
Non-Discriminatory Access to Digital Access Control Services

From now on, **IRIS plus** will be appended to every other edition of **IRIS, Legal Observations of the European Audiovisual Observatory**, replacing under a new name and format the IRIS FOCUS series that was introduced in 2000 to tackle subjects of international significance. **IRIS plus** will therefore provide you with a thematic supplement to our topical IRIS newsletter, often focusing on comparisons of law.

This first edition of **IRIS plus** deals with electronic conditional access systems and their function as gateways to digital services. It describes which systems may ultimately restrict access, particularly to digital television, and explains the reasons why. It also mentions the various European Union and Council of Europe instruments designed to prevent access restrictions. However, in an effort not to hinder the development of new markets through State regulation, the sector is very cautiously regulated. The ultimate aim is self-regulation by means of open competition. The article therefore also deals with EC competition law, which comes into play when market access and competition are threatened by monopoly situations. Finally, it describes future developments, which will be shaped, *inter alia*, by the convergence of the various sectors affected by conditional access systems and the need for a single regulatory framework.
Happy reading!

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1. Introduction

Anyone wishing to compete in the world of broadcasting needs access to transmission networks, content, new markets and information. Access-related issues are therefore of immense economic and legal importance for the European broadcasting market. This report deals with one specific aspect: access for digital broadcasters to electronic conditional access systems. Access to digital control systems is one of the most important links in the chain of digital broadcasting service provision (content - marketing of content/ bundling - transmission infrastructure - consumer equipment - access control). Ultimately, the way such systems operate determines access to customers and hence to the market itself.

The European Commission has defined conditional access as "any technical measure and/or arrangement whereby access to the protected service in an intelligible form is made conditional upon prior individual authorisation".¹ Where digital television is concerned, this mainly involves the encryption and decoding of programme signals using so-called set-top boxes. Other elements of electronic access control include what is known as the Subscriber Management System (SMS)² and the Subscriber Authorisation System (SAS).³ One of the aims of electronic access control systems is to ensure that programmes can only be received by viewers who have paid the corresponding fee in advance (pay-TV).

This also means that whoever is in control of a conditional access system ultimately decides which broadcasters have access to viewers in the pay-TV sector. Experience in this sector has already shown that access system operators can exercise huge influence over market structures and competition. A provider who is able to establish a standard service is actually in a position to dominate the pay-TV market and restrict or even, in a worst-case scenario, completely cut off market access for broadcasters, rival conditional access providers and manufacturers of consumer equipment. Electronic conditional access systems therefore represent one of the most important bottleneck facilities in the digital pay-TV sector. Their potential influence on the market is obvious.

The following report aims to provide an overview of the current European legal instruments that are designed to counter abuse of electronic access control systems and thus ensure that all competitors have access to these systems. It focuses in particular on the question of access to electronic access systems and existing initiatives and decisions in this field.

Firstly, we shall consider the current European harmonisation measures contained in Directive 95/47/EC⁴ and Council of Europe Recommendation No. R (99) 1. The decisions taken by the European Commission in its capacity as the body responsible for competition in the pay-TV market will then be discussed.⁵

2. Directive 95/47/EC

2.1 General

The European Commission was aware of the repercussions that the introduction of conditional access systems might have on the European market. It therefore adopted a special regulatory instrument designed to protect competition in the digital broadcasting market - Directive 95/47/EC on the use of standards for the transmission of television signals. In this document, the Commission considers the "digital broadcasting market" to be primarily the market for digital television services.

Directive 95/47/EC deals with various aspects of access to digital television and conditional access systems in the broadest sense, such as the interoperability of access control systems with consumer hardware (e.g. reception devices), the redistribution of encoded signals via cable and, finally, access for broadcasters to conditional access systems. These regulations are designed to ensure that the various competitors enjoy access to the digital television market.

2.2 Broadcasters' Right of Access to Conditional Access Systems

Article 4(c) of Directive 95/47/EC is the key to access for broadcasters to conditional access systems. Member States are obliged to ensure that the operators of conditional access services, irrespective of the means of transmission, who produce and market access services to digital television services offer to all broadcasters, on a fair, reasonable and non-discriminatory basis, technical services that enable the broadcasters' digitally-transmitted services to be received by authorised viewers by means of decoders administered by the service operators.⁶ This applies both to independent providers of access control services and pay-TV providers who operate and market their own system. On the other hand, the Directive neither entitles competitors to demand that a system be interoperable with their own, nor obliges the operator of a conditional access system to guarantee its interoperability with other systems (see below).⁷

In other words, the Directive states that services must be made available which enable other pay-TV providers to offer their own programmes through different decoders. This is the case whether or not the operator has a dominant market position. Decoder providers who have developed their own system may not deliberately withhold access to their system - and thus access to the customer - from individual television broadcasters, nor discriminate against them (e.g. by favouring their own channels), nor make excessive charges for use of their system.

However, it is left to the Member States to organise access in such a way as to protect the legitimate economic interests of operators who provide access.

The Directive does not, however, lay down particular standards for conditional access systems, nor binding regulations on system interoperability.⁸ Rather, it leaves it up to the operators' self-regulatory bodies and market forces, such as consumer demand, to develop standards and find ways of guaranteeing system interoperability. Standards are therefore drawn up mainly by internationally recognised standard-setting organisations such as ETSI, CEN/CENELEC, ITU, ISO or IEC. The DVB Group has produced proposals on system interoperability (so-called Simulcrypt⁹ and Multicrypt¹⁰).

However, the right of access described in the Directive is significantly restricted from the outset. For example, it only applies to digital television services. As well as (encoded) television services, customers are already being sold access to online and other digital interactive services on digital platforms, which are not covered by the Directive.

The fact that the Directive does not deal with radio or analogue television services may be due to the huge economic importance of digital television. However, the Directive also fails to mention other issues, which could turn out to be significant bottlenecks in digital television and must be taken seriously, e.g. access to so-called Electronic Programme Guides¹¹ and Application Programme Interfaces.¹² Both of these components of a decoder system also enable the operator to control how and indeed whether viewers gain access to digital television.¹³ However, some Member States, such as Italy, Germany and Ireland, have already introduced a number of far-reaching additional regulations on EPGs and APIs when transposing Directive 95/47/EC, paying particular attention to consumer protection.

Another feature of the Directive is the clear division between infrastructure and content. The Directive concentrates exclusively on access to technical services rather than actual content. However, in practice, content issues are relevant, for example in relation to the bundling of digital channels. Vertically-integrated providers of digital programme bouquets, who sell their channels via their own proprietary access systems, are not obliged by the Directive to provide rival providers (of either encoded or free-to-air channels) with access to their digital bouquet. This can lead to problems when viewers subscribe to a particular programme bundle, hoping it will provide them with all the channels they need on a daily basis. In view of the trend towards the vertical integration of content and infrastructure providers in the television market, it is doubtful

whether the distinction the Directive draws between content and transmission technology can continue to correspond with current market conditions.

In regard to all the issues that the Directive fails to deal with, it is necessary to refer back to general competition law, particularly European cartel law and the law banning the abuse of dominant market positions. This view is confirmed by Article 4(c) of the Directive, which expressly obliges Member States to take all necessary measures to ensure that all access service operators comply with Community competition law, in particular if a dominant position emerges (see section 5 of this article).

2.3 Transposition of Directive 95/47/EC by the Member States

As mentioned above, the transposition of the Directive by the Member States lies beyond the scope of this report. However, it can be assumed that national regulations are similar to one another, at least in principle, and that they contain the essential elements of the Directive. In this connection, the following is particularly worth noting: the wording of the Directive gives the Member States considerable discretionary powers and freedom to draw up their own regulations when transposing it. It is therefore not surprising that, in countries where the Directive has already been transposed, the measures taken are similar in respect of the most important provisions, while considerable differences emerge where individual questions are concerned. This can be seen in national regulations on EPGs and APIs, for example. There are definite differences between the intensity and procedures with which different Member States have approached the task of transposing and actually implementing the regulations. The United Kingdom is a particularly interesting case, since OFTEL and the DTI have looked in great detail at ways of regulating the introduction of electronic access control systems. Other Member States, such as Spain, have attempted to make system interoperability compulsory by law, although this proposal was opposed by the European Commission and was ultimately dropped.

3. Future Initiatives

3.1 General

Directive 95/47/EC is to be replaced by a set of five new Directives, currently being prepared by the European Commission, which should create a new regulatory framework for electronic communications networks and services. The Commission claims that the previous regulations were primarily aimed at facilitating the transition from State monopolies to a free competitive market. In the meantime, however, the situation has changed, since there is now competition in these markets. The overriding purpose of the new regulations should be to foster the convergence of broadcasting, telecommunications and information technology (IT) and the gradual removal of sectoral provisions in favour of general competition law.¹⁴ Therefore, the whole communications field, including access, will be newly regulated in a single framework.

3.2 Proposal for an Access Directive

What will be different? The most radical change affecting access to digital conditional access systems may well be that access issues will, in future, be dealt with under the general umbrella of access to electronic communications networks and associated facilities.¹⁵ The proposed Directive regulates access¹⁶ to conditional access systems in conjunction with access to transmission networks and associated facilities, including those for telecommunications.

The new proposal more or less adopts word for word the corresponding provisions of Directive 95/47/EC. This suggests also that the Commission does not believe that specific access issues in the digital TV sector should be regulated by market forces at this stage.

The provisions concerning conditional access systems continue to apply to digital television only. The most obvious concession to further technical progress in this field is an introductory clause stating that specific additional access regulations for EPGs and APIs may be introduced in accordance with certain procedure, should the need arise.

In addition to the aforementioned special regulations, the Proposal for a Directive appears to make provision for national regulatory authorities to monitor access to and the interoperability of conditional access systems as part of their general supervision of electronic infrastructure markets. To this end, the Directive describes a number of ways in which regulatory authorities can intervene in actual cases of anti-competitive behaviour. The Directive also sets out a list of criteria which must be respected by the national supervisory authorities and which are possibly also designed to protect the economic interests of conditional access system operators.¹⁷

The proposed new regulatory framework follows the same basic ideas as Directive 95/47/EC: access to conditional access systems should be provided and system interoperability encouraged in the interests of the consumer. Furthermore, the proposed Directives generally aim to ensure that the market is completely self-regulating in the future and that sectoral regulations are progressively removed during the transition period. Accordingly, they also promote the principles of freedom of contract and self-regulation where access is concerned: access and conditions of access should, if possible, be negotiated by the parties concerned in accordance with economic considerations. It should then remain for general competition law to ensure that the result complies with the need for fair competition and that no party abuses its market power to the detriment of others. *Inter alia*, the concept of considerable market power in electronic communications markets is defined in particular.¹⁸

As far as access to conditional access systems is concerned, these structural changes mean that, ideally, sectoral provisions should, in future, give way to a case-by-case evaluation process in accordance with the provisions of general competition law. It can therefore be assumed that competition law will play an increasingly important role in resolving access issues.

4. Council of Europe Recommendation No. R(99) 1

Council of Europe Recommendation No. R(99) 1 on measures to promote media pluralism is also designed to foster non-discriminatory, fair and transparent access to facilities and services, including electronic access control systems.¹⁹

In this document, the Council of Europe urges its Member States to adopt appropriate specific regulations. It stresses the importance of fair access and of political and cultural diversity for pluralism in the media, particularly broadcasting, on account of its huge impact broadcasting has on political and cultural plurality and the formation of opinions. In this context, electronic access control systems are particularly mentioned as bottlenecks in digital television. The Council of Europe also emphasises the importance of individual access to information and the need to protect the individual's right to information.

Unlike Directive 95/47/EC, the Council of Europe expressly recommends that its Member States consider introducing common technical standards and measures to guarantee the interoperability of conditional access systems.

The Recommendation goes even further by tackling, *inter alia*, the development of broadcasting concentrations, which might endanger media pluralism, and suggests appropriate measures, such as creating special media authorities with powers to take action against such market behaviour where necessary. It also proposes that specific initiatives be taken to prevent vertical concentrations, which can run counter to the aims of media policy.

5. Developments in Competition Law

In addition to the aforementioned provisions of Directive 95/47/EC,²⁰ the application of competition law is providing growing evidence of Community action to safeguard fair access to digital conditional access (CA) services.

EC competition law is primarily aimed at realising the goals of the internal market rather than at pushing through media policy provisions. However, there can be a correlation between effective

competition and the attainment of media policy objectives such as the safeguarding of pluralism, which is a by-product of efforts to prevent monopolies, to curb the abuse of dominant market positions and to evaluate proposed mergers.²¹

Competition law has therefore been referred to by the Commission and the European Court of Justice in relation to specific cases concerning media law.²²

As far as access is concerned, competition law can therefore be extremely important because it is or can be economically desirable for companies to control every stage of the process of providing digital services such as television: the sale and production of content, control of access to transmission and encryption facilities, access to transmission networks and decoding by the customer (vertical concentration). This would enable them either to discriminate against other content providers who want to broadcast their own television programmes via digital networks and other providers of services necessary for digital transmission, or to exclude them altogether from transmission networks and service markets. The provisions of competition law are, in principle, designed to counter such structures or developments that hinder or threaten fair competition.

5.1 Legal Standards

As far as primary legislation is concerned, the relevant principles of competition law are found in Articles 81 *et seq.* of the EC Treaty (ban on cartels, abuse of dominant market positions, public and monopolistic undertakings), while under secondary legislation, the most important instruments are the Cartels Regulation No.17/62²³ and Regulation No.4064/89/EEC²⁴ ("Merger Regulation").

Regarding access to digital services, this means that abuses such as the denial of access to particular content providers by owners of access infrastructure and technology can be banned on the basis of Article 82 of the EC Treaty.

On the other hand, merger controls can prevent dominant market positions from developing through company mergers.

Mention should also be made of the "essential facility" principle,²⁵ which is derived from the ban on abuse of dominant market positions in the sense of Article 82 of the EC Treaty, and which states that such a position arises when companies own or control fundamental requirements and facilities for the provision of a service – facilities that competitors rely on in order to provide their own service.

The European Commission is responsible for the practical implementation of these standards. Its strategy for dealing with bottlenecks in the pay-TV sector is described below, with reference to selected decisions under competition law. Our study aims to show firstly whether specific decision-making practices can already be identified in the application of competition law to problems of access to conditional access systems, and secondly to what extent this issue has played a role in related cases and what can be learnt from this.

5.2 Commission Decisions

There appear to be no decisions in which the competition-related aspects of a company's control of conditional access systems are predominant. The relevant Commission decisions can be classified more generally as relating to non-discriminatory access to digital television.

In these decisions, the Commission seems primarily to want to protect competition in the various markets it defines. Thus it hopes to prevent situations in which a company might endanger competition by abusing its dominant position where conditional access systems are concerned.

5.2.1 MSG Decision²⁶

This decision is relevant because the Commission stipulates that the market for services that tend to go together with pay-TV, such as conditional access services, should be treated separately from pay-TV under competition law.²⁷

The case concerned the intention of Bertelsmann AG (Bertelsmann), Deutsche Bundespost Telekom (Telekom) and Taurus Beteiligungs, a holding company owned by the Kirch group (Kirch), to cre-

ate a joint venture called *MSG Media Service Gesellschaft zur Abwicklung von Pay-TV und damit verbundenen Dienste mbH* (MSG). The object of the new company was the technical, business and administrative handling of payment-financed TV and other communication services, including conditional access and customer management, and to provide the infrastructure necessary for the supply of digital TV and related services. The company would therefore, as provider of content, conditional access and the transmission network, have been involved in every stage of the digital pay-TV process (vertical concentration). Accordingly, it would have had to negotiate access to its services with other programme providers who wanted to transmit their products using this infrastructure. MSG would thus have been able to influence the choice of other providers who also wanted to broadcast digitally. On account of the specific interests of the companies that owned MSG, the non-discriminatory choice of providers would have been threatened and those companies would have been able to dominate the pay-TV market.

In defining the relevant markets that existed apart from the market for cable-TV networks, the Commission distinguished for the first time between the pay-TV market on the one hand and the market for administrative and technological services (particularly electronic conditional access services) in the pay-TV sector on the other. This distinction was made because of the specific technical requirements of pay-TV.²⁸ MSG would have become the only supplier in the latter market in Germany.

Such a position would not, in principle, have constituted a dominant market position likely to endanger competition in an emerging market, since that future market would remain open to future competition. It would therefore have only amounted to a temporary monopoly.²⁹

However, the Commission decided that this was not the case, since it thought that, even in the development phase, there was a danger that MSG would remain the only provider of these pay-TV-related services in the long term and thus close off the market altogether.

A decisive factor in this decision was the fact that the companies wishing to form MSG were each already in a position, as well as and on account of their existing positions in certain market sectors, to establish parts of the digital pay-TV infrastructure and provide corresponding services. Telekom's particular strength lay in its ownership of a broadband cable network and its monopoly of the fixed telephone network, through which it controlled the two main means of transmission that could provide the return channel required for interactive digital television, and the customer base.

As well as their own channels, rights to further programmes and privileged access to the content of other (free-TV) providers, Bertelsmann/Kirch – through Premiere, the only pay-TV supplier – already had a subscriber base and associated administrative and marketing structures.

A merger would have prevented possible competition between the companies involved. Once MSG was established on the market, potential competitors would have been unable to gain a foothold in the market for technical and administrative services for pay-TV in the face of the combined competitive advantages and particular strengths of Telekom/Kirch/Bertelsmann.³⁰

The encryption technology in the d-box, the decoder for the only pay-TV channel, Premiere, was based on the use of a proprietary system. Any other provider of payment-financed services would therefore have been forced to license this system if it wanted to reach viewers via the d-box decoder.³¹

Even if a common interface were used inside the d-box, enabling the encryption technology to be designed so that any other pay-TV or service provider could operate its own conditional access and subscriber management system using the existing (MSG) decoder base, the Commission thought that the right to lay down conditions of use might be open to abuse.³²

As the provider of a comprehensive service package, MSG would therefore have had a competitive advantage in the market for conditional access and subscriber management services where technical matters were concerned.³³

The concept of interdependent markets is clearly seen in the Commission's explanation. Power in just one market sector had repercussions for all the others, particularly in pay-TV. This was a result of the specific nature of digital transmission, each stage of which was built on the previous stage (content, access, encryption, decoding, EPGs). An unusual market situation in one stage of the process could therefore affect all the others. The Commission's aim is to keep all markets open. It endeavours, with reference to the various instruments of competition law, to achieve this objective by treating markets separately while taking common development (vertical concentration) into account. Since market power may not be abused in other markets, such as pay-TV itself or cable networks (separation of markets), any influence exerted on conditional access systems by players in these sectors should be prevented or at least kept in check.³⁴ On the other hand, however, the aforementioned interdependencies, particularly the influence of the CA system on the pay-TV market must be taken into account, so that this notion of treating all the markets as one should apply also in the assessment of the individual market constituted by pay-TV services (particularly where access to CA services is concerned). When deciding whether a market is open, the evaluation of market power in a single market depends on whether the company concerned is also involved in other up- or downstream markets.

An important element of this decision is that, for the first time in the pay-TV and access field, the Commission found there to be vertical concentration over several relevant markets, since there was a clear danger of a dominant market position in the conditional access sector having a reflex effect on the pay-TV market (interdependence of markets).

5.2.2 *Nordic Decision*³⁵

This decision, in which the joint venture Nordic Satellite Distribution (Nordic), set up by Norsk Telekom AS, TeleDanmark A/S and Industriforeningens AB Kinnevik, was denied permission to provide satellite transmission services and distribution services via cable networks or direct-to-home broadcasts for television programmes in the Nordic region, reinforces the Commission's practice, initiated in the MSG decision, of defining markets and monitoring vertical concentrations.

In its definition, the Commission stated that considerable differences existed between the two modes of distribution both technically and financially,³⁶ as a result of which the relevant markets needed to be split once again. The assumption that a separate product market existed for the provision of pay-TV-related services to viewers and TV providers requiring access was also strengthened.³⁷ However, the markets were not divided again according to transmission technology (analogue or digital) because, in future, only digital technology would apply and competitors already in the digital market used both systems.³⁸

5.2.3 *Bertelsmann/Kirch/Premiere*³⁹ *and Deutsche Telekom/BetaResearch*⁴⁰ *Decisions*

The basic structures in both these decisions are the same as in the MSG Media Service case, since the companies involved were again – in their capacity as providers of content, infrastructure and conditional access technology – partners in a proposed merger.

The Commission ruled that the mergers would create and strengthen dominant market positions in the relevant markets of digital pay-TV in respect of related services or (in the Deutsche Telekom/BetaResearch case) in the cable network market, a different level in the pay-TV distribution network, and that this could restrict non-discriminatory access to digital access systems.

As a result of the merger, d-box technology, the decoder used by the parties for the unscrambling of their transmitted signals, would in practice, as a proprietary conditional access system with the aforementioned drawbacks,⁴¹ become the digital standard in the German-speaking area. The same was true with cable transmission, since the parties had agreed that Telekom, in providing technical services for digital transmission of TV programmes on its broadband cable networks, would rely exclusively on Beta access technology on

the basis of the d-box decoder. Through its regional companies, Telekom, as a broadband cable operator, controlled the level 3 network vital to the distribution of cable television, from the cable head-end, where the digital programme signal was received and fed into the cable network, to the boundary of the individual house. Any potential pay-TV supplier and any other potential supplier of conditional access services would be obliged to use Beta access and encryption technology and Kirch's d-box decoder as far as the Telekom cable network was concerned.⁴² The same applied to the satellite pay-TV sector, in which Premiere would control conditional access systems and BetaDigital, jointly owned by Kirch and Bertelsmann, would operate a transmission centre and provide the services connected with processing and broadcasting.⁴³

In the Commission's opinion, the undertakings made by the companies concerning, inter alia, pay-TV services⁴⁴ (involvement of other companies in BetaResearch, disclosure of the d-box interface, provision of non-discriminatory access, other providers no longer obliged to purchase the Premiere bouquet) were insufficient to guarantee unimpeded market access to third parties.

The access issue itself was not the main consideration in the Commission's report. Its assessment largely concerned the pay-TV market. In the companies' view, cable operators (other than Telekom) would be able to acquire rights to Premiere programmes and bundle them with other providers' programmes, as part of a co-operation agreement. Meanwhile, competitors' dependence on technical services, created by the division of the cable network into levels 3 and 4, would be overcome. Hence, other providers could be considered as potential competitors for the creation of an alternative pay-TV programme and marketing platform. However, these undertakings, which were aimed at keeping the pay-TV market open, were not legally binding and were therefore rejected by the Commission.⁴⁵

As far as the access issue is concerned, however, the companies' undertakings concerning d-box technology are of particular interest. The companies offered to disclose the API interface of the d-box network⁴⁶ and to supplement the native API with a standardised interface, which had not yet been developed. They would also keep to all future DVB standards.⁴⁷ In addition, a share in BetaResearch, which administered the technical basis of the d-box system and was controlled by the three companies, would be opened up to third parties via an intermediate holding company, which would enjoy the same rights as the three other shareholders. Significantly, information about the technical development of the d-box and its operating software in particular would therefore be made accessible to third parties. In the Commission's opinion, this undertaking could, in principle, solve the problem of the control of technology by programme suppliers (Bertelsmann and Kirch) to the exclusion of other pay-TV providers.⁴⁸ However, since the fourth shareholder would be an intermediate holding company, the three original owners of BetaResearch (Kirch, Bertelsmann and Telekom) would still have a majority vote and, with their two votes, Kirch and Bertelsmann would be able to block any decision that went against their interests as programme providers. Ultimately, therefore, the undertakings did nothing to prevent Kirch, Bertelsmann and Telekom from controlling the technology behind the conditional access system.⁴⁹

As a possible solution in principle, with reference to the aforementioned undertakings, the Commission said that the structural control of the technological basis of digital pay-TV (and its further development) could be abandoned, i.e. the conditional access services market in particular could be opened up.

However, it should also be noted that the Commission again mentioned the other relevant markets in its decision – in this case, the pay-TV programming market in particular. In its overall assessment of the undertakings, it directly linked the conditional access and pay-TV markets together because, even if control over the technology were relinquished, operators would need to be given a realistic chance of establishing an alternative programme and marketing platform in the German pay-TV market and this would not have resulted from the arrangement proposed by the three companies.⁵⁰

5.2.4 British Interactive Broadcasting/Open Decision⁵¹

In proceedings taken under Article 81.3 of the EC Treaty, the Commission authorised the creation of the company British Interactive Broadcasting (BiB) by the British Broadcasting Group plc (BSkyB) and British Telecom (BT).

In this decision, the Commission for the first time showed that the pattern of its previous decisions concerning pay-TV and related services also applied to types of electronic service other than those previously dealt with.

In addition to BSKyB's pay-TV service, BiB was to provide so-called digital interactive television services using the BT cable network and set-top boxes. These were new applications, separate from traditional pay- or free-TV, offering additional features such as e-commerce, e-mail, on-line learning and computer games. In particular, the services included so-called on-demand applications such as video, communications and home shopping services. These would, in future, offer direct marketing and sales between supplier and consumer. Since they were distributed using the same transmission networks as pay-TV and were controlled via the same CA systems, the question of non-discriminatory access also applied to this bottleneck facility.

In the market for digital interactive television services, the cooperation of the companies amounted to an appreciable restriction of competition under Article 81.1 of the EC Treaty.⁵² The creation of the joint venture would eliminate possible competition in this sector between the two companies, since both were able to bear the technical and financial risks of launching such services alone. Here also, in finding there to be a restriction of competition, the Commission took into account all the markets together, referring to the parties' market positions in related markets (telecommunications, pay-TV and particularly customer access infrastructure).⁵³ Community law was also applicable because trade between EU Member States was affected.⁵⁴ The agreement particularly impeded access for potential competitors in the relevant United Kingdom market. In addition, the services could technically be provided in other European countries.

However, the Commission thought competition had not been restricted because the conditions for exemption set out in Article 81.3 of the Treaty, under which exceptions to the ban on cartels could be made, were fulfilled. The joint venture, on account of the planned conversion of the cable network to broadband technology, contributed to technical progress and, through the extended range of communications and commercial possibilities for providers of goods and services, to economic progress. Moreover, competition to provide many of the relevant products was not eliminated by the venture. Besides BT, there were many other potential providers of digital interactive television services.⁵⁵

Of particular relevance to our study are the measures laid down by the Commission to offer third parties access to the set-top boxes that were controlled by BiB and used both for BSKyB's pay-TV service and for BiB's interactive services. Not only should the mechanism by which providers paid to use the infrastructure be transparent and non-discriminatory, but the technical services (e.g. encryption) should also be made available to other providers.⁵⁶ These measures, designed to promote access, were necessary because competing providers of digital interactive services were anxious to gain access to the existing BiB/BSkyB set-top box infrastructure for financial reasons.⁵⁷ If they were denied access to these boxes via conditional access systems, a substantial part of competition on the downstream services markets would be eliminated.⁵⁸ The Commission therefore demanded that BSKyB should develop and operate common encryption systems using Simulcrypt⁵⁹ with interested parties, subject to appropriate agreements. The parties were also ordered to provide interested parties with information about the technical specifications of the set-top box, including any proposed changes to the specifications.⁶⁰

This decision therefore goes further than Directive 95/47/EC, which does not mention the problem of access to interactive digital services provided in addition to pay-TV. The importance of competition law thus becomes clear, since through its general provision on the prevention of anti-competitive market positions, it can be applied to individual cases and deal with new trends, including technical innovations.

5.2.5 Kirch/BSkyB Decision⁶¹

This decision also deals with the "convergence concept", i.e. the Commission's intention to protect competition in the markets it defines, including those outside the broadcasting sector, and to monitor the dangers of vertical concentration. The Commission authorised the merger of *Kirch Vermögensverwaltungs GmbH & Co. KG* (Kirch) and BSKyB, as a result of which KirchPayTV GmbH & Co. KG (Kirch Pay-TV) fell under the joint control of the two parties.

As well as its involvement in BiB,⁶² BSKyB broadcasts analogue and digital television services via satellite and cable. These include pay-TV, conditional access and subscriber management services. The Kirch group is a similarly structured company, which also, through its subsidiary BetaResearch, operates thematic pay-TV channels and conditional access systems.

The Commission did not think the proposed merger was likely to create or strengthen a dominant market position in the pay-TV market. BSKyB was unlikely to enter the relevant market (German pay-TV) in the immediate or near future. The problem of access in this sector was therefore not aggravated by the merger.

However, reservations were expressed concerning the creation of a dominant position in the newly defined market for digital interactive television services, since BSKyB, through its involvement with BiB, provided this kind of medium for goods and services in the United Kingdom. The merger would have enabled Kirch Pay-TV to profit from its partner's technological expertise and help in funding the development of the technical infrastructure in Germany⁶³ in order to be the first to enter this market. The role played by pay-TV in this form of marketing should also be noted. Pay-TV was considered likely to be a "driver" for digital interactive television services because pay-TV and other interactive television signals could be transmitted together and because it already boasted an infrastructure used by large numbers of customers. This meant that the more customers a pay-TV platform had, the more attractive it was to digital interactive service providers. Since the Kirch group led the pay-TV market on account of its package of premium channels,⁶⁴ it would have been the only company capable of providing pay-TV in conjunction with digital interactive television services in the foreseeable future. As Kirch was also able to control access to pay-TV through BetaResearch technology, it also controlled access for digital interactive television service providers to this technology and thus to the market. As well as dominating the pay-TV market, where Kirch's d-box was not the only decoder capable of receiving pay- or digital TV⁶⁵ but was the only one able to process and decipher Kirch's pay-TV channels, the d-box, as a set-top box equipped with the corresponding Beta software, would have become the standard decoder for interactive services. Other competitors who also wished to develop an infrastructure for digital interactive services were also working - just like Telekom - with BetaResearch technology or were afraid of making further investments because of KirchPayTV's domination of the market.

Once again, the problem of the proprietary system arose, since any other operator who wanted to offer this kind of interactive service via the d-box would be dependent on a (main) competitor for access to transmit its service.

The management of subscriber data, which was also carried out by BetaResearch, was particularly relevant in this case. In order to optimise the range of interactive services provided, it was vital to analyse viewer behaviour. However, the difficult situation arose whereby one competitor (Kirch) would have been able to analyse the subscriber data of other providers.

The Commission concluded that the undertakings made by the companies concerned compensated for the creation of a dominant position in the market for digital interactive television services. It therefore granted authorisation.⁶⁶

Kirch was to ensure that all interested third parties should, on a non-discriminatory basis, be able to use technical services supported by its platform. Access for third parties' applications to Kirch's d-box system was also to be guaranteed, since the d-box decoder would contain an API standardised by the Digital Video Broadcasting Group (DVB), based on Java technology and accessible to all. Hence, the d-box would be able to understand operating systems other than its own.

In order to provide operators of other technical encryption platforms with access to the d-box, the negotiation of Simulcrypt arrangements was to be made easier.

Despite the fear that Kirch might aspire to a dominant position in the market for digital interactive television services, the Commission authorised this merger. An important reason for this was the desire to promote technical innovation through the introduction of new sales techniques. However, the crucial "market" for all existing pay-TV services had to function as a counterbalance in a fair, non-discriminatory way, as suggested by the Commission's assessment of the undertakings made by the companies.

6. Summary and Outlook

By means of Directive 95/47/EC, the European Commission established a code of conduct for providers of conditional access services in order to offer market access to actual and potential competitors. All providers of digital television services are obliged to guarantee fair and non-discriminatory access to electronic conditional access systems, irrespective of whether the system operator holds a dominant position in the relevant markets. This should not only facilitate market access and provide a secure legal basis for investment, but also protect viewers' rights to a pluralistic range of services and free access to information. The underlying concept is obvious: by controlling an electronic conditional access system, an operator can exclude its rivals from the market and deny viewers access to their services. Such behaviour can have unwanted repercussions on market structures and competition. The Directive is therefore designed to forestall possible abuses. However, other important aspects, such as the standardisation or interoperability of systems, are left to the self-regulatory mechanisms of the parties themselves.

In such circumstances, the provisions of general European competition law, particularly Articles 81 and 82 of the EC Treaty, apply. The Commission has made clear that general competition law is and will remain applicable alongside Directive 95/47/EC and the proposed Access Directive that is to replace it. General competition law will particularly come into play in situations where Directive 95/47/EC does not apply, e.g. access to EPGs and APIs or to digital interactive services, anti-competitive behaviour resulting specifically from the existence and abuse of dominant market positions, and issues arising prior to the access stage, *i.e.* the prevention of concentrated structures that might endanger competition. If sufficient competition genuinely emerges in broadcasting and related markets in the future, the Commission has said that these sectors could be regulated exclusively by general competition law.

Neither the ECJ nor the European Commission in its role as competition watchdog have yet had to deal specifically with situations in which access to electronic conditional access systems has been unfairly denied. A survey of decisions made by the Commission and ECJ in similar cases in which access to key positions has been impeded could shed some light on how these issues might be dealt with if complaints were made about alleged abuses.

However, a number of recent Commission decisions taken in merger control cases relate to the pay-TV market and, *inter alia*, the importance of the use of conditional access systems. As we have seen, the relevant decisions mainly concern the development of anti-competitive structures. It is clear that, in certain market structures, the control of access systems threatens to cause serious disruption to competition, maybe even to close off markets altogether. There is a danger of vertical concentrations and associated dominant positions in up- and/or downstream markets that are essential for the provision of pay-TV services (e.g. content, infrastructure and conditional access facilities). This can particularly lead to conflicts of interest that run counter to the general principles of fair competition. If a company that controls conditional access systems also

markets its own content, it may be tempted to abuse this position in order to exclude potential competitors from the market.

With these dangers in mind, the Commission has tried, since its MSG decision, to keep the pay-TV and related markets open, firstly by laying down conditions for mergers and subsequently by banning them altogether. This proved necessary, particularly in the early development phase of the market, when many companies that already held strong positions in analogue TV (or related) markets were moving into the digital sector.

In this connection, the British Interactive Broadcasting/Open and Kirch/BSkyB decisions are particularly relevant, since they show how the Commission has adjusted its position in reaction to technological progress. For the first time, the Commission considered that electronic conditional access systems could play a role not only in pay-TV but also in interactive digital television services - an aspect which Directive 95/47/EC, for example, did not cover.

Clearly, not every vertical concentration structure is dangerous *per se*. Concentrations can result from internal growth and economic progress, with the aim of cutting costs, optimising efficiency and particularly of recovering the often considerable initial investments. However, competition can be seriously damaged if it becomes clear that the parties to a merger are able to impede the entry of potential competitors on a lasting basis.⁶⁷ Nevertheless, if the companies concerned can persuade the Commission that the market will not be closed off in this way, the Commission may authorise such a merger. For example, in the Kirch/BSkyB case, the Commission accepted the companies' undertakings to offer other providers of digital pay-TV and interactive television services access to their own system and to guarantee interoperability.

In certain cases, a trend can be seen whereby access issues in the pay-TV market are dealt with mainly by self-regulation. This approach is also apparent in proposals for a new regulatory framework for communications services and facilities. These state that, ideally, in a competitive market, basic conditions of access to networks and facilities such as electronic conditional access systems should, in principle, be negotiated according to economic factors by the companies concerned. If the market does not function satisfactorily, additional specific regulations such as Directive 95/47/EC can be introduced during the transition period in order to help prevent abuses. General competition law also applies during and after that period.

These principles are also reflected in the Council of Europe's initiatives. In its Recommendation No. R(99)1 on measures to promote media pluralism, the Council of Europe expressly draws Member States' attention to the danger of abuses of control over digital conditional access systems and urges them to take specific measures. The European Community's experiences can also be helpful and stimulating for non-EU members of the Council of Europe.

The Council of Europe Recommendation also mentions once again the link between free access and effective competition on the one hand and the protection of pluralism, politically and culturally diverse services and content and the individual's right to unrestricted access to information on the other.

Therefore, both institutions, in a (technical and economic) process that is characterised by openness to change, have begun to create a legal framework in such a way that different options are applied in a reasonable way, either cumulatively or one after the other.⁶⁸ Accordingly, technical and market conditions influence whether and for how long the aims of creating and maintaining fair competition can be pursued through sectoral regulation on the one hand or competition law on the other. If, in general competition law, market concentrations resulting from mergers are monitored by means of ex-post controls, the need for sectoral regulation of (partly liberalised) markets may remain for longer. This is particularly true in situations where few or only one provider is able to set *de facto* standards in emerging markets.

- 1) Article 2(b) of Directive 98/84/EC of 20 November 1998 on the legal protection of services based on, or consisting of, conditional access, Official Journal L 320, 28 November 1998, pp.54-57.
- 2) The SMS manages data about the subscriber, which is necessary for the authorisation process and personalisation of smart cards.
- 3) The SAS controls the encryption process and manages the code for deciphering scrambled signals.
- 4) Directive 95/47/EC of 24 October 1995 on the use of standards for the transmission of television signals, Official Journal L 281, 23 November 1995, pp.51-54.
- 5) This article does not deal with other European initiatives on electronic access control, such as Directive 98/84/EC (see footnote 1) or the corresponding Council of Europe Convention on the Legal Protection of Services based on, or consisting of, Conditional Access, (Strasbourg, 24 January 2001), Article 3a of the "Television without Frontiers" Directive (Directive 89/552/EEC of 3 October 1989 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities, Official Journal L 298, 17 October 1989, pp.23 *et seq.* as amended by Directive 97/36/EC of 30 June 1997, Official Journal L 202, 30 July 1997, pp.60 ff.), etc. The same applies to the other provisions of Directive 95/47/EC and their transposition by the Member States, the (at least indirectly relevant) European initiatives on media concentration, consumer protection and the decisions of the European Commission on similar access issues in other fields or any related discussions in the telecommunications field (see, for example, Directive 90/387/EEC of 28 June 1990 on the establishment of the internal market for telecommunications services through the implementation of open network provision, Official Journal L 192, 1990, p.1, amended by Directive 97/51/EC of 6 October 1997, Official Journal L 295, 1997, p.23).
- 6) However, this only applies if the digital television services offered comply with the European legislation in force.
- 7) For an explanation of access and interoperability as aims of the Community, see also the Commission Communication on "The development of the market for digital television in the European Union" - report in the context of Directive 95/47/EC, COM (1999) 540, p.34, 9 November 1999. In its Resolution on the aforementioned Communication, the European Parliament explained more clearly that free access to digital television should be recognised as a fundamental principle (see IRIS 2000-7: 4).
- 8) In this context, interoperability means the compatibility of rival conditional access systems. It is jeopardised when two competing pay-TV broadcasters use different conditional access systems. If these systems are not interoperable, subscribers to both services may have to purchase two different set-top boxes.
- 9) See Technical Specification of DVB Simulcrypt, Part 1, Digital Video Broadcasting (DVB), 1 April 1997, see also <http://www.dvb.org/standards/index.html> (found on 5 February 2001).
- 10) See Common Interface Specification for Conditional Access and other Digital Video Broadcasting Applications, PREN 50221, June 1996; Guidelines for Implementation and use of Common Interface for DVB Decoder Applications, TM 1782. RV.1, draft E, 4/12/96, DVB; see also <http://www.dvb.org/standards/index.html> (found on 5 February 2001).
- 11) An Electronic Programme Guide (EPG) is a type of navigation software for digital television and is similar in function to a web browser. Viewers are electronically guided through the ever-increasing number of available channels and helped to make their selection.
- 12) An Application Programme Interface (API) controls the functions of the set-top box and coordinates the software applications that digital channels need if they are to work. It therefore provides for the applicability and compatibility of different software programmes that are needed by different types of service within the same set-top box.
- 13) The German *Rundfunkstaatsvertrag* (Inter-State Broadcasting Agreement) takes these provisions further, including them under the ban on discrimination in Paragraph 53.2. The Commission is also studying the problem of further possible bottlenecks other than decoders, see Commission Communication COM (1999) 540, *loc.cit.*, p.34.
- 14) See Articles 1 and 7 of the Proposal for a European Parliament and Council Directive on a Common Regulatory Framework for Electronic Communications Networks and Services, COM (2000) 393 - C5-0428/2000 - 2000/0184.
- 15) Proposal for a Directive on access to, and interconnection of, electronic communications networks and associated facilities ("Access Directive"), COM (2000) 384 - C5-0433/2000 - 2000/0186.
- 16) Article 2(a) of the Access Directive defines access for the first time as "the making available of facilities and/or services, to another undertaking, under defined conditions, on either an exclusive or non-exclusive basis, for the purpose of providing electronic communications services. It covers *inter alia*: [...] access to conditional access systems for digital television services."
- 17) See Article 12.2: "When imposing the obligations ... national regulatory authorities shall take account in particular of:
 - (a) the technical and economic viability of using or installing competing facilities, in the light of the rate of market development;
 - (b) the feasibility of providing the access proposed, in relation to the capacity available;
 - (c) the initial investment by the facility owner, bearing in mind the risks involved in making the investment;
 - (d) the need to safeguard competition in the long term;
 - (e) where appropriate, any relevant intellectual property rights."
- 18) See Article 13 of the proposed Directive on a Common Regulatory Framework.
- 19) Recommendation No. R(99) 1 of the Committee of Ministers to Member States on measures to promote media pluralism, Strasbourg, 19 January 1999.
- 20) See also the corresponding reference in Article 4(c) of Directive 95/47/EC.
- 21) On this and other points, see also Ukrow, Jörg: *Chancengleicher Zugang zu den Übertragungswegen*, in: *Schriftenreihe des Institutes für Europäisches Medienrecht (EMR)* (ed.), *Fernsehen und Neue Medien in Europa, Regulierung - Liberalisierung - Selbstkontrolle*, vol. 22, pp.115 *et seq.*, Munich/Berlin 2001.
- 22) For example, in the *Kinderkanal/Phoenix* judgment of 24 February 1999, NN 70/98; ECJ, T-70/89, Magill, judgment of 10 July 1991, 1991 Digest, II - 535; ECJ, verb. Rs. C- 241/91 and 242/91 P, RTE & ITP, judgment of 6 April 1995, 1995 Digest, I - 743; ECJ, C-7/97, Bronner, judgment of 26 November 1998, 1998 Digest, I - 7791.
- 23) Council Regulation No.17: First Regulation implementing Articles 81 and 82 of the Treaty, 6 February 1962, Official Journal 1962, p.204.
- 24) Regulation (EEC) No.4064/89 of 21 December 1989 on the control of concentrations between undertakings as amended by Regulation No.1310/97 of 30 June 1997; Official Journals L 395, 30 December 1989, p.1 and L 180, 9 July 1997, p.17.
- 25) See also ECJ, C-7/97, Bronner, *loc.cit.*, vol. 23 *et seq.*
- 26) Case IV/M. 469 - MSG Media Service, 9 November 1994, Official Journal L 364, 31 December 1994, p.1.
- 27) For a definition of the markets and the Commission's policies, see van Loon, Ad: EU involvement in national television ownership and control policies and practices, in European Audiovisual Observatory, IRIS Special: Television and Media Concentration - Regulatory Models on the National and the European Level, Strasbourg, 2001. The idea of adapting market definitions to technological change is clearly set out in Commission Communication COM (1999) 540, *loc.cit.*, p.17.
- 28) Paragraph 20 of the MSG decision.
- 29) Paragraph 55 of the MSG decision.
- 30) Paragraph 60 of the MSG decision.
- 31) The use of such a proprietary system means that any broadcaster wishing to use this encryption system must conclude a contract with the system owner. These contracts usually stipulate that a particular operator, controlled by the system owner, should administer the subscription system. The Commission explained the relevance of such a practice in its Bertelsmann/Kirch/Premiere decision (see 5.2.3, below). If such a proprietary conditional access system is to be operated, it must provide access on non-discriminatory terms. This means that the licensor of the decoder technology can conduct his business without being influenced by a programme provider (see paragraph 111 of the Bertelsmann/Kirch/Premiere decision). In this case, the licensor was not independent, since BetaResearch was largely controlled by companies with their own interests as programme suppliers (*loc.cit.*, paragraphs 111 and 112).
- 32) Paragraph 97 of the MSG decision.
- 33) Paragraphs 69 *et seq.* of the MSG decision.
- 34) See also paragraphs 87 *et seq.* of the MSG decision.
- 35) Case IV/M. 490 - Nordic Satellite Distribution, 19 July 1995, Official Journal L 53, 2 March 1996, p.20.
- 36) Paragraph 57 of the Nordic decision.
- 37) Paragraph 58 of the Nordic decision.
- 38) See Paragraphs 29 and 30 of the MSG decision.
- 39) Case IV/M. 993 - Bertelsmann/Kirch/Premiere, 27 May 1998, Official Journal L 53, 27 February 1999, p.1.
- 40) Case IV/M. 1027 - Deutsche Telekom/BetaResearch, 27 May 1998, Official Journal L 53, 27 February 1999, p.31.
- 41) See previous comments on the MSG decision and footnote 31.
- 42) Paragraphs 106 and 109 of the Bertelsmann/Kirch/Premiere decision.
- 43) These would include services such as encryption (where BetaResearch was again the holder of exclusive, open-ended licences for Beta encryption technology on the basis of the d-box), video compression, multiplexing and satellite uplink.
- 44) Paragraphs 123 *et seq.* of the Bertelsmann/Kirch/Premiere decision.
- 45) Paragraphs 133-136 and 148-153 of the aforementioned decision.
- 46) Paragraph 130 of the aforementioned decision. BetaResearch has since published the Application Program Interface (API) of the d-box (see IRIS 1999-2: 16).
- 47) Such a standardised API is the interface between the operating software and multimedia applications and should enable the consumer to use a single decoder (such as the d-box) to access the applications of other service providers.
- 48) Paragraph 154 of the Bertelsmann/Kirch/Premiere decision.
- 49) Paragraphs 133-141 and 148-155 of the aforementioned decision.
- 50) Paragraph 155 of the aforementioned decision.
- 51) Case IV/36.539 - British Interactive Broadcasting/Open, 15 September 1999, Official Journal L 312, 6 December 1999, p.1, published under case no. K (1999) 2935.
- 52) Paragraphs 140 ff. of the aforementioned decision.
- 53) Paragraphs 141, 142 and 170 of the aforementioned decision.
- 54) Paragraphs 153-157 of the aforementioned decision.
- 55) Paragraphs 159-172 of the aforementioned decision.
- 56) Paragraphs 173 *et seq.* of the aforementioned decision.
- 57) The investment needed to create a separate infrastructure and the customer's reluctance to buy more than one set-top box meant that these reasons were plausible. See also paragraph 173 of the aforementioned decision.
- 58) Paragraph 175 of the aforementioned decision.
- 59) There are basically two possible ways of producing an open CA system: Multicrypt, where every provider includes the code for its CA system in its programme bouquet. Here, the reception device must, depending on which programme bouquet the viewer wishes to receive, be equipped with a CA module and a smart card for each service provider. With Simulcrypt, the codes for all CA systems are transmitted with the programming signal, so that all decoders on the market that utilise one of those CA systems can be used.
- 60) Paragraphs 180 and 181 of the aforementioned decision.
- 61) Case IV/M. 0037 - BSKyB/KirchPayTV, 21 March 2000, Official Journal C 100, 15 April 2000, p.45.
- 62) See previous decision.
- 63) The d-box decoder would have to be adapted so it could process digital interactive service signals. The BetaResearch software would also have to be developed further. See paragraph 77 of the BSKyB/Kirch Pay TV decision.
- 64) Premium channels are those for which viewers pay an extra charge (as opposed to basic packages). See also paragraph 134 of the Bertelsmann/Kirch/Premiere decision.
- 65) The following are also available, for example: so-called universal decoders, produced by the Free Universal Network (FUN) and comprising the DVB Common Interface and the API developed by American firm OpenTV, and set-top boxes without an API or an integrated CA system, with which any unencrypted digital channel can be received, but not multimedia additional services or applications such as the respective EPGs of the various programme providers.
- 66) Paragraph 93 of the BSKyB/Kirch Pay TV decision.
- 67) See the MSG decision.
- 68) Sectoral *ex-ante* regulation and competition law as complementary instruments are also mentioned by the Commission in its Communication COM (1999) 540, *loc.cit.*, pp.18 and 33.