers, also apply to pay-TV operators. As the argument goes, the Universal Service Directive only applies to ‘electronic communications services’ meaning services that consist of the transport of signals.\textsuperscript{765} In this sense, services that provide or exercise control over content, such as the making available of access-controlled broadcasting services to consumers, are not telecommunications services and do not fall under the Universal Service Directive.\textsuperscript{766} Pay-TV operators do both: they provide content services to consumers, and in most cases, also operate the technical platform that is necessary to do so, for example, the conditional access solution. One could argue that because of their control over the technical pay-TV platform that pay-TV operators fall under the scope of the Universal Service Directive. After all, and as was explained in Chapter 1, consumers conclude contracts with pay-TV operators about the provision of services, or signals, in intelligible form.\textsuperscript{767} One indication that this view is not shared by the Commission is the fact that the Commission refrained from defining a retail market for broadcasting services in general, and pay-TV services in particular. This is again a consequence of traditional understanding of broadcasting as ‘once-sent-free-access-for-all’.\textsuperscript{768}

\textsuperscript{763} Universal Service Directive, Recital 26.
\textsuperscript{764} Universal Service Directive, Article 20 (Information in consumer contracts, right to withdraw), Article 21 (Transparency), Article 22 (Quality), Article 34 (Out-of-court dispute resolution).
\textsuperscript{765} Framework Directive, Article 2 (c); Universal Service Directive, Recital 45.
\textsuperscript{766} European Commission, Recommendation on Relevant Product and Service Markets, Explanatory Memorandum, p. 36.
\textsuperscript{767} Framework Directive, Article 2 (c); Universal Service Directive, Article 1 (1).
\textsuperscript{768} See sections 1.4.2. and 1.5.2.
4.4.5. SUMMARY

Article 6 and Annex I of the Access Directive adopted an absolute approach towards the regulation of access questions whereby all operators of a conditional access facility are obliged to provide access. The precise scope of the access obligation is unclear and remains open for interpretation by the courts. Article 6 and Annex I work with narrowly defined bottlenecks and remain restricted to conditional access devices that provide access to digital radio and broadcasting services. The emphasis is on guaranteeing open access to the related service level, not on actively encouraging competition between different conditional access platforms. More generally, the regulation of conditional access is still focussed on the traditional broadcasting sector, where it is still based on the ‘once-sent-free-access-for-all” concept. This is done despite the fact that, with the arrival of electronic access control in broadcasting, the distribution pattern resembles that of other telecommunications services. Consequently, many of the problems are similar, such as the effects of control over retail conditions for functioning competition and general public interest objectives.

4.5. Access to Other Bottlenecks in Digital Television: Article 5 (1)b

Under certain circumstances, NRAs may choose to expand the access obligation to EPGs and APIs if this is necessary to ensure end-user accessibility to digital radio and television broadcasting services. According to Article 5 (1)b of the Access Directive, Member States can authorize their national NRAs to go beyond the present scope of the Access Directive and impose obligations on operators to provide access to EPGs and APIs. NRAs can do so irrespective of the finding of significant market power. Moreover, Article 5 (1)b, Annex I, Part 2 of the Access Directive could be the gateway to extending the authority of national NRAs to monitor other facilities of the technical platform in digital broadcasting, namely in all the cases in which it is necessary to ensure that end users can access digital broadcasting services. For the time being, Annex 1 of the Access Directive refers to the API and the EPG, but the Annex could be extended to cover other facilities or services.

Having said that, the details of Article 5 (1)b of the Access Directive are still very unclear. In particular, the directive leaves open whether obligations under this provision involve only the provision of access itself or whether NRAs can also impose additional obligations, such as the disclosure of technical information and specifications or mandated interoperability. Two options are possible: one would be that the imposition of access to facilities that fall under Article 5 (1)b of the Access Directive follows the previously described concept of access regulation under

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769 Article 5 (1) b Access Directive.
770 In this sense Gibbons 2004, 63pp.
Article 6 of the directive. In this case, national NRAs would probably have little room to choose a remedy other than an access obligation. The other option would be to have Article 5 (1)b follow the concept of Articles 8 to 13 of the Access Directive. This concept, as explained below, differs considerably from the regulation in Article 6 of the Access Directive, and it would give national NRAs far more flexibility to choose how they remedy anti-competitive situations.

One argument that speaks for the first option is its proximity to Article 6 of the Access Directive: both provisions deal with access issues in digital broadcasting. Like Article 6 of the Access Directive, Article 5 (1)b does not require significant market power, and both Articles are treated together in Annex 1. And in the earlier draft versions of the Access Directive, access to associated facilities other than conditional access, such as EPGs and APIs, was still regulated under the umbrella of Article 6 of the Access Directive.77 An argument in favour of the second option is that access to the API and EPG is now treated under Article 5 and not under Article 6 of the Access Directive. In its first paragraph, Article 5 stipulates that NRAs shall

‘encourage and where appropriate ensure, in accordance with the provisions of this Directive, adequate access and ... interoperability of services, exercising their responsibility in a way that promotes efficiency, sustainable competition, and gives the maximum benefit to end-users’.

Article 5 (1) of the Access Directive calls on national NRAs to interfere where they consider necessary and in a way that they consider best-suited to achieve maximum benefit for end users, be it in the form of access or interoperability obligations. Article 6 of the Access Directive does not provide national NRAs with this flexibility, but Articles 8 to 13 of the Access Directive do.

With the increasing sophistication of software and middleware solutions such as EPGs and APIs, ensuring end-user accessibility can be far more complicated than simply granting someone access to a facility. Accessibility can also include the provision of technical information, format compatibility, transparency, etc. From a functional point of view, such an argument would favour an interpretation of Article 5 (1)b in the context of Articles 8 to 13. This interpretation also seems to be supported by Article 5 (2) of the Access Directive, which explicitly refers to Article 12 of the Access Directive (obligations of access to and the use of specific network facilities). It does not explicitly exclude EPGs or APIs.

Ofcom put forward a third approach, according to which

‘it may be most appropriate to use Article 8 of the Access Directive, rather than Article 5 of the Directive, given that this route would allow the

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imposition of the obligations set out in Articles 8-13 of the Access Directive on operators with SMP [significant market power].

This view has its merits, especially as far as the application of the significant-market-power criterion is concerned (see below). On the other hand, it contradicts the wording of Article 5. Moreover, this route seems rather superfluous considering that Article 5 (1)b of the Access Directive could be interpreted to allow the application of the principles set out in Articles 8 to 13 of the Access Directive.

What does not fall under Article 5 (1)b of the Access Directive are content-related aspects, such as the way information services are listed or presented in an EPG. This can be concluded from Article 6 (4) of the Access Directive, which states that the provision is without prejudice to the ability of Member States to impose obligations in relation to the presentational aspects of electronic programme guides and similar listings and navigation facilities. Having said that, it is worth noting that the presentational aspects of an EPG design are crucial in determining if and how services are accessible to end users. In practice, it will therefore be very difficult to make a distinction between, on the one hand, access to the EPG, and, on the other hand, the presentational arrangement. This aspect will probably play a major role mainly for the practical realization of the Access Directive at the enforcement level.

Another question is whether access obligations for EPGs (as suggested in Article 5 (1)b of the Access Directive) will solve the information problem described in Chapter 1. This depends on the effect an access obligation would have. In the best case, the obligation to grant access to an EPG would ensure that EPGs include information about competing services on the same service platform. However, an access obligation still does not provide a guarantee that consumers are adequately informed about services and conditions that are offered on other platforms; access obligations do not guarantee that consumers will be able to learn about service providers who operate their own EPG or conditional access system. Similarly, access obligations are not a means to guarantee that comparable service information will be available for all services, including free-TV services and services from other Member States. In any case, access obligations are still no guarantee for the reliability, quality and accuracy of the service information.

The importance of access to and the quality of transparent and comparable service information for functioning competition can already be assessed by the fact that the Universal Service Directive ascribes some service information a universal service status. According to the Universal Service Directive, Member States must

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772 Offel (now: Ofcom) 2002, paragraph 47.
773 European Commission, Recommendation on Relevant Product and Service Markets, Explanatory Memorandum, p. 37. See also Ofcom' Statement on Code on Electronic Programme Guides, Ofcom 2004, paragraphs 15-16; but see also paragraph 19.
774 See section 1.5.2.
775 Universal Service Directive, Recital 11, Article 5. See also Schulz 1998, pinpointing the importance of transparency in a multi-channel environment, p. 190.
make sure that at least one comprehensive telephone directory is available to end users in a form approved by the relevant authority, whether printed, electronic or both, and is updated on a regular basis and at least once a year. Arguably, the telephone directory is a kind of search engine because it helps consumers find the service they are looking for, namely to connect to a particular person. Like the EPG, directory information and directory enquiry services constitute an essential tool in realizing the accessibility of services, be it telephony or broadcasting services. Those directory services that provide an overview of all of the available services, including those offered by rivals, are tools that facilitate overall accessibility. Directory services that only provide information about the subscribers to one particular network cannot fulfil this function. The same can be said of the EPG.

From recalling the social and economic importance of the availability of comparable and comprehensive service information in a multi-channel environment, the step towards considering extending universal service obligations to other ‘directory services’, such as EPGs is not big. Universal service obligations are a construct used to respond to social and political demands. Consequently, the universal service concept is open to respond to changed perceptions of the relevancy of a medium or of access to particular services for social and economic life. On the other hand, decisions about the extension of universal service obligations should not be undertaken without carefully considering the impact they can have on innovation and investment, and whether the market itself is able to comply with consumer needs. Successful examples, such as programme journals and online search engines, demonstrate that directory services and the provision of information about information can be a profitable market, and one that serves consumer demand. Moreover, Articles 21 and 22 of the Universal Service Directive already provide a framework for NRAs to make sure that consumers have enough information available so that they can compare existing services in terms of quality and pricing. According to Article 21 (1) and Annex II of the Universal Service Directive, Member States shall ensure that transparent and up-to-date information on prices and tariffs as well as on standard terms and conditions are available to consumers. Interesting is also the provision in Article 21 (2) of the Universal Service Directive that suggests providing consumers with interactive guides so they can independently evaluate the costs of alternative services. In other words, the directive suggests to give consumers electronic tools so they can learn not only about the terms and conditions of each particular service separately, but obtain an overview of the different services available to them and compare them. Article 22 of the Universal Service Directive deals with information about the quality of services. It stipulates that Member States shall ensure that NRAs are able to require

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777 Universal Service Directive, Recital 11.
778 See section 1.5.2.
undertakings that provide publicly available electronic telecommunications services to publish comparable, adequate and up-to-date information for end users on the quality of their services. Having said that, although potentially useful in the pay-TV case, these provisions are only applicable to electronic telecommunications services, or, more narrowly even, to telephony services (Article 21 of the Universal Service Directive). They do not apply to the broadcasting sector.

4.6. The Rule: Access to Telecommunications Infrastructures and Facilities—A Flexible Approach

Access to telecommunications infrastructures and facilities that do not fall under Article 6 of the Access Directive can fall under Articles 8 to 13 of the Access Directive. With the exception of conditional access, the API and the EPG for digital broadcasting services, and unlike the former ONP concept, the Access Directive does not distinguish between specific bottlenecks. Instead, the Access Directive extends access and interconnection rules to all electronic telecommunications networks and associated facilities. In other words, open access regulation is no longer restricted to selected elements of the telecommunications network; instead, a more general approach was adopted with the goal of establishing throughout Europe a common, harmonized framework for access questions at the transport level.

4.6.1. Scope of Articles 8 to 13 of the Access Directive

Articles 8 to 13 of the Access Directive do not deal with predefined bottlenecks; instead, a flexible approach has been adopted by which the NRAs are entitled to determine the circumstances under which facilities are considered potential bottlenecks to market entry and competition. Conceptually, this means that Articles 8 to 13 of the Access Directive do not automatically label certain facilities as bottleneck facilities, unlike the current approach in Article 6 of the Access Directive. Instead, NRAs evaluate the question of bottleneck control within the context of the market situation. It makes the final assessment dependent on the effect denial of access has on competition or end-user interests.

It remains to be seen whether national NRAs will decide to apply Articles 8 to 13 of the Access Directive to bottlenecks in digital broadcasting that do not fall under Articles 5 (1)b and 6 of the Access Directive. In section 4.5., it was argued that Article 5 (1)b of the Access Directive could leave some room to be interpreted within the context of Articles 8 to 13 of the Access Directive. Were this to be done, such facilities would fall under the below described flexible approach.

The applicability of Articles 8 to 13 of the Access Directive, however, depends on whether a relevant market for ancillary digital broadcasting facilities has been defined. Market definitions mark the limits for the regulatory activity of NRAs. So
far, the Commission has not yet defined a wholesale market for ancillary services in
digital broadcasting, basically because it was convinced that Article 5 (1)b of the
Access Directive would prove to be sufficient. The Commission has also not
defined a wholesale market for the pay-TV service platform.781 The pay-TV
subscription service itself, as this is a content service that, falls outside of the scope
of the Communications Framework. What the European Commission did define,
was a wholesale market for broadcasting transmission services and distribution
networks providing they supply the means to deliver broadcast content to end users.
It will only be possible for national NRAs to monitor and regulate markets that
differ from those identified in the Commission’s Recommendation where this is
justified by national circumstances and where the Commission does not raise any
objections. According to Article 15 (3) of the Framework Directive, NRAs can
define relevant markets as ‘appropriate to national circumstances’ providing they
follow the strict procedures set out in Articles 6, 7 and 15 of the Framework
Directive.

4.6.2. SIGNIFICANT MARKET POWER

The precondition for any ex ante obligation under the flexible approach is that the
enterprise in question must be designated as having significant market power for the
market in question. The Commission indicated that the definition of significant
market power used in the Communications Framework was equivalent to the
concept of dominance as defined in the case law of the European Court of Justice.782
One important difference, however, is that in the framework of the Access
Directive, significant market power is identified from an ex ante perspective. In
practice, this often means that the market analysis is based on a purely prospective
assessment due to the lack of evidence and records of past behaviour or conduct.783
The accuracy of the market analysis carried out by NRAs will thus depend on
information and data that exist at the time of the adoption of the relevant decision.
Further details are specified in the Commission’s Guidelines on market analysis and
the assessment of significant market power under the Community Regulatory
Framework for electronic telecommunications networks and services.784

The concept of a market-power-oriented threshold is based on the assumption
that bottleneck control is not necessarily harmful to competition, but that only
enterprises with a particular degree of market power can efficiently influence

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781 European Commission, Recommendation on Relevant Product and Service Markets, Explanatory
Memorandum, pp. 36-38.
782 For a critical discussion, see Larouche 2002, p. 137.
783 Accordingly, the outcome of the analysis by NRAs can differ from the outcome of general
competition law procedures.
784 European Commission, Commission Guidelines on Market Analysis and the Assessment of
Significant Market Power.
competition to their own advantage.\textsuperscript{785} As the Commission indicated, ‘mandated access is not appropriate in all markets and can have the disadvantage of discouraging investment in innovation by a platform operator’.\textsuperscript{786} This statement makes it all the more surprising that the Commission continues to maintain the absolute access obligation in Article 6 of the Access Directive rather than imposing access obligations only on enterprises with significant market power.\textsuperscript{787}

National NRAs must justify their decisions based on an analysis of the competition in the market in question and an assessment of the market position of the operator of any bottleneck facility. For this purpose, NRAs are bound to observing a specific market analysis procedure and market definitions as laid down in Articles 14, 15 and 16 of the Framework Directive. Additionally, the Commission issued, after consultation with the NRAs, the aforementioned Recommendation on Relevant Products and Service Markets as well as the Guidelines on Market Analysis and the Assessment of Significant Market Power. The Commission’s recommendation should identify markets ‘whose characteristics may be such as to justify the imposition of regulatory obligations set out in the specific Directives’.\textsuperscript{788} According to the Commission’s guidelines, the finding of significant market power is not only a matter of market share.\textsuperscript{789} NRAs must also take into account other criteria, such as the ease with which control over the infrastructure can be duplicated, the degree of product or service diversification, economies of scale and scope, the likelihood of new market entries that could constrain the market power of the established undertaking and the existence of barriers to market entry.\textsuperscript{790} In particular, the guidelines also address the issue of newly emerging or fast developing markets in which the market leader is likely to have a substantial market share but should be spared from overregulation.\textsuperscript{791} According to Article 15(1) of the Framework Directive, NRAs are required to take ‘the utmost account’ of the Commission’s Guidelines.

Where a national NRA determines that the relevant market is not effectively competitive, it should identify enterprises with significant market power in that market in accordance with Article 14 of the Framework Directive and impose

\textsuperscript{785} See also section 1.5.3. Access Directive, Recital 6: ‘In markets where there continues to be large differences in negotiating power between enterprises, and where some enterprises rely on infrastructure provided by others for delivery of their services, it is appropriate to establish a framework of ex-ante rules to ensure that the market functions effectively’.
\textsuperscript{787} See the critical discussion of Article 6 in section 4.4.2.
\textsuperscript{788} Framework Directive, Article 15 (1).
\textsuperscript{789} According to the European Commission, an enterprise with no more than 25% market share is not likely to enjoy a (single) dominant position, European Commission, Commission Guidelines on Market Analysis and the Assessment of Significant Market Power, paragraph 75.
appropriate obligations from a catalogue of possible initiatives, as provided for in Articles 9 to 13 of the Access Directive. However, in areas in which NRAs conclude that the market is effectively competitive, they should refrain from imposing sector-specific initiatives and withdraw any existing obligations (Article 16 (3) of the Framework Directive).

**Vertical Integration**

significant market power at the transport level is not the only motive for NRA intervention. In response to trends in information markets, NRAs can also interfere if they find that the specific position of an enterprise in a related market poses a particular threat to functioning competition:

‘Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the link between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking.’

In other words, where an undertaking has a dominant position in one market and a leading, not necessarily dominant position, in a related market, NRAs are entitled to assume that the enterprise holds a dominant position in both markets taken as a whole. Related markets can be horizontal or vertical markets. NRAs may also restrict activities of that enterprise in the related market, impose access obligations in any form and/or accompanying measures that provide for greater transparency and controllability, such as obligations concerning non-discrimination, price control and cost accounting. The Communications Framework might also give NRAs an important and effective means to meet the challenges of strongly vertically integrated markets and to prevent enterprises from abusing their economic strength by leveraging market power from one market into another.

NRAs, however, must not automatically jump to the conclusion that interference is needed in a related market. One must bear in mind, as was explained in Chapter 1, that leverage is likely to occur only in exceptional situations. Even if an enterprise has sufficient market power in both markets, this does not say anything about the profitability of leveraging. Consequently, NRAs should be careful before restricting the activities of an enterprise in the related market. And, as the European Commission claims, there are many cases in which interference in the related market is not even necessary. According to the Commission, NRAs will normally be in a position to prevent any likely spill-over or leverage effects from flowing into the related retail or service market by imposing on that enterprise any of the

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792 Access Directive, Article 8 (1).
793 Articles 8 to 13 of the Access Directive and Article 14 (3) of the Framework Directive
795 See section 1.5.3.
obligations provided for in the Access Directive.\textsuperscript{796} For example, NRAs may require a vertically integrated enterprise to make transparent its wholesale prices and its internal transfer prices to, among other things, ensure compliance with the non-discrimination requirement or to prevent unfair cross-subsidies.\textsuperscript{797} It should also be noted, however, that the abilities of NRAs to remedy spill-over or leverage effects is limited due to the limited competences of telecommunications NRAs to monitor content-related questions.\textsuperscript{798}

4.6.3. Access Obligation

Contrary to the regulation of access to conditional access systems, Articles 8 to 13 of the Access Directive are based on the principle of negotiated access. This means that it is expected that the concerned parties negotiate appropriate access agreements and conditions. In the case of interconnection agreements, the Access Directive even explicitly states that operators of public telecommunications networks have a right and, when requested by other enterprises, an obligation to negotiate interconnection with each other (Article 4 (1) of the Access Directive). Only when negotiations fail, are NRAs requested to impose adequate access, interconnection or interoperability obligations.

Flexible Approach

The ‘flexible’ approach under Articles 8 to 13 of the Access Directive stipulates that national NRAs are to impose specific ex ante obligations where these are necessary to ensure adequate access and interoperability in the market. Unlike under general competition law, access obligations do not require a preceding situation of market power abuse; the infliction of ex ante obligations is based on a prospective assessment.\textsuperscript{799}

The nature of the obligation will again depend on the requirements of the market situation. The final access obligation, thus, will be the result of case-by-case decisions, made under the authority of the national NRAs, which take the circumstances of each case into account. Such circumstances include the anticipated effect of an access denial on the overall competition, the market position and protection-worthy interests of the facility operator, the so-called ‘essential requirements’ (see section 4.6.5.).

The Toolbox

Once the NRA has identified a possible bottleneck situation that was caused by a provider of telecommunications networks or facilities with significant market

\textsuperscript{796} European Commission, Commission Guidelines on Market Analysis and the Assessment of Significant Market Power, paragraph 84.
\textsuperscript{797} Access Directive, Article 11 (1).
\textsuperscript{798} See section 4.4.4
\textsuperscript{799} See also Dommering/Van Eijk/Theeuwes/Vogelaar 2001, p. 59.
power, the NRA can choose from a list of possible responses the answer that is the most likely to restore the market balance and that has a proportional goal-remedy relationship. This is the so-called ‘toolbox’ approach. Remedies in the toolbox range from the ability to impose duties that are related to the provision of access and/or interoperability (see section 4.6.4.) to other measures that are aimed at preparing the ground for a sufficiently competitive and transparent environment so that market participants can negotiate access agreements on fair, reasonable and non-discriminatory terms. Examples are the obligation to make public accounting information, technical specifications, network characteristics, terms and conditions for supply and use, and prices (Article 9 (1) of the Access Directive as well as to publish reference offers (Article 9 (2) of the Access Directive). The ‘tools’ in the toolbox enable NRAs to create the conditions that make monopoly-controlled facilities accessible to rivals. Some of the tools are also aimed at encouraging the emergence of different platforms. Switching between different platforms is facilitated by interoperability arrangements and provisions requiring transparency, non-discrimination, accounting separation and price control. Not included in the toolbox is the ability to enforce structural separation measures, for example, in vertically integrated enterprises.

As for the obligation to allow access to one’s own facilities, Article 12 (1) of the Access Directive leaves it up to the NRAs to determine which initiatives are needed to ensure the openness of a particular facility. Different situations may require different initiatives to realize open access. This applies in particular to the more software-oriented elements of the telecommunications network, where accessibility depends on a complex interaction between different standards and interfaces. The set of optional initiatives clearly extends beyond the scope of Article 6 of the Access Directive as it is not restricted to the access to the facility itself, but also covers access to technical interfaces or operational support systems and initiatives that actively promote the interoperability of competing facilities and services. According to Article 12 of the Access Directive, NRAs can also be authorized to monitor the contractual relationship between the facility operator and the access requester even after access has been granted (Article 12 (c) of the Access Directive), for example, to ensure that granted access is not withdrawn; that access to operational support systems, such as customer and information management

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800 See Dommering/Van Eijk/Theeuwes/Vogelaar 2000, p. 97.
801 Note: As opposed, the Council Regulation on the Implementation of the Rules on Competition Laid Down in Articles 81 and 82 ECT entitles competition NRAs, here: the European Commission, to also adopt structural measures as of mid-2004, European Council, Regulation on the implementation of the Rules on Competition, Article 7: ‘any behavioural or structural remedies which are proportionate to the infringement committed and necessary to bring the infringement effectively to an end. Structural remedies can only be imposed either where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the undertaking concerned than the structural remedy’. But see also the critical discussion of this distinction in section 3.3.2. For a more general overview of possible remedies: Larouche 2000, pp. 325-329.
systems (Article 12 (h) of the Access Directive) is granted; that access to technical interfaces is granted, and that information, such as accounting information, technical specifications, network characteristics, terms and conditions for the supply and use of the system, and prices (Article 9 (3) of the Access Directive) are made available.

4.6.4. INTEROPERABILITY

Unlike the conditional access regulation, European telecommunications law has had a two-tier approach from the very beginning: it addresses (a) the vertical relationship between network operators and telecommunications service providers with the rules on fair, non-discriminatory access, and (b) the horizontal relationship between competing facility operators with the rules on interconnection and interoperability. The principle of open non-discriminatory treatment applies to both levels. The Access Directive adopted the approach of the former ONP Framework and modernized it in order to respond to the increased intelligence and complexity of telecommunications networks and associated facilities. In addition, it extends the Framework to cover other aspects such as the interoperability of services with middleware or software elements, and the provision of information and specifications needed to run an application or use a facility. In this context, interoperability obligations often work at the interface between the infrastructure and the service level because they guarantee that the services provided by means of a particular infrastructure element are interoperable with the facility itself as well as with other services using the same technical platform. Accordingly, the flexible approach gives NRAs room to oblige operators to actively promote the interoperability of services with the technical application environment, for example, by providing access to the operating systems or converter, or by requiring the installation of a common interface or other interoperability solutions. More importantly, NRAs can also require operators to make available information that is necessary to make systems interoperable, etc. (Articles 12 (e) and (g) of the Access Directive).

In addition, Article 5 (1)a of the Access Directive stipulates more generally that NRAs shall actively encourage, and where necessary and appropriate, also take more pro-active measures to ensure the interoperability of services. The NRAs’ task is to ensure end-to-end connectivity for end users where enterprises control access to end users, according to Article 5 (1)a. This provision mirrors the previously described Article 5 (1)b of the Access Directive, which applies to digital broadcasting, and here more specifically to the obligation to provide access to the API and/or EPG. In contrast, Article 5 (1)a provides a more general approach to

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addressing technical lock-in situations by imposing obligations to make systems interoperable or interconnected. For this purpose, NRAs can also impose conditions that refer to the implementation of specific technical standards or specifications (Article 5 (2) of the Access Directive). A precondition, however, is that they respect Article 17 of the Framework Directive, which stipulates the authorities of the European Commission in the field of standardization.

4.6.5. ESSENTIAL REQUIREMENTS

In areas in which NRAs have clearly identified the anti-competitive effect of potential access denials, the legal consequence is not necessarily the imposition of an access obligation or the application of another remedy. The Access Directive continues the proportionality approach (‘essential requirement’) of the former ONP Framework and limits access obligations explicitly to what is practically and technically possible and economically feasible. The obligation to grant access does not apply to situations where a third party’s access might cause disproportional technical or economic losses. According to Article 12 (2) of the Access Directive, when imposing access obligations on a case-by-case basis, NRAs must balance all of the interests involved and consider not only the technical aspects, such as system integrity and security, interoperability and capacities, but also the economic and wider competition policy aspects. Examples of such policy aspects are the need to allow enterprises to recoup initial investments, the long-term effects of access denial on competition, the need to consider the economic risks an enterprise runs when setting up certain facilities, and any of the facility provider’s property interests (Article 12 (2) of the Access Directive).

4.6.6. TERMS AND CONDITIONS

In areas in which terms and conditions of access and interconnection are not negotiated for an individual case, it is primarily the task of national NRAs to determine what fair, reasonable and non-discriminatory terms and conditions are and to impose adequate ex ante obligations. The NRAs’ task is facilitated by the ability to impose various transparency obligations (Articles 9 and 11 of the Access Directive). As far as the adequacy of terms and conditions is concerned, particular emphasis is placed on the aspect of price discrimination. Facility operators may be subject to tight price controls, including possible obligations regarding cost

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803 See also European Commission, Access Notice, paragraphs 87–98.
804 Article 12 (1) of the Access Directive reads: ‘National regulatory authorities may ... impose obligations on operators to meet reasonable requests for access to, and use of, specific network elements and associated facilities, among other things, in situations where the national regulatory authority considers that denial of access or unreasonable terms and conditions having a similar effect would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user’s interest’. Article 10 (2) of the Access Directive addresses discriminatory behaviour.
orientation and accounting systems (Articles 9, 11 and 13 of the Access Directive). The burden of proof that charges are derived from costs, including a reasonable rate of return on investment, lies with the facility operator (Article 13 (3) of the Access Directive).

Moreover, Article 17 of the Universal Service Directive applies. Article 17 of the Universal Service Directive acknowledges the consequences of monopolistic control over the consumer base in the form of contractual lock-ins and other forms of anti-competitive behaviour on competition and consumer welfare. The provision authorizes NRAs to monitor retail conditions. Where NRAs find that a given retail market is not competitive and access obligations under the Access Directive are not sufficient to make the market competitive, NRAs can impose additional obligations, such as terms and conditions that define how services are marketed to consumers. It is worth noting that NRAs are entitled to pursue competition and general public interests, such as maintaining the affordability and public availability of certain services for consumers.805

Cost-control and transparency play major roles in this context. The Universal Service Directive recognizes that, for reasons of efficiency and to encourage effective competition, it is important that the services provided by an enterprise with significant market power reflect consumer demand conditions and costs. Enterprises should not use their control over access to consumers to impose excessive or predatory prices on them.806 NRAs can also step in where enterprises show undue preference for certain consumers or unreasonably bundle services. According to Article 17 (2) of the Universal Service Directive, NRAs may therefore impose retail price cap measures, measures to control individual tariffs, or measures to orient tariffs towards costs or prices in comparable markets. According to Articles 21 (2) and 22 of the Universal Service Directive, non-regulatory measures such as the transparency initiatives mentioned in section 4.5. can also be used to make publicly available comparisons on retail tariffs, the quality of services and terms and conditions of access. These measures enable consumers to compare services and exercise their choice, and thereby realize the previously mentioned 'twin objectives'.807

4.6.7. SUMMARY

Articles 8 to 13 of the Access Directive implement a flexible concept for the regulation of access to technical bottlenecks. Instead of pre-defined bottlenecks and obligations, it is the task of the NRAs to identify critical bottlenecks within the context of the market situation and choose effective and proportionate remedies. NRAs dispose over a toolbox of possible remedies, including access, transparency

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and interoperability obligations as well as the monitoring of retail conditions to prevent abuse of monopolistic control over the consumer base in form of technical/contractual lock-ins or lack of comparable service information.

4.7. Two Conflicting Access Regimes

4.7.1. Ex Ante/Ex Post Control

The two access regimes outlined above could result in very different outcomes for telecommunications markets. The flexible access concept under Articles 8 to 13 of the Access Directive approaches the issue of bottleneck control within the context of the reality of market structures. Its efficacy depends on the choice of the appropriate remedy and the ability to adopt timely procedures. Articles 8 to 13 of the Access Directive establish a system of ex ante market control by which national NRAs regularly monitor market developments and identify sector-specific bottleneck situations. The flexible concept necessarily involves an element of legal uncertainty and subjective assessment due to the uncertainties of any ex ante assessment of market power and the fact that operators cannot necessarily foresee future obligations that might be imposed on them. This also means that the legal situation in national telecommunications markets could change quickly and in line with changes to the economic structure of the respective markets. As telecommunications markets will differ from Member State to Member State, it is also likely that the concept will result in different legal situations in the different national markets.

Conditional access facility operators that fall under Article 6 of the Access Directive will find a less dynamic and, at first glance, more continuous legal environment. The price for continuity and stability, however, is less flexibility to react to newly emerging bottleneck situations in the converging digital service sector in a timely manner and before lasting harm is done. Furthermore, upon closer scrutiny, the approach of Article 6 of the Access Directive gives rise to some legal uncertainty, although of another kind than under the flexible approach. The possible causes for the uncertainty are threefold: the reference to the somewhat outdated definition of broadcasting, the split supervision of NRAs, competition authorities and courts, and, finally, the impossibility of predicting the outcome of judgements in access conflicts. It remains to be seen whether the concept of judicial ex post control is efficient and cost-effective. As opposed to sector-specific NRAs, courts will generally lack the information and experience required to adequately decide cases of access refusal. The overall costs of obtaining a decision, the consequences of a prolonged situation of uncertainty (due to lengthy judicial proceedings) and the possible costs of enforcing decisions can make the absolute approach more inefficient than the flexible approach. In dynamic technology markets such as the pay-TV market, the time aspect plays a crucial role in effective regulation. As Dommering, Van Eijk, Theeuwes and Vogelaar observe, timing is one of the most
underestimated aspects in the regulation of the telecommunications sector.\textsuperscript{808} The success of the absolute approach and its ability to effectively guarantee fair access to conditional access facilities, EPGS and APIs will depend largely on whether legislators will succeed in predicting the relevant bottlenecks or defining them in a manner that is flexible enough to respond to technological changes or market conditions. It will also depend on the ease with which the law can be amended in response to changing technological and market conditions, and whether the responsible judicial bodies have sufficient competence and access to the necessary information to judge the fairness and adequacy of access conditions.

4.7.2. THE POWER OF THE NRAS

Undoubtedly, the flexible concept gives NRAs sufficient opportunity to evaluate the market situation, and in particular to identify bottleneck situations, the facility in question, the relevant market, and whether an enterprise with significant market power is active. It also gives NRAs some flexibility to choose the most appropriate remedy. Unlike court decisions, NRA decisions are also economically and politically motivated decisions that take market factors, competition policy and general public policy interests into account. This could allow NRAs to shape future market structures and conditions of competition for all bottleneck facilities (except conditional access and other technical facilities for broadcasting services). The NRAs’ powers, on the other hand, are limited due to the concept of strict separation between content and infrastructure regulation, which is not only immanent to the Communications Framework, but is also reflected in the way supervision over the service and transport sectors is organized. In response, there is a growing acknowledgement in the Member States that a strict separation between the content and the service level is increasingly difficult to maintain. This is why in some Member States, such as the UK and Italy, the regulatory authorities for both sectors were merged into one entity, while other countries, such as Germany, require the NRAs in the different sectors to closely cooperate.

The sector that falls under Article 6 of the Access Directive does not leave any or only little flexibility for NRAs to take competition or general public interest objectives into account and adapt their choice of remedies accordingly; this area is reserved for the legislator.\textsuperscript{809} Article 6 of the Access Directive mandates an absolute access obligation, principally irrespective of the market situation and whether other, more effective remedies are available. The goal of Article 6 of the Access Directive is to guarantee the openness of the conditional access platform. This is done with a

\textsuperscript{808} Dommering/Van Eijk/Theeuwes/Vogelaar 2001, p. 98. ‘Timing is een van de meest onderschatte aspecten bij de regulering en het toezicht in de communicatiesector’ [Timing is one of the most underestimated aspects in the regulation and supervision of the communications sector. Translation by the author]. Neumann 1998, pp. 33-35 on the particularly high financial risks and difficulties during the entrance phase.

\textsuperscript{809} Different opinion Cave/Cowie 1998, section 5.
view towards protecting the interests of competing broadcasters, consumers and general public interest objectives by ensuring that the market for access-controlled services is not impeded by undue bottleneck control. It is up to the courts to evaluate the adequacy of access obligations. The courts’ decisions are made on a case-by-case basis, they will focus less on medium or long-term market or public information policy considerations.

4.7.3. STIMULATING VS. DISCIPLINING

Articles 8 to 13 of the Access Directive do not predetermine the remedies that may be imposed on operators because the choice of remedies depends on the case being treated and the ‘the nature of the problem’.

For facility operators that fall under the flexible approach, this means being exposed to a level of uncertainty in terms of the applicable obligations and their scope. On the other hand, NRAs are explicitly encouraged to take the valid economic interests of the facility operator into account, notably the investment made by the operator and its chances of a reasonable return on investment. The NRAs are also encouraged to take the facility operator’s risks into account, as well as the technical and economic viability and the feasibility of imposing access or other obligations. Less economically powerful operators, for example, those without significant market power, will only be burdened with specific obligations in exceptional circumstances.

If correctly exercised, the flexible approach could be a powerful tool for stimulating investment and innovation in the respective markets because it leaves room for investment-friendly and market-policy-oriented choices. In contrast, the absolute access obligation is primarily a tool for disciplining facility operators and prosecuting the abuse of market power. It leaves little room for political market considerations or initiatives to mitigate the deterrent effect an absolute access obligation might have on investment and innovation. The conceptual difference between the two approaches is likely to be reflected in the outcome of decisions in access conflict cases.

4.7.4. NEGOTIATED ACCESS VS. MANDATED ACCESS

Another difference is that Articles 8 to 13 of the Access Directive apply the concept of ‘negotiated’ access rather than that of ‘mandated’ access under Article 6 of the Access Directive. Since one of the objectives of the flexible approach is to create a transparent negotiation-friendly environment, facility operators that fall under Articles 8 to 13 are very likely to experience additional transparency obligations regarding the conditions of supply and the obligation to publish reference offers, etc. Another important difference between the flexible approach and the absolute access concept is that the former mandates the imposition of elaborate obligations.

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concerning pricing and accounting. The flexible approach refers to the economic adequacy and reasonableness of prices, including retail prices. In addition, under the flexible concept NRAs are also entitled to monitor retail conditions in terms of the way services are marketed to consumers. As a result, under the flexible concept, enterprises initially enjoy more negotiating power than under the absolute concept. However, under the flexible approach, NRAs have considerable power to monitor and influence the terms and conditions of access agreements—probably even more than under the absolute approach.

4.7.5. STIMULATING COMPETITION

Both models aim at opening markets to competition and both pursue, to varying degrees, the idea of deregulation. However, there are two major differences in the way they approach this goal. One difference is the way both concepts approach questions of interoperability. The other difference is the role that individual consumer-service-provider relationships play in the NRAs’ monitoring activities.

As to the first difference, the strategy of the flexible approach is twofold. First, regulation aims at preventing the anti-competitive use of market power in the form of bottleneck control by monitoring the behaviour of major players in a national market and intervening where necessary. The idea is to guarantee unprejudiced access to the service level by mandating access to a technical platform in order to prevent facility operators from leveraging economic power from the transport level to the service level. Second, the flexible approach strongly mandates interoperability solutions to encourage competition at the transport level. This further reduces the chances of leverage and of a technical service or facility of becoming a lasting bottleneck facility. Ideally, this concept will create a number of alternative facilities that compete ‘within the [facility] market’ rather than ‘for the market’. From the consumer perspective, competition would occur at levels such as price, quality, product features and support services, rather than be a race to establish a dominant standard. Programme and application providers can benefit from this situation, as they will probably be able to choose from alternative technical facilities that compete in terms of quality and service conditions.

In contrast, Article 6 of the Access Directive focuses on opening up the technical platform to competing broadcasters by imposing behavioural rules on the conditional access operator and controlling ex post the adequacy of access conditions. Article 6 of the Access Directive does not promote competition between the different technical platforms but access to the dominant platform. It is worth noting that this is in contrast to the findings in some of the Commission’s merger decisions that ascribed major importance to inter-platform competition, including competition between different conditional access standards. As a result of the

811 See also Shapiro 1998, p. 9.
812 See section 3.3.1.
application of Article 6 of the Access Directive, and from the broadcasters' point of view, there would be principally no need to establish a second conditional access system since the standard of the first-come is firmly established and access to this technical platform can be enforced. It is left up to the industry to develop and apply interoperability solutions for the technical pay-TV platform, be it with a view towards conditional access or API interoperability. If industry negotiations fail, competition in the pay-TV sector will continue to develop mainly as a competition ‘for the market’ in which competitors strive to establish the dominant standard and secure their market position. Presumably, the first mover—or alternatively the operator of the most popular service platform—will establish a de facto standard that does not even have to be the most technologically advanced or consumer-friendliest.

Arguably, Article 6 can also stimulate competition in the pay-TV sector if it encourages the market entry of smaller service providers that cannot afford to operate their own system. It is questionable to which extent these smaller operators will indeed be able to discipline the behaviour of a dominant pay-TV operator. Much depends on whether Article 6 of the Access Directive is an efficient tool to protect the economic and editorial independence of service providers that are carried via this platform. On the other hand, the absolute concept could have a deterrent effect on larger platform operators, meaning potential competitors at the service level who intend to operate their own conditional access system. This is because the lack of mandatory interoperability solutions can generate incalculable risks for launching their own system.

As far as the aspect of monopolization of the installed consumer base is concerned, accessibility for consumers to digital broadcasting services is one of the goals declared in Articles 5 and 6 of the Access Directive. However, the provisions do not address issues of individual consumer access to pay-TV platforms. They focus instead on creating conditions that allow consumers that are subscribed to one pay-TV platform or use one particular decoder technology, to access services from other service providers using that particular technology.

More generally, the Access Directive is not concerned with questions regarding the consumer-service-provider relationship, such as the issues of technical and contractual lock-ins or the information problem that were discussed in Chapter 1. As far as access to telephony, the internet or other telecommunications services is concerned, the provisions of the Universal Service Directive apply and address such issues. This is done in form of provisions dealing with unjustified bundling, unfair pricing, the availability of comparable service information and matters of interoperability. Insofar, social and general public interests can be taken into account when assessing the adequacy of the terms, conditions and prices of services at the retail level. This does not apply, however, for broadcasting services.
<table>
<thead>
<tr>
<th>Competent authority</th>
<th>Article 6 Access Directive</th>
<th>Articles 8 to 13 Access Directive</th>
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<tr>
<td>Mixed competencies of national legislators, courts, NRAs and competition authorities</td>
<td>Wide scope of judgement and interference for NRAs</td>
<td></td>
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<tr>
<td>Character of control</td>
<td>Ex post control</td>
<td>Ex ante obligations</td>
</tr>
<tr>
<td>Definition of bottlenecks</td>
<td>Predefined bottlenecks</td>
<td>Flexible definition of bottlenecks, dependent on market structure and subject to timely technological change</td>
</tr>
<tr>
<td>Access obligation</td>
<td>Absolute access obligation for all CA providers, irrespective of degree of market power and level of vertical integration</td>
<td>Specific initiatives which focus on targeting vertical concentrated structures</td>
</tr>
<tr>
<td>Applicable to</td>
<td>Applicable to all operators of CA who produce and market access services for digital television</td>
<td>Applicable only to operators with considerable market power (exception: Article 8 (2))</td>
</tr>
<tr>
<td>Focus</td>
<td>Principle of mandated access prevails</td>
<td>Principle of negotiated access prevails</td>
</tr>
<tr>
<td>Remedy</td>
<td>Predefined access obligation, while further definition of conditions left to the interpretation of the general notion of 'fair, reasonable and non-discriminatory'</td>
<td>Actual obligations depend on 'nature of the problem'</td>
</tr>
<tr>
<td>Interoperability</td>
<td>Questions of interoperability left in the first place to market players</td>
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</tr>
<tr>
<td>Accompanying measures</td>
<td>Accompanying measures restricted to the obligation to keep separate financial accounts regarding activity as CA provider. Licensing of CA to decoder manufacturers at fair, reasonable and non-discriminatory conditions</td>
<td>Catalogue of possible ex ante obligations exceeding the actual access provision and extending to initiatives with the intention of preparing the ground for fair access negotiations in a competitive environment (e.g. transparency obligations and price control, obligation to accounting separation, cost accounting obligations)</td>
</tr>
<tr>
<td>Limits</td>
<td>-</td>
<td>Essential requirements, Article 12 (2)</td>
</tr>
<tr>
<td>Goals promoted</td>
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<td>Competition at service level Competition at transport level Innovation, investment at transport level Deregulation Stimulate inter- and intra-platform competition</td>
</tr>
</tbody>
</table>

Table 2—Comparison of Article 6 and Articles 8 to 13 of the Access Directive. Table 2 compares Article 6 to Articles 8 to 13 of the Access Directive using different criteria.
4.7.6. Summary

The existence of two such disparate approaches to bottleneck control in the broadcasting and non-broadcasting sector is likely to lead to considerable inconsistencies in the market structure for both the digital TV broadcasting and non-broadcasting service markets. Conceptually, one system promotes full competition at both levels (the transport and the content service level), while the other might have the opposite effect of consolidating the dominance of one conditional access platform that is commonly also associated with the dominant service platform. Both concepts will have very different effects on competition, innovation and consumers. Very likely, only a flexible approach will leave enough room to actively stimulate innovation and investment in digital broadcasting markets and encourage larger service providers and conditional access operators to enter the market.813

The uncertainty is very prominent in areas in which the two regulations overlap, as is the case with advanced conditional access systems that provide access to both broadcasting and information society services. By distinguishing between providers of access-controlled broadcasting and non-broadcasting services, the Access Directive submits them to very different legal regimes. At the same time, the operators will be the target of contradictory economic impulses, as one regulation can aim at competition between alternative systems, while the other aims at stability and continuity with respect to existing systems. The resulting incoherence in market structure and policy might seriously impede the development of the market for advanced access-controlled content services, such as interactive services that are offered at pay-TV platforms as well as broadcasting services that are streamed via the internet.

4.8. Absolute Approach versus Flexible Approach

Section, 4.7, illustrated that the Access Directive maintains two different and even contradictory access regimes for technical facilities, and that this could lead to considerable legal uncertainty and inconsistency. In section 4.8., arguments in favour and against both approaches are weighed to determine which approach is better-suited to deal with bottleneck situations in pay-TV.

The need for and the character of public intervention depends to a large extent on the structure of the markets in question and on their openness. Obviously, there is a delicate balance between the advantages of an access obligation and the possible

813 See, for example, Shelanski/Sidak 2001, who argue that the drivers of innovation are the major players rather than small newcomers, p. 124. However, examples such as the case of joint control of German Telekom over the cable and the telephone network illustrate that the opposite can also be true, whereby internal conflicts of interests and structural inflexibility can block innovation (in this case, investment in broadband technology).
adverse effect on competition and investment. An ‘access-at-any-price’ approach may not only be detrimental to its goals, but may also be questionable from a constitutional point of view. To be justifiable, any approach to access regulation must be proportionate and sufficiently balanced to adequately consider the legitimate interests and constitutional freedoms of all of the parties involved, meaning the parties requesting access as well as the facility operator.

Imposing an absolute obligation on conditional access operators to grant access to their system might facilitate the entry for new access-controlled services. It could be a viable instrument for addressing the high entrance risks and costs that could deter competitors from entering the market. Newcomers would not be under pressure to invest in new technical facilities because they would have access to existing facilities. Conditional access controllers would be widely deprived of possibilities to fight market entry with access refusals since they would be legally obligated to provide access to their systems.

On the other hand, are all conditional access systems by definition obstacles to market entry? Chapter 1 explained why it is so difficult to identify critical bottlenecks. The definition of critical bottlenecks is a process that must take particular market situations and a sector’s competition and general public policy goals into account. The greatest difficulty with any ex ante access obligation is probably the identification of critical bottlenecks. The price for legal certainty in dealing with bottleneck situations is that a predefined access obligation can quickly become outdated and even harmful in a fast moving technology and economic environment, and thus fail to achieve its goal.

4.8.1. When is a ‘Bottleneck’ a Bottleneck?

Enterprises that specialize in the development and installation of conditional access systems do not automatically have an incentive to reduce the availability of the conditional access system to competitors or to discriminate against access requesters. In the absence of additional circumstances, why would an economically minded enterprise refuse to sell its technology to as many users as possible and profit from the resulting profits and economies of scale? It is often argued that the degree of vertical integration in the pay-TV sector would not only create the possibility but also the incentive for pay-TV operators to leverage market power using bottleneck control. But as was explained in Chapter 1, those views too easily ignore that leverage is not necessarily a profitable, and therefore likely, strategy. The existence of a bottleneck situation and the occurrence of leverage

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814 See section 1.5.3.
815 See section 1.5.3.
816 See also Besen/Farrell 1994, 122pp.
818 See section 1.5.3.
depends on, among others, the competitive strength of the enterprise in question, the degree of concentration in the markets for conditional access systems and access-controlled services, and the existence of obstacles to market entry.\textsuperscript{819} Even in vertically integrated structures, pay-TV operators may have valid economic incentives to admit competing operators to their conditional access system and service platform. A rich array of content could enhance the attractiveness of their own platform. Hence, it seems that it is not the control over the conditional access facility itself that threatens to block market entry, but the existence of additional structural factors that accompany this control. Consequently, simple control over facilities does not justify limiting the operators’ property rights and contractual freedom by imposing access obligations.\textsuperscript{820} Such overregulation can interfere with legitimate business practices, render a service inefficient and harm competition and consumer welfare. It can also create a disincentive to innovate and invest in the development and maintenance of an own technical platform. Accordingly, at least the European Court of Justice subjects the analysis of alleged bottleneck facilities in competition law cases to a strict and critical assessment.\textsuperscript{821} With this in mind, and against the background of the intended deregulation of the telecommunications sector, it is difficult to see why facilities in digital broadcasting should be more strictly regulated under Articles 5 (1)b and 6 of the Access Directive than they would be under general competition law, unless there are other reasons that would require the stricter approach (see section 4.8.5.).

In order to adopt effective, innovation-friendly and proportionate regulation, it is necessary to specify the circumstances that make a facility or service a bottleneck. Factors that can favour bottleneck situations can be, for example, the existence of indirect network effects, individual and collective adaptation costs as well as the lack of adequate interoperability solutions.\textsuperscript{822} This is particularly true for bottleneck situations at the upper levels of the telecommunications model, such as the conditional access system. The conditional access bears little resemblance to the natural monopoly situations that the former ONP framework sought to address. Natural monopolies describe situations in which demand for a particular service or facility can be best and most efficiently served by a single operator.\textsuperscript{823} Usually, this concerns resources whose capacities can be extended only with difficulties, due to the technical and economic particularities of a sector. Examples for sectors that are often considered susceptible to natural monopolies are the energy and telecom networks. The existence of natural monopolies is an extreme case of market

\begin{itemize}
\item \textsuperscript{819} See section 1.5.3.
\item \textsuperscript{821} See section 3.4.1. As far as access to the conditional access system is concerned, this is already reflected in Article 6, Annex I, Part 1 (b) of the Access Directive. This is different for the facilities in Annex I, Part 2, notably the API and the EPG. But both Article 6 and 5 (1)b of the Access Directive allow the imposition of access obligations even in the absence of significant market power.
\item \textsuperscript{822} See section 1.5.2.
\item \textsuperscript{823} See Herdzina 1999, p. 41.
\end{itemize}
development. Usually, the technological and economic conditions will restrict the number of potential competitors (oligopoly) without necessarily excluding any chance of competition.

Bottleneck situations in pay-TV are often the result of the economic strength and the control of a proprietary standard. The co-existence of several competing conditional access standards in larger markets such as France, Italy, the UK, Germany or The Netherlands, seems to suggest that access-controlled service providers do not necessarily have to depend on one particular conditional access operator, but that alternative systems can live alongside each other. In other words, often it will be the proprietary control over a dominant conditional access or API standard that provides enterprises with sufficient market power to effectively exclude third parties from accessing a conditional access platform or its underlying content platform.

In contrast, the flexible approach under Articles 8 to 13 of the Access Directive makes regulatory interference in potential bottleneck situations dependent on a finding of significant market power as well as on a more comprehensive assessment of the actual market situation. It has to be acknowledged, however, that Article 6 (3) of the Access Directive leaves NRAs some room to perform a market analysis for conditional access facilities and to restrict the imposition of access obligations, at least, to operators with significant market power, too. Within the context of the market analysis and according to Articles 16, 14 (3) of the Framework Directive, NRAs are also entitled to take into consideration the involvement in related markets, such as a market for access-controlled services, the possible interaction between both markets, and the likelihood of new market entries. On the other hand, section 4.4.2. has been demonstrated that the provision is difficult to apply in practice.

Moreover, according to Article 5 (1)b of the Access Directive, such possibilities are not provided for in the regulation of EPGs and APIs. Bearing in mind that Article 5 (1)b, in combination with Annex 1, Part 2 of the Access Directive, could become the main tool used to deal with unforeseen bottlenecks in digital television, the lack of a more comprehensive requirement to analysis the economic conditions is deplorable and potentially harmful to innovation and competition.

4.8.2. CONDITIONAL ACCESS IS NOT RESTRICTED TO DIGITAL BROADCASTING

While the scope of Articles 5 (1)b and 6 of the Access Directive appears to be too broad in some respects, it is certainly too narrow in others. As far as bottlenecks in digital broadcasting are concerned, the Access Directive and the relevant provisions in the Framework Directive and the Universal Service Directive have a strongly technology-dependent approach. The Communications Framework still

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distinguishes between broadcasting and non-broadcasting services. To this extent, it clearly fails to live up to its promise to create the conditions for an effective, horizontal framework for the regulation of convergent service markets.

To begin with, conditional access, APIs and EPGs are not the only potential bottlenecks in pay-TV, and it cannot be excluded that, with further technological development, new and unheard of facilities will emerge and become bottlenecks to market entry. As far as telecommunications services and facilities in general are concerned, the flexible bottleneck concept in Articles 8 to 13 of the Access Directive is open and sufficiently technology-independent to respond to newly emerging bottleneck situations. This is not the case for newly emerging bottlenecks in pay-TV. To cover them will require amending at least Annex 1, Part 2 of the Access Directive.

Second, conditional access is not a problem that is restricted to broadcasting. The use of conditional access is no longer (and probably never was) restricted to the distribution of digital broadcasting content. With progressing convergence, providers of other non-broadcasting services require access to the technical pay-TV platform. Modern pay-TV platforms also offer e-commerce services, access to the internet, and internet-based services. Likewise, conditional access solutions can, as explained in Chapter 1, appear in the non-broadcasting environment. ‘Pay-TV’ services can be received via the internet or mobile platforms. Conditional access can also be a part of technical solutions that have nothing to do with broadcasting or broadcasting-like services at all, for example, when it is implemented in DRM solutions. The same is true for EPGs and the API. The equivalent of an EPG can be an electronic directory service, a search engine or a web browser. And APIs can be found in set top boxes as well as in portable devices, in computers and mobile phone devices. It is difficult to understand why the operators of such facilities are treated differently based on whether they are active in what was traditionally considered the broadcasting sector or the non-broadcasting sector.

Third, by distinguishing between providers of access-controlled broadcasting and non-broadcasting services (for example, providers of on-demand services that are delivered via the internet), the Access Directive creates artificial distinctions between different kinds of services that are potentially received via the same set top box. More importantly, the directive creates a considerable level of legal uncertainty as to whether and under which provision(s) the following cases fall under the Communications Framework:

- Access by service providers to conditional access solutions for an internet or mobile platform environment.
- Access by service providers to conditional access solutions that control access to both broadcasting and IS services.

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825 See section 1.4.1.
826 See section 1.4.3.
827 See section 1.2.
— Access by service providers to bottlenecks in digital television other than the conditional access, the EPG or the API (for example, access to the billing system).

— Access by service providers that do not qualify as broadcasters in the traditional sense.

Finally, operators of convergent access-controlled platforms will be left with considerable legal uncertainty if they have to open their facilities to third parties, and the conditions and supervisory regime they should be subject to.

The conflicts in the current approach will therefore particularly affect providers of digital services and/or facilities that do not clearly fall under Articles 5 (1)b, 6 or Articles 8 to 13 of the Access Directive, or where the two legal regimes overlap. The consequence can be either a regulatory gap or overregulation. One might argue that none of the situations listed above fall under the scope of Articles 5 (1)b or 6 and that they therefore fall under the more general framework of Articles 8 to 13 of the Access Directive. The applicability of Articles 8 to 13 of the Access Directive to conditional access and other facilities that do not fall under Articles 5 (1)b and 6 of the Access Directive would require, however, the definition of a relevant market. As far as facilities other than transmission networks in digital broadcasting are concerned, no such market has been defined yet, at least not at the European level.

4.8.3. PITFALLS OF ABSOLUTE SOLUTIONS

Providing that NRAs succeed in identifying a bottleneck situation, the issue of finding the best remedy to bottleneck control still remains. Obliging the operator of a technical pay-TV platform to grant access to the conditional access system, the EPG or the API is certainly an option. However, with the increasing sophistication of the technical distribution process, and depending on the market structure, other remedies might prove to be more effective. In areas in which applications are written in different formats, access to the API may be less crucial than knowledge of its technical specifications and standards. If the conditional access operator is willing to grant access to the API but makes only limited capacities in the set top box memory available, the obligation to provide for sufficient capacity might be more appropriate. Moreover, the way in which services are marketed to consumers, the size of the bundles and the prices requested could form no less of an obstacle to market entry and functioning competition, even if access to the conditional access system were granted. Here, it might be necessary to monitor the retail conditions in pay-TV markets.

On the other hand, any legal framework should give the NRAs sufficient room to take the legitimate interests of the facility operator into account. A few examples of legitimate interests are capacity constraints, security concerns or the need to recoup investments. The point made here is that it is difficult to formulate, as Articles 5 (1)b and 6 of the Access Directive do, a predefined one-fits-all response to bottleneck control. This is the reason why the Communications Framework in
Articles 8 to 13 of the Access Directive opted for a more flexible concept of bottleneck definition and regulation. It remains to be seen if the approach is indeed more flexible or whether procedural obstacles, difficulties in identifying and enforcing the adequate remedies, and time-consuming market definition procedures will prevent effective and timely initiatives. One thing, however, is certain: remedies are proportional and constitutional only where they are necessary and effective in achieving their goals and where no other, less stringent measure is available to achieve the same goal. A more flexible approach is more likely to accommodate these concerns than the absolute approach.

4.8.4. INTEROPERABILITY

So far, the discussion focussed on the openness of a technical pay-TV platform for competitors. There may be situations in which service providers are not even interested in using a third party’s platform, but wish to operate their own technical platform, for example, for security reasons, strategic marketing reasons, or because another technical system is superior. The presence of a dominant, proprietary standard can have a discouraging effect on these operators. Arguably, mandating interoperability could result in more competition in the facility and service market, because it would encourage the market entry of parties that prefer to operate their own technical conditional access platform, instead of using an existing one. An intra-platform scenario could, for consumers, very well lead to lower prices, more choice, broader availability of services across different platforms, diversity, etc.

The example of the Global System for Mobile Communications (GSM) standard showed that mandating one common standard could substantially increase consumer welfare and acceptance. Other examples of successful standardization are the digital compression standard DVB-Moving Picture Experts Group (MPEG) 2 and the standards for digital transmission (DVB-S, DVB-T, DVB-T) that paved the way for the proliferation of digital television, but also for the MPEG Audio Layer 3 (MP3) and the DVD standard.

The Access Directive recognizes for all facilities that fall outside of the scope of Articles 5 (1)b and 6 how important some form of interoperability between telecommunications services and/or other facilities can be as a precondition for functioning competition and consumer freedom of choice. According to Articles 5 (1)a and 12 of the Access Directive, NRAs have far-reaching authority to mandate interoperability for telecommunications facilities and services at all levels of the telecommunications infrastructure. In contrast, as far as facilities that are affiliated

829 See only Besen/Farrell 1994, p. 120.
831 Meaning at the level of physical infrastructure (interconnection between networks), network and carrier services (for example, roaming, switching) and teleservices (compatibility of operating systems), see section 1.3.
with the technical pay-TV platform are concerned, the European Union has adopted a more cautious approach and only encourages Member States to promote the MHP standard for the API. Having said that, the difficult and fruitless discussion in the European pay-TV market on achieving a common industry standard provides an example of the obstacles that must be overcome before an industry-driven standard can be achieved. Moreover, APIs are only one of many facilities that can cause interoperability issues. Similarly, and no less important, obstacles to the widespread availability of digital services at different platforms include the interoperability between rival conditional access systems, electronic payment systems, DRM systems, media players and plug-ins, and hardware devices.

This is not to say that interoperability solutions are always beneficial. A negative example was the DH-MAC experiment. Here, neither the industry nor consumers were prepared to accept a standard that was officially mandated but soon perceived as outdated and inferior. In such situations, mandated interoperability solutions can backfire and actually freeze standards that are technically not optimal, but are the result of a political decision. Publicly mandating one specific interoperability solution not only risks promoting an inferior standard, it can even be in conflict with the EC Treaty, as Spain experienced with the way it promoted the Multicrypt standard.

Moreover, the experiences gathered in telecommunications regulation demonstrate that the practical difficulties of enforcing interoperability can be considerable. This became evident when the telecommunications networks were interconnected as a means of achieving interoperability in the fixed telephony market. One aspect that makes enforcing interoperability so difficult, is the fact that interoperability solutions are often enforced against the will of the incumbent who has chosen a particular (proprietary) standard for strategic reasons. For example, in the case of conditional access, control over a dominant conditional access standard can be an effective means of monopolizing large parts of the consumer base. As a consequence, enforcement procedures can be complicated and cost-intensive. Forcing conditional access operators to make their system interoperable with other conditional access systems, and compatible with competing applications, could also mean discouraging competition. For example, Playstation owners certainly benefit from the fact that Playstation competes with the X-Box in terms of hardware and by producing more and more attractive games. One might wonder whether Microsoft and Sony would invest the same effort if their game consoles were compatible. In other words, the interoperability approach could remove important incentives to invest in ever more advanced technologies and new applications.

832 A concise overview of the different economic arguments in favour and against mandating interoperability is given in Van Geffen/De Nooij/ Theeuwes 2002, pp. 55-64.
833 See section 4.2.1.
834 See section 4.4.3.
835 See section 1.5.2.
On the other hand, if the devices were compatible, Playstation consumers could buy more easily games by Microsoft and vice versa, thereby stimulating the demand for more and better games from different sources.\(^{836}\) Also, more third-party game writers might feel inclined to write applications that are compatible with both platforms. It is also unclear how much innovation consumers are willing to accept. Will consumers constantly buy the newest hardware or software updates? Or will the majority of consumers be content with durable and user-friendly devices? The answer to this question will probably also depend on the kind of services that are transmitted through the set top box—simple broadcasting services or video games and other more sophisticated applications.\(^{837}\) The decision of whether or not to impose interoperability is, thus, also a question of policy objectives for each sector,\(^{838}\) for example, whether to support competition in or between platforms.\(^{839}\)

In any case, any decision to intervene should be the result of careful consideration about the need for intervention, the costs and the expected benefits.\(^{840}\) This can also be the general obligation to make systems or services interoperable or compatible, without actually deciding on one particular standard. Again, the transport level cannot be seen separately, and regulatory goals for the service level can influence the final decision. Arguably, from a public information policy point of view, interests of consumers of films and other broadcasting content might be better served if consumers are able to access a broad range of content without having to invest in ever newer and better hardware because this could stimulate broad and affordable access opportunities and prevent social exclusion. This could be another argument in favour of giving NRAs the power to impose interoperability obligations in the digital broadcasting sector.

\(^{836}\) See also Besen/Farrell 1994, 119pp.


\(^{838}\) See also the comprehensive discussion in Larouche 2000, pp. 382-388 and 388-398; Van Geffen/De Nooij/ Theeuwes 2002, pp. 55-64.

\(^{839}\) Besen/Farrell, pp. 120 and 121pp., see also the papers by Farrell/Saloner 1985; Shapiro 2000, 7pp and 13pp., Larouche 2000, 383pp. See also sections 3.3.1., 3.3.2. and 4.4.2.

\(^{840}\) In this sense also e.g. Larouche 2000, p. 397.
4.8.5. **Reasons to Maintain Article 6 of the Access Directive**

The previous analysis begs the question of why the absolute access obligation in Articles 5 (1)b and 6 of the Access Directive should be maintained. Why not move to a more flexible approach, such as that provided for in Articles 8 to 13 of the Access Directive? Not only do Articles 8 to 13 of the Access Directive allow for a more flexible, technology-independent definition of bottleneck facilities that also takes the actual market power and structure into account. They also allow for a more flexible ‘toolbox’ of instruments to remedy bottleneck control, which may be better suited for the dynamics of information markets.

One important argument that favours treating bottleneck situations in digital broadcasting separately, concerns the purportedly substantial differences in industry structure between the broadcasting and telecommunications sectors.\(^{641}\) However, control over access to the conditional access system and/or other elements of the transport level raises similar questions and concerns in the broadcasting and non-broadcasting sectors:

- In both sectors, a third party seeks access to the distribution infrastructure or parts thereof to generate profit from the consumer base the access provider controls.
- Likewise, monopolistic use of and refusal to grant access to the facility can block access to related markets and hinder potential competition and new market entries.
- The governing regulatory approaches to bottlenecks in the digital broadcasting and telecommunications sectors in general aim at market openness and deregulation.
- The focus of each set of rules, be it the regulation of bottlenecks in pay-TV or the regulation of bottlenecks in telecommunications markets, is the obligation to grant access to networks and facilities on fair, reasonable and non-discriminatory terms.
- Both sets of rules deal with arguments of scarcity and the balance of conflicting economic interests of the facility operator, competitors and consumers.

Still, one could argue that an absolute access obligation such as that in Article 6 of the Access Directive would ensure more legal certainty and should hence be maintained. On the other hand, as the analysis shows, it is still far from clear whether Article 6 of the Access Directive really provides for more legal certainty than, for example, Articles 8 to 13 of the Access Directive. Although this seems to be the case at first glance, this form of certainty is unreliable because it is based on parameters that may cease to be crucial. The most obvious example is the technology-dependent bottleneck definition at a time when it is becoming increasingly difficult to identify what broadcasting is. Other causes for legal

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\(^{641}\) For a concise overview of the industry arguments for and against a common treatment, see Ovum 2001, pp. 14-15.
uncertainty are the vague scope of the access obligation according to Article 6 of the Access Directive, the lack of guidelines of what adequate, non-discriminatory and fair terms and conditions are, and the unpredictable outcome of court decisions in access conflicts.

It is probably true that the process of determining market power up front brings an element of uncertainty with it. This applies in particular to the digital broadcasting sector, which has vertically integrated structures and fragmented audiences. However, ease of application should not be at the expense of an appropriate and proportionate solution. In areas in which the problem is less the control over the technical facility itself than that its use within the context of the market structure, the market structure should be tested for bottlenecks.

It is also argued that the regulation of broadcasting has traditionally required different and stricter rules because of a particularly strong social and public interest in the regulation of broadcasting.\(^{842}\) This study is not the place to demonstrate whether this general policy argument is still valid. But even without such a demonstration, the argument is not very convincing within the context of the regulation of access to the technical platform. The Communications Framework claims that it is technologically and content neutral. This is also true for the technical pay-TV platform.\(^{843}\) As discussed earlier, the European Parliament’s suggestion to apply must-carry rules to pay-TV platforms was dismissed because the content-neutral Article 6 of the Access Directive was said to be sufficient when dealing with this kind of bottleneck problem.\(^{844}\) Moreover, as explained in Chapter 2, the fact alone that some access-controlled broadcasting services are distributed and marketed through access-controlled intermediary platforms does not necessarily endanger the realization of public information policy objectives for this sector. Rather, it is the way access-controlled services are marketed to consumers that triggers public information policy concerns.\(^{845}\) This again is a question that principally falls under the Communications Framework, even if the relevant rules have not yet been extended to the broadcasting sector.\(^{846}\)

Finally, one reason to maintain Article 6 of the Access Directive could be the existence of urgent consumer interests. This is the need to protect consumers from so-called decoder towers, meaning a situation in which consumers have to install more than one set top box to receive broadcasting programmes from competing providers. Article 6 of the Access Directive could bring peace to the set top box war. The obligation of the established pay-TV operators to grant other broadcasters access to their conditional access platform may clear the way for the joint use of a single set top box. Consumers could then choose from competing offers without

\(^{842}\) See Access Directive, Recital 10. See also section 2.2.

\(^{843}\) See Access Directive, Article 6 (4). The act of providing broadcasting content still falls under the regime of broadcasting law.

\(^{844}\) See section 2.3.3.

\(^{845}\) See section 2.2.1.

\(^{846}\) See also Access Directive, Recital 10.
having to face the costs of acquiring additional set top boxes. Ideally, the absolute access obligation would generate a pluralistic offering of competing broadcasting programmes that can be received through the same conditional access platform.

On the other hand, one may wonder if the decoder-towers argument is still valid, or, if it is, if decoder towers are the lesser evil. As previously explained, Article 6 of the Access Directive does not necessarily guarantee that consumers get the best and most innovative decoder standard; the provision supports the standard of the first mover. Moreover, the prices for set top boxes keep falling and many operators subsidize the provision of set top boxes for consumers. Finally, a regulation that promotes the consumers’ ability to switch between different platforms and protects them against technical lock-ins would be equally, if not more, suitable to obviate abuse of monopoly power and encourage consumers to invest in hardware. If an adequate interoperability regime existed, there would be no standards war.

4.8.6. ARE ACCESS OBLIGATIONS THE OPTIMAL REMEDY?

A different question altogether is if access obligations are at all the optimal answer to monopoly control over technical facilities in pay-TV. The answer to this question is not only a matter of telecommunications regulation, but an assessment of the wider public information policy goals for the pay-TV sector, which were discussed in Chapter 2.

Mandated access regimes can be very questionable from the standpoint of static and dynamic efficiencies and consumer welfare. Access obligations could hamper investment by cutting down incentives to invest in technical innovation and improvement, and by discouraging other enterprises from doing so. As a consequence, so says Yoo, mandated access 'preempts the only solution to the bottleneck problem that is viable in the long run (i.e. the development of a viable alternative to the bottleneck facility)'. McGowan further differentiates by saying that compelling access might be adequate in a natural monopoly market if it will not be profitable for competitors to replicate existing systems as here access obligations could increase competition, efficiency and consumer welfare. However, as McGowan continues, 'in situations not involving natural monopoly the market will support more than one firm... So long as replication is possible, the claim that a competing facility would be too costly to build is entitled to no weight'.

As already mentioned, the bottleneck character of a conditional access system is more likely to be the result of control over a particular (proprietary) standard, than that the facility is a bottleneck facility as such. In such a situation, access obligations encourage the use of a particular conditional access standard. Because of the right of access, there is no need to develop costly alternatives. Encouraging

848 McGowan 1996, p. 805. See also section 3.4.1.
service providers to use one particular conditional access standard is likely to further increase the strategic and economic importance of this conditional access solution. This is the result of indirect network effects and the need to generate efficiencies and economies of scale and scope. The larger the number of services carried via a particular technical platform, the more attractive the platform will be in the eyes of consumers and, finally, of other service providers. Access to the first conditional access platform and its particular standard will become even more important for market entry, with the result that its controller will have even more influence on market developments. The stronger a particular standard becomes, the more likely is it that the market will ‘tip’ towards this particular standard and that this will result, finally, in a monopoly position. This was, for example, one reason why Netscape finally lost the competition against Microsoft Explorer. In the end, access obligations can contribute to a situation in which a sector is dominated by one proprietary standard—even when in theory different, competing technical solutions would have been possible. The dominant standard is very likely the standard of the first mover or the most popular pay-TV platform, even if it is not necessarily the most technically advanced or most consumer friendly. In other words, access obligations risk ‘freezing’ a certain technical standard. The question is who are the drivers behind innovation and the development of new, diverse digital content services—the large established players or highly motivated newcomers?

If access obligations reduce demand for alternative systems or standards, this will not only affect competition between different conditional access technologies, but also competition between different pay-TV platforms. In pay-TV, the technical and the service platforms are closely integrated, which can make it attractive or even indispensable for major operators to operate their own conditional access system for strategic, security and efficiency reasons. As far as the entry of competitors is concerned, only those that can expect to generate similar popularity and scale in a relatively short time will consider entering the market. Others will rely on being able to use the established pay-TV platform. Access obligations might therefore favour further monopolization of the markets for conditional access and access-controlled services rather than discourage it.

To make the situation more difficult, access obligations still leave ample room for the monopolist to influence competition in its favour at both the technical and the service level. Much will depend on how effectively NRAs can ensure that the terms and conditions of access to a conditional access solution are fair, reasonable and non-discriminatory for rivals. The principle of strict separation between the transport and the service level in regulation and supervision does not make this task

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850 In this sense also Veljanovski 2001, pointing out that the Communications Framework was biased towards promoting short-term service competition a the expense of network competition, Veljanovski 2001, p. 120.
851 See section 3.3.2.
any easier, at least not in areas in which activities at both levels are tightly integrated. In practice, the efficiency of access remedies will also depend on the way the broadcasting and telecommunications markets are supervised, and the extent to which telecommunications NRAs are entitled to take content-related aspects into account and vice versa. The example of electronic access control makes very clear that with the advancing economic and technological convergence between the transport and service levels, regulatory authorities must step out of their traditional field of expertise and authority. They can no longer restrict their activities to one level and ignore the other.

Access obligations are also controversial from a public information policy point of view. On the one hand, one could even argue from the public information point of view that a dominant pay-TV platform might have advantages. Arguably, a powerful privately controlled service platform could be an invaluable partner for media regulators in realizing public information policy goals, such as the digital switchover or broadband rollout. States could place burdensome tasks on the broad shoulders of a national media giant. Powerful pay-TV operators are major drivers of and catalysts for digitization; they invest in campaigns that convince reluctant consumers of the merits of digitization and develop the necessary equipment and attractive services. Finally, the access obligation could stimulate intra-platform competition because providing access-controlled services through the existing infrastructure would be less costly and more attractive to smaller operators in particular. The result might very well be a kind of ‘internal pluralism’ and more choice for consumers.

On the other hand, one may already wonder whether access obligations will indeed stimulate internal pluralism within a pay-TV platform. A reduction in economic freedom often comes hand in hand with a reduction of initiative and responsibility, in this case journalistic responsibility. In such situations, access obligations can strengthen not only the economic, but also the journalistic influence of a platform operator. This is to say, even in areas in which a monopoly position of a pay-TV platform may still be acceptable from a competition point of view, the requirements of pluralism and diversity of sources raise serious concerns about whether it is desirable to actively promote the creation and strengthening of one dominant access-controlled pay-TV platform. Monopoly control over the pay-TV market can challenge fundamental objectives in broadcasting regulation, namely to prevent one private player from exercising excessive influence on large parts of the audience. In addition, the effect of one large and comprehensive pay-TV platform on the position of free-TV providers in general and public broadcasting in particular, must be taken into consideration, as well as the extent to which a pay-TV platform can affect their position when negotiating programme rights and

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852 See Wentzel, p. 172; Bullinger (1997), speaking of ‘Massenprogrammhaltung’ and the influence on the ‘personality’ of the individual programme, p. 763. Reduction of individual editorial freedoms is a necessary part of the strategic concept of service platforms, as otherwise it could not develop its own, distinguishable profile.
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competing for audience attention. To conclude, access obligations could be counterproductive, not only from a competition policy point of view, but also from a public information policy point of view.

4.8.7. REFORM PROPOSAL

Having said that access obligations are not the best remedy to realize competition policy and public information policy objectives in the pay-TV market, the next question is what the better remedy is. Access obligations are a remedy for the symptoms of a lack of competition in the market for technical pay-TV facilities. That such a standard can prevail and influence competition in the facility market is due to a lack of competition in the technical facilities market, as well as a lack of competition in the pay-TV market itself. Providing consumers can choose from a number of equally attractive pay-TV offers, trying to dominate a share of the consumer base by means of a proprietary conditional access standard would be a risky and probably not very profitable strategy. The operator of that intermediary platform would risk loosing those parts of the audience that do not value its services highly enough to agree to subscribing to a platform that is incompatible with other services.

A better approach to tackle bottleneck situations in pay-TV could be to stimulate competition at the technical facility level, and more importantly, the service level. Creating the conditions that make the associated service market sufficiently competitive could decrease the prospects of anti-competitive leverage as a result from control over technical bottlenecks. A further advantage of stimulating competition at the service level is that it would prevent the existence of one powerful pay-TV platform from conflicting with guiding principles behind broadcasting regulation—the promotion of pluralism, diversity and fair access opportunities.

Of course, whether a pay-TV market becomes competitive or not depends on whether service providers develop sufficiently attractive service offers and applications. This is particularly true where pay-TV providers compete with an attractive free-TV offer. Experience will show if pay-TV will turn into a popular third form of broadcasting alongside advertising and fee-financed services, whether several competing access-controlled platforms can exist alongside each other in a given market and whether consumers will accept pay-TV. The author argued that digitization and convergence could have a stimulating effect on the take-off of and competition between access-controlled services. Competition in the pay-TV market, however, also depends on whether consumers are free to choose between competing offers. In other words, competition also depends on whether the regulatory framework foresees remedies to prevent that single operators monopolize the consumer base.

The existing regulatory framework under the Access Directive is very focused on the supply-side of the market. The access obligations in the Access Directive
focus on the access of competitors to access-controlled platforms, ignoring entirely the impact that the contractual and technical relationship between service provider and consumer has for competition. To remedy the monopolization of the consumer base means to create conditions that enable consumers to access diverse services of their choice at fair, affordable and non-discriminatory conditions. Hence, an alternative approach to tackle a monopolization of the consumer base would be to shift the regulatory focus to the other side of the market—the retail side—and to create the conditions that enable consumers to choose and give them the freedom to choose by lowering their switching costs. Adequate tools would guarantee the mobility of consumers and stimulate their willingness to switch between services. Suggestions of what these tools could be will be developed in the following paragraphs.

Contractual Lock-ins and Fairness of Contractual Conditions
As far as consumer contracts are concerned, the Universal Service Directive provides a legal framework that gives NRAs instruments to ensure that service providers offer services to consumers at adequate, non-discriminatory conditions and fair prices, and refrain from unjustified bundling strategies. The Universal Service Directive acknowledges that for 'reasons of efficiency and social reasons, end-user tariffs should reflect demand conditions as well as cost conditions, provided that this does not result in distortions of competition'. The Universal Service Directive also stipulates that service providers must provide consumers with a minimum level of legal certainty in subscriber contracts, concerning contractual terms and conditions, service quality, contract and service termination conditions, compensation measures and dispute resolution. Contracts must include information on prices, tariffs and terms and conditions in order to increase the consumers' ability to optimize their choices and thus fully benefit from competition. These provisions provide tools to tackle contractual lock-ins and unfair provisions in consumer contracts. It remains to be seen whether these provisions are sufficient to meet consumer concerns in practice.

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853 Klemperer 1987, p. 391. See also the G7 Summit, Conclusion of G7 Summit 'Information Society Conference', Doc/95/2/, Brussels, 26 February 1995: 'The regulatory framework should put the user first and meet a variety of complementary societal objectives. It must be designed to allow choice, high quality services and affordable prices. It will therefore have to be based on an environment that encourages dynamic competition, ensures the separation of operating and regulatory functions as well as promotes interconnectivity and interoperability. Such an environment will maximize consumer choice by stimulating the creation and flow of information and other content supplied by a wide range of service and content providers'.

854 Universal Service Directive, Article 17 (2).
856 Universal Service Directive, Recital 30, Articles 20 (1), (2).
Regarding the problem of technical lock-ins, the Universal Service Directive offers a solution regarding the interoperability of consumer equipment. According to Article 24 of the Universal Service Directive, Member States must ensure that any analogue television set has at least one open interface socket to connect additional devices and ensure interoperability. The provision, however, only refers to digital television equipment, not to set top boxes.

Questions concerning decoder interoperability are dealt with in the Access Directive and the Framework Directive. However, neither of them obliges operators in the pay-TV sector to provide for adequate interoperability solutions. In addition, under Articles 5 (1)b and 6 of the Access Directive NRAs do not have as many possibilities to impose interoperability obligations on pay-TV providers as they do for all other telecommunications service and facilities providers according to Articles 8 to 13 of the Access Directive. It is true that the discussion about the adequacy and desirability of mandated interoperability can be very controversial. Nevertheless, the author concludes that there are valid and important arguments in favour of mandated interoperability solutions in areas in which mobility and fair access opportunities would otherwise be at risk. It is difficult to see why the (un)willingness of major industry players towards standardization in pay-TV would change in the future and why necessary initiatives in this field should be further postponed. Without imposing a particular standard, initiatives could focus on making consumer equipment interoperable through open interfaces and open standards for software and middleware. The approach of Article 24 of the Universal Service Directive to mandate a common interface could serve as a model.

In terms of the information problem, the importance of comparable service information has already been acknowledged in the Communications Framework. The Universal Service Directive, and in particular the provisions on directory services and transparency obligations in Articles 21 and 22 of the Universal Service Directive, demonstrates that transparency, as a precondition for functioning competition and the realization of public information policy objectives, is taken very seriously in Europe. Access to telephony directory services, a kind of search agent, is even subject to an universal service obligation. The study argued in section 4.5. that the examples of programme journals for the broadcasting sector or search engines and browsers for the internet demonstrate that there can be a market for independent information agents and that competition between such services is generally possible. NRAs could seek to stimulate such competition. Article 21 (2) of the Universal Service Directive, a provision that mandates providing consumers with comprehensive, comparable and user-friendly service information, could serve as a model. So far, the provision does not apply to EPGs.
Pay-TV Subscribers Excluded from Rules on Consumer Protection

Most of the aforementioned provisions on consumer protection in the Universal Service Directive, however, such as the provisions on transparency and the publication of service information in Article 21 of the Universal Service Directive, are only applicable to providers of telephony services. Others only apply to electronic telecommunications services and associated facilities. Services providing content, such as the offer for sale of a package of sound or television ‘broadcasting’ content have been deliberatively excluded from the Universal Service Directive, except in Article 31, which is the provision on must-carry.\textsuperscript{857} Again, this is an indication that, as far as broadcasting services are concerned, the Communications Framework handles a fundamentally different idea of the consumer-service-provider relationship than it does for the rest of the telecommunications sector. In the case of digital broadcasting, consumers are still not considered active market participants—which they are in pay-TV—but passive receivers.

Hence, pay-TV is a good example to illustrate why the technology-dependent concept of the regulation of the transport level is no longer adequate in media markets. Technology-dependent regulation is also not in line with European policies to promote multi-platform access to all kinds of digital services. Pay-TV services are distributed to consumers, similarly to telephony and other telecommunications services, on an individualized basis. Consequently, in pay-TV too, technical or contractual lock-ins, or the lack of transparency can be a means to monopolize the consumer base. With ongoing convergence, the differentiation between broadcasting and non-broadcasting services is not any longer justified as far as the modalities of the way services are marketed to consumers are concerned. It is difficult to see why subscribers to digital broadcasting services should be in a weaker legal position than subscribers to telephone networks or internet service providers.

4.8.8. SUMMARY

To conclude, the flexible concept under Articles 8 to 13 of the Access Directive is better-suited to react to bottleneck situations in digital broadcasting. There are no viable reasons to maintain Article 6 of the Access Directive. Moreover, the present top-down approach of dealing with electronic access control in European law fails to address the monopolization of the consumer base and the effect this has on competition and consumer access to content. To effectively address these concerns, this study concludes that a bottom-up approach that focuses on access conditions for consumers is needed. Consumers and their demands are key to stimulating competition and to disciplining the behaviour of the market parties.

\textsuperscript{857} Universal Service Directive, Recital 45, Framework Directive, Article 2 (c).
4.9. Conclusion

Despite the formal common framework, the way the European Communications Framework approaches access questions is strikingly incoherent. The Access Directive, the Framework Directive and the Universal Service Directive are far from achieving the declared goal of realizing a horizontal, transmission-technology-independent approach when dealing with technical bottlenecks in general and conditional access in specific. Instead, the regulations still maintain a distinction between ‘broadcasting’ and ‘non-broadcasting’ services. In an age of convergence, this is an increasingly questionable distinction. Moreover, the approach towards bottleneck regulation that is provided for in Articles 5 (1)b and 6 of the Access Directive seems too simplistic and too inflexible to identify critical bottleneck situations in digital broadcasting and allow NRAs to respond with adequate remedies. Finally, Article 6 of the Access Directive ignores, as does the Communications Framework in general, that there is a retail relationship between pay-TV operators and consumers, and that the way this relationship is designed is relevant for the realization of competition and general public policy interests.

We have seen that there are no urgent economic or legal reasons that necessitate treating technical facilities in pay-TV differently from technical facilities in the telecommunications sector in general. The technology-dependent concept of Article 6 of the Access Directive conflicts with European policies for the digital service sector to promote a multi-platform’ environment in which consumers have access to services irrespective of the technical distribution platform.

If regulators opt for access obligations as a regulatory tool, a more flexible technology-independent approach seems better-suited to respond to the challenges of technical bottleneck control. Articles 8 to 13 of the Access Directive, together with the relevant provisions of the Universal Service Directive, are a more promising way of addressing bottleneck issues and the monopolization of the consumer base than Article 6 of the Access Directive. The Access Directive should be adapted during a review to reflect this and abandon Article 6 of the directive. Until then, however, in order to prevent the obstruction of market development, an adaptation at the enforcement level is probably the best preliminary option. NRAs could narrowly interpret Article 6 of the Access Directive, with the effect that all conditional access systems that provide access to convergent services (which may soon be the majority) would fall under the flexible concept of Articles 8 to 13 of the Access Directive. Moreover, NRAs could interpret Article 5 (1)b of the Access Directive in the spirit of Articles 8 to 13 at least for EPGs and APIs.

Access obligations are not necessarily the optimal remedy in the pay-TV sector. Providing market conditions allow for it, a better approach would be to make the associated service market sufficiently competitive by tackling the monopolization of the consumer base. Giving NRAs the flexibility to impose interoperability obligations can be a means to remedy technical lock-ins. The provisions on transparency for consumers in Articles 21 and 22 of the Universal Service Directive
respond at least in part to the previously identified information problem. The provisions on consumer contracts and retail conditions in Article 17 of the same directive provide remedies for contractual lock-ins.

One problem that is common to the access obligations as provided for in the present form of Article 6 and Articles 8 to 13 of the Access Directive, is the formal distinction between the transport and the service level when dealing with technical bottlenecks. In practice, this distinction is increasingly artificial and difficult to maintain in pay-TV markets, and all the more so as the nature of the problems involved is often the same for the transport and the service level. This has to do with the functional relationship between the technical conditional access platform and the service platform, meaning the subscription service itself. The technical pay-TV platform is an integrated part of the pay-TV operators’ business model, whose core business is still the provision of access-controlled services through the service platform. Consequently, access decisions must also take into account content-related aspects, such as the content of the competitor’s service, the form in which and the price for which it is offered to subscribers, etc. It is very questionable whether the Access Directive leaves room to take the functional and strategic unity between the service and transport levels into account. It is also not clear to which extent the notion of ‘fair, reasonable and non-discriminatory’ conditions under the Access Directive is to be interpreted within the context of content-related conditions. A more comprehensive assessment of pricing, foreclosure and interoperability strategies requires that NRAs are able to take both levels of a pay-TV operator’s activities into account.