

STUDY ON THE IMPACT OF THE CONDITIONAL ACCESS DIRECTIVE



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EXECUTIVE SUMMARY

The Directive

The directive on the legal protection of services based on, or consisting of, conditional access (Directive 98/84/EC, hereinafter CAD) was adopted on 20 November 1998.

The objective of the CAD is to provide conditional access (CA) systems protecting services that are remunerated, effectively Pay-TV and on-demand services, with a common standard of legal protection. In other words, it aims at compelling all Member States to adopt a certain level of sanctions and remedies in order to efficiently fight CA piracy.

The directive covers both broadcasting (television and radio) and interactive online services (information society services - ISS) that use some form of conditional access.

The study in brief

The study first examines why conditional access services (CAS) play a different role in non-media ISS and in media content distribution. It then describes the economics of audiovisual content distribution and the role played by conditional access devices in this domain, showing that piracy incentives are numerous along the distribution chain. A legal evaluation of the CAD application is then carried out, revealing that a number of weaknesses restrain the efficiency of such a regulation.

The study is based on a sample of member states, selected on the basis of the importance of national markets and with a view to ensure a balanced representation of large/small, old/new member states; another criterion for the sample selection is the issue of linguistic proximity, whereby linguistic areas transcending national borders are examined. The sample therefore includes eleven countries: the United Kingdom, Germany, France, Italy, Spain, Ireland, Austria, Sweden, Belgium, Poland and Lithuania.

The study conclusions justify the importance of opening a discussion at EU level on how to build systematic intellectual property (IP) protection by improving the existing regulatory framework (including the CAD) and ensuring appropriate enforcement of the existing measures, as well as improving cross-border cooperation in the monitoring and enforcement of the CAD.

The economic analysis

The first finding of the economic analysis is that the economic functions of encryption devices strongly differ in non media and in media applications. While in non media services, Conditional Access Systems directly participate in the utility supplied to the consumer, in the case of media content delivery CA systems are basically both an exclusion and discrimination tool. In other words they are technical means aiming at selecting among consumers and extracting from them the price they are willing to pay for media goods. The term discrimination is hereinafter used as an economic concept, and should not be confused with the notion of discriminatory practices which are forbidden by EU Internal Market rules.

From an economic perspective, media goods are opposed to communication services (so-called non media ISS) by the fact that their demand patterns as well as their renewal or diversity objectives require a discriminatory pricing strategy usually called “versioning”. Because of the diversity of its linguistic and cultural communities, Europe shows a highly specific distribution of media content preferences. These are largely related to territoriality but may also exceed it. Moreover, depending on its own evaluation of media externalities, each European country has followed a specific audiovisual path leading to a wide diversity in TV industrial organisation, in audiovisual (AV) content delivery systems, in AV version market structure and in national regulation. The wide differences in the penetration rates and the turnover of pay-TV markets illustrate this phenomenon. Such a cultural, industrial and regulatory landscape does not favour cross-border versioning.

Compared to its American competitors, this situation places Europe in a very adverse position. While its industry is highly fragmented and ruled by national and politically sensitive media regulations, the European Union as a territory has to cope with high discrimination costs. The harmonisation of the EU media regulations which would efficiently help the reduction of these discrimination costs raises many issues regarding the legacy of the multiple media development paths, the setting up of a common evaluation of media externalities as well as common internalisation rules to be applied across the EU. By aiming at facilitating cross-border exchanges through protected discrimination devices, the CAD probably missed the sophistication of this point. However, because they are discrimination tools, CAS should be protected so to be maximally efficient.

The fragmentation of the European audiovisual industry as well as the competition between Free-To-Air (FTA) and pay-TV versions create many incentives for CAS hacking or piracy. These incentives are mainly attributable to moral hazard. And yet, right holders, who are the first ones to suffer because of moral hazard issues, claim they cannot resort to the CAD.

The economic analysis shows the extensive level of moral hazard in these markets which is likely to increase as new delivery modes develop (IPTV, mobile TV etc), most often, thanks to free content. The existence of moral hazard may imply that certain forms of piracy are encouraged because they help the roll-out of new delivery systems. The analysis demonstrates that this moral hazard is greater in the EU than in the US. In effect the horizontal and vertical integration of the US audiovisual industry allows a leaner vertical control of the distribution by the right holders. The vertical integration of broadcasters with CAS suppliers provides more efficiency in fighting piracy. As a result, not only Europe has heavier discrimination tasks to perform, but also its discrimination tools suffer more moral hazard. Moral hazard may also raise competitive and piracy issues on the set-top-box (STB) markets. The analysis suggests that competition policy should account for the economic benefits of vertical integration and the costs of interoperability within such markets.

Another aspect that should be taken into account is the expansion of P2P (peer to peer) practices (virtually non existent when the CAD was adopted) which creates a structural moral hazard in content distribution over broadband networks: any Internet access provider is simultaneously a deliverer of legal and illegal content. P2P undermines the exclusivity of rights licensed by rights holders on a given platform/territory, thereby reducing the value of those rights.

The existence of moral hazard makes it extremely difficult to assess the impact of the CAD even to the extent that data are not made available to make empirical estimations. Nevertheless the CAD can play its deterrent role to assist in the suppliers of services to maximise revenues generated by their services.

The grey market arises from new discrimination needs associated with the increasing movement of EU citizens. In general, the grey market appears not to be conflicting with the CAD. An essential distinction has to be drawn between the infringement of CAS (piracy) which is the object of the CAD and the breach of contractual obligations imposing territorial restrictions to rights exploitation, which is in fact a tool to discriminate at the cheapest costs the disseminated consumers living out of their cultural zone. Such an objective is in line with the containment of discrimination costs provided by the CAD. Right holders should be adjusting their contracting strategy when the transaction costs of grey markets overwhelm their benefits.

For the time being, the costs of reaching those consumers through a grey market tolerance still appear to be much cheaper than reshaping the distribution contracts on a non territorial basis. However, in view of the growing size of grey markets across Europe, and taking into account the political goal of establishing an Internal Market, the Commission could broker some discussions with stakeholders on a better apprehension of the grey market and its handling to prevent copyright infringements.

The legal analysis

The legal analysis is carried out across the sample of selected member states – eight relevant topics for analysis are singled out:

1. Competent authorities overseeing the implementation of the CAD
2. Dates of Implementation of the CAD
3. Relevant national regulations in force before the CAD
4. The CAD's implementation in the selected countries
5. Alternative legal rules used to fight piracy
6. Scope of the infringing activities
7. Sanctions and remedies
8. Relevant case law

The results of the analysis show that the implementation of the CAD has succeeded in harmonising to some extent the legal protection of CA services within the internal market. It is far from being the priority of public authorities (compared to copyright law or cyber crime legislation for instance). In fact, in the countries where no specific legislation addressing the circumvention of CAS existed, no public consultation or debates have been held to transpose the CAD and the transposition has been mainly a “copy-paste” of it.

However, it seems that in these countries the CAD has made it easier for the stakeholders to enforce their rights and in that regards it has improved the situation. The CAD in particular has filled existing legislative gaps insofar as horizontal or very broad legislation such as competition, copyright or criminal law were perceived as rather inadequate tools to fight a specific form of

infringement such as CA piracy. The CAD has made it easier for concerned stakeholders such as pay-TV operators or CA industries to take legal actions and have legal standing in courts.

On the other hand, in the countries where an existing specific legislation used to exist, the implementation of the CAD has brought little added value in terms of protection and has mainly consisted in enlarging the scope of the existing law to cover ISS.

The main difference between the different legal orders with regard to the implementation of the CAD lies now in the sanctions applied to the infringing activities adopted by each of the Member States, and in particular between those countries which choose to additionally sanction private use (not required by the CAD) and those which choose to only sanction the commercial use of illicit devices. In theory, the inclusion of private use in the list of infringing activities should act as a strong deterrent tool to prevent CA piracy. Yet, the quantity and quality of data collected is insufficient to draw such a swift conclusion. Data on piracy is practically non-existent at public level and there is also a relevant lack of case law. The development of a legitimate CA-related AV market in different countries is dependent on too many factors to correctly assess the role played by sanctions for private use of illicit devices in determining the growth of the market.

Sanctioning the private use of infringing devices would help reduce the moral hazard existing in the AV value chain at the level of the end consumer, thus strengthening the legitimate offer. Similarly to what exists for counterfeit trademarks, the possession of an infringing device should be considered as an offence independently from its usage. If not, private use, whose control is impossible to enforce and which therefore should remain an exception, creates huge incentives for circumvention.

The lack of case law (it seems that most of the cases are settled out of courts) is a major impediment in correctly assessing the importance of the CAD to fight CA piracy. The CAD operates as a complementary tool to other pieces of legislation protecting copyright or against unfair competition. The major advantage of the CAD for CAS providers is that it allows them to acquire legal standing in cases of CA piracy (whereby right holders can also rely on copyright law).

Overall, it seems that business operators benefiting from the CAD are satisfied with its adoption and its implementation into national law, although most of them call for further upwards harmonisation of the law in terms of sanctions, remedies and inclusiveness of the list of prohibited activities. Yet this call cannot be accompanied by empirical evidence that the CAD has been effective in tackling cross-border piracy nor that its objectives in terms of Internal Market have been met.

Another aspect that needs to be brought to the fore is that the lack of knowledge and interest in the CAD shown by public authorities has had as a consequence that no cross-border administrative cooperation has been established on this subject. The CAD was intended to address Internal Market issues but its implementation and monitoring have been carried out without any tangible trans-national dimension. The Commission may remedy this situation by setting up an expert working group (on the model of the expert groups existing in the framework of other Directives such as the E-commerce Directive or the Television without Frontiers (TWF) Directive).

The main conclusions

- The CAD aims at protecting encryption technologies and the related “encoded services” with references to a wide range of policy motivations with the noticeable exception of IP protection. Essentially it promotes the idea that a better securitisation of remunerated information services will facilitate cross-border trade as well as Internal Market efficiency.
- In general, the grey market appears not to be conflicting with the CAD. An essential distinction has to be drawn between the infringement of CAS (piracy) which is the object of the CAD and the breach of contractual obligations imposing territorial restrictions to rights exploitation, which is in fact a tool to discriminate at the cheapest costs the disseminated consumers living out of their cultural zone. Such an objective is in line with the containment of discrimination costs provided by the CAD. Right holders should be adjusting their contracting strategy when the transaction costs of grey markets overwhelm their benefits.
- However, in view of the growing size of grey markets across Europe, and taking into account the political goal of establishing an Internal Market, the Commission could broker some discussions with stakeholders on a better apprehension of the grey market and its handling to prevent copyright infringements. The political goal of establishing an internal media market should be in line with improving discrimination efficiency while reducing transaction costs.
- The CAD has been quite well fitted to the needs of the pay-television industry. This industry has been able to get legal protection for its technical delivery systems, and therefore, for the added-value of its business. However, the application and enforcement of the directive shows many weaknesses: lack of interest from member states in the implementation and monitoring of the CAD, low level of harmonisation and weak political willingness from Member States to fight against copyright piracy.
- Public authorities are unaware of the trans-national effects of the CAD. No cross-border co-operation has been established in this domain. To remedy this situation, the Commission should consider setting up a working group composed of Member States’ representatives in order to improve monitoring and discuss ways of enhancing the effectiveness of the CAD.
- The CAD achieved a low level of harmonisation, which only includes minimal prescriptions with regard to the level and nature of sanctions applicable to the circumvention of CAS. Sanctions and enforcement are considerably different across member states, and some safe harbours still exist. The majority of stakeholders involved in the CAS-related media business underline the importance of including the private use of infringing devices in the list of activities subject to sanctions. Stronger sanctions (in particular, criminal sanctions) are also considered to be more effective in fighting piracy.
- The IP legal status of digital content and its effective enforcement and application appear as the key driver of efficient markets and distribution systems. This driver appears not to be properly addressed by the CAD. Right holders consulted in the course of the study

estimate that as they are not explicitly included in the scope of the CAD, they have no legal means, through this instrument, to fight downstream piracy by themselves. They therefore rely on their pay-TV distributors or CAS providers whose market power is, in theory, reinforced by that tool. This issue should be the object of careful consideration from the European Commission in the context of a possible amendment of the CAD.

- Technology based regulation is threatened by obsolescence, complexity, and inefficiency. In this context, it is useful to draw comparisons with other pieces of EU and international legislation addressing similar issues as the CAD. The EU Copyright Directive as well as the Enforcement Directive, the proposed Criminal Sanctions Directive and the Draft WIPO Broadcasting Treaty appear more suited to rule fair economic relations in content distribution systems. In particular, they affirm the economic value of IP goods and explicitly condemn all forms of circumvention of “effective technological measures” at every stage and for any purpose.
- It appears that a convergence of the CAD with the approach set out in the above mentioned pieces of legislation would reinforce its role as an essential tool in the legal arsenal available at European level to counter IP piracy across all digital platforms. The protection of technical systems should be the consequence of the protection of content and not the opposite. As it stands, the CAD seems imbalanced in favour of providers of technical systems. The European Commission should redress this situation.
- The study also raises a series of issues which deserve further consideration and analysis in view of assessing the CAD in the wider context of the EU media sector regulation. These issues concern notably the moral hazard endemic in the roll-out of broadband networks (through the expansion of P2P circumvention practices) and the role played by internet services providers (ISPs) in this context; the question of legal protection for media right holders falling outside the scope of the copyright regime (such as sports right holders); and finally the relevance of competition policy to structure media markets in Europe. These topics should be discussed at EU level between the European Commission and relevant stakeholders.
- The CAD has been conceived as an internalisation tool for expanding digital service markets. Its evaluation through this study brings an opportunity to re-think the externalities and the harmonisation of the European media markets. Media markets will not be harmonised through technology because, conversely to telecoms, their value is directly related to content. IP is then the key internalisation tool of positive media externalities. A possible review of the CAD provides an opportunity to discuss the adequacy of the existing corpus of EU regulations in addressing the problems brought by new digital platforms to Europe’s media market.
- This approach has wide-ranging implications touching upon key aspects of the EU’s Internal Market, competition and information society policies. A consultation on these topics, open to all interested parties is therefore recommended, in order to launch a debate on the future of the European media industry in the digital environment.

Chapter I: What is the Conditional Access Directive (CAD)?

1.1 General historical context

The last decade of 20th century displayed a significant increase in technological innovation. First, broadcasting channels developed in the 1980s electronic services called pay-tv services that increased throughout Europe in the 1990s. Along with that development, electronic services, referred to as Information Society services¹ (hereinafter: ISS) rapidly expanded at the end of the 1990s. Those services are accessible only upon the condition that one pays either a fee or a subscription. Unless authorised, users are not allowed to access the content of those services.

The development of those remunerated electronic services was accompanied by protective security systems that prevent non-authorised users to access the content provided by such a service. Over the years, the degree of security increased but nonetheless, those services remained victim to piracy. The protective measures are primarily comprised of signal encryption, the traditional technology used for pay-TV, which consists of scrambling broadcast signals. The viewer will receive distorted pictures and sounds unless he is authorised to access the services. To restore the broadcast to its original format, and therefore access the encrypted content, the user will need a special decoding device, either in the form of a decoder, a smart-card or a computer programme for instance. However, conditional access technologies encompass more than just typical encryption systems as they also include any technology denying access such as user-ID/password formats for pay services on the internet.

In spite of this, as mentioned above, these special conditional access devices have been particularly subject to piracy. No matter how fast these devices evolve, a form of piracy which aims at circumventing them will almost simultaneously arise. A whole illegal and unauthorised black market has flourished in the past few years, offering devices at a lower price that enabled users to receive conditional access services without the legal authorisation of the designated service providers. No need to say that the rapid expansion of the piracy industry and its ability to adapt have undesirable effects on electronic service providers. They suffer considerable losses, notably in potential markets, and are obliged to adapt their distribution methods of conditional access devices in order to keep a control on them. Right holders, who provide broadcasting content, bear further losses as the negotiated price for their rights does not take into account all the users who benefit from their content without authorisation. The need for constant monitoring and improvement of conditional access devices also demands a certain cost which has to be borne by service providers.

¹ At EU level Information Society services are defined by Directive 98/34/EC (so-called “transparency directive”) as modified by Directive 98/48/EC of 5 August 1998. Article 1 of Directive 98/48/EC defines Information Society Services as “any service normally provided for remuneration, at a distance, by electronic means and at the individual request of a recipient of services”

1.2 Legal background

The problem of safeguarding conditional access systems and devices first arose in Europe with a recommendation issued by the Council of Europe in 1991. The Council of Europe passed a Recommendation of the Committee of Ministers to Member States (No. R(91)14) on legal protection of encrypted television services, later completed by Recommendation No. R(95)1 on Measures against Sound and Audiovisual Piracy. The council of Europe was the first institution to raise awareness on the gravity of the piracy problem and its adverse impacts.

Less specifically, the World Intellectual Property Organisation (WIPO) issued treaties in 1996 on the 'Obligations concerning Technological Measures' (article 11 WIPO Copyright Treaty² and article 18 Performance Phonograms Treaty³). Those treaties as well cover conditional access devices.

In 1996 the European Commission addressed the piracy problem in a Green Paper on the legal protection of encrypted services in the internal market⁴. Following a survey conducted in 1995, the Green Paper noted that there was a substantial difference in the level of protection in the Member States' national legislations in relation to encrypted services. Hence, the Commission saw a need to legislate on anti-piracy legal protection, more precisely to harmonise national legislations protecting electronic remunerated services using conditional access systems.

Following the recognition of a need for Community action, a Directive on the legal protection of services based on, or consisting of, conditional access (Directive 98/84/EC of 20 November 1998) was adopted. The Directive grants legal protection to conditional access systems protecting services that are remunerated, essentially protecting pay-TV services against piracy.

Later in 1998 the European Parliament sought to adopt amendments⁵ to the Council Common position. They hoped to extend the protection of conditional access, seeking to protect not only remuneration for such services but their 'economic value' and to additionally extend the definition of illicit activities in relation to any activities for direct and indirect financial gain. Both of these proposals were rejected by the Council.

The issue of the scope of the Conditional Access Directive (CAD) is examined in detail below in chapter 3.2.6. A key aspect of this examination consists in analysing whether only commercial infringing activities are sanctioned or whether private use of infringing devices is also punishable by law. The situation differs from country to country, as the CAD only includes activities carried out for commercial purpose in the list of infringing activities, leaving Member States free to extend this list to private use of illicit devices (recital 21 of the CAD).

2 http://www.wipo.int/export/sites/www/treaties/en/ip/wct/pdf/trtdocs_wo033.pdf

3 CRNR/DC/95 <http://www.wipo.int/documents/en/diplconf/distrib/95dc.htm>

4 COM(96) 76 http://europa.eu/documents/comm/green_papers/pdf/com96_76_en.pdf

5 Parliament resolution on the Commission Green Paper on legal protection for encrypted services in the internal market: OJ C 167, 2.6.1997; http://eur-lex.europa.eu/LexUriServ/site/en/oj/1998/c_262/c_26219980819en00340040.pdf

In comparison with the CAD, the Copyright Directive (Directive 2001/29/EC⁶) lays down a general provision (article 8) for the adoption of appropriate sanctions and remedies against any infringement of the rights and obligations set out in the Directive, without distinguishing between commercial or non-commercial scale. A distinction was introduced by the Enforcement Directive (Directive 2004/48/EC)⁷ which, although targeting any infringement of intellectual property rights, explicitly mentions the commercial scale requirement for some of the measures provided (evidence, right of information, provisional and precautionary measures), leaving Member States free to apply those measures to other acts (recital 14). The same distinction is included in the proposed Criminal Sanctions Directive. These topics are further analysed below in chapter 4.3.

In 2000, a study⁸ was commissioned by the European Commission on the use of conditional access for reasons other than the protection of remuneration, one of them being the territorial restriction of an audience for example. This study concluded that it was too early to assess the possible impact of CA use on the Internal Market and to predict how the market would develop if use of CA devices increase. The study also found it impossible to assess to what extent piracy of non-remunerated CA services would play a role in the need to introduce protection for such services within Internal Market.

1.3 Objectives

The objective of the CAD is to provide conditional access (CA) systems protecting services that are remunerated, effectively Pay-TV and on-demand services, with a common standard of legal protection. In other words, it aims at compelling all Member States to adopt a certain level of sanctions and remedies in order to efficiently fight the piracy of those concerned services.

The directive explicitly refers to a public consultation following the above mentioned 1996 Green Paper on the “Legal Protection of Encrypted Services in the Internal Market”. The consultation resulted in the confirmation of the need for such a legal tool.

As a consequence, the CAD thus reflects media market issues as they stood in 1998. This vision is based on the assumption that encryption technologies are critical to the development of digital service markets. The directive also assumes that such technologies will promote:

- Freedom of expression across Europe
- Cross-border service market expansion
- Pay-TV market expansion

6 Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society

http://eurlex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&numdoc=32001L0029&model=guichett

7 Directive 2004/48/EC of the European Parliament and of the Council on the enforcement of intellectual property right;

[http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004L0048R\(01\):EN:NOT](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004L0048R(01):EN:NOT)

⁸ Study on the use of conditional access systems for reasons other than the protection of remuneration, to examine the legal and the economic implications within the Internal Market and the need of introducing specific legal protection , 01.09.2001, <http://www.ivir.nl/publications/other/ca-report.pdf>

In particular, e-commerce and pay-TV services are seen as opportunities to expand European cross-border markets. The CAD offers legal protection to service providers against illicit circumvented access and notably pay-TV piracy. It applies to all kinds of remunerated services based on, or using conditional access.

1.4 Coverage of the Directive

Definitions

Protected services: The Directive covers both broadcasting (television and radio) and interactive online services (information society services - ISS) that use some form of conditional access. 'Service' is to be understood in the meaning of the treaty i.e. in return for remuneration, either a subscription or a fee or indirectly via advertising revenue in dual markets. It also protects the provision of conditional access to those services.

Conditional access and conditional access device: The directive is very neutral in terms of its definition of conditional access (CA), it does not refer to any technology in particular and hence leaves room for future encompassment of new technologies instead of merely protecting already existing techniques.

Illicit device: The directive states that any equipment or software that is specifically designed or adapted to give intelligible access to a protected service without the authorisation of the service provider is to be considered as an illicit device. The prevalent illicit devices on the piracy market when the CAD was adopted were smart cards (duplicated, modified or copy of the original but not blank).

Infringing activities

Infringing activities are enumerated in detail in article 4 of the Directive. The objective is to eradicate piracy at the source of its business chain of activity hence all activities are covered, ranging from 'preliminary commercial' deeds up to maintenance of sold illicit devices. However, it should be observed that the Directive only imposes sanctions on commercial activities and not on personal use and possession of pirate devices. Recital 21 of the Directive, however, leaves the possibility open for Member States to prohibit the private possession of illicit devices.

Sanctions and remedies

No specific sanctions or remedies are imposed on Member States, which are free to implement the Directive whatever way they think appropriate. Though, sanctions should be effective, dissuasive and proportionate to the potential impact of the infringing activity. Affected service providers must be able to access appropriate remedies including taking action for damages, an injunction or other preventive measures and where appropriate, the elimination of illicit devices from commercial channels.

1.5 Methodological remarks

The CAD is technology driven (i.e. the fact that the CAD focuses on the legal protection of a technical system and leaves aside the question of offering parallel protection to the services protected by that system) and based on digital technologies as they were seen in 1998. At that time, broadband internet networks were only emerging and massive copyright infringing applications such as decentralised peer-to-peer (P2P) software did not yet exist. Since then, P2P has contributed to widely expand copyright piracy independently from circumventing any conditional access or encryption device.

P2P software is not illegal per se, however P2P networks have been massively used for the unauthorised exchange of copyright protected files. Initially P2P thrived from building on the legal uncertainty surrounding its methods – in particular, legal loopholes linked to imprecise definitions of fair use (or private copy) limitations have allowed P2P users to avoid being sanctioned for their infringing activities. Nevertheless, the illicit nature of copyright infringement through unauthorised P2P exchanges has been recognised and sanctioned by various courts throughout the world – most notably by the US Supreme Court in July 2005. A brief description of the issues raised by P2P networks is provided below in chapter 2.6.3.

The massive flow of P2P copyright circumvented content has made new encryption technologies aimed at protecting copyright — such as Digital Rights Management (DRM) — highly difficult to adopt.

This example suggests that the Directive possesses some weaknesses in its approach to digital markets. Two of them can be mentioned at this stage:

- While digital markets clearly require encryption technologies, there is no economic thinking of the added value spectrum of such technologies in the background or in the design of the Directive. The CAD motivation relies on general universal principles (freedom of speech, unified Internal Market) but not on any contextual micro-economic analysis. No mention is made of the specificity of intellectual property (IP) and other information goods able to flow over digital networks. However, the economic function, the technologies and the incentives to circumvent conditional access devices strongly differ in non-media ISS and in audiovisual content distribution services. In media good distribution, piracy economics and practises aim at stealing the good to the benefit of the final consumer. On the other hand, with non-media ISS based on private information handling, they aim at spoiling the service to the detriment of the consumer.
- Because of the CAD's technology oriented approach, no anticipation of the spread of broadband applications is made, and especially no concern is expressed about audiovisual content distribution services over the Internet. Since the adoption of the CAD, the surge of new systems for the digital distribution of audiovisual content has more clearly pointed out the specific problem of IP protection in a digital environment across all distribution platforms. The issue of updating legal protection for IP media goods has been addressed some years later in the EU Copyright Directive (EUCD, Directive 2001/29/EC). Unlike the CAD, the EUCD is not focused on a particular technology but lays down a series of rights

and obligations and provides for adequate protection to the owners of those rights – the EUCD therefore seems better suited to tackle the problem of content piracy.

This study will focus on these two aspects. It will first examine, from an economic perspective, why conditional access systems play a different role in non-media ISS and in media content distribution. This will lead to explain why the CAD alone cannot be relied on to facilitate the cross-border development of secure ISS. The study will then describe the economics of audiovisual content distribution and the role played by conditional access devices in this domain. It will be revealed that piracy incentives are abundant along the distribution chain, which makes them difficult to prevent through a specific technical regulation.

This economic analysis will then be completed with a legal evaluation of the CAD application over a sample of selected European countries. This evaluation will prove that the weaknesses highlighted above restrain the efficiency of such a regulation.

The study conclusion will insist on the importance of focussing future EU regulation on building systematic IP protection by improving the existing regulatory framework and ensuring appropriate enforcement of the existing measures. This step should be complemented by updating existing regulations addressing specific technological devices such as the CAD.

Chapter II: Economic analysis

Encryption technologies have existed since the origin of the digital era and have an increasing pace of applications. They cover a wide spectrum of economic functions, shaping various incentive schemes for circumvention and infringement. Those functions and incentives strongly differ in so-called Information Society Services and in pay-TV services which constitute a media, e.g. **information good** — audiovisual content (AV) — distribution system.

The following analysis gathers some methodological remarks about the economic function of encryption in digital services and in media distribution. To make this distinction clear, it is necessary to go back to the economic concepts underlying the key category of “information,” whose utility, applications and markets are not explicit enough in the common expression of Information Society. After a brief presentation on the economics of digital media, the role of conditional access systems for AV content delivery is examined and the corresponding implications for industrial organisation are set out.

This study focuses on a sample of Member States selected on the basis of the importance of their national markets and with a view to ensure a balanced representation of large/small, old/new member states. Another criterion for the sample selection was the issue of linguistic proximity, whereby linguistic areas transcending national borders are examined. The sample covers eleven countries: the United Kingdom, Germany, France, Italy and Spain constitute the main markets; Ireland and Austria are included because they belong to the same pay-TV market as the UK and Germany (respectively). Sweden represents a prime example of Scandinavian markets. Belgium is a multilingual country. Poland is the biggest state from Eastern Europe, and Lithuania, a small one, where pay-TV markets are less developed with unique piracy issues. Detailed economic data for each country are presented in Annex III. The analysis is based on public statistics and information collected through interviews with CA industry professionals, ISS providers and broadcasters.

The data collection consisting in AV content companies’ revenues, infrastructure and equipment, enables us to show the diversity in AV content distribution markets across the European Union and to explain the specificities existing in the television landscape. Data on piracy activities and security are not available for two main reasons: first, illegal activities – circumvention of IP included – are intrinsically difficult to assess; second, the stakeholders are reluctant to provide such information – data, case law – which are considered commercial secrets. As a consequence, the data collection process does not enable us to create piracy indicators or relevant regulatory indicators. An econometric study, including many explanatory variables but not piracy indicators, would not have allowed us to properly assess the efficiency of the CAD and therefore we are obliged to draw more normative conclusions.

2.1 Concepts

2.1.1 Information systems, private and public information

According to Shapiro and Varian, “Essentially, anything that can be digitized — encoded as a stream of bits — is information”⁹. So, from a technical point of view, information is equivalent to a stream of bits. However, from an economic perspective, information has a wide range of utilities which are provided through **information systems**.

Information systems specify the rules through which information should be encoded and conveyed to its users to deliver its significance or its material counterpart. Physical equipment such as telecom networks, computers, as well as symbolic rules such as languages or monetary systems are information systems. Digital technologies allow one to express, in the smallest possible alphabet — the binary code, pieces of information which were formerly conveyed through various types of information systems.

If we now look at the economic status — the utility — of the various pieces of information that are encoded and conveyed through information systems, we can distinguish two main categories:

- **Private information** whose utility is shaped through a specific protocol connecting together an emitter and a receiver. A private conversation between two persons, an exchange of letters or e-mails, a contract between two parties and a payment order are examples of such information. Private information is commonly used in business transactions where two identified parties need to swap pieces of data. Since it is specific to a communication protocol, private information is not supposed to carry utility for others than those — individuals or machines — involved in the protocol. It is subsequently valued through complementary goods or services: the information or communication systems — postal services, computers, telecom services, Internet access, — allowing its circulation, or through the transaction it permits to achieve. Private information has no value per se.
- **Public information** addresses indistinct users. Public information, as opposed to private information, does have a value per se and might require a market: a new chemical formula, a technical innovation, software, a brand, a novel, etc. However, public information has the properties of a public good: it is non-rival and non-excludable. Non-rival means that the consumption of a given good by a consumer will not deprive any others from consuming it. Non-excludable means that, in the absence of legal restriction, no one could be excluded from the access to these goods. Being comparable to a public good, public information should then either be publicly financed or require economic institutions to make it rival and excludable so to be produced and marketed like a private good.

⁹ Carl Shapiro and Hal Varian, *Information Rules*, Harvard Business School Press, 1998.

2.1.2 Information externalities

The main economic characteristic of information, whatever form it takes, is that it carries strong externalities. This means that its circulation not only provides utility to the one who gets it but also to society as a whole¹⁰. The consequence is that economic institutions have to be set up in order to internalise those external effects so as to provide incentives to produce and circulate socially useful information. Yet, these external effects are subject to a social or political evaluation which may differ from one society to another (the right to information provision from the Television Without Frontiers (TWF) directive is an example of the evaluation made by the Commission regarding the usefulness of certain information to be circulated across the EU)¹¹.

In the case of communication systems carrying private information, the pricing rules have been set up in each society with the intention to internalise the forecasted positive externalities: universal service rules have been created to avoid discrimination and maximally expand the coverage of the service. Pricing and cross-subsidy mechanisms have followed the patterns and the goals of each society. In the case of mobile telephony, Europeans have adopted a “calling party pays” tariff system while the Americans have adopted a network sharing cost mechanism between the two parties. Each system has its own internalisation mechanism. The consequences on the respective industrial organisations and markets have been considerable.

Regarding public information, the ownership rules (IP) which have been designed to internalise information positive externalities have always been associated with censorship rules or practises which were supposed to prevent negative — amoral, subversive, seditious, etc. — external effects. As we will see later, the local mix of IP rules and censorship practises have created strong idiosyncrasies in the economic regulation and in the industrial organisation of information goods.

IP rules are made to create private incentives in information good production and to enable vertical transactions in order to make those goods widely available to the public. However, they exclude consumers from the access to information goods which otherwise would be public goods. This is why, depending on the business model in information production and on the social evaluation of its circulation, information property rights are usually limited to a specific duration of time.

Censorship rules have scarcely been dealt with as economic institutions though some recent works show that they have played a major role in the industrial organisation of the media sectors and created, within European countries, strong economic and institutional path-dependencies. For example, the French system of printing licenses (“*privilège d’édition*”), combined with the *ex ante* Royal Censorship, represents a totally different trajectory to the British Stationers’ Company, followed by the Stamp tax, for four centuries¹².

¹⁰ While these external effects have existed for centuries, their conceptual impact was first analysed in languages and in luxury or conspicuous consumption during the last century... See Saussure, F. de (1972 [1916]) : *Cours de linguistique générale*, edited by Tullio De Mauro, Paris : Payot. P 24, and Harvey Leibenstein « Bandwagon, Snob and Veblen effects in the Theory of Consumer’s demand. » *The Quarterly Journal of Economics*, May 1950.

¹¹ See chapter II, Article 3a of the 1997 Television Without Frontiers Directive – events of major importance to society, including sport

¹² In the early eighteenth century, while the French had set up an *ex ante* censorship institution, the British have introduced a set of economic rules, and notably a tax on paper, the *stamp*, so to restrict the circulation of the written press within a limited circle of wealthy readers. So, not only the building up of the public sphere differed in the

2.1.3 Information goods

Information goods are pieces of public information that carry specific utilities. The markets and the external effects associated with these utilities require specific internalisation tools based either upon taxes or property rights. Property rights consist of a temporary exploitation monopoly granted to individuals or to corporations. Those rights are commonly identified under the name of IP. Hereinafter, the term IP (Intellectual Property) will be used to define rules of property related to information goods and to the exploitation of exclusive rights – these rules may cover copyright and related rights, right to the image, right to commercial exploitation etc. In the context of this study, IP should not be confused with the narrower sense which is usually associated to it (that of copyright and/or patent). Information goods may include items such as sports events which are usually not included in the copyright regime. Because these rules are connected with the internalisation of a wide range of local social effects, they are highly idiosyncratic and both complex to define and to enforce. The CAD, as we will see, is largely used as an IP enforcement tool.

Scientific or technical innovations are information goods which are usually integrated into products manufactured by an industry. They are internalised through **patents** and property rights. Patented goods address a Business-to-Business market in relation with their final applications. The risk of theft or property circumvention is then limited to a business community. Moreover, patented goods are subject to obsolescence and require a specific property regime to assert *ex ante* their innovative value. These characteristics make the economics of patents highly specific compared to other IP regimes.

Software is a part of information systems that is used to encode, store, process, transport and decode streams of information bits. Software is a functional information good dedicated to the operation of hardware systems. It is comparable to grammatical rules in a given language. It may raise the performance of an information system but it does not produce by itself any kind of “meaning” useful to the final consumer. Software economics are dependent upon the information system for which the software is designed. For that reason, the software property regime is based on copyright law but shares economic patterns with a patent system. Software is commonly valued and marketed in relation with the compatible information systems. Encryption technologies such as conditional access systems (CAS) are software programmes performing codes and handling functions in specific information systems.

Other information goods like **trademarks** or **media** provide the user with a “meaning”. This meaning is valuable, whether it adds some value to a branded good or whether it is valued by itself by the consumer. Because this information is directly valued by the consumer in mass global markets, its ownership is widely subject to circumvention and generates, as we will see, a moral hazard in distribution. It is, however, not our objective to expand here on trademark economic issues which are very close to media ones. But because the CAD largely applies to audiovisual

countries, but also these approaches resulted in different internalisation processes of the media externalities by the publishing industry : one based on the right of author and a strong public intervention, the other on the copyright and regulated market mechanisms. See Paul Starr, *The Creation of the Media*, Basic Books, New York, 2004, and Raymond Birn, *La Censure Royale en France des Lumières*, Odile Jacob, 2007.

content distribution which is part of media economics, we need to focus on media content characteristics.

Media content is meaningful information designed and emitted for indistinct audiences. According to the European definition, the function of media content is to inform, entertain or educate the general public¹³. In a digital environment, any kind of event meaningful to an audience can generate media content: war, a fire, a speech, a concert, a royal wedding, sports competitions, a concert, etc. The audience should be informed that such information exists and could be made available to them.

The function of the **media** is to “operate” or to “frame” the information flow so as to make it meaningful, accessible and ultimately useful to the consumer. A novel issued in the form of a book does not have the same exact impact as opposed to being serialized in a newspaper. The **media are information systems dedicated to meaningful information goods**. Therefore, media content or, by extension, **media goods**, generate markets. Before digitisation, content markets were attached to each form of media — books, newspapers, paintings, cinema, TV, etc. — and were not studied *per se*. Economic and political institutions such as copyright and censorship have been progressively adapted to the roll-out of new media integrating new technologies¹⁴. However, this process has followed different routes shaped by the institutional framework of the public sphere and the media roll-out in each country. The current situation is that all the Intellectual Property institutions resulting from the roll-out of the various media have to be harmonised and adapted to the dematerialisation and digitisation of the content. The CAD applies, amongst other things, to important technical aspects of IP enforcement for audiovisual content, a media good historically associated with television.

Since the contents are still associated with their original *operating* media, **audiovisual content** usually refers to the content that could be received through television broadcast. Such content (hereinafter AV content), is now commonly accessible via personal computers or on mobile phones. This definition is currently worked on by the new directive of Audiovisual Media Services. Though, to be coherent with our approach, AV content should be defined as any audio or video information emitted towards indistinct audiences. Television would then be defined as the presently dominant audiovisual medium. Nevertheless, music and narrative videos — whether they be films, TV-shows, documentaries, news, sports events, etc. — show different utility patterns generating many different versions. These patterns participate in the complexity of media economics.

2.1.4 Media economics

Media content — or, in the following, media goods — are information goods carrying many specificities. Here are some characteristics which will prove useful in the following of this study.

First of all, as mentioned above, media goods create strong externalities which generate heavy idiosyncratic regulations. However, IP remains the basic internalisation tool. Although copyright

¹³ See notably the Amended TVWF Directive project of May 2007. Chapter 1, Article 1. Television is then redefined as an Audiovisual Media Service.

¹⁴ See Paul Starr, *The Creation of the Media*, Basic Books, New York, 2004

regulations may differ from one country to another, the core institution of media economics is IP granting the right owner a temporary exploitation monopoly. Media economics are then based on monopolistic competition between IP right holders. Yet, national regulations shape the media industrial organisation and the media good markets. While the United States have built up their political institutions thanks to the roll-out of a widespread printed media industry, the ante-media European countries — countries into which political institutions pre-existed the outbreak of mass media — have had to adjust their media regulation to their existing political institutions.

A unified European media market would have to harmonise a set of regulations resulting from five centuries of public information internalisation policies. The disparities in copyright rules or in the vertical relations between right holders and distributors resulting from the de-nationalisation of the television sector illustrate this phenomenon. While the number and the regulations of private television channels differ in each country, the obligations made to television operators to purchase programmes from domestic independent producers have introduced specific rules in production financing and in the remuneration of IP rights. These rules which shape the competition among audiovisual media are now shaken out by the roll-out of new media markets. Other disparities concern the status given to *fair use* or *private copying*. Such provisions allow the free circulation of copyrighted material within a limited private sphere. Some countries have set up special taxes or “levies” to compensate the loss in revenues for content owners, others have not. Such taxes are comparable to a compulsory license. The extension of the fair use or the private copy exception to P2P applications would abolish the barrier between private and public information and justify a compulsory license system to finance all media goods¹⁵.

Another aspect that should be taken into consideration is that not all media goods benefit from the same level of IP protection. At its outset, the copyright regime offered monopoly rights to authors (writers), composers and publishers of artistic and literary works. The same kind of protection (although on a different scale) was then provided to performers and to those investing in creation: producers of phonograms as well as broadcasting organisations. Creativity and not media economics is at the basis of the copyright regime, even though some marked differences exist between the Anglo-Saxon copyright tradition and the continental “*droit d’auteur*” regime¹⁶. This explains why some categories of valuable media goods such as sports events do not enjoy copyright protection per se, but only when associated to their transmission through broadcast.

Second, media goods deliver “meaning”, which in most cases — with the noticeable exception of news — address the widest possible range of individual preferences. In other words, media goods deliver unpredictable and maximally heterogeneous utilities generating a high failure rate. Furthermore, as they are experience goods whose utility is known only after they have been consumed, they carry a strong production and distribution risk. For this reason, media markets rely on sophisticated pricing mechanisms aiming at extracting the maximum willingness-to-pay from the consumer. Showing high production costs and low marginal or reproduction costs, media economics are based on the capture of the total marginal utility of their potential consumers.

¹⁵ This aspect is developed in section 2.6.2

¹⁶ This aspect will be further developed in chapter 4.3 below

Conversely to functional goods and services, the media pricing mechanisms are highly discriminatory¹⁷.

This second point may conflict with the first one: the external effects of communication systems dedicated to private information flows and associated services differ from media ones. Everybody should be able to communicate, but media goods should be maximally valued so as to be renewed and serve the same range of preferences: therefore the internalisation mechanisms cannot be the same in the two systems. While communication systems are commonly priced on a cost basis with non discriminatory rules, the roll-out of media is often pulled by better price discrimination allowing serving diversity objectives. The roll-out of broadband networks being both communication and media systems therefore generates severe regulation headaches, especially in Europe.

Third, price discrimination is achieved through versioning. Monopolistic competition enables content owners to apply price differentiation among consumers. The discrimination strategy is called quality pricing, or versioning. It consists in offering different qualities of the content at different prices to get consumers themselves to select from among these versions, according to their differing degrees of willingness-to-pay. Content owners can therefore take advantage of these various demand segments and maximize overall profit. The high quality or the first released versions will be picked by consumers with a high willingness-to-pay while the cheaper versions will be chosen by consumers expecting a lower marginal utility. Two-sided markets consisting in inserting commercial information (advertisements) within a media content so as to make the advertiser subsidise the content, but also to spoil its quality, is a common versioning practise¹⁸. This pricing mechanism allows discriminating the consumers by offering free content which is then paid by the advertiser in proportion of the audience reached. Public television largely financed by license fees and public subsidies provides quality programmes but not premium content. Fully ad-subsidised and public based versions are free for the consumer (known as free-to-air, FTA). FTA versions suppress the consumer's risk to buy a product which would not match his expected utility. Moreover, they do not usually require conditional access devices. This is commonly the case for the online press. However, it may occur that a FTA version is licensed only to a limited geographical market and then require CAS to exclude outsiders from that market. This is the case when content is licensed to a specific geographical area only, whilst its FTA broadcast would exceed the territory covered by the rights. CA systems allow then to restrict the broadcast to the viewers located in the licensed territories.

The versioning of content depends on its utility patterns. While a music track can be listened to while doing something else and is commonly consumed more than one hundred times in a lifetime, video content requires full attention and, on average, is not watched more than two to four times by an individual. For that reason, music is purchased in a limited number of versions (CDs, MP3, digitally encrypted files) to be stored in libraries and then played-back several times on demand. On the contrary, video content is distributed through a wide spectrum of versions, allowing the

¹⁷ This property also applies to trademarks whose investment in "meaning" has to be recovered through price discrimination. Luxury goods carrying heavy trademark investment show the same economic patterns as media contents. They should be considered as the combination of a material good and a media. See Bomsel : "L'industrie du luxe ou comment associer objets et représentations". Annales des Mines - Réalités Industrielles, Paris, Juillet-Août 1995.

¹⁸ A two-sided market is a platform selling two different services to two kinds of customers — viewers and advertisers — under two different pricing schemes.

consumer to get it within different time windows, under different formats and at different prices. Pay-TV content is usually released in timeframe windows preceding FTA broadcasts and is one of the most valued versions of video content.

Last but not least, digital technologies allow the continuous surge of new media and new versions. This proliferation of new media and new versions stimulates the competition between content distribution channels, each medium trying to increase the utilities associated with its versions. Thanks to their IP rights granting them an exploitation monopoly, content owners, especially those controlling large catalogues, may arbitrate between the utilities brought by new technologies.

2.2 Conditional access system economics

2.2.1 CAS utilities

Conditional Access Systems (CAS) are pieces of software and equipment used in electronic information systems in order to secure a remunerated service. However, the economic function — the utility — of these devices and their adoption by the consumer depend on the economic nature of the information flowing in the system. The CAD distinguishes two main fields of application: radio or television broadcasting and ISS. According to Directive 98/34/EC, ISS refer to any kind of services whether remunerated directly or indirectly and taking place over an electronic communication network. At the time the CAD was issued, there was no media content offered through the Internet using conditional access. ISS using conditional access such as on-line payments, e-banking, etc., were mostly handling private information. In other words, ISS using CAS were not media.

Therefore, the CAD identified two types of utility for CAS: the securitisation of non-media e-services and the protection — the exclusiveness — of broadcasted pay-content.

The possibility to sell on-demand audio and video contents on electronic communication networks brings new issues both in ISS and in CAS definitions. As for ISS, it means that they might include new versioning tools for media content. Those media services will then have to comply with the economic and institutional rules of media, which as we mentioned above, is a complex issue. Regarding CAS, they might now include pure software devices such as Digital Rights Management systems (DRMs) which also raise specific economic issues.

To keep some economic coherence, we have decided to separate the analysis between the two main types of uses of CAS: the securitisation of non-media ISS and the protection of media content.

As we will see, the CAS used for securing electronic transactions are usually not standardised while deeply embedded into the communication systems. The CAS dedicated to pay-TV or to other AV services are both exclusion means and versioning tools. They are then used not only to remunerate the content distribution chain but also to increase the expected revenue from content exploitation.

2.2.2 The case of non-media ISS

Non-media ISS refer to any kind of non-media services whether remunerated directly or indirectly and taking place over an electronic communication network. Those services, which include telecoms and internet access, basically consist in the handling of private information including or not including monetary transactions. CAS are used to provide the consumer with privacy, confidentiality, accurate billing, security and reliability. In other words, CAS helps to prevent the consumer from any hazard which would spoil the quality of the service and deter his loyalty.

For merchant sites, even though the selection, the ordering and the payment may occur over the Internet, the corresponding good or service is not entirely delivered online. Therefore security applies to the various steps of the transaction and not to the delivery of the good or the service. In this case, conditional access is only one aspect of the security functions which usually include the authentication of the consumer, the confidentiality of the communications, the reliance in transaction orders and payments, the tracking of the delivery, etc.

Security in non-media ISS is part of the service supplied to the consumer. In other words, when a consumer wants to make a connection or a transaction online, he has an interest in paying for a security component, otherwise his utility would be lower. This means that there is no economic incentive for ISS piracy tools to widely circulate among consumers: non-media ISS piracy tools are neither commercialised nor massively distributed. As a consequence, non-media ISS piracy cases fit poorly within the scope of the Directive.

Inquiries made in large e-banking and e-retailing services show that non-media ISS do not call for standardised CA systems. CA systems are embedded in wider security procedures which allow the services to be performed. They are usually highly customised and integrated into the service. Consequently, piracy means are not available as standardised software openly circulating among the customers and are not illegal *per se*.

Moreover, even when such circumvention tools exist, the share of CA systems is impossible to isolate from other security costs in the aggregated non-media ISS value chain. While security offenders in non-media ISS are commonly prosecuted, no legal case has been identified where the CAD has been used for fighting ISS piracy.

As a consequence, the range of ISS mentioned above is excluded from the scope of this study. This is consistent with the legal analysis (see below Chapter III) according to which the legislative framework covering security in the non-media ISS exceeds the scope of the CAD and consists mainly in legislation addressing cyber-crime and electronic commerce. However, ISS related to digital delivery channels for audiovisual content, such as P2P, VOD and mobile TV will be taken into account as they are part of the audiovisual content distribution systems presented in the following section.

The analysis in the next sections deals with television and more generally with audiovisual content distribution markets. It will be argued that the objective of protecting conditional access services

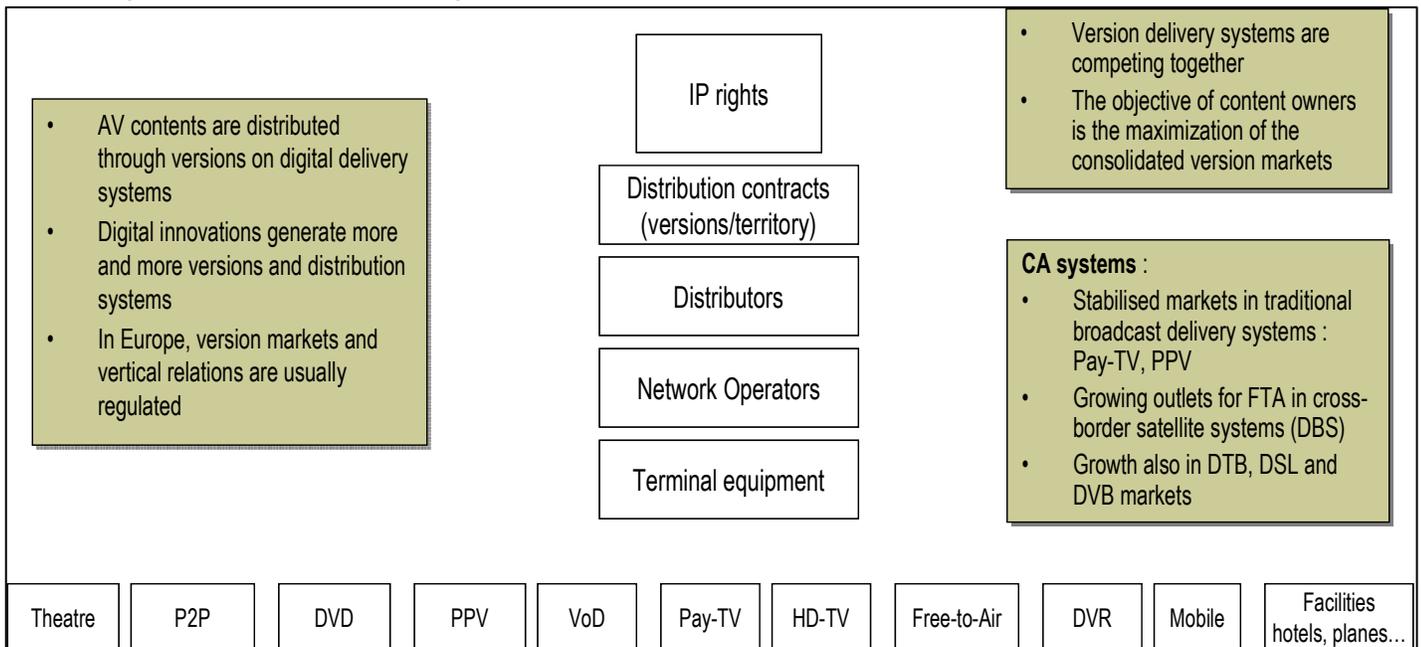
related to media goods meets specific economic issues referring to media economics. These issues dealing with IP protection and media versioning are detailed in the following section. The consequences of media economic patterns on vertical relations in audiovisual content markets will then be outlined. Finally, the way the players manage piracy issues will be analysed.

2.2.3 CAS in audiovisual (AV) content distribution

In media goods distribution, CAS have two complementary functions. The first one is to enforce excludability, which means to restrict the access to the good only to the consumers satisfying to certain conditions. The second one is to build up quality and access differentiation allowing the content owner to better discriminate his customers. CAS can be classified as discrimination tools. One paradox of the CAD is that it aims at facilitating cross-border trade while protecting a discrimination tool helping to segment markets and to select among consumers.

By granting the owner the exclusive right to market his product, IP rules enable the creation of content markets and of content distribution systems to supply them to the consumer. As figure 1 shows, AV contents are marketed across distinct territories through different versions addressing specific market segments with adapted pricing models. The goal of the content owners is to maximise the value corresponding to the utility of their products for the final consumer. This utility is attached, on the one hand, to the technical parameters associated with the delivery of the content, and, on the other, to the “meaning” of the content for the consumer. The latter strongly varies with linguistic and cultural patterns within and across countries.

Figure 1: AV content versioning markets



2.2.4 Technical versioning

While FTA content is openly broadcast through two-sided market models, pay-content is delivered to well identified individual subscribers. In most European countries, television has been rolled out as a public service financed through a special tax. The FTA model has provided the consumer with an incentive to invest in a TV set. Since the first generation of TV sets has been rolled-out, more channels and colour services have progressively been offered. TV has then become a commercial service based on a two-sided market platform able to resell audiences to advertisers.

This process resulted in local regulations in each EU country so as to insert the new TV operators into the domestic media landscape. Each country then acted according to its traditions in evaluating media externalities and setting up internalisation tools. Countries willing to protect their domestic media sector have instituted specific rules regarding ownership concentration, diffusion quotas and vertical relations. These processes have led to a territorial monitoring of media competition through a versioning regulation including the ad density in FTA programmes and the release windows for motion pictures. According to the NPA VoD study¹⁹, the modalities and the schedule of the cinema release windows are quite different among the 25 EU Member States. The relative position of the window release granted to pay-TV determines its differentiation with the other media and then its ability to discriminate subscribers.

The FTA models did not require any access control, except for territorial reasons, but started spoiling the comfort of watching broadcasts with more and more advertising. The roll-out of VHS and the development of CA technology allowed the marketing of new versions based on pay-services. Thanks to the equipment available in the consumer's home, broadcasters have been able to offer new utilities with restricted access: premium content — exclusives, first broadcasts — and thematic bundles (including adult material) gathering specific programmes better valued by the consumer than the FTA channels. However, being sold at a higher price, these versions had to be inserted in time windows preceding FTA. Depending on its audiovisual industrial organisation, each country has had to find a way — regulated or not — to set up this insertion.

Not only does the competition between FTA and pay-TV versions rely on quality, but additionally on the pricing mechanism of each version market. While FTA relies on instantaneous audiences corresponding to separate programmes, the pay-TV operators sell bundles. In economic theory, bundling is a better discrimination tool than separate retail. This means that if pay-TV operators reach a critical mass of audience, they should be in a position to extract a better value from their programmes and will increase their competitive advantage in purchasing them. The ongoing concentration trend in the national pay-TV industries anticipates on this fundamental advantage.

¹⁹ Video On Demand in Europe, a study by NPA Conseil sponsored by the EAO and the French Direction du Développement des Médias. May 2007.

Digital technologies widen the scope of the technical utilities attached to content versions. As a consequence, new version markets appear such as VoD platforms and mobile TV. These new versions have to be inserted into the range of existing ones so as to increase the consolidated market of each content. The dispersion and the disintegration of content owners in Europe further complicates the competition game between distributors and generate regulation capture by potential winners: FTA broadcasters are the most affected by the insertion of new media, but also by piracy, as their window release is the result of a regulatory framework which did not forecast this situation. It is then the interest of their competitors to keep the regulation untouched so as to increase their differentiation and their competitive advantage. As illustrated by the NPA study²⁰, this process is fuzzy and follows the versioning game and the regulatory trends of each country. The competitive roll-out of delivery infrastructure amplifies the regulatory contradictions and the conflicts of interest between the telecom and the media sector. This topic would need a specific study to be addressed. However, being a media versioning tool, CAS take part in this competition.

2.2.5 Cultural Versioning

Because media goods provide a meaningful experience which can be socially shared, they generate cultural paths which affect their relative value within the different cultural communities. The utility of new contents also depends on those which have previously shaped the tastes of the targeted audiences. Therefore, versioning is highly sensitive to linguistic and cultural parameters.

The strategies adopted by MTV or YouTube underline how idiosyncrasy plays a key role in AV content distribution (see the box below). In some particular cases, such as major international football events (e.g. UEFA's Champions League), AV contents can successfully be broadcast all over Europe if suitably packaged. But even in these cases, it is difficult to assert the existence of a truly pan-European Internal Market as licenses are rarely granted on a pan-European basis. Rights to the Champions League are sold by UEFA through multiple individual licenses to national broadcasters because viewers want to watch football matches commented in their own language. In this context, some Hollywood blockbusters may appear as an exception: designed for global audiences, the cinema versions are more and more released on a "day and date" basis across different countries in different languages (subtitled/dubbed) so as to minimise the impact of piracy. However, the marketing investments vary from one country to the other and shape different distribution contracts. The same happens of course for the posterior marketed versions such as home video and TV broadcasts.

As mentioned in 2.1, the versioning aims at packaging and releasing the content so as to discriminate the consumers by their decreasing utility: while the premium high quality versions will target the consumers showing the highest willingness-to-pay, the following releases will progressively reach consumers with a lower utility. The versioning parameters are the time of release, the quality — density, definition, ad pollution —, the means of access and the pricing. Pay-content versions have then to be designed so as to bring maximum differentiation and marketed before FTA ones. The economics of pay-TV rely on its differentiation with all other media, but primarily with FTA.

²⁰ Video On Demand in Europe. May 2007.

MTV strategy

MTV (Music Television) was founded in 1981 to broadcast music programmes in the US. Its owner, Viacom, decided to expand it overseas by creating the European MTVE (MTV Europe) in 1995. This was made possible thanks to the TVWF directive which, in that case, offered MTV the possibility to broadcast from one country on a pan-European basis. However, MTV first ignored the linguistic and cultural specificities across Europe and initially only received limited audiences. A new versioning approach was designed consisting in broadcasting 60% of US programmes and 40% of local programmes. A MTV Kitchen was founded in Italy sharing its broadcasts between the music and the kitchen.

Such a strategy enabled MTV to better compete with local channels and to increase its ad revenues. It may be argued that the opportunity to reach a pan-European audience was the reason for MTV to launch its European services but the need to adapt to local viewers then pushed Viacom to review its strategy. It therefore seems that the initial possibility to go cross-border was a major incentive for MTV to invest in the EU – however, the specificities of national markets later led the broadcaster to segment its offer along national borders.

YouTube expansion

At the beginning of June 2007, Google announced its plan to test its video sharing service in France — because of the Internet market size — before expanding its business across Europe. Competing with successful FVOD websites such as DailyMotion or MySpace, YouTube decided to launch a French version of its service, intended to better match French tastes. This strategy also aimed at getting content sharing agreements with national TV channels. France Television has since agreed to license YouTube to broadcast its France 4 programmes. However, the economic sustainability of such a model remains uncertain.

In the end, it appears that, in spite of a quite open import regulation, the distribution of AV content in Europe has to go through linguistic or cultural versioning. This would generate fixed investment and highly segmented returns. This characteristic of the European media market will be underlined in the following sections.

National or territorial versioning has a major impact on the industrial organisation and the trans-national circulation of media in the EU. As observed by the MTV example, distributing media content over Europe requires customisation investments to adjust to every local market. There are then few economies of scale to be expected from an EU media concentration. It also means that compared to large monolingual markets such as the United States, India or China, Europe suffers from a competitive handicap: the multiplicity of languages and cultures creates a specific distribution of individual preferences that require expensive versioning and brings high discrimination costs. Each version adds some costs and addresses smaller markets. Moreover, as we will see below, the national regulations resulting from long run internalisation policies in the media sector amplify this segmentation. On the one hand, this provides heavy discrimination needs thus alimentering the expansion of the CAS markets. On the other, it strongly opposes the cross-border objectives of EU policy. The implications of this fragmentation on the Internal Market will be discussed in depth in chapter 4.2 below.

However, cross-border trade is common when linguistic areas do not correspond to national boundaries. Many German channels are broadcast over Austria. The same can be said for British and Irish TV. Hosting three different linguistic communities, Belgium has established different channels addressing their segmented communities and has largely opened its boundaries to foreign channels. Hence, Belgium is the only country in the EU with no public nation-wide broadcaster. These particular cases do not question the national organisation of AV content distribution, private contracts enabling them to manage cross-border markets.

As we will see below, pay-TV “grey markets” are associated with these versioning patterns. Grey markets occur when the cultural preferences of some viewers strongly differ from the dominant preferences of a territory. It is then informally offered to those viewers to buy access services from a neighbouring country rather than to invest in a specific versioning for the whole territory.

2.3 AV content markets

The following sections provide quantitative figures about AV version markets in the EU Member States and the US. It then continues to describe the performances of different AV version markets across Europe. The diversity of the markets not only reflects the linguistic segmentation of the Union but also the development paths followed by the national audiovisual media sectors.

2.3.1 AV content markets in the EU and the US

Figure 2 illustrates that, with the same size of population, the AV markets’ performance is much larger in the US than in the EU. While the FTA markets are less developed in the US than the EU, the US pay-TV market is at least three times larger than the EU’s. The reasons for this are deeply rooted in America’s history. Since the 1830s, American media has been rolled-out following a commercial logic funded through advertisements and consumers’ payment. The centennial willingness-to-pay for media is higher in the US. Regarding television, the early roll-out of the cable infrastructure has been pulled by tough competition among commercial FTA channels. The resulting ad pollution of the FTA has given an earlier and wider opportunity to pay-TV services.

Conversely, to the US, the European countries have rolled-out television as a public service. It can be argued that the monitoring of television’s externalities — its social and political impact — has naturally met the European tradition of public service. Television is then primarily seen as a universal service, progressively diversified and upgraded by new channels. This conception is reflected by the Right of access provision of the TWF directive (see below). As a consequence, FTA television has been the first to be regulated so as to provide quality programmes with little advertising. The willingness-to-pay for pay-TV channels is therefore lower in the EU.

Right of access

One of the innovations of the 1997 Television without Frontier Directive compared to the 1989 version was to create a regulatory framework in order to prevent pay-TV to exclusively broadcast events of major importance to the public such as important sport, political or cultural events. Article 3a of the Directive guarantees thereby the public free access to the broadcast of such events. Member States must establish a list of those major events which will be broadcast on FTA channels even though pay-TV has acquired exclusive rights thereof. The principle of mutual recognition applies so that Member States must ensure that broadcasters under their jurisdiction respect the lists that other Member States have notified to the Commission²¹.

The new “audiovisual without frontiers” Directive²² is going even further in that direction as article 3j of the provisional text purports to make broadcasters that hold exclusive rights on events of high interest grant a right to other broadcasters to use short extracts. This would likely be done for the purpose of general news programmes when in the interest of viewers²³.

The idea behind those regulatory measures is to promote media pluralism and the right of free access to information following the principles laid down by article 11 in the Charter of fundamental rights of the European Union. However, the detractors of these rules highlight that those measures also play a role in undermining the economy of media industries in Europe. This view is sustained by the consideration that the right of information may be used to circumvent the exclusivity of media rights, which is the basis for content distribution contracts between right owners and media services providers.

It may be argued that the possibility to rely on secure exclusive rights would give European distributors higher margins that could be reinvested in European content production.

As a result, pay-TV revenues enable AV content to be much better valued in the final markets of the US rather than in Europe. The consequence is a huge competitive advantage in AV content creation and distribution in the US. **Growth in pay-TV revenues is therefore at stake in European countries.**

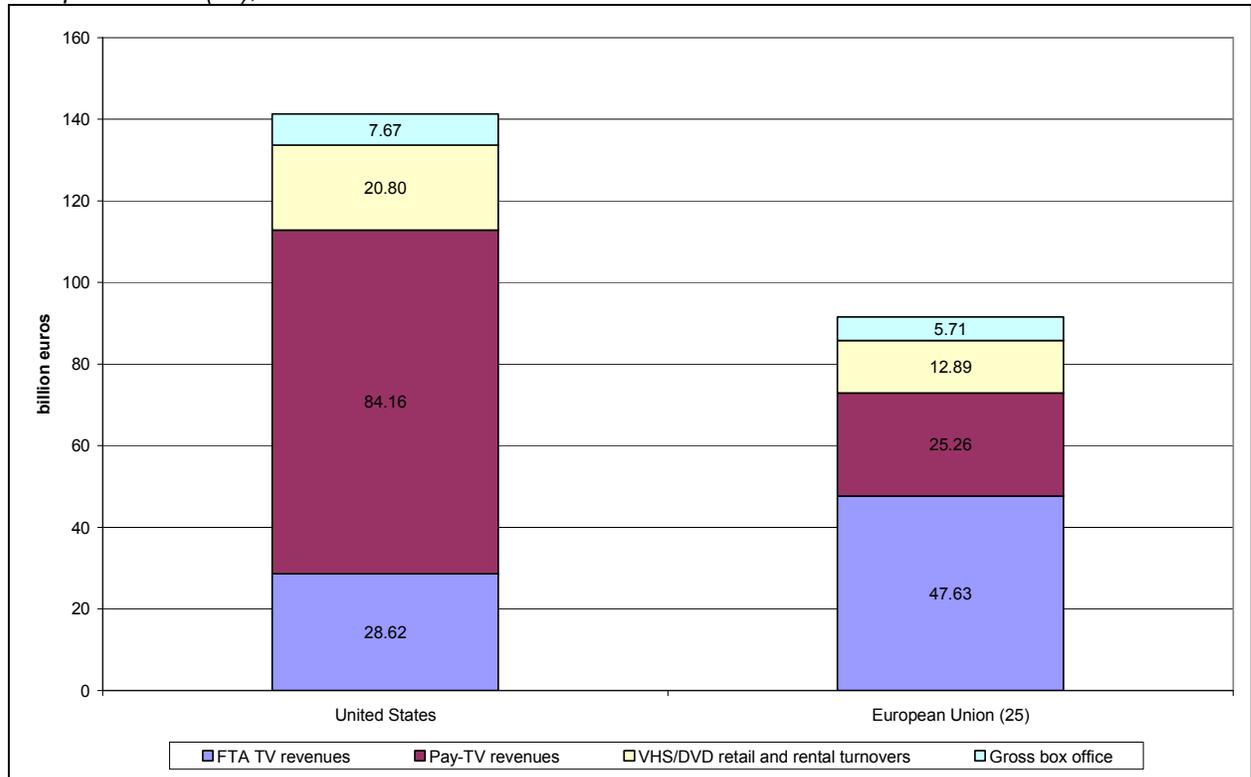
²¹ See Chapter II, article 3a§3 of the TWF Directive (consolidated version)

<http://eur-lex.europa.eu/LexUriServ/site/en/consleg/1989/L/01989L0552-19970730-en.pdf>

²² http://ec.europa.eu/avpolicy/docs/reg/modernisation/proposal_2005/avmsd_cons_may07_en.pdf

²³ *Ibid* recital 27

Figure 2: Distribution of revenues across audiovisual retail markets²⁴ in the United States and European Union (25), 2004



Source: US Census Bureau, European Audiovisual Observatory 2005, 2006

2.3.2 Diversity of AV content markets across the EU

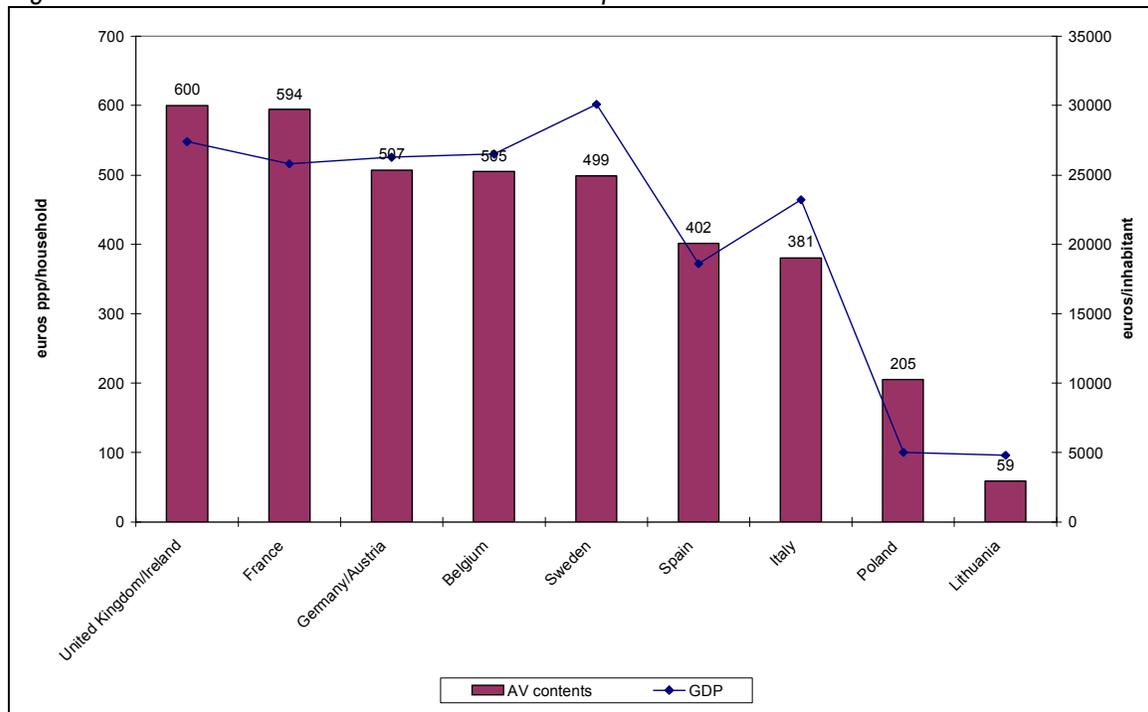
The following figures (3 to 6) illustrate the patterns of the consumption of AV content versions in the 11 selected European countries²⁵. To make a comparison independently from the countries' population size²⁶, we have developed an indicator relating to per household. After a general overview, we have tried to take into account the living standards by using the ratio "AV content consumption/final consumption expenditure" weighted by the purchasing power parity. These charts highlight strong heterogeneities in the size and the structure of version markets.

The size of AV contents' markets is usually linked with average income (Figure 3). EU Member States with the highest standards of living can be distinguished from first, Italy and Spain and

²⁴ For the US, the figures on TV provided by US Census Bureau. "FTA TV revenues" corresponds to "television broadcasting" section according to NAICS Definitions – it includes "establishments that operate studios and facilities for over the air or satellite delivery of television programs", pay-TV to 'cable networks and program distribution" – it includes "establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis". In the 25 countries of European Union, "free TV and radio" includes public television (and radio) broadcasters, private advertising television companies, "pay TV" includes, Pay-TV Premium companies, TV packagers, cable operators.

second from two new Member States, Poland and Lithuania. However, the parameter “income” is not enough to understand other heterogeneities on AV contents’ markets.

Figure 3: AV content distribution markets and GDP per inhabitant in 2003



Sources: European Audiovisual Observatory, 2005, Eurostat

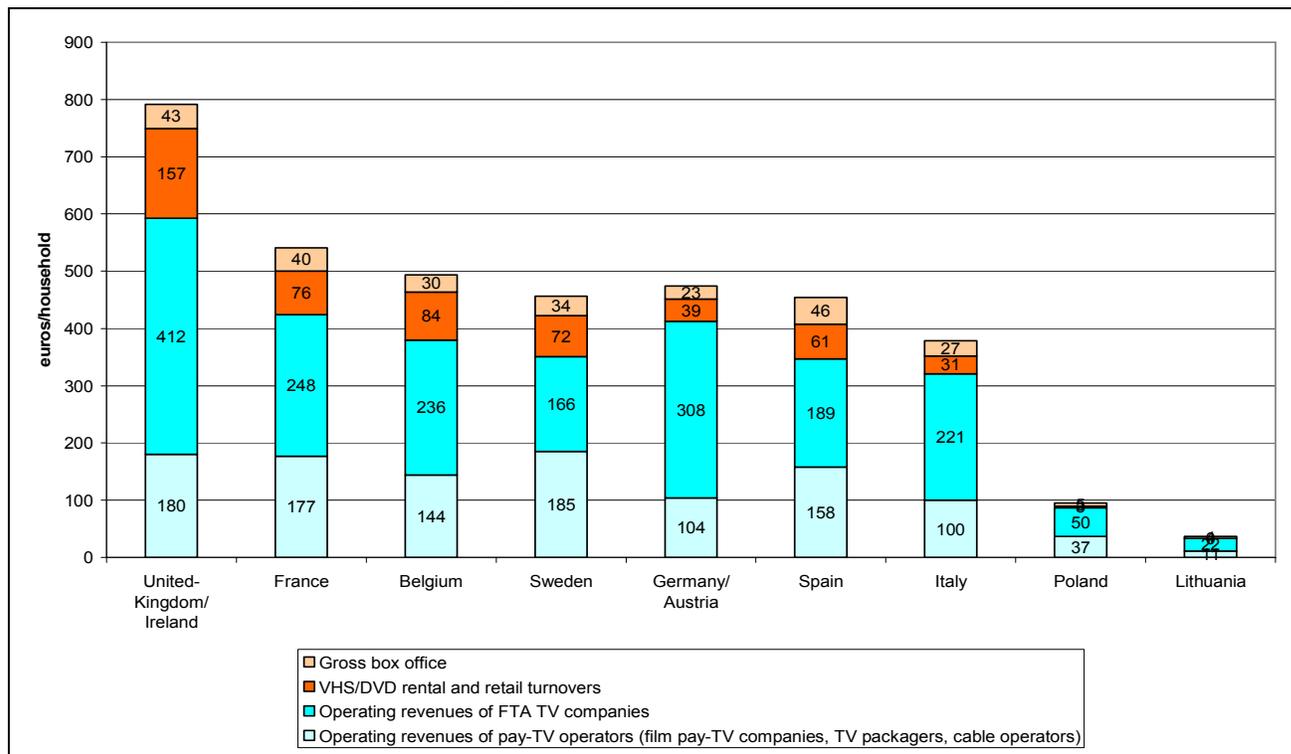
As illustrated by Figure 4, AV contents consumption discriminates three different country groups. The United Kingdom and Ireland stand at the highest levels, ahead of continental Europe. On the other end of the spectrum, the new EU members with the lowest income show the lowest AV contents consumption per household.

The British and Irish markets are much more developed regarding FTA TV and video markets than the other European countries. Pay-TV consumption is also very high but reaches the same levels as in France and Sweden. On the contrary, Germany, Austria and Italy have a weaker pay-TV segment along the side of a strong FTA market.

²⁵ The consumption of FTA TV is assessed through FTA TV revenues – public funding, license fees and advertising.

²⁶ AV content revenues are obviously positively correlated with the population's size.

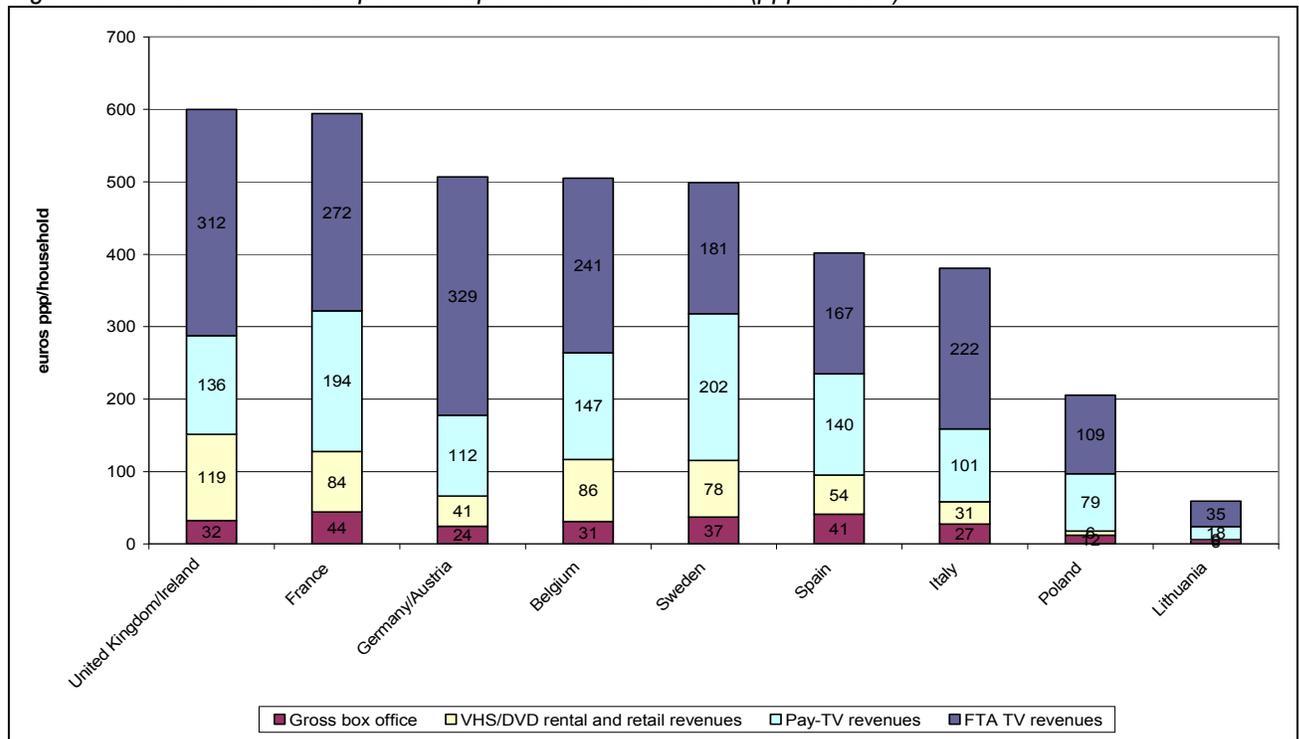
Figure 4: AV contents consumption in European countries in 2003



Sources: European Audiovisual Observatory, 2003, 2005, 2006

Below, figure 5 takes into account the purchasing power parity. It underlines that the bundled British/Irish and French markets are about the same size. However, the structure is different since pay-TV consumption is more developed in France whereas FTA TV and video consumption reaches higher levels in the UK and Ireland. French and Swedish pay-TV markets are the most developed while FTA TV reaches high levels in the British and German markets.

Figure 5: AV contents consumption European countries in 2003 (ppp euros²⁷)

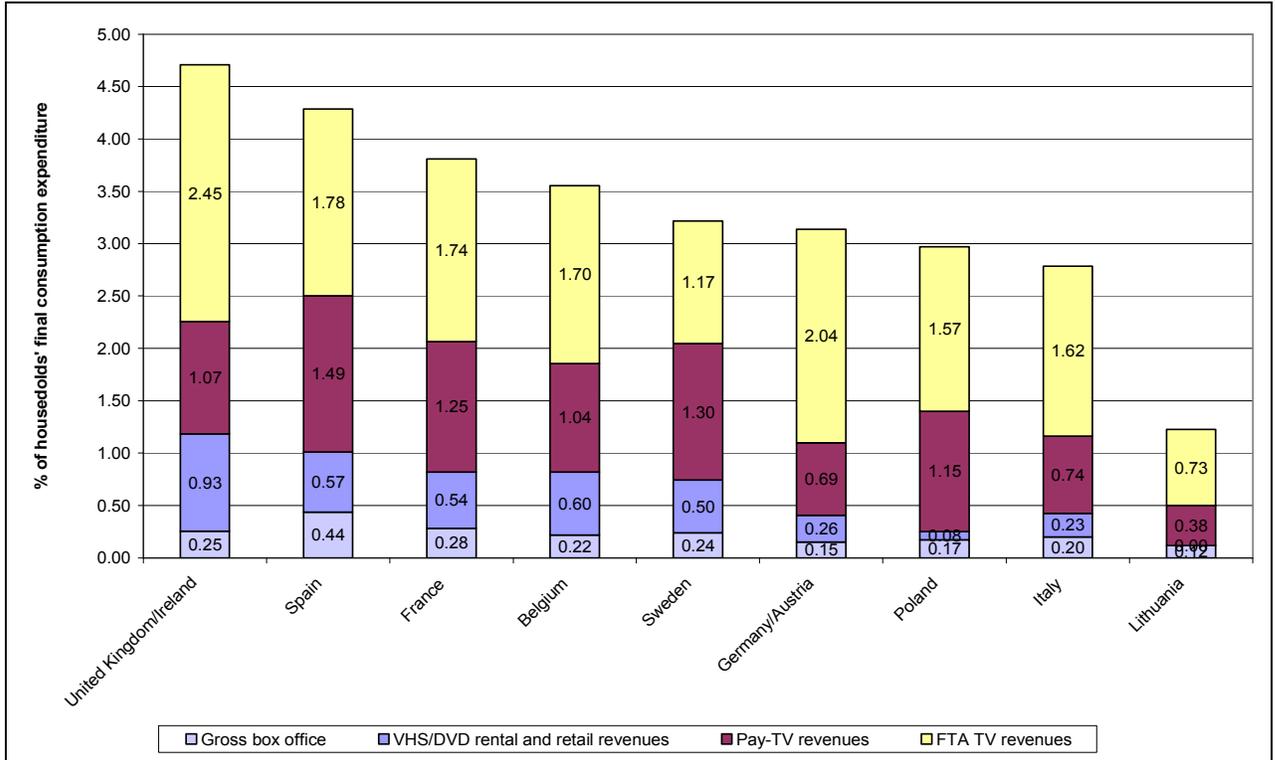


Sources: European Audiovisual Observatory, 2005, Eurostat

Figure 6 below corresponds to the share of AV contents in relation to the spending of a household. The ranking is quite different from the previous charts. It underlines that Spanish households spend relatively much money than other Europeans for AV content. In contrast, the Germans and the Italians generate large ad revenues for FTA but do not spend much for pay-TV or video. Lastly, the pay-TV market is quite strong in Sweden, especially when compared to FTA.

²⁷ The Purchasing Power Parity (PPP) enables to assess the purchasing power of two currencies in their home countries for a same basket of goods.

Figure 6: Share of AV contents consumption in the final consumption expenditure of households in 2003



Sources: European Audiovisual Observatory, 2005, Eurostat

2.3.3 Development path, competitive structure and regulatory parameters

The British AV market levels appear similar to US levels even though the UK has approached television as a public service. The BBC was developed relatively early²⁸ in regard to public television broadcasts and has always been considered as providing high quality programmes²⁹. Commercial FTA TV – ITV – was launched considerably early in the UK as well compared to other EU Member States³⁰. Thanks to a TV tax and a flexible ad density, FTA TV companies enjoy high revenues. Pay-TV can differentiate and reaches high subscription levels thanks to a dominant satellite operator – BskyB, controlled by Rupert Murdoch’s media group (figures 8 and 9). Yet, cable penetration remains low indeed. In fact, the Thatcher government had tried, in the 1980s, to stimulate its roll-out by deregulating the sector: cable networks were then authorised to broadcast as many channels as they wanted to. The competition though with high quality FTA, was unbearable at the time. The reasons for this are the high costs that come with rolling out a cable infrastructure in a limited area. They additionally are not able to be adapted to discriminate the consumers’ willing-to-pay for contents. So, in 1990, when BskyB entered the pay-TV market, the cable networks had by then only reached a small audience. The satellite was then able to pick up the customers equipped with video recorders and willing to pay for premium content. Moreover, it benefited at that time from a high willingness-to-pay (among the highest in Europe as shown in Figure 4) of those customers it was able to discriminate. Such willingness-to-pay was also attached to the quality and the diversity of the English speaking premium content available (sports, news, American movies and TV series).

French and Swedish pay-TV also reaches high revenues. By taking into account the purchasing power parity, French and Swedish pay-TV markets even exceed the British ones.

In France, Canal+ was launched in 1984, before the liberalisation of FTA TV. At that time Canal+ was dedicated to movies, with exclusive deals for the first broadcast one year after initial theatrical releases as well as the authorisation to broadcast adult movies after midnight. It also benefited from an analogue terrestrial frequency covering the whole country. With these two advantages, it rapidly reached the critical mass while maintaining high prices. These initial conditions set up a high willingness-to-pay for premium content in the country. FTA liberalisation did not affect it much but the surge of the satellite brought in competitors who split the content offer and prevented the growth of the market. The race for premium content, which led to the merger of the two satellite platforms in 2006, increased the distribution costs and slowed down the growth of the pay-TV market.

Similarly, because commercial FTA was not allowed in Sweden until 1990, pay-TV broadcasters were only competing with public TV. The latter, financed only through public funding, could not offer as many programmes and channels. Therefore, the competitive structure enabled pay-TV to expand. Geographical and linguistic reasons are further examined later to explain the high revenues of Swedish pay-TV.

²⁸ It was used as a model by most of European countries.

²⁹ FTA TV revenues include revenues from BBC World.

³⁰ ITV was launched in 1954 whereas private televisions, financed by advertising, only appeared in the 1980s in other European countries.

On the contrary, German pay-TV and video markets are poorly developed whereas FTA TV reaches high revenues (see Figure 7). The federal structure of the state has given ground to the development of the cable infrastructure in association with the broadcast of regional and local FTA programmes. The process benefited from the high quality of public TV and a relatively small amount of advertising. FTA cable TV thus provided enough utility to incite households to subscribe its basic offer. However, the quality differentiation and the willingness-to-pay for content is not enough to allow pay-TV to efficiently compete with FTA. As a consequence, cable operators' revenues mainly consist of basic access fees.

Italy is an example that liberalised FTA TV before rolling-out pay-TV. Commercial FTA started there in the early 1980s. At that time the licenses were granted for regional broadcasts only. By concentrating several local networks, Berlusconi launched the first national commercial TV channel. FTA TV rapidly expanded and shaped the taste of the public. In 1992, when the first pay-TV operator Telepiù rolled out its offer, FTA TV was already quite competitive. Moreover, local movie productions were not strong enough to offer differentiated premium content. Lastly, Telepiù encompassed a high rate of piracy which somewhat benefited to its competitors. Its purchase by Sky Italia in 2003, a subsidiary of the Murdoch media group, on the one hand increased the broadcaster's access to premium content, and on the other, led to the adoption of BSkyB's CAS provided by NDS. This decision considerably reduced the piracy and helped the surge of the pay-TV market (Figure 9).

In Spain, AV content markets are rather less developed (see Figures 3 and 5) than in northern Europe. However, relative to the purchasing power, the willingness-to-pay for content is quite high (see Figure 4), which may generate a strong growth in the future. Interestingly enough, their expenditures on pay-TV are amongst the highest of the selected countries in this study, probably due to the attractiveness of local football championship. While solely funded through advertising, the public TV – RTVE – remained a monopoly until 1989. At that time, three terrestrial analogue licenses were granted, two for commercial FTA, the third one to Canal+ for pay-TV. It was during this period that pay-TV benefited from a regulation allowing high advertising rates for FTA.

2.3.4 Geographical factors: size and language

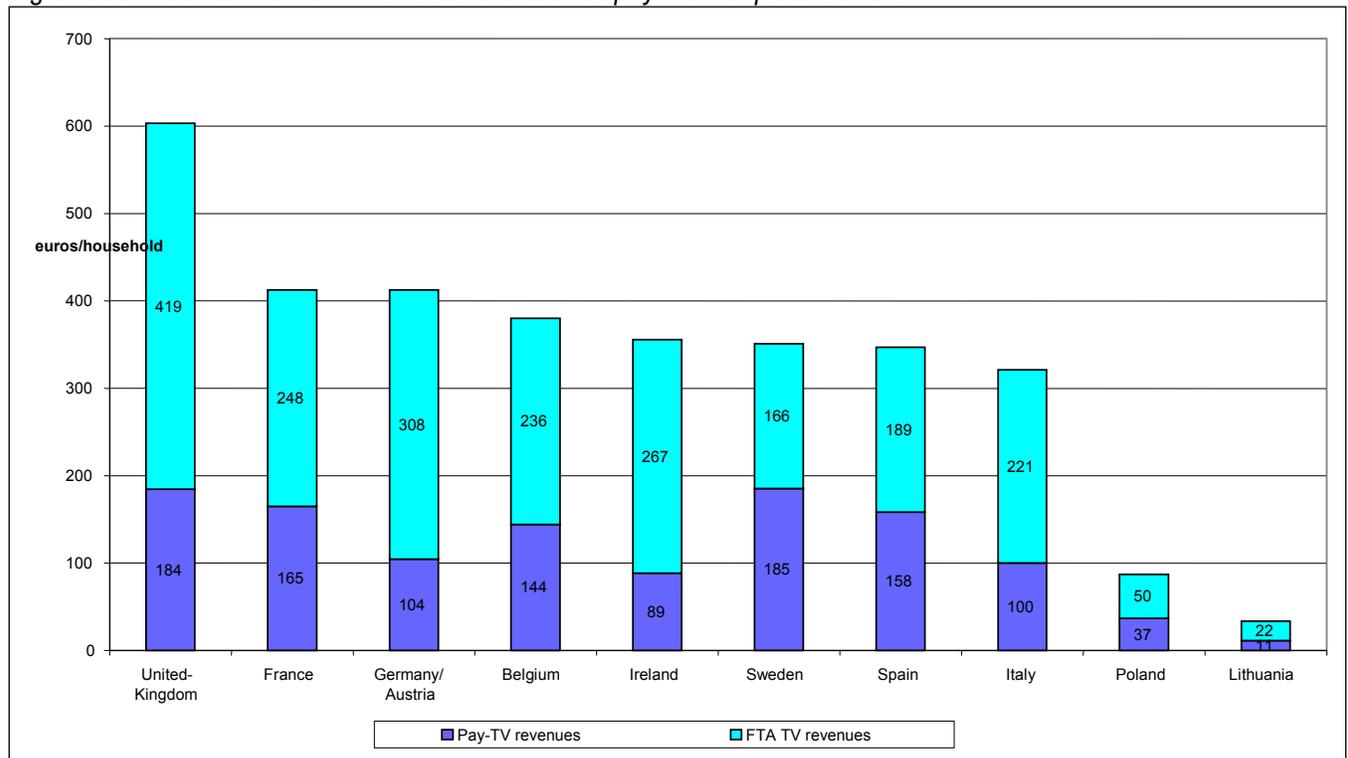
Small countries – Sweden, Ireland, Austria, Belgium, Lithuania³¹ – whose linguistic areas go over national boundaries have commonly developed a cable infrastructure to broadcast foreign FTA channels. Cable networks are indeed better suited to broadcast FTA because they carry huge economies of scale. Therefore, they first target the large number of customers ready to pay an access fee to get free content that is not available over the air. In the 1960s, Belgium was one of the first countries in the Europe to roll-out cable networks in order to broadcast French channels. The Swedes, who are generally bilingual, have rolled-out a cable infrastructure for broadcasting Anglo-Saxon FTA channels. Once the infrastructure has reached its critical mass of consumers, it can then discriminate and sell pay content. On the contrary, terrestrial and satellite broadcasting is more adapted to market discrimination and therefore to pay-TV: once positioned over a geographical zone, it can discriminate among the customers and cherry pick those with a high

³¹ Lithuanian TV broadcasts several Russian TV channels.

willingness-to-pay. A single satellite operator, such as Premiere, covers Germany and Austria whilst BSkyB covers the entire United Kingdom and Ireland.

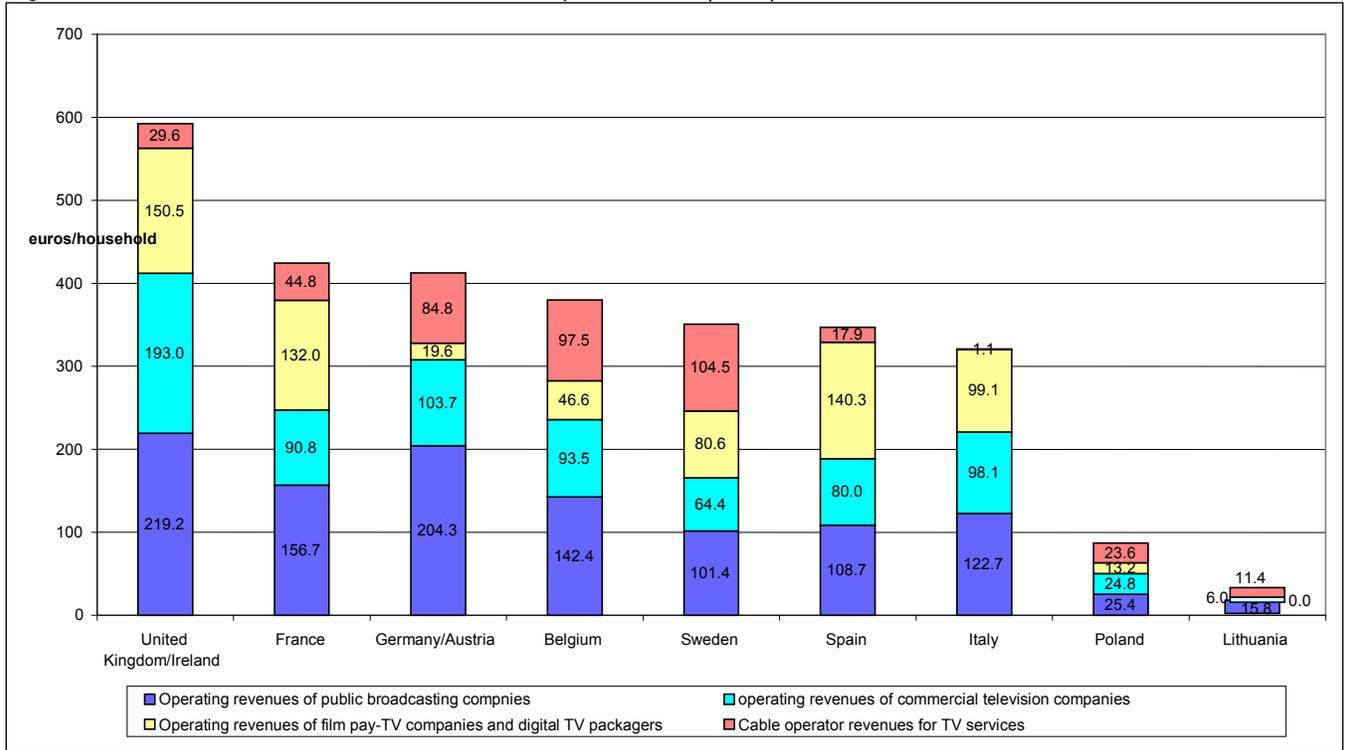
In addition, countries with small populations cannot finance by themselves enough content to satisfy their consumers. Their domestic market cannot remunerate a capital intensive diversified AV content production, and if they look to export they would have to compete with countries able to test and amortise their products on wider markets. Therefore, they rely on imports. Imports are especially convenient for countries host to a wide cultural and linguistic community. It is also true for the Scandinavians, who are, as previously mentioned, generally bilingual and fond of Anglo-Saxon as well as other foreign programmes. However, such patterns may generate conflicts in regulating the media markets in Europe. While some countries have interest in importing massively, some others will consider strategies to maximise their own domestic productions. As a consequence, not all European countries are organising their markets the same for optimal discrimination. Massive importers will let the foreign content owners organise their distribution while content protective countries will regulate vertical relations so as to protect their production sector. These regulated vertical relations will interfere with price discrimination on the various version markets.

Figure 7: Breakdown of revenues between FTA and pay-TV companies in 2003



Sources: European Audiovisual Observatory, 2003, 2005, 2006

Figure 8: Breakdown of TV revenues in the European Union (2003)



Sources: European Audiovisual Observatory, 2005, 2006

The table 1 below describes some features of the TV landscape in each selected country.

Table 1: TV development path, regulation in EU member states and the US

	Public TV	Resources for public TV	Regulation on advertising for public TV	Licence fees in 2006 (euros)	Commercial FTA TV	Regulation on advertising for commercial FTA TV	Pay-TV	Cable	Satellite	Advertising
European Union			9 min/hour on average, 12 min/hour max (TWF Directive)			9 min/hour on average, 12 min/hour max (TWF Directive)			1977: Eutelsat, 1988: ASTRA, 1989: Intelsat	
Austria	1955: ORF (from 1966) + German channels, 1966: ORF2	Licence fees, Advertising		242.9	2001: ATV Privat-TV Services AG		1985: (without advertising), 2002: Premiere Austria	1974	1990	
Belgium	1953, 1960: RTBF, VRT, 1977: BRFB	Licence fees, Advertising	French community: 12 min/hour max, Flemish community: 9min/hour on average, 12 min/hour max	French community: licence fees; Flemish and German-speaking communities: taxes	1987: RTL-Tvi, 1989: VTVM	French community: 12 min/hour max, Flemish community: 9min/hour on average, 12 min/hour max	1989: Canal+ (Hertzian) (Canal Digitaal)	1960		1987: advertising by a single station
France	1947: 1st channel; 1964: 2nd channel; 1973: 3rd channel	License fees, Advertising from 1968	6 min/hour on average, 8 min/hour max, no advertising slot during a film	116.5	1986: La 5, La 6; 1987: TF1	6 min/hour on average, 12 min/hour max, 1 advertising slot during a film, 20 min between 2 advertising slots	1984: Canal+ (Hertzian), 1992: Canal Satellite	1982	1988: TDF1	1968
Germany	1953: ARD; 1963: ZDF	License fees, Advertising from 1956	20 min per day; No advertising after 8PM	204.4	1981	3H30 per day, 12 min/h max	1988: Teleclub, 1990: Premiere (satellite), 1996: DF1 (digital)	1970	1985: TV-Sat	1956
Ireland	1962: RTE + British channels, 1978: 2nd channel	License fees, advertising	5 min/hour on average	155	1990: TV3	9 min/hour				
Italy	1954: RAI 1; 1961: RAI2; 1979: RAI 3	License fees, Advertising from 1957	7-8 min/hour max	99.6	1980: Canale5	12 min/hour max, 10min45/hour on average	1992: Telepiù (Hertzian)	-		
Lithuania	1957: LTV, 2003: LTV2		9 min/hour on average, 12 min/hour max	-	1992: LNK	9 min/hour on average, 12 min/hour max				
Poland	1952: TVP	License fees and advertising	9 min/hour on average, 12 min/hour max	36.8 (2004)	1992: Polsat, 1997: Polsat2, 1997: TVN	9 min/hour on average, 12 min/hour max	1995: Canal+, 1998: Polsat Cyfrowy			
Spain	1956: RTVE; 1965: 2nd channel	Advertising from 1956	9 min/hour on average, 12 min/hour max	-	1989: Antena 3; Tele-5	12 min/hour max	1989: Canal+ (Hertzian) (Canal Digital)			1956
Sweden	1954: Sveriges Radio AB, 1956: SVT1, 1969: SVT2	License fees	No advertising	209.6	1992: TV4	8-10 min/hour	1986: pay-TV authorised, C+; Filmnet; 2nd pay-TV (Canal Digital)		1990: Tele-X	1991
United Kingdom	1936: BBC; 1964: BBC2	License fees	No advertising	188.6	1954: ITV; 1997: Channel 5	7 min/hour on average; 12 min max	1984: Channel 4 (Hertzian); 1989: DTH UK; 1990: BSkyB	1982	1990	1954
United States	1968: PBS		No regulation 16-21 min/hour on average		1953: ABC, CBS, NBS		1972: HBO	1983: USCI	1953	1953

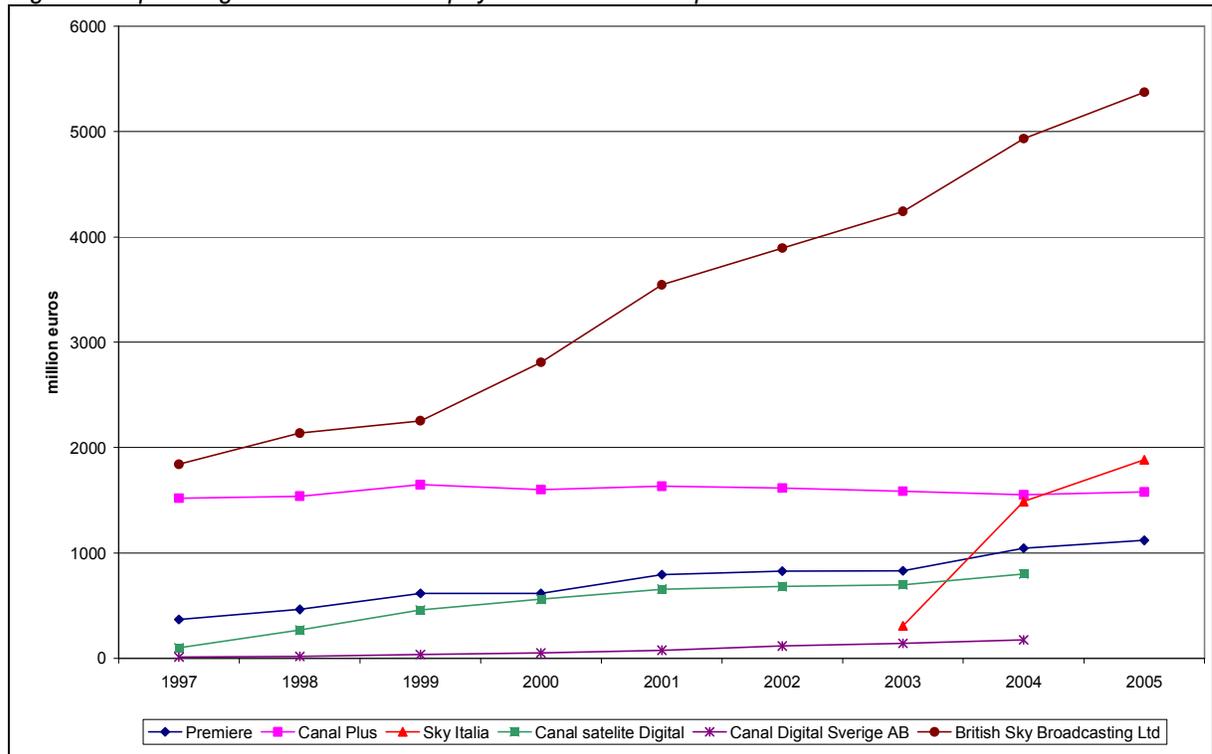
Sources³²: EAO, 2006, Eli Noam, 1991, CSA, Vlamsregulatormedia, Krajowa Rada Radiofonii I Telewizji, Lietuvos Radijo ir Televizikos Komisija

³² Eli Noam, *Television in Europe*, Oxford University Press, New York. Philippe Leroy, *Rapport d'information du Sénat n°413, 2004-2005*

2.3.5 Pay-TV markets' size and growth

The main European pay-TV operators are listed in figure 9 below. The British market – BSkyB went through a spectacular growth process and reached more than 5 billion euros of revenue in 2005 – strongly differs from the others whose revenues are smaller and growth nearly equalled zero. This dominant position can be explained by the reach of a critical mass, allowing it to maximise the value of the distributed contents. Once such a mass is obtained, the broadcaster benefits from a competitive advantage in purchasing premium content and then increases its quality differentiation. When this dynamic is launched, the bundle selling model of pay-TV becomes more and more efficient in comparison to FTA. This strategy has also been applied to Sky Italia since 2003 and to Canal+ ever since 2005. In Italy, the end of piracy sustains the observed growth between 2003 and 2005.

Figure 9: Operating revenues of main pay-TV offers in European countries



Sources: European Audiovisual Observatory, 2003, 2005, 2006

2.4 The Conditional Access industry

The previous section shows that technical solutions must be designed to enable efficient broadcast of AV contents. CAS are technical means of IP enforcement, included sport events (see box below). They are thus exclusion means — barbed wires — which participate in the shaping of final markets and contractual vertical relations in the content industry. CA devices are products complementary to AV content and delivery systems. Their function is to allow content versions to be delivered to the consumer under discriminative pricing models while limiting the moral hazard associated with IP circumvention. This point will be developed in the next section.

Conditional Access Services (CAS): technical aspects

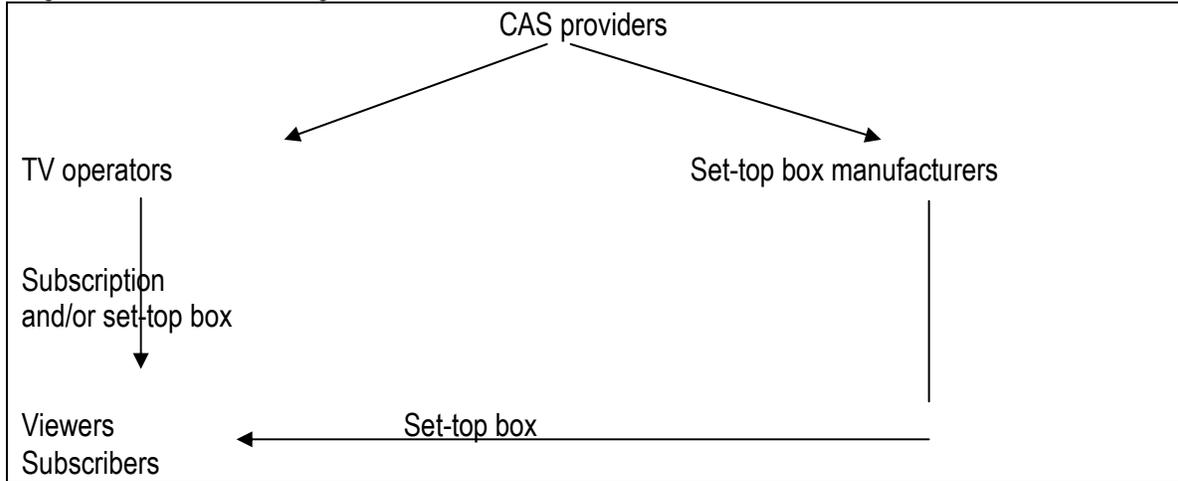
CAS are based on a language specific to each CAS provider. The CAS provider regularly (between 18 and 24 months) designs a new version based on that given language in order to effectively fight against piracy. A CA product is built on three levels: the first one consists of content encryption and thus protects the content by means of control words; the second corresponds to the control level and protects control words thanks to an encryption key; the third one manages the different types of subscriptions at the consumer level. To sum up, CAS provide content protection, safeguard of the protection, and management of consumer access rules.

The CA solution is situated at both the head-end of the TV operator and at the consumer side. Intermediate levels that require CA solutions also exist for disintegrated delivery networks (DSL, cable, etc.). At the consumer level, the CA solution usually consists in a smart card and/or a module. In that case, a set-top box is necessary to read the card.

The security of the smart card generally results from the combination of hardware and software. Its efficiency is limited to only a few years because of fast technological obsolescence and some bugs in technologies' uses. Whether pirated or not, or marketed or not, new versions must be designed by CA providers for at least two (correlated) reasons: reputation and forecast. In effect, new CA generations are not systematically marketed. Moreover, smart cards more than two years old are not systematically cracked.

The business model of CA providers (Figure 10) is based on revenues derived from both pay-TV operators and CA manufacturers (set-top boxes - STB -, modules, etc). The breakdown of revenues is different according to CAS providers (cf. *infra*) but the biggest share is paid by TV operators. CAS providers' revenues reached around 1.5 billion euros in 2006 worldwide.

Figure 10: CAS market organization



The CAS market looks quite competitive. However, this competition is shaped by the high switching costs of TV operators who cannot easily revoke their supplier once they have rolled-out a solution. The CAS industry is R&D (Research and Development) intensive and the market is highly concentrated. The four main CAS providers hold 90% of the market as the breakdown in Table 2 outlines. The concentration rate is even higher if the analysis excludes Motorola and Scientific Atlanta (not present in Europe).

Such a structure results from the combination of several economic characteristics. First, indirect network effects — standardisation, interoperability — induce a raise of STB manufacturers' utility when they adopt the same CA language: the consumer can access more content with the same device³³. Second, CAS industries are capital intensive and benefit from economies of scale. As a result, the more the CAS provider will invest in R&D³⁴, the more it will design efficient solutions, the more TV operators will adopt his solution, etc. The rationale presupposes that R&D spending and CAS' quality are positively correlated. On the other hand, CAS efficiency also depends on the degree of CA products' differentiation and implies the existence of several CAS providers.

Table 2: Market shares of main CAS providers all over the world³⁵

CAS companies	Market share
NDS	30%
Nagra Kudelski	30%
Motorola/Scientific Atlanta	30%
Viaccess	4%
Irdeto	4%
Conax	2%

³³ On the other hand, interoperability withdraws lock-in effects for TV-operators by diminishing switching costs for the viewer and may then reduce their utility.

³⁴ R&D investments reach around 30% of CAS revenues.

³⁵ The following breakdown is taken from CAS providers' interviews.

The table below lists some CAS providers' customers from TV landscape.

Table 3: CAS providers and TV operators in selected European countries³⁶

CAS	Countries	Satellite	Cable	DSL	Terrestrial
NDS					
	Austria			Deutsch Telekom	
	Ireland	BSkyB			
	Italy	Sky Italia			
	Spain	Auna			
	Sweden	Viasat			
	United-Kingdom	BSkyB			
Nagra Kudelski					
	Austria	Premiere			
	Belgium		BeTV		
			Telenet		
	France	Canal+		Neuf Cegetel	
		Canalsat			
		ABSat			
	Germany	Premiere			
	Ireland	Chorus			
	Italy	Mediaset			
	Poland	Cyfra+			
		Polsat Cyfrowy			
	Spain	Digital+			
		Euskatel			
		RTVE			
	United-Kingdom	Telewest			Top UP TV
Viaccess					
	France	AB Sat	Noos	Orange	
		TPS		TPS-L	
	Germany	ADD Europe			
	Sweden	Nordic Satellite			
Conax					
	Germany	Deutsche	Bosch		
			Telecolombus		
			Other cable operators		
	Ireland		CASCY Cablevision		
	Italy				DM I
					EdiOnWeb/ Conto
	Lithuania		Balticum TV		
			Init Corporation UAB		
				Teo LT AB	
					Balticum TV
	Poland	TVN	TKP		SatFilm Sp. ZOO
			Telsat Telewizja		
			Other Cable		
	Sweden	Canal Digital	Comhem AB		
			MKB		
	United-Kingdom	Telenor UK Ltd	Wight Cable		
		Kingston Inmedia			

The table shows that NDS has few but big customers that are mainly satellite operators. Conversely, Conax has several small customers in many European countries. Cable operators are more numerous and smaller than satellite operators. This can be explained by the local dimension of cable distribution systems which have been rolled-out in relation with incumbent fixed telecom operators. The digitisation of telecom networks has raised new concerns about the market dominance of incumbent telecoms. The telecom regulation now leads to a separation between telecoms and cable operators and, in a second phase, to a concentration in the cable industry.

³⁶ Information can be found in CAS providers' websites.

Satellite systems cover wider territories and have experienced neck to neck competition on a national basis: this has led to earlier merging decisions. Indeed, most of them are now national monopolies after having merged as seen in Italy, Spain and France for example. The Swedish situation is a noticeable exception since several satellite operators are still competing together. As previously explained, the Swedes are consuming imported Anglo-Saxon programmes. The regulation of the Swedish TV market enabled pay-TV to widely expand. The consumption of many English speaking programmes in the Scandinavian territories justifies their supply through multiple broadcasting systems.

The roll-out of DSL (digital subscriber line) providers, still accounting for a small share of CAS turnover, creates new market outlets growing at a sustained rate. Set-top boxes for both free and digital terrestrial pay-TV (DTT) have also developed over the last few years. Mobile TV platforms could be the next platform broadcasting AV content in version markets. As DTT and mobile TV are emerging platforms, a snapshot of their recent developments may be provided by looking into the market situation of significant territories.

Italy has been selected as a notable example due to the size of its market and to the rapid increase that DTT and mobile TV have experienced in the country over recent months:

DTT in Italy

According to GFK³⁷, sales of DTT set-top boxes reached the considerable figure of 4,551,807 in Italy at the end of 2006. Out of these, almost half (43.6%) were financed by public subsidies granted by the government in 2004 and 2005 – this subsidy was successively deemed illegal by the EC because of its lack of neutrality between platforms³⁸. It is certain that public support was instrumental in pushing Italy amongst the leading countries in terms of DTT adoption across Europe.

Although DTT has grown rapidly in Italy in the last two-three years, it is far from achieving complete coverage of the country. The initial date for the analogue switch-off, set by the government for 2006, has had to be postponed – most likely to land between 2010 and 2012. The government is pursuing a strategy aimed at achieving a full transition to DTT in local areas, ahead of proceeding with the digital switch-over across the whole country – the regions of Sardinia and Valle d'Aosta should become “all digital” by 2008.

Set-top boxes necessary to access DTT services can essentially be of two types: simple or base set-top boxes, which can receive FTA digital broadcasts and have basic functionalities, and secondly advanced set-top boxes, whose main feature is interactivity, including the possibility to access premium (i.e. pay-per-view) services.

³⁷ www.gfk.it

³⁸ See case nr N270/2006 Contributi ai decoder digitali

In Italy, the overwhelming majority of DTT set-top boxes belong to this second category. Simple set-top boxes represent no more than 3.4% of the market according to GFK. This is due to the choice of the two major FTA national broadcasters (RAI and MEDIASET) to opt for Multimedia Home Platform (MHP) as the technical standard for DTT set top boxes – MHP is the standard designed by the DVB consortium for digital interactive TV decoders.

According to the Commission, this combination of voluntary agreement amongst broadcasters, public subsidy schemes and the definition of common implementation specifications were decisive in helping the roll-out of interactive DTT services in Italy³⁹.

CA-protected services, or pay-per-view (PPV), are a special case of interactive DTT. In Italy, this type of service was implemented by two terrestrial broadcasters, MEDIASET and La 7. Public broadcaster RAI does not include PPV in its DTT offer.

PPV through DTT is gradually taking off in Italy. MEDIASET sold 1.1 million pre-paid DTT smart cards for its PPV service, called MEDIASET Premium, as well as 4.1 million recharges in 2006. Overall revenues for the PPV offer were €108 million in 2006, more than double the 2005 results (€44 million)⁴⁰. Premium content includes football matches from the two national top leagues (Serie A and B), premium movies and access to extra content from reality shows such as the local Big Brother.

Revenues generated by PPV for La 7 were €15 million in the first nine months of 2006 – compared to €5million for the first nine months of 2005⁴¹. Premium content consists mainly of football matches – in practice La 7 acquired the rights to broadcast, in PPV form on its DTT service, matches from a number of teams not licensed to MEDIASET Premium. On 27 July 2006, MEDIASET and La 7 signed an agreement for the cross licensing of the football matches included in their respective DTT offer for the next 3 years.

Mobile TV in Italy

Italy is a pioneer market for mobile TV. The first full-fledged mobile TV service was launched in Italy in 2006 by 3 Italia ahead of the FIFA World Football Cup. By the end of 2006, 3 Italia recorded 400,000 subscribers to its mobile TV service based on the DVB-H standard. In the meantime, rival mobile operators TIM and Vodafone have also launched mobile TV offers. All three mobile TV operators chose Nagravision as the CAS provider for their services.

New CA devices have therefore been designed to cover new technologies and new delivery systems. New functions like TV recording have been introduced in set-top boxes. As a consequence, DRMs (see the box below) have supplemented CA systems so as to store the encrypted content in digital video recorders. More generally, the roll-out of new digital delivery systems creates new content versions which are either streamed or downloaded by the consumer.

³⁹ See the Communication from the Commission COM(2006) 37 of 2 February 2006 on reviewing the interoperability of digital interactive television services pursuant to Communication COM(2004) 541 of 30 July 2004

⁴⁰ MEDIASET – 2006 results

⁴¹ Telecom Italia Group – results for the first 3 trimesters 2006

In both cases, content should be protected by technical means which, in the future, may not be dedicated to a specific device. Content protection through DRMs is all the more required since the consumer gets the content under a digital format which could be re-broadcasted through communication networks. Because set-top boxes are dedicated to the use of pay-TV, they appear today as the safest way to deliver encrypted content to the consumer. In consequence, pay-TV broadcasters operate the safest and the most efficient digital content delivery systems.

CAS were initially designed for analogue broadcasts. They have then been adapted to digital broadcasts or digital streams flowing over broadband networks. However the digital recording of such streams or the download of copyrighted digital files require specific technical protection means usually called DRMs. Technically, see the box below, DRMs do not differ radically from CAS: they both rely on encryption technologies allowing to exclude or to discriminate among consumers. However, because digital distribution of copyrighted files can follow other routes than unidirectional broadcasting, the economics of DRMs are even more complex than the economics of CAS. Compared to CAS, the massive re-broadcasting of unencrypted copyrighted files creates many additional moral hazards which may combine with technical and legal loopholes. Although explicitly protected by the EU Copyright Directive, the roll-out of DRMs appears then much more hazardous than the one of CAS.

Although the CAD also covers DRMs (article 2c of the CAD defines CA devices as “any equipment or software designed or adapted to give access to a protected service in an intelligible form”), in practice its usage is very limited in the case of ISS such as VOD services. This appears to be one of the major shortcomings of the Directive – only business operators active in the pay-TV area are aware of its existence and have recourse to its provisions in courts, whereas new service operators (ISPs, telecoms, digital service providers) who could rely on the CAD to protect their business do not actively use it. Right holders are also more dependent on the EU Copyright Directive to discourage circumvention of DRMs in digital platforms.

Both DRMs and CAS are technical means to manage access to AV content. Originally, CAS were conceived to encrypt an analogue broadcast received through a specific device (i.e. a set-top box). DRMs appeared as a different concept with the encryption applying not to a stream to be broadcasted, but to digital files to be downloaded, stored and read on one or multiple devices. The required technologies are therefore slightly different. But also, the vertical chain of content distribution and, as a consequence, the economics of the roll-out of the two types of technologies raise quite different moral hazard issues.

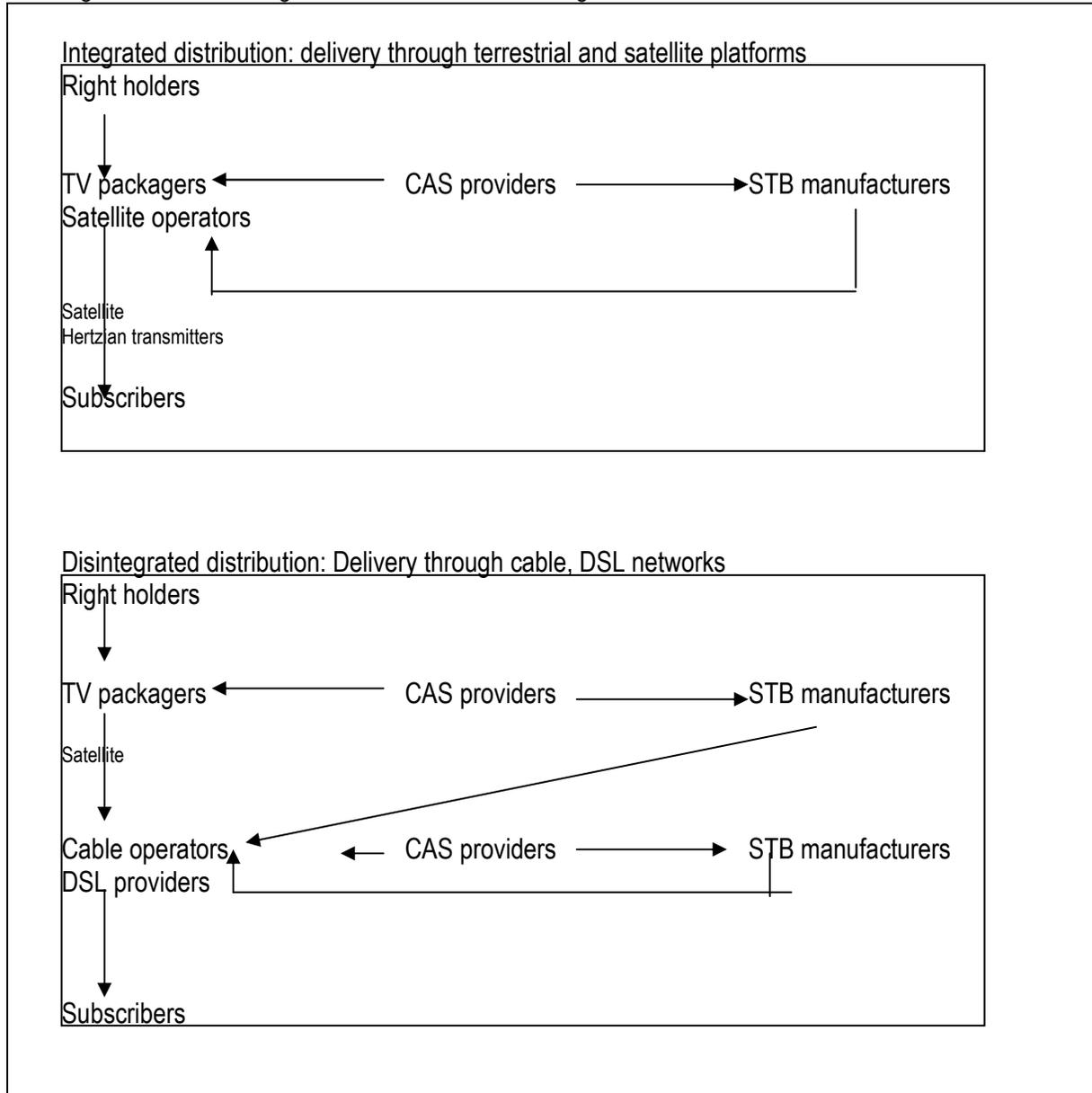
2.5 IP right economics in the digital environment: IP fundamentals, vertical relations and moral hazard

This section aims at describing the vertical relations of the sophisticated delivery chain of AV content while focusing on moral hazard.

As shown in figure 9, the right holders delegate AV content broadcast to TV-operators, TV-operators entrust AV content protection to CAS providers and set-top box manufacturers, CAS providers subcontract set-top box manufacturing to set-top box manufacturers, TV-operators offer

subscriptions and set-top boxes to viewers. The second part of the figure illustrates the occurrence of an additional vertical relation. This happens when the distribution is disintegrated, that is when the TV-packager and the TV-deliverer are distinct.

Figure 11: Vertical organization of TV broadcasting



Before getting into details, we need to define the vertical relations in AV content distribution in reference to the principal-agent theory. In this approach, also called “contract theory”, the principal delegates to the agent several tasks specified in a contract. The relation is called vertical because the principal takes the decision to delegate the agent. In a vertical relation, information asymmetries and divergent interests raise two major problems. First, before signing the contract,

the principal seeks to select the best agent without having access to all the required information: he faces anti-selection issues. Once he has signed, the agent should act exactly according to contract terms. However, he can be tempted to act differently when his interests are not similar to those of the contract or when the contract does not mention all circumstances: the principal is therefore facing moral hazard problems.

2.5.1 Vertical relations between right holders and pay-TV operators, between right holders/content aggregators and deliverers

The right holders grant broadcasting rights to TV operators according to several criteria: price, market size, number of broadcasts, territoriality, and quality of CAS – that are supposed to guarantee content protection by giving access only to legal viewers, e.g. viewers paying a subscription fee, belonging to the right geographic area and by excluding all the others.

Moral hazard issues may happen within vertical relations where a producer has licensed a distributor. The distributor who conveys a wide range of products to the consumer can have interest in not doing his best effort in marketing each product. He can, for instance, be tempted to cut distribution costs so as to raise his margin at the disadvantage of one or several producers. As CA systems are part of AV content distribution costs, they can be subject to moral hazard from pay-TV operators. Right holders must make a trade-off between the market size and the protection level.

The distributor can also increase the utility supplied to the final consumer and therefore its revenues at the expense of the other players in the chain. For instance, DSL or cable triple-players provide several services, amongst which, AV content products and broadband connection. As P2P enables free access to media content and increases the subscribers' utility, the access providers may be lenient with such practices at the expense of the right holders and/or content aggregators. But in the long term, if DSL triple-players use the P2P subsidy to roll-out set-top boxes, and if circumvention becomes less tolerated, they may offer content providers a wide consumer base to be accessed. Piracy subsidises the roll-out of the delivery system which can, in a second phase, be operated as a loyal distribution channel⁴².

Such features are common in the vertical relations of the content distribution chain. The refusal by TPS (France's second largest pay-TV operator) to be broadcast over Free's (a triple player) DSL network, whose protection system was considered inefficient by the aggregator, clearly illustrates such a pattern in France. The *rappports de force* between right holders and delivery networks are usually dynamic. In effect, Canal + first shared the same point of view as TPS but changed its mind when the number of Free's subscribers rapidly increased.

⁴² See "L'affaire du Peer-to-Peer" pp. 181-227. in *Gratuit!* by O.Bomsel, Gallimard Folio, 2007.

2.5.2 Vertical relations between CAS providers and pay-TV operators

A pay-TV operator must protect the AV content he broadcasts and therefore purchase a CA solution. On the one hand, we assume that the TV-operator wishes the most efficient CA solution⁴³. Reputation enables TV-operators to sort out issues related to anti-selection. On the other hand, if the CAS provider designs a hacker-proof solution, his revenues might be lower compared to those he would earn in case of a piracy hack, which requires updating. Divergent interests are then at stake and moral hazard issues can rise in a principal-agent relation. Moreover, even if the CAS market is highly competitive, high switching costs for TV operators may strengthen moral hazard. Within that framework, a range of contracts have been designed.

First generation contracts have been indexed on variable costs – a royalty per smart card sold – as incentives' theory suggests. The more viewers that subscribe to pay-TV offers, the higher the revenues for CAS providers. Nevertheless, according to interviewed stakeholders, that incentive appeared insufficient to solve moral hazard issues.

New contracts have therefore been imagined to make interests more convergent⁴⁴. The CAS provider and his customer will share costs in case of CAS cracking: the former will take care of manufacturing new smart cards'; the latter will manage logistic costs for replacing hacked devices. In return, the TV operator pays a lump sum monthly to the CA provider. The CA provider benefits from regular revenues and has the incentives to provide the most efficient solution at the same time. For instance, the Viaccess model offers the "Solo Contract" and the "Zen Contract". This double contract model (sale/rental) is also offered by Nagra. The first one consists in the sale of the CA solution to the CA user. In that case, if any piracy attempts succeed after ten months, the operator largely takes on the responsibility for piracy costs. On the contrary, in the second case, a regular payment to the CA provider enables the CA user to limit his costs if an unexpected hack occurs. The second type of contract binds the CAS supplier with a performance obligation but at a higher cost for TV-operators. Such contracts may restrain moral hazard issues.

Moral hazard is usually easier to control within an integrated distribution service (see Figure 9). In the case of integrated broadcasting services, the CAS supplier will monitor the relations with the module manufacturer providing the encryption function and the TV operators renting the set-top box to their subscribers. One single supplier can be held responsible for the entire delivery chain. In disintegrated delivery networks, as described below, several CAS suppliers can be involved. In effect, disintegrated deliverers (i.e. cable or DSL) would first have to descramble copyrighted contents from TV broadcasters – satellite and terrestrial – before again scrambling their own packages with their own CA solution. In France, for instance, Noos purchased Aston modules in order to descramble Viaccess' encrypted content from TPS. Such a process multiplies the CAS spending along the chain while not reducing moral hazard.

To conclude, moral hazard can be controlled, at a certain cost, through adapted binding contracts between disintegrated players. Solutions to such moral hazard issues can also be obtained through

⁴³ This hypothesis should be qualified if we refer to the previous section. Moreover, the CA solution is intrinsically potentially hackable.

⁴⁴ Irdeto was the first to set up such a contract.

vertical integration as with the cases of Sky and NDS (both controlled by News Corp)⁴⁵. TV broadcasters therefore develop their own control access solutions, suppressing moral hazard issues. Such a solution makes sense only if the content industry is concentrated enough to get the economies of scale in the CAS.

2.5.3 Relations between CAS providers and STB manufacturers, between TV-operators and Set-top box manufacturers

As mentioned in 2.3, about one third of CAS providers' revenues come from set-top box manufacturers. Contrary to the US where CAS design and set-top box manufacturing can be integrated, disintegrated relations are systematic in the EU.

Relations between the two players can be analysed through the economics of patent rights. In effect, the CAS provider grants technology protected by IP to set-top box manufacturers who have to purchase a licence prior to producing the according set-top box. In addition to this lump sum, manufacturers pay a royalty for each set-top box sold. The license price depends on the CA providers' business model. Viaccess, for instance, provides its solution to set-top box manufacturers who pay a licence fee and royalties per sold unit in return. The lump sum provides incentive to the manufacturer to amortise the license on large numbers of set-top boxes. The Conax model offers the licence to set-top box manufacturers who pay only the royalty. The manufacturer has no fixed costs attached to one specific CAS. The breakdown between fixed and variable costs will impact the competition on the set-top box market. Moreover, for security reasons, some CAS providers like NDS restrict the number of licensees.

The contractual relations between CAS providers and set-top box manufacturers, as well as the set-top box distribution model, may therefore generate moral hazard. Some set-top box manufacturers can be tempted to emulate CAS language without purchasing any license and royalty.

To avoid such problems, some CAS providers are willing to highly customise their products in participating with the implementation of their licensed technology into a set-top box, in addition to financial terms. This is the case of NDS who grants a solution and a service. This scheme gives the CAS provider a better control on the set-top box manufacturer and raises the protection of the CAS from emulation by free-licensee set-top box manufacturers, although it raises some concerns with regard to fair competition and the consumers' interests. The case of SKY Italia, who use NDS proprietary decoders, illustrates such a dilemma, one where security reasons and fair competition are opposing each other as highlighted below.

Vertical integration would solve such issues in the case where there are no more disintegrated set-top box manufacturers. Yet, it could not suppress but only diminish piracy activities. Indeed, set-top box manufacturing can be expected to be much more secure in such a structure. Moreover, it would raise competitive issues in the EU legal framework.

⁴⁵ At the same time, it has some implications for competition policy as described in the box below.

STBs are either rented or purchased by the consumer as a bundle with the pay-TV subscription, or purchased as a standalone device⁴⁶. In the first model, the TV operator is in charge of subscriptions and set-top box renting/sale. It is the most widespread model in the European Union. Within the privative model, the viewer subscribes a TV package and must purchase the set-top box. In Sweden, only the privative model exists.

The retailing of set-top boxes raises competition issues on the STB markets. Set-top boxes designed by manufacturers that do not own a license generate unfair competition on these markets. They have two competitive advantages on licensee ones: first their price does not include the CA license cost; second, they can have several CA slots facilitating pirate uses (the owner can access a wider pirated smart card market). However, they are not considered as illegal devices and CAS providers have difficulty to prosecute successfully such manufacturers. As a consequence, the disintegration of these markets is source of moral hazard from the STB manufacturers.

The bundle model partially contains these divergences of interests and piracy activities. In that case, the STB manufacturers' revenues depend only on TV operators, and in no way on pirate viewers. If only the bundle model applied, piracy issues would be partly solved because STB retail selling would not exist anymore. Indeed, if the bundle model consists in renting STB, piracy activities are therefore over. On the other hand, if the bundle model consists in selling both STB and subscription, it may happen that some viewers subscribe to pay-TV services to get a cheap access to a decoder before using a pirated card as a pay-TV operator pointed out. Moreover, the bundle model induces high pay-TV subscriber acquisition costs (SACs) that micro-broadcasters cannot afford.

As a matter of fact, only the rental model can prevent from piracy practices in the CA vertical chain. Conversely, the standalone model is based on a retail market for set-top boxes. While the capital intensity is smaller for the broadcaster, both legal subscribers and illegal viewers can purchase set-top boxes. Set-top box manufacturers can then find interest in piracy activities seeing as they would increase their sales. However, such practices could turn into losses: after a piracy hack, which could temporarily boost their sales, STB manufacturers would have to change their products. If all the smart cards are replaced, all their investments and stocks would be lost. However, such integration may be considered as anti-competitive (see the example of Premiere described in the box below) or economically impossible to achieve.

The CAD, which considers the CAS as a pure technical protection tool, does not tackle moral hazard issues. This makes the efficiency of the regulation quite difficult to assess. It is significant that no content aggregator or CAS provider has accepted to disclose CAS piracy figures for this evaluation study: piracy economics are part of the content distribution business and require commercial secrecy. They are usually dealt with through private distribution contracts.

Such contracts are based on the possibility of the right holder to design incentives in order to constrain the distributor and thus maximise his selling efforts. Pricing formulas like minimum guarantees, advance payments or revenue sharing are the most common tools used to handle moral hazard in vertical relations. The principle laid down by the EUCD (see below chapter 4.3), is to provide legal protection to the vertical chain by covering all technical protection measures such

⁴⁶ We will comment in 2.5.2 the situation where the STB is supplied by a triple-play DSL retailer.

as DRMs used for packaging the contents. Therefore, any stakeholder from the chain is able to sue a circumventor.

Conditional access and competition policy issues

Case study: Italy

Background

When **SKY Italia** began operating in July 2003, its programmes were received by viewers through set-top boxes with different CAS – this was a legacy of the pre-merger situation, where two competing platforms co-existed. The 1999 law had imposed a single decoder, whose different CAS were provided for by the pay-TV operator. In 2003 therefore, a significant set of decoders on the market were equipped with the SECA (ex-Telepiù) CAS.

Throughout 2004, SKY began the migration of its subscribers' base to its own CA system – NDS. SKY replaced the existing SECA decoders in the market with new NDS decoders. This move provoked the resistance of some consumer associations as the new NDS decoders did not allow the reception of FTA satellite programmes.

SKY defended its move with security reasons. In fact, whereas rampant piracy had plagued the Italian pay-TV market since its inception, after the transition to SKY's proprietary CAS, it appears that CA piracy has been greatly reduced in Italy. However, this has been achieved by limiting the market of available set-top boxes, to the detriment of competition in this area.

The complaint

Comex s.p.a. (hereinafter: Comex) is an Italian manufacturer of set-top boxes. In particular, Comex produces XDome, a multifunction satellite receiver and DVD player. In 2004, Comex asked SKY to license its NDS Videoguard CA system for the marketing of the XDome. SKY refused the licence on grounds of security reasons and Comex made a complaint on this subject to Italy's Communication Authority (AGCOM) which is competent to judge antitrust cases involving the media market.

The complaint presented by Comex made reference to the EC decision clearing the Stream/Telepiù merger, whereby the Commission imposed on SKY to license its CAS on a non-discriminatory basis to rival operators. Yet, AGCOM rejected the complaint in 2005 as the EC decision only imposed licensing obligations for third party operators active in the same market as SKY, i.e. pay-TV operators. These obligations therefore were not applicable to other categories of market players such as set-top box manufacturers.

However, AGCOM pledged to continue monitoring market developments in the field of digital set-top boxes to ensure the respect of the relevant regulations in force.

The decision and its consequences

On 31 January 2007, AGCOM made a new decision on the Comex/SKY case. It represents a turning point in terms of its implications on competition policy.

In particular, AGCOM makes reference to article 43§1 of Italy's Communication Codex which implements in its entirety art 6 of Directive 2002/19/EC ("Access Directive") and its Annex 1⁴⁷.

The infringement of this article had been repeatedly mentioned by Comex as a consequence of SKY's refusal to license its NDS system. SKY justified its stance with security issues due to the fact that Comex's XDome used the open source Linux operating system as well as with commercial and other quality issues. In return, Comex offered to modify its set-top box according to SKY and NDS' requirements and lamented the non-exhaustiveness of the conditions imposed by SKY on the licensing of the NDS system.

AGCOM accepted this point considering that SKY had not sufficiently clarified the conditions under which it was disposed to submit the licensing of its CAS. It interpreted art. 43§1 of the Communication's Codex as the source of an effective obligation for SKY and NDS. It considered that to set aprioristic conditions impeding the manufacturing and marketing of set-top boxes compatible with the NDS system was not reasonable, equitable and that it was notably a discriminatory behaviour under the terms of the Access Directive.

AGCOM also rebuffed SKY's arguments based on the need to protect its customers in terms of quality standards, affirming that the quality of the product, its distribution and maintenance would benefit from increased competition in the market.

Soon after, AGCOM ordered SKY and NDS to communicate all the conditions, including technical, security and commercial, needed to license the NDS' Videoguard system.

AGCOM's judgement has potentially disruptive effects on the market for pay-TV services in Italy and, if followed by similar cases in other countries, across Europe. Based on the provisions of the Access Directive, AGCOM effectively put into questions the selection chain at the basis of the bundle integrated model which characterises the majority of Europe's pay-TV markets.

As explained above, most of the EU's pay-TV operators adopt a bundle model whereby set-top boxes are provided free of charge (or rented at low price) to subscribers by pay-TV operators themselves, which further aim at building a strong client base for their services while securing AV content broadcasting.

This model has been justified with reasons mainly linked to the security of the system. In the case of SKY Italia, it has been observed that piracy has considerably decreased in Italy after the adoption of set-top boxes equipped with the NDS system.

⁴⁷ Annex 1 of the Access Directive provides the following:

When granting licences to manufacturers of consumer equipment, holders of industrial property rights to conditional access products and systems are to ensure that this is done on fair, reasonable and non discriminatory terms. Taking into account technical and commercial factors, holders of rights are not to subject the granting of licences to conditions prohibiting, deterring or discouraging the inclusion in the same product of:
a common interface allowing connection with several other access systems, or
means specific to another access system, provided that the licensee complies with the relevant and reasonable conditions ensuring, as far as he is concerned, the security of transactions of conditional access system operators.

Relation with the CAD

The AGCOM decision has significant consequences for the business of CA-related industries in Italy and potentially across the rest of Europe. It is too early to assess these consequences in practice. What is of interest is the effect of this case on the AV market.

The gradual rise in the bundled pay-TV model, now dominant across Europe, may have negative effects on competition in ancillary markets such as the STB market, but it has proven to be more effective in ensuring the security of businesses. It has been noted that, as a general rule, the bundled model seems to offer increased guarantees to the industry – in particular to pay-TV operators and to right holders who rely on strong protection measures to make their content available.

German pay-TV operator **Premiere** used to rely on a bundled (both rented and sold) model but in 2003 it was forced to open up its distribution system to third party set-top box manufacturers by local competition authorities. It now operates a double strategy selling and leasing digital set-top boxes to its subscribers in combination with subscriptions. According to Premiere, it is difficult to monitor compliance with security and other technical issues when licensing CA systems to external set-top box manufacturers, also given the high number of potential licensees. Security is inevitably eroded through the set-top box retail (“horizontal”) model.

The efficiency of IP protection along the distribution chain depends on the mastering of moral hazard between all the players involved. Vertical integration could partly solve such issues. However, it raises concerns in terms of potentially anti-competitive practices in the hardware market. It is a matter of diverging policy options – whether to reinforce the security of the whole AV distribution chain by sustaining the bundle model, or whether to force competition on the market. The dilemma here lies between media policy and competition policy.

When moral hazard cannot be solved through vertical integration, legislation should focus not only on technical devices, but on the definition and protection of content which is the core issue. Content producers should be able to exploit their rights across the different delivery channels offered by technology. Appropriate legal protection is needed in this context. The CAD does not properly address moral hazard issues in the CA value chain which may generate problems such as unlicensed set-top boxes. Moreover, the CAD does not appear adequate to solve the piracy dilemma and especially to address the growing P2P problem, as it was not aimed at such phenomenon when it was conceived. This issue will be discussed in the next section.

2.6 The piracy dilemma: moral hazard and how to master it

Because the high value of AV content creates strong and disseminated incentives for IP circumvention, CAS are subject to the permanent corrosion of piracy: many players in the distribution vertical chain including consumers but also intermediary good and service suppliers – equipment manufacturers, equipment retailers — may find interest in circumventing IP.

Moreover, vertical relations multiply moral hazard issues, as previously analysed, and prevent those concerned from fighting against piracy efficiently. Piracy operates like a subsidy increasing the utility of the service of all the vertical players who directly or indirectly benefit from delivering free content. This happens when the most efficient CAS devices are not implemented because CAS providers and set-top box manufacturers have different interests. It may also happen, as shown below, that these illicit activities do not motivate the players (including rights owners) to take radical measures against piracy. From the content owner's standpoint, piracy may appear as an implicit revenue sharing agreement between right holders and pay-TV operators giving incentives to the pay-TV services deliverer to expand its infrastructure or its installed customer base. This situation could be reviewed in a second phase by improving the security of CA systems or by revising contractual provisions so as to reduce piracy.

Piracy, e.g. circumvention of IP rules resulting for the consumer in the illegal access to proprietary content at a free or discounted price, has significantly evolved since the CAD was published. The incentives for piracy result from the growing value of the AV content to be circumvented and from the roll-out of new delivery systems generating new moral hazards. While CAS circumvention practices have followed the sophistication of the CAS, new forms of piracy — through online P2P systems — have appeared and rapidly expanded. However, these two forms of piracy have different technical and economic patterns. They are depicted in the following section.

2.6.1 CAS piracy

CAS piracy occurs mainly in the case of pay-content broadcasting. As any form of piracy, it enables consumers to get the content for free or at a discounted price, which not only creates free-riding in consumption, but also competition distortion within all the lawful distribution systems.

Piracy activities are continually evolving with technology and CAS innovations. Some of them are not covered by the CAD: the following box details various forms of piracy and outlines some devices that are not included as piracy tools in the CAD.

CAS piracy activities

The first means used to circumvent broadcasted pay-contents consisted in emulating the set-top boxes. CAS providers have ended that practice by designing smart cards.

Starting in 1996, both set-top box and smart cards have become necessary to access pay-TV programs. In response to these developments, pirates devised several means to emulate smart cards. Various solutions have been developed:

Some consist in enlarging the authorised contents' access provided by the legal card allowing the consumer paying for the cheapest basic offer, to get the entire spectrum including the premium bundles.

Pirate cards can surge from two sources. First, illegal viewers can purchase pirate cards through specialised shops or websites. Another solution consists in purchasing a blank smart card and downloading software enabling to one emulate a genuine one. The blank card is not illegal *per se*⁴⁸. Websites which either sell pirated cards or provide the software required, are often localised in lenient countries⁴⁹.

In 2000, the piracy of the interface between the set-top box and the smart card enabled control words downloading. The most recent practice does not even require the smart card⁵⁰. Decryption can be directly achieved from the set-top box with an Ethernet connection⁵¹. Contrary to previous piracy practices, replacing smart cards is useless. CAS providers should replace all the set-top boxes and provide proprietary devices to eradicate definitively the piracy of their systems.

The *multipost* card designed in 2006 introduced a new form of piracy. Up to now, a subscription corresponded to one single TV set. *Multipost* cards, which are now marketed, provide access to pay-TV contents on multiple TV sets located in the home premise with only one subscription. This form of piracy questions the current principle “one subscription, one support to see paying contents”.

Additionally, the pirated signal may be spread over the Internet to potentially thousands of illegitimate users. The main problem with control word piracy is that the servers (the central point from which the signal is then dispatched through the Internet) are often located outside the EU territory and cannot be easily shut down – the CAD is not useful in this context.

It is clear that new and fast-evolving forms of CA piracy have emerged since the CAD was adopted and implemented into national legislation. According to the views expressed by several stakeholders, the CAD in its current form is inadequate to tackle the newest and most sophisticated forms of piracy. Amendments of the CAD by rephrasing its wording and enlarging its scope are suggested by several industry operators. These aspects will be further examined in chapter 4 below.

Players:

Organised crime develops pirate activities and is included in the scope of the Directive. Piracy organisations can be located in countries where anti-piracy legislation is weak and operate towards neighbour countries with little risk. They can also provide illegal access to foreign operators/aggregators' offers on their national market without any sanction. Hackers and computer-geeks will crack a CA solution just for a challenge. Their solution is then circulated among a small hacker community and does not necessarily raise a problem for CAS providers and users. Such a practice, which may subsequently become detrimental, is not included in the scope of CAD, which currently sanctions infringements carried out solely for commercial purposes.

⁴⁸However, in a recent case in Sweden, Keycard, a company that sold empty cards, was condemned in 2004 for the first time for selling an important quantity of blank cards. For more details on this case, see chapter 3.1.8 below.

⁴⁹ For instance, one of the interviewed stakeholders quotes the manufacturing of pirated cards originating from North Africa, the Middle East, the Far West and new EU member states (such as Slovakia), which are then sold at a low price through websites across the EU.

⁵⁰ For instance, Linux boxes were designed in 2001.

⁵¹ The Dreambox is the most famous example.

Besides the cracking of smart cards, which may give free access to very large audiences, as highlighted above, a common form of piracy consists in enlarging the authorised contents' access provided by the legal card. The consumer paying for the cheapest basic offer can then gain access to all the potential channels, including the premium bundles. Some cable operators (Noos in France for example) were confronted with such practices from their subscribers. In this case, the moral hazard is highest for the premium broadcasters: the other players in the chain, including the broadcasters of the basic offer, may benefit from the content value passed onto the consumer.

The subscribers of the basic offer raise their utility thanks to piracy. It then impacts the TV provider's revenues: the TV provider may increase the number of basic subscribers without any additional cost for the purchase of broadcasting rights. The provider will have no incentive to stop piracy when it stands to gain from the enrolment of basic customers, plus the costs for stopping piracy are overwhelmed by the loss in selling higher grade pay-content. Here again, we meet the two-period game characteristic in the roll-out of delivery systems: the first phase consists in expanding the customer base, the second in raising the average return per user (ARPU).

2.6.2 Internet piracy through peer-to-peer

The first P2P network based on Napster technology had not yet started when the Directive was issued (1998). Since then, file-sharing of circumvented content through P2P software has become the dominant application of broadband networks in terms of capacity. According to Sandvine statistics, P2P protocols mobilise more than two thirds of the broadband capacity in Europe⁵². Although this phenomenon is not covered by the CAD, it would not be possible to discuss anti-piracy issues without recognising with this topic.

P2P circumvention operates as a free additional utility associated with broadband services. What this means is that P2P piracy is currently raising the willingness-to-pay for all wired triple-play services. In the multi-system competition, it enhances the roll-out of digital infrastructure whether it is cable or DSL. The paradox with this form of piracy is that it speeds up the roll-out of digital set-top boxes whose function is to deliver AV content through safer CA technologies. Triple-play operators are selling broadband modems providing access to P2P networks bundled with set-top boxes based on CA technologies. This situation makes the protection provided by the CAD incongruous: the same player sells a CAS and a circumvention tool massively distributed through communication networks.

The economic impact of P2P circumvention depends on the patterns of multi-system competition as well as on the willingness of public authorities to prioritise IP protection versus infrastructure roll-out. This situation which involves the implementation of the EU Copyright Directive in each member state and its enforcement exceeds the scope of this work.

Besides, the expansion of P2P practices creates a structural moral hazard in content distribution over broadband networks: any Internet Service Provider (ISP) is simultaneously a deliverer of legal and illegal content. As a consequence, as long as broadband networks are seeking new

⁵² http://www.sandvine.com/news/pr_detail.asp?ID=88

customers, they have no interest in fighting against piracy. In the case of music distribution, where broadband is the only dematerialised distribution system for pay-content, this situation raises critical issues regarding the adoption of DRMs: the legal content which is more expensive than the illegal one cannot also be less welcoming to the consumer. In the case of AV content, the moral hazard of broadband networks should benefit broadcast systems (including IPTV through set-top boxes) whose distribution is more secure and more rewarding for right holders. Their distribution contracts will favour broadcast systems which represent wider markets and higher revenues.⁵³

The same can be said for media content that is only partially covered by IP rights such as sports events⁵⁴. The commercialisation of new media rights (including online and mobile rights) is becoming an ever more important part of the sports rights business. As an example, in the most recent round of UEFA Champions League, commercial contracts (for 2006-2009), TV partners have the right and obligation to simultaneously stream live matches online. However, technical developments that allow for the emergence of the online market also lead to the possibility of illegally copying the broadcast streams. As for music and AV content, the main threat is posed by the development of P2P technology. In particular, P2P undermines the exclusivity of rights licensed by sports rights holders on a given platform/territory, thereby reducing the value of those rights.

Actions taken by football rights holders to stop Internet piracy have been brought to the fore

The first case concerns a class action lawsuit for copyright infringement brought by the FAPL together with a music publisher, Bourne CO., against YouTube and its parent company Google on 4 May 2007. The complaint, filed in federal court in New York, seeks to stop the services from the "unauthorized and uncompensated use" of the creative and other copyrighted works of the league and publisher, as well as the works of other copyright holders that would qualify as part of the class action suit.

The FAPL and publisher claim that YouTube and Google "are pursuing a deliberate strategy of engaging in, permitting, encouraging, and facilitating massive copyright infringement on the YouTube website" in order to attract traffic to the site, according to the complaint. Although the services are aware of a "pattern of massive infringement", they purposefully refrain from employing readily available measures to curb the infringement.

The lawsuit seeks a court-ordered injunction to prohibit YouTube and Google from continuing to violate various copyright protection laws. The lawsuit also asks for damages in an unspecified amount for YouTube's past copyright violations.

The FAPL was later joined in its claim by the French Football League (LFP) and the French Tennis Federation (FFT).

⁵³ This view is deeply argued in *When internet meets entertainment* by Olivier Bomsel and alii. Ecole des Mines Press, 2006.

⁵⁴ However national jurisprudence in some Member States considers the creation of a broadcasting signal at sports events to be a form of copyright. For a more detailed discussion of this point see below section 4.3.2

The second case concerns a claim brought by a sports right holder together with a broadcaster before a UK court. Their case was against three individuals accused of infringing the claimants' copyrights by communicating them and authorising their communication to the public contrary to section 20 of the UK Copyright Act as well as by copying them contrary to s. 17 of the Copyright Act. The three individuals had set up a website disseminating the broadcast of others over the Internet for viewing by the users of their service – including dissemination of the claimants' broadcasts. The claim was filed in March 2006. In May 2006, the judge recognised that the claimants' rights had been infringed in the case in question and therefore granted them summary judgement.

Besides its relevance in illustrating a concrete case of legal action against Internet pirates, this case is interesting as it raises the question of the status of sports right holders as holders of IP rights. This issue will be further examined in chapter 4.3.

2.6.3 P2P and private copy

P2P software emerged in the context of the digitalisation as a way to share content. Internet users are able thereby to exchange files with each other either directly or through a mediating server. P2P designate a type of transient internet network that allows a group of computer users with the same networking program to connect with each other and directly access files from one another's hard drives.

P2P applications are not illegal *per se*, however they dominantly became a way to circumvent copyright. As of today, four generations of ever more decentralized software are massively used to freely access copyrighted material. Nonetheless, there also exists non-infringing uses of P2P networks, namely the exchange of public domain or non-copyrighted material, as well as authorised licensed P2P applications such as the current Kazaa or iMesh.

The question whether downloading copyright-protected content from an unauthorised P2P application is legal or illegal is still controversial and not yet settled by European jurisdictions. Nevertheless, it is not possible to assert that downloading from a P2P network is legal because it falls under the scope of the private copy exception.

The question depends on the legislations of the different Member States. Although, all Member States are signatories to the Berne Convention and have implemented the EUCD, there are still a lot of disparities in their copyright and neighbouring rights regimes, especially in terms of private copying. So far, according to private international law rules, the law of the country where the infringement of rights occurs applies, namely the law of the country where the download occurs. Hence, there is no general rule applying for the EU in respect of the infringing nature of the act of downloading from unauthorised P2P networks. In France for example, after the implementation of the EUCD, downloading from a P2P application is now a criminal offence. In Germany, the law expressly states that private copying is authorised provided it is done from a manifestly legal

source, which is not the case in unauthorised P2P networks. In the Netherlands, a court rejected the claim of a local anti-piracy association and held that the copy for private use of an illegal MP3 does not constitute a breach of current law⁵⁵. However, there is a lack of case law at the moment since in most countries, right holders are rather reluctant in suing individuals or were not able to do so for legal reasons.

In this context, it is important to differentiate between the two acts resulting from the exchange of files on unauthorised P2P networks: the act of *downloading* and the one of *making available*. Whereas downloading creates a copy of a file made available by another user and hence affects the reproduction right of the author, the act of making available affects the right to perform and communicate to the public and hence is by all means an infringement of IP rights. Only the act of downloading could theoretically benefit from the exception of the private copy.

However, in most Member States, the current definition of private copy is that a copier can make, without authorisation, a copy of a work he owns for his own private use when not intended for a collective use. The lawfulness of the source is an important criterion to judge the legitimacy of private copying: as a downloaded copy is made from a file which was not authorised by the owners of copyright and neighbouring rights, the act of downloading is hence tainted by unlawfulness. A lawful exception – private copy – cannot have its source in an unlawful act amounting to counterfeiting and being carried out beyond the trade market⁵⁶.

Besides, many right holders rely on the “three steps test” in order to oppose the private copy argument. According to this test, established in the Berne convention⁵⁷, an exception (including for private copying) must only apply in certain special cases which do not conflict with the normal exploitation of the work and do not unreasonably prejudice the legitimate interests of the right holder. The download from unauthorised P2P networks is usually understood as not falling under this test and is thereby excluded from the private copying exception.

Finally, P2P systems usually imply that the same user downloads but also makes available protected works. Hence, the copy is not just for his private use but also for further acts of making available a protected work for other users. It is in that case, impossible to define the intent and the behaviour of a P2P user as being of a private nature and thereby speak in favour of the application of the private copy exception.

The legality of unauthorised P2P applications has been several times challenged by right holders. The music industry has seen a series of courtroom victories against P2P networks such as Napster⁵⁸ in the United States, Australia and other countries. In the 2005 Grokster⁵⁹ case, the US Supreme Court recognised that there was an infringing use of unlicensed P2P applications and that P2P software providers could be held liable for copyright infringements committed by their users if they actively encourage that infringement. Through a series of lawsuits, right holders also sued ISPs: SABAM v. Scarlet (ex Tiscali)⁶⁰, BREIN v. KPN⁶¹ or Lycos v. Pesser⁶². Lastly, there have

⁵⁵ Decision 12 May 2004, court of Haarlem, *Stichting Brein* case

⁵⁶ Cass. Com., 24 Sept 2003 : D. 2003, jur. P. 2683, note C. Caron

⁵⁷ Article 9.2 of the Berne Convention for the Protection of Literary and Artistic Works

⁵⁸ *A&M Records v. Napster*, 239F. 3d 1004 (9th cir. 2001)

⁵⁹ *MGM Studios, Inc et al. V. Grokster Ltd et al.*, 259F. Supp. 2d 1029, 2003, US ist. (19th August 2004)

⁶⁰ *SABAM c/ SA Scarlet*, Court of first instance of Brussels of 29 June 2007:

also been an increasing number of cases against internet users which have so far failed to bring light on the exact status of P2P downloading.

As a consequence, the current status of jurisprudence does not enable us to assert that the act of downloading from an unauthorised P2P application falls under the exception of private copying.

2.6.4 Grey market issue

Definition

First of all, it seems important to delimit what is meant by the grey market since not every stakeholder interviewed gave the same definition.

A trade association interviewed gave its own definition which refers to the flow of decoding equipment through distribution channels other than those authorised or intended by the manufacturer or licensed distributor of set-top boxes. The definition is used to essentially describe the parallel import of goods. Due to the nature of this type of grey market, it is near impossible to track the precise numbers of grey market sales. The trade association states that the work of customs officials is thus crucial in this field.

The association emphasises the fact that this situation commonly occurs when electronic equipments such as set-top boxes (mostly produced outside the EU) are sold at a price which enables a profit whilst its price remains below the normal market price within the EU. These devices usually have lower or no security features and can easily be manipulated in order to be used for illicit purposes.

Thus, the definition provided by the trade association essentially refers to piracy of hardware products which is substantially different from the mainstream definition of grey market.

This mainstream definition of grey market reads as follows: grey market consists in extra-territorial viewings by individuals who receive cross-border transmissions which are not licensed by right holders for the territory on which they are received, yet viewers are not circumventing CA systems to receive signals at a discounted price. Grey market is distinct from the black market as viewers rightfully pay a subscription to pay-TV operators and are considered as legitimate clients by the latter. Grey markets can be considered as an intermediate case between legality and piracy.

Even though viewers pay for accessing pay-TV contents, they are not authorised to view these contents as the owners of the rights have restricted the license to a given territory (usually the home country of the pay-TV operator). To get a subscription, they just have to provide an address located in the proper territory, even though their actual place of residence is elsewhere.

<http://www.juriscom.net/documents/tpibruxelles20070629.pdf>

⁶¹ Brein v. KPN Telecom, LJN: AZ5678, Rechtbank 's-Gravenhage , 276747 / KG ZA 06-1417

⁶² Lycos v. Pessers, LJN: AU4019, Hoge Raad , C04/234HR

Issues related to grey markets concern satellite operators as the satellite footprint usually go across borders and even continents as is the case with North Africa⁶³. It thus does not concern analogue terrestrial signals or cable. The problem is more acute in relation to pay-TV operators that operate in a smaller country sharing the language with a larger neighbour. Indeed when the pay-TV operator has acquired the rights for premium content (films or sports rights) it may lose subscriptions as viewers subscribe to the same offer provided by pay-TV operators in the neighbouring country which sometimes shares the same language.

Grey market in this sense is growing across Europe as the establishment of the Internal Market and the increased internal migration of European citizens has enlarged the demand for cross-border pay-TV services. Consumers do not understand why they are not entitled to access their favoured home country programmes and perceive this as a failure of the Internal Market.

The issue

Interviewed stakeholders are aware of the issue but consider it in general as an insignificant phenomenon and not so commercially relevant for right holders as subscribers are paying anyway and are therefore accounted for when negotiating licensing contracts. Such practices raise the number of subscriptions to pay-TV offers and therefore increase the revenues of pay-TV operators and CAS providers as well as right holders. This is the reason why some services even publicly promote subscription to pay-TV services outside the home territory, even though this infringes the respect of licenses offered by right holders which are usually granted on a limited territorial basis (as a general rule, the home country of the pay-TV operator).

Interviewed stakeholders accept that this activity infringes the rights of commercial exploitation of the distributor of the pay-TV signal that has acquired the right. This in fact represents a moral hazard for right holders and legal distributors from grey market countries which may lose some viewers when they broadcast those programs after purchasing the rights. The other players from the chain may, however, benefit from the value of the content passed onto the consumer.

Right holders interviewed representing major Hollywood studios (through the MPA), European film companies and sports right holders are in principle against the grey market. However, they consider the issue as being unavoidable due to technological advancements and due to the territoriality principle which remains the cornerstone of their licensing practices. As a consequence so far no legal actions have been undertaken by right holders to address this issue.

Pay-TV operators are active in the fight against piracy when it means a lost in revenues. On the other hand, it is not in their interests to foil the grey market: the first impact consists in increasing the number of subscribers. They do not consider the grey market itself as being piracy. For them

⁶³ For instance, the North African population has largely access to pirated TPS programs. In reality, the distortion on the French market is small. Considering that they could lose markets on North African territories, right holders would be the only players to suffer a negative consequence. For TPS, taking measures against illegal viewers would generate costs and no revenue. This situation is now taken over by Canal Plus. An interesting issue is that illegal pay-TV contributes to open the North African countries to foreign programmes and to western opinions. Comparably to what happened in Europe in the 18th century with printed books, tolerated foreign broadcast participates in the democratic opening of the local public sphere. As a consequence, there is a political interest from both emitting and receiving countries to keep on with this situation.

the phenomenon has too little of an economic impact. They claim that the demand is very little and it would not be valuable for their business model to seek to legally offer their services in the countries concerned by grey market activities. The costs to set up a subsidiary company in another country would be a lot higher than the revenues they could get from it.

Nevertheless, the grey market may sometimes be at the heart of illicit forms of “parasitic” exploitation of rights. This is the case when intermediaries or middlemen provide services offering access to non-licensed pay-TV broadcasters in a given territory, taking a margin on the subscribers’ payment. This shows that legal uncertainty surrounding the grey market fosters the development of parallel markets which might not be beneficial to legitimate players in the AV value chain.

There seems to be an understanding that rights holders have to live with this and not much can be done. Nobody is able to provide data on the significance of this phenomenon. There is very little case law in relation to rights enforcement in such a situation.

By way of example, proceedings⁶⁴ took place in 2000 in Belgium against French pay-TV operators selling subscriptions in their territory. Be-TV (former Canal+ Belgique) has been suing retailers selling TPS and Canal Satellite subscriptions⁶⁵. However, as the subsequent judgement shows, it is very difficult to take legal action in the context of the grey market and it has not been ruled whether or not the infringing retailer was operating illegally or not. The plaintiff had to change the subject matter of its action in the course of the proceedings going from a claim based on the cease and desist of the commercial activities of the retailer to a claim based on a cease and desist of the advertisement the retailer made to Belgian costumers for French pay-TV subscriptions.

From an economic perspective, the grey market, in the sense of viewers accessing the content through exploitation licenses not covering their location, is a way to efficiently discriminate disseminated consumers without writing a specific distribution contract. While the usual contracts are territorial, grey markets appear as an infringement which can marginally spoil the value of certain territories. The problem here deals with transaction and discrimination costs. Because cultural preferences are more homogeneous within national territories and also because media regulations are not yet harmonised across borders in Europe it is cheaper to build up distribution contracts on a national territorial basis. If grey markets steadily expand, then the transaction costs of settling the damages incurred to spoilt territories will overwhelm the benefits of territorial agreements. This trend will naturally incite the players to adjust their discrimination tools. It is in the public interest to lower the content discrimination costs which, in the end, are billed both to the producer and to the consumer. Because of the extreme complexity in the distribution of linguistic and cultural preferences across Europe, we will later touch upon public policies related to this issue.

⁶⁴ N° 2000/AR/2345 p. 1813-1825

⁶⁵ See chapter 3.2.8

2.7 Preliminary Conclusion

In order to assess the impact of the CAD, we have tried to analyse from an economic perspective the functions of CAS in various applications listed in the Directive.

The first finding is that the economic functions of encryption devices strongly differ in non-media and in media applications. While in non-media services, CAS directly participates in the utility supplied to the consumer, in the case of media content delivery CAS are basically both exclusion and a discrimination tools. In other words it is a technical means aimed at selecting among consumers and extracting from them the price they are willing to pay for either one or a bundle of media goods.

This observation has led us to underline that media goods are opposed to communication services by the fact that their demand patterns as well as their renewal or diversity objectives require a discriminatory pricing strategy usually called “versioning”. Because of the diversity of its linguistic and cultural communities, Europe shows a highly specific distribution of media content preferences. These are largely related to territoriality but may also exceed it. Moreover, depending on its own evaluation of media externalities, each European country has followed a specific AV path leading to a wide diversity in TV industrial organisation, in AV content delivery systems, in AV version market structure and in national regulation. The wide differences in the penetration rates and the turnover of pay-TV markets illustrate this phenomenon. Such a cultural, industrial and regulatory landscape does not favour cross-border versioning.

Compared to its American competitors, this situation places Europe in a very adverse position. While its industry is highly disintegrated and ruled by national and politically sensitive media regulations, the EU as a territory has to cope with high discrimination costs. The harmonisation of the EU media regulations, which would efficiently help the reduction of these discrimination costs, is well beyond the focus of this study. Such a goal raises many issues regarding the legacy of the multiple media development paths, the setting up of a common evaluation of media externalities as well as common internalisation rules to be applied in the Union. By aiming at facilitating cross-border exchanges through protected discrimination devices, the CAD probably missed the sophistication of this point. However, because they are discrimination tools, CAS should be protected so as to be maximally efficient.

The fragmentation of the European AV industry as well as the competition between FTA and pay-TV versions creates many incentives for CAS hacking or piracy. These incentives are mainly attributable to moral hazard. And yet right holders, who are the first ones to suffer as a result of moral hazard issues, cannot resort to the CAD.

The analysis shows the extensive level of moral hazard in these markets which is likely to increase as new delivery models develop (IPTV, mobile TV etc), most often, thanks to free content. The existence of moral hazard may imply that certain forms of piracy are encouraged because it helps the roll-out of new delivery systems. The analysis demonstrates that this moral hazard is greater in the EU than in the US. In effect, the horizontal and vertical integration of the US AV industry allows a leaner vertical control of the distribution by the right holders. As shown by the BSkyB example, the vertical integration of its CAS supplier NDS provides more efficiency in fighting piracy. As a result, not only does Europe have heavier discrimination tasks to perform, but its discrimination

tools also suffer from more moral hazard. Moral hazard may additionally raise competitive and piracy issues on set-top box markets. The analysis suggests that competition policy should account for the economic benefits from vertical integration and the costs of interoperability within such markets.

The existence of moral hazard makes it extremely difficult to assess the impact of the CAD even to the extent that data is not made available to make empirical estimations. Nevertheless, the CAD can play its deterrent role to assist in the suppliers of services to maximise revenues generated by their services.

The grey market arises from new discrimination needs associated with the increasing movement of EU citizens. For the time being, the costs of reaching those consumers through a grey market tolerance are still claimed to be much cheaper than reshaping the distribution contracts on a non-territorial basis. Such a practice, which does not constitute CAS circumvention, will naturally disappear when the discrimination costs of a cross-border distribution are lower than the grey market ones.

Whereas the CAD and exclusive distribution contracts can be used to ensure that IP good producers (other than copyright works producers) such as sports events organisers can maximise their revenues from distributing AV products across the EU, the fact that they may not fully benefit in certain Member States from existing IP protection provided by the EU CD implementation may need to be considered.

Chapter III: Legal Analysis

3.1 Methodological issues

The CAD has been implemented in the 27 EU Member States. (Slovakia adopted a law in 2005 after receiving a letter of formal notice for non implementation from the Commission, Estonia and Latvia –as Slovakia- received a reasoned opinion but adopted and notified their law either in 2005 or 2006). Cyprus, before its accession to the EU, ratified the Council of Europe's European Convention for the Legal Protection of Services based on, or consisting of, Conditional Access of 11 July 2002, which covers the scope of the CAD. Thus once it officially became an EU Member State, Cyprus did not have to transpose the CAD. National laws implementing the Directive are available either in the original language or in an unofficial English translation on the Commission's website⁶⁶.

The objective of this chapter is not to list the different provisions laid down by national pieces of legislation implementing the CAD. The aim of this study is to assess the effectiveness of the CAD in achieving adequate legal protection for CA-related services in the Internal Market and to evaluate its impact on the developments in relevant AV markets. For this purpose, the analysis focuses on a sample of eleven countries, selected for reasons mentioned previously (see introduction to chapter 2 above).

It is the intention of this chapter to present the main features of the legal framework existing in the countries belonging to the sample.

Data collection for this chapter has consisted in gathering the relevant pieces of legislation. This task was facilitated by the European Commission who provided the laws of the countries examined. The second step has been to define the main themes to be investigated as part of the mapping out of the legal framework. This task has required further research and qualitative insight.

Therefore a consultation process has been carried out by sending questionnaires to relevant public authorities (ministries and independent regulatory authorities) and business contacts across the selected Member States. The list of interviewed stakeholders as well as the list of meetings organised and events attended is presented in Annex II. Feedback from interviewed stakeholders has been instrumental in giving a deeper insight into the issues raised by the implementation of the CAD and its practical impact.

The results of this process are presented hereafter.

⁶⁶ http://ec.europa.eu/internal_market/media/elecpcay/natimpl/index-map_en.htm

3.2 Mapping out of the legal framework in the selected sample of Member States

Subsequent to preliminary examination of the CAD and national laws implementing it, the following 8 main themes have been chosen as being relevant points of reference for mapping out the legal framework of the selected sample of Member States.

1. Competent authorities overseeing the implementation of the CAD
2. Dates of Implementation of the CAD
3. Relevant national regulations in force before the CAD
4. The CAD's implementation in the selected countries
5. Alternative legal rules used to fight piracy
6. Scope of the infringing activities
7. Sanctions and remedies
8. Relevant case law

Legislative provisions are presented with a view to highlighting legislative trends and comparing the different national legal frameworks. This presentation is descriptive and aimed at outlining the main characteristics of the regulatory frameworks across the selected sample of countries.

3.2.1 Competent authorities overseeing the implementation of the CAD

One of the most recurrent difficulties encountered in the process of the study was the identification of the competent public authorities in charge of overseeing the implementation of the CAD. In some countries this proved to be a difficult exercise thus providing some indication on the usefulness of the CAD and its actual relevance. The results of the research also show that public authorities are not monitoring the enforcement of the CAD as they were generally unable to provide information on this topic.

More important, there is no evidence at all of any collaboration between the public authorities of different countries in regards to the cross-border aspects of the CAD. If business contacts could provide little data on the trans-frontier dimension of CA piracy, public authorities contacted were unable to identify any relevant issues linked to the trans-national dimension of the problem. No trace of cross-border administrative cooperation on the subject of the CAD has been found.

In general the CAD has been implemented without significant public debate - on the contrary, for instance, of the long and heated discussions which have accompanied the implementation into national law of the EU Copyright Directive 2001/29/EC. Implementation usually consisted in literally transposing the provisions of the Directive into national laws (or changing existing laws accordingly – for more details see below point 3.2.4).

The difficulty in identifying the authorities responsible for the implementation and monitoring of the CAD may also be linked to the transversal nature of the CAD itself, whose scope falls into different policy areas (AV, broadcasting, copyright, internet security, criminal law etc.)

The federal nature of some countries examined represented an additional obstacle in the identification of relevant contacts.

Major difficulties in identifying public authorities have been encountered in the following countries: **Germany, Ireland, Lithuania, Poland** and the **United Kingdom**.

The federal nature of the **German** system made it hard to identify a spokesperson. Media matters are a *Land* competence. Therefore *Länder* authorities were contacted about the implementation of the CAD, but none of the authorities contacted acknowledged being competent to answer the questionnaire. The head of the Land Media authority in charge of European Affairs for all Länder was aware of the Directive but referred the matter to the Ministry of Economy and Technology. The latter acknowledged being competent for the implementation but not for the enforcement of the CAD. The Länder regulators are the enforcing authorities.

In **Ireland**, a contact at the Broadcasting Policy Division within the Department of Communications, Marine and Natural Resources was identified. However, this Department acknowledged its competence (even though the Communications Division and not the Broadcasting Policy Division eventually claimed its competence on the matter) only after diverting the questionnaire to the Department of Enterprise, Trade and Employment, which denied its competence on the matter.

In **Lithuania**, feedback on the implementation of the Directive was easily obtained from the Communications Regulatory Authority (RTT) after a unit of the State Non-Food Products Inspectorate declined its competence. However, in the feedback given by the RTT, it was stated that for further information on the implementation of the Directive, the State Non-Food Products Inspectorate should be consulted. The Inspectorate finally acknowledged its competence after some insistence and after it was recalled that the Inspectorate itself is responsible to oversee the implementation of the CAD as stated into the national law implementing the CAD.

In **Poland**, it took a few weeks for the Office of Electronic Communications to decide that it was not competent on the issue. The National Broadcasting Council was then contacted and provided very few comments on the implementation of the Directive, confirming the competence of the former authority contacted in addition to the Office of Competition and Consumer as well as the Ministry of Transport. However, none of these authorities has replied to the questionnaire.

Finally, in the **United Kingdom**, OFCOM, the UK regulator and competition authority for communications industries, redirected the competence to the UK Patent Office. Although it released a regulatory impact assessment at the time the Directive was implemented, the Patent Office eventually redirected us to the Broadcasting, Policy and Technology unit at the Department of Trade and Industry as being the competent body dealing with the Directive. None of these authorities has replied to the questionnaire.

The table below indicates the competent public authorities identified in each Member State:

Member State	Competent authorities	Answers
Austria	Chamber of Commerce + national court	yes
Belgium	Ministry of Economic Affairs + French community Ministry (Audiovisual and Multimedia Department) + Flemish community Ministry (Culture, Youth, Sport and Media Department)	yes
France	Ministry of Culture and Communication (Media Development Department)	yes
Germany	Federal Ministry of Economy and Industry	yes
Ireland	Department of Communications, Marine and Natural Resources (Communications Division)	yes
Italy	Communications Authority	no
Lithuania	Ministry of Economy (State Non Food Products Inspectorate) + Communications regulatory Authority	yes
Poland	Office of Electronic Communications + National Broadcasting Authority + Office of Competition and Consumer Protection + Ministry of Transport	only Broadcasting Authority
Spain	Ministry of Industry (DG Development of the Information Society)	yes
Sweden	Ministry of Education Research and Culture	yes
United Kingdom	Department of Trade and Industry	no

3.2.2 Date of implementation of the CAD

On the sample of countries covered by our study, the implementation years are as follows:

- implementation year 2000: Sweden, United Kingdom, Austria, France, Ireland and Italy
- implementation year 2002: Germany and Poland
- implementation year 2003: Belgium and Spain
- implementation year 2004: Lithuania

It is to be noted that, with exception of France, the UK, Ireland and Sweden, the other examined countries implemented the Directive after the deadline set by the Directive (28 May 2000).

3.2.3 Relevant national regulations in force before the CAD

Two different groups of countries out of the sample can be distinguished to assess the regulatory environment that existed before the implementation of the CAD and related to the legal protection of encrypted services:

- a) Countries with existing specific CA regulations: **Belgium, France, Ireland, Lithuania, Sweden and the United Kingdom**
- b) Countries with other existing provisions used by CA operators: **Austria, Italy, Spain, Germany and Poland**

a) Countries with existing specific regulations protecting CA services

Belgium, France, Ireland, Lithuania, Sweden, and the United Kingdom already had ad hoc legislation protecting CA services from illegal circumventions. For these countries, the implementation of the Directive consisted in amending the existing legislative measures in force.

Prior to the implementation of the Directive, **Belgium** had two specific regulations giving legal protection to CA devices used by broadcasting services. However, no specific legislation for Information Society services existed. Linguistic communities are competent for matters relating to media and broadcast whereas the federal government is competent for ISS matters. There was no specific law for the German community.

The regulation of the French-speaking community (*articles 19 and 43 of the decree 27 July 1987 on Broadcasting* which protect radio and television broadcasting) exclusively protected CA devices used by pay-TV operators, and more precisely the remuneration and other economic interests of broadcasters, but did not sanction the commercialisation of illicit devices. Indeed, Article 43 of the mentioned decree only covered the following infringing activities: decoding without paying for the signals of pay-TV services; the direct broadcasting; providing a recording; or receiving a decrypted programme from a third party without authorisation. The criminal sanction of those infringing activities was a fine of 26 BEF (Euro 0.63) to 100 000 BEF (Euro 2478.94). Confiscation of the illicit device(s) was also laid down.

The Flemish community regulation (*article 119 of the decree 25 January 1995 on broadcasting*⁶⁷) sanctioned the illicit distribution of CA devices and did not deal with the protection of ISS. It focused on preparatory activities such as: the manufacturing, import, distribution, sale, rental, possession and installation of decoding devices; the use of commercial communications; and the individual purchase or rental of decoding devices (whereas the specific provision applicable to the French

⁶⁷ Besluit van de Vlaamse regering tot coordinatie van de decreten betreffende de radio-omroep en de televisie

community focused on the unauthorised interception of signals). The decree did not distinguish between unauthorised activities for commercial purposes and those for private purposes. It additionally provided figures for fines ranging from 26 to 10.000 BEF (Euro 0.63 to 248), which usually increased by a certain amount defined each year by law.

In 1986 **France** enacted a specific law on AV matters (*Law No. 87-520 of 10 July 1987⁶⁸ on the protection of television or radiodiffusion services for a specified public*). In 1992, a specific provision on the legal protection of CAS was introduced (*article 268 Law No. 92-1336 of 16 December 1992⁶⁹ modifying the French audiovisual law of 1986*). This law was classified as criminal law as it related to the entry into force of the new criminal code and the subsequent modifications of certain criminal provisions and criminal procedures. Article 268 modifying article 79 of the AV law of 1986 targeted AV services but restricted legal protection to remunerated pay-TV service providers and it did not cover Information Society. The 1992 law set up criminal offences for unlawful activities related to illicit CA devices as well as activities in relation to the private possession of illicit equipment⁷⁰. The list of prohibited activities was very detailed, including acts ranging from the manufacturing to importing, selling, storage or installation of equipment, appliances or instruments designed wholly or partly to fraudulently receive protected broadcast programmes as well as activities relating to the advertisement of such equipments. Infringement of this article involved criminal sanction: fines up to FF 200.000 (Euro 30.490) and imprisonment up to two years. The court could also order the confiscation of an illicit device or any other related material. As for the private use, the sanction was a fine of 50.000 French Francs (Euro 7622.45).

Ireland had the Broadcasting Act 1990. Section 9 of the Act delineated the prohibition on the interception of services. While conditional access was not specifically mentioned, this section could apply to persons supplying illicit cards to circumvent CAS, as the prohibition relates to “a service provided by a licensee or a service provider” (section 9 (1)). The infringing activities covered were the interception, the possession, manufacturing, assembling, import, supply, the publishing of information, the installation, maintenance of the service and attempt to damage it. In the case of a summary conviction, the sanction was imprisonment of up to three months or, a fine not exceeding £1.000 (Euro 1.470,97); otherwise on conviction of indictment, imprisonment of up to two years or a fine not exceeding £20.000 (Euro 29.425,43). Forfeiture of equipment and civil remedies were also included in the sanctions available. However, the Irish competent public authorities do not consider this law as being a legal tool used prior to the implementation of the CAD for the protection of conditional access devices. Thus, the information for Ireland in the table below is purely indicative and therefore should not be considered as being definite legislation *per se* (see point b. of this section).

Lithuania already had specific provisions on CAS and related facilities under Article 27 of the Law Amending the Law on Telecommunications of 9 June 1998. This article prohibited the

⁶⁸ Loi No. 87-520 du 10 Juillet 1987 relative à la protection des services de télévision ou de radiodiffusion destinés à un public déterminé

⁶⁹ Loi No. 92-1336 du 16 décembre 1992 relative à l'entrée en vigueur du nouveau code penal et à la modification de certaines dispositions de droit pénal et de procédure pénale rendue nécessaire par cetter entrée en vigueur, Journal Officiel No. 298 du 23 décembre 1992

⁷⁰ Article 79-4, Loi No. 92-1336 du 16 décembre 1992

manufacturing, ownership, import, export, sale or transfer in any other manner, modification, installation, or use, for commercial purposes, of decoders, other decoding devices or software which would provide illegal access to protected services, which are usually provided against remuneration.

Sweden previously had legislation covering encrypted pay radio and television broadcasting services. The relevant provisions were implemented into Swedish criminal law (Chapter 23) in December 1993 by the *1993:1367 law on Prohibition of Certain Decoding Equipment*⁷¹. The law only covered radio and television broadcasting services provided against remuneration and not ISS. The manufacture, sale, rental, installation, and maintenance of decoding devices for commercial purposes, were prohibited. Infringements were sanctioned by a monetary fine and/or prison sentence of up to 6 months. The court could also order seizure of any object of offence and of profit. Civil remedies could also be initiated parallel to or independently of a criminal case.

In the **United Kingdom**, a specific legislation on CA techniques existed prior to the implementation of the Directive: Articles 297-299 Copyright, Designs and Patents Act 1988 (CDPA) as amended by Article 140 Broadcasting Act 1996 and Article 179 Broadcasting Act 1990, as well as the Telecommunication Act 1984. It is interesting to note that this law was classified under copyright law. The Act covered television and radio broadcasting services as well as cable and probably ISS⁷². The law only covered CAS that ensured remuneration interests and protect copyrights. Commercial manufacturing, import and commercial promotion, advertising, sale and hire as well as offering and exposing the sale and hire of unauthorised decoders were declared unlawful⁷³. Violations of those provisions were sanctioned by prison sentences and fines of up to £5000. The court could also order confiscation of the proceeds of crime in the case of a serious offence. Additionally, civil remedies were available for any copyright infringement. The particularity of UK law is that it granted standing to any individual who was responsible for the content of a programme as the CDPA considered broadcasters as the copyright owners of the content in programmes.

Hereafter, a table summarising the specific legislations existing in the Member States prior to the implementation of the Directive:

Member State	Specific legislation
Belgium	French Community: Article. 43 du décret du 17 juillet 1987 on audiovisual Flemish Community : Article 119 of the coordinated media decrees of 25 January 1995
France	Loi n° 92-1336 du 16 décembre 1992, modifying the French audiovisual Law of 1986
Ireland	Broadcasting Act 1990
Lithuania	Law on Telecommunications, 9 June 1998 No. VIII-774

⁷¹ Lag (1993:1367) om förbud beträffande viss avkodningsutrustning, SFS Nr. 1993: 1367

⁷² UK copyright law has a broad definition of broadcast: "any transmission of visual images, sounds or other information" (Section 6 (1b) CDPA).

⁷³ Section 297A and 298 CDPA

Sweden	Act (1993:1367) on Prohibition of Certain Decoding Equipment.
United Kingdom	- Articles 297-299 Copyright, Designs and patent Act 1988 as amended by Article 179 Broadcasting Act 1990 and by Article 140 Broadcasting Act 1996 - The Telecommunications Act 1984

b) Countries with existing general provisions used to fight piracy

In the following countries no specific law on the protection of CA services existed before the implementation of the Directive. CA piracy acts were judged under other legal provisions such as unfair competition rules, IP law, specific rules relating to cyber-crime and criminal law provisions and, in particular, copyright law. In most of these countries these alternative measures are still in force. Please refer to point 3.2.5 below for further details.

In **Austria**, infringements consisted mainly in the commercial distribution of pirated decoders. These illegal acts were dealt with before the implementation of the CAD under unfair competition law (*article 1 UWG unlauteren Wettbewerb gesetz*). Article 1 UWG requires that there is an act of effective competition between the pay-TV service provider and those who commercially distribute pirated decoders. Actual competition can be found between companies that address the same consumers for example. These conditions made it very difficult to start legal proceedings before the courts. Article 1 UWG has been used in relation to pay-TV services.

In **Germany**, cases of CAS infringements were dealt with either under provisions of the criminal code or under unfair competition rules. § 202 a of the penal code (*StGB*) sanctions the unlawful use of data protected by special security systems. § 265a of the penal code was also used prior to the implementation of the Directive but it only sanctions the unlawful claim of profits. However, it neither applies to cases of commercial use, nor to preparatory actions leading to the infringement. Infringement of CAS are also dealt with under unfair competition rules (§§ 1, 3, 4 Nr. 11 *UWG unlauteren Wettbewerb gesetz*).

In **Ireland**, provisions laid down in IP, Copyright law, or Competition law have been used in the context of piracy of CAS (though no concrete reference to such cases has been provided by Irish contacts).

In **Italy**, CA-related piracy, consisting mainly in the sale and promotion of pirated smart cards, was the subject of prosecution, based mainly on some articles of the Criminal Code dealing with cyber crime. In particular, law 547 of 23 December 1993 modified the Criminal Code by adding specific provisions covering a series of activities linked to cyber crime - amongst others, activities consisting in abusive access to an ICT system and in the illegal interception, impediment or interruption of ICT communications.

In **Poland**, cases of CAS infringements were dealt mainly under the Copyright Act (infringement of intellectual property), or under unfair competition rules.

In **Spain**, infringements against CAS were dealt with under the Spanish Civil Code and Penal code (protection of property), under which cases were judged as akin to fraud. Industrial and IP law was also used in so far as some provision referred to the use of illicit decoders.

Hereafter a table summarising the existing general provisions in the Member States prior to the implementation of the Directive:

Member State	Existing general provisions
Austria	Unfair competition + IP
Germany	Unfair competition + Criminal Code (§263a StGB)
Ireland	IP + Competition law
Italy	Criminal Code
Poland	Unfair Competition + IP
Spain	IP + Criminal Code

In conclusion, it can be said that before the adoption of the CAD there were significant disparities in the legal treatments with the illicit reception of CAS in the Member States of the EU: some activities were prohibited in some Member States yet were perfectly legal in others. Industry players could rely on specific national laws in some countries, whereas in others they had to build up their cases using horizontal legislative tools.

However, even after the adoption and implementation of the CAD, criminal organisations can choose the most lenient countries to commercialise illegal devices (see above, chapter 2.5). This is due to the different levels of sanctions in Member States with some countries being more indulgent than others having set lower levels of sanctions. It could also be explained due to insufficient enforcement of the law, but lack of data prevents us from drawing any concrete conclusion in that respect.

Besides the disparity in the legal treatment of CA piracy, it appears that a range of different legislative instruments were adopted across Europe to tackle this problem, as is shown in the table above. The effectiveness of these instruments varies from country to country and must be assessed on a case by case basis – however, it is important to point out that in general, provisions included in horizontal legal tools had significant short-comings in properly addressing the issue of CA infringements. Criminal law and IP law appear to be the most used legal instruments in this respect.

This does not mean that these tools were useless, as in some cases they proved to be effective at court level, in particular in relation to the sanctions imposed on offenders. Yet, the implementation into national law of the CAD allowed for the creation of minimum harmonised rules in regard to the scope of activities sanctioned and the need for effective sanctions and remedies.

3.2.4 The CAD's implementation in the selected countries

No country reported any specific problems related to the implementation process. Often, provisions were simply literally transposed into national law.

The implementation of the CAD was enacted by Member States in two ways: either they already had an existing piece of legislation on the protection of CAS and amended their legislations, or where they did not have a specific piece of legislation they adopted a new one.

a) Countries where specific legislation on the legal protection of CA services already existed.

The Directive was implemented by amending existing legislation.

In **Belgium**, the French and Flemish Communities both amended their legislation. The French community introduced two articles (*article 153 and 155*) in the *Decree of the 27th February 2003 on broadcast*, which replaced the *1987 decree on audiovisual*. Article 153 sanctions the same infringing activities covered in Article 4 of the Directive and thus expressly sanctions the commercial use of illicit devices and adds a provision sanctioning the private use (Article 153.1.4), therefore making an explicit differentiation between commercial use and non-commercial use (which was not the case in the decree in force prior to the implementation of the CAD). Article 153 provides for criminal sanctions with a prison sentence, while Article 155 provides for civil sanctions. The Flemish Community modified its anti-piracy article 119 of the coordinated media decree of 1995 first by *decree of 2 February 2001*, which was then updated by *decree of 7 May 2004*, modifying the existing Article 119 in order to implement the Directive. By coordination of 4 March 2005, a re-numbering of the coordinated media decree took place, thus changing article 119 into article 202. Similar to the French Community, Article 119/202 is a copy of Article 4 of the Directive but goes further as it sanctions the private use of illicit devices (article 202.2-3, formerly article 119.2-3). At the federal level, a specific law was adopted by the Ministry of Economy, which is an exact transposition of the Directive but only covers ISS (*Law of 12 May 2003 on legal protection of conditional access services relating to Information society services*⁷⁴) since the competence in Belgium is federal for ISS. Although Belgium extended its protective provisions to private use, the lack of data prevents us to assert that those measures had a positive impact on Belgian CAS markets in terms of piracy levels.

In **France**, considering the broad scope of the existing law, the implementation of the Directive consisted mainly in small changes in the existing legislation (*Law n° 92-1336 of 16 December 1992 modifying the audiovisual Law n°86-1067 of 30 September 1986*) modified through the amendment of article 79 (providing an upgraded definition of the services covered by the law), as well as in the amendment of some provisions of the Criminal code (article 323-1 et seq.). Thus, Article 323-1 and

⁷⁴ Loi du 12 mai 2003 sur la protection juridique des services à accès conditionnel et des services d'accès conditionnels relatifs aux services de la société de l'information – Ontwerp van wet op de rechtsbescherming van diensten gebaseerd op of bestaande uit voorwaardelijk toegang met betrekking tot diensten van informatiemaatschappij.

following, where introduced in the Criminal Code, in order to reinforce the protection of electronic devices, by an ordinance of 19 September 2000 (n°200-916).

In **Lithuania**, prior to the accession of the country in the EU, the existing Law on Telecommunications had been amended (and in particular article 27.3) in order to implement the CAD (Law amending the Law on Telecommunications, 5 July 2002). The same Law was then modified into the Law on Electronic Communications (rendering the former one void), which came into force on 1 May 2004, the day of the official accession of Lithuania into the EU. In the new law, article 25.6 is a copy of the former article 27.3 of the law amending the Law on Telecommunications, which covers all the infringing activities of Article 4 of the Directive. The only precision that the new article brings concerns the Lithuanian authority competent to supervise compliance with the provisions, namely the State Non-Food Products Inspectorate.

In **Sweden**, the existing law (1993:1367) forbidding certain decoding equipment was modified by the enactment of the *Act on prohibition of certain decoding equipment (2000:171)* and by modifications brought in with the *Marketing Act 1995:450 (§§ 4, 14, 19, 21 and 29)* which sanctions the promotion of unauthorised equipment. The new law is an extension of an earlier one to protect ISS and not only radio and TV services.

In the **United Kingdom**, the Regulations 2000 which transposed the Directive amended sections 297A and 298 of the Copyright, Designs and Patent Act 1988 and section 42 of the Telecommunications Act 1984. Section 297A of the 1988 Act now covers the activities prohibited by the Directive. The rights and remedies in section 298 now extend to the providers of ISS and CAS. As for section 42A of the 1984 Act, it has been amended in order to avoid overlap with the amended section 297A of the 1988 Act.

Thus, it can be said that most of the Member States which already had a specific legislation protecting CAS implemented the CAD mainly to include ISS in the scope of their law. Bearing in mind the economic analysis carried out in chapter 2.1 on the different economic functions of non-media ISS and pay-TV, it has to be noted that in these cases the implementation of the CAD appears to have had little or no effect on the improvement of the existing legal framework. However, the appearance of media ISS such as VOD will probably mean that such amendments will have an impact on business in the future.

b) Countries where no specific legal protection existed prior to the implementation of the Directive.

In **Austria**, a separate legislation on conditional access was adopted at the federal level - *the Federal Law on protection of services based on conditional access 60/2000*⁷⁵. The law follows the provisions of the Directive, especially regarding infringing activities.

In **Germany**, a new law was created, the *law on the legal protection of services based on, or consisting of, conditional access - the "Zugangskontrolldiensteschutz-Gesetz (ZKDSG)"* which came into force on 23 March 2002.

⁷⁵ *Zugangskontrollgesetz (BGBl [Federal Law Gazette])*

In **Ireland**, the Directive was transposed into a new Irish law under an Irish Statutory Instrument No.357 on the 1st of November 2000.

Italy, on 18 August 2000, modified its copyright law (law 633 of 22 April 1941) by adding specific norms criminalising the infringement of CA systems (Law n. 248 of 18 August 2000). Art. 171 *octies* of the modified copyright law reads: “*imprisonment from 6 months to 3 years and a fine from € 2,582 to € 25,822 shall be imposed on any person who, with fraudulent purpose, produces, markets, imports, promotes, installs, modifies, uses for public or private purpose devices of parts of devices able to decode audiovisual transmissions protected by conditional access broadcast by air, satellite, cable, either in analogue or digital format*”. For particularly serious cases, imprisonment may not be less than 2 years and the fine may not be less than € 15,494.

Only three months after the amendment of the copyright law, the Italian legislator adopted another law, intended to implement the Directive. Legislative Decree n. 373 of 15 November 2000 is in effect the exact implementation of Directive 98/84/EC, as testified by the reference to the Directive itself in the introductory recitals of the law. Law 373 almost literally transposes the provisions of the Directive into Italian law, in terms of definitions, scope, infringing activities. It is important to note that, in line with the wording of the Directive, only activities carried out for commercial purposes are considered to be infringements under the law – this represents a step back, in a legal protection perspective, in respect of the reference to private use included in law 248. However, on 7 February 2003, the Parliament adopted law n. 22 which amends legislative decree 373/2000 by adding a reference to criminal sanctions, and the sanction of the private usage laid down in art.171 *octies* of the copyright law as being applicable to infringement of CA services.

In **Poland**, the Act on the protection of some services provided by electronic means based on or consisting of conditional access which was adopted on 5 July 2002, introduced some subsequent amendments to the Act of 16 April 1993 on Combating Unfair Competition and to the Act of 4 February 1994 on Copyright and Related Rights. It covers the provisions of Article 4 of the CAD, but goes beyond, sanctioning the private use of illicit devices. Besides, the Act makes it possible to submit motions for prosecution by public organisations (such as Sygnal⁷⁶) whose aim is to protect the interest of businesses which offer services based on, or consisting of conditional access.

In **Spain**, specific provisions to protect CAS were introduced in the Spanish penal code by the introduction of article 286 on 23 November 2003. The Article covers the infringing activities covered in the Directive, and goes further with a sanction of the private use.

3.2.5 Alternative legal rules used to fight CA piracy

Public authorities and other stakeholders have been asked whether there were other legal measures protecting CA services against piracy and whether they were more useful in practice than the national law implementing the CAD. It is particularly relevant to examine whether the CAD is the more used tool in the anti-piracy fight, in order to evaluate its effectiveness. Besides, it is also relevant to observe whether the law implementing the CAD is used in practice in countries that did

⁷⁶ Sygnal members regroup the major satellite TV operators in Poland such as Canal+ Cyfrowy Sp. zo.o., Cyfrowy Polsat) and cable operators (UPC, Aster, Multimedia).

not have specific legal protection for CA piracy or if other legislation previously used are still implemented. This enables to gauge whether the implementation was useful and if it succeeded at filling prior legislative gaps.

Indeed, in countries which did not have a specific legislation before the enactment of the Directive, the implementation filled legislative gaps insofar as horizontal norms such as those provided for in competition, copyright or criminal law were perceived as rather inadequate tools to fight a specific form of infringement such as CA piracy. The implementing law presents thus a practical interest as it made it easier for pay-TV operators or CA industries to take legal actions. They now have a legal standing without having to construct on those horizontal norms. It is for example very difficult to bring evidence on unfair competition. In **Austria**, plaintiffs are required to prove that there is actual competition between their business and the one of the infringing party. The plaintiff has to show economic damages.

Yet, in some cases the implementation of the Directive meant lowering initially penalty standards available in national legislations. This is the case notably in Austria, Germany and Italy. This happened because the national legislation implementing the CAD set lower levels of sanctions than those existing in the previous, horizontal legislation (it has to be remembered that the CAD does not fix any levels for penalties therefore it was up to the national legislators to set penalty standards in the course of the implementation process).

In **Belgium**, the legislative and political competence depends on whether the media are concerned or other areas such as Information Society services. For media issues, the law of the French and Flemish linguistic communities is used. At the federal level there are other legislations applicable apart from the one on protection of CA-related ISS. The Ministry of Economics along with the Federal Computer Crime Unit argue that it is mostly the law against cyber-crime⁷⁷ which is used in practice as an alternative law for infringements of CA-related services because it has a broader scope and includes higher sanctions for the private use of illicit devices.

In **Germany**, the law implementing the Directive has already been applied in connection with unfair competition rules (§§1, 3, 4 Nr. 11). There is one case in which the law implementing the Directive was used in connection with copyright law (§§ 20, 97). Moreover, criminal law has also been and is still being used. Courts have been using §263a of the Criminal Law (1986 law covering computer crime) along with §§202 and 269 of the criminal law for years in cases of CA devices infringement cases (e.g. unauthorised decoders).

In **France** and **Spain** provisions of Intellectual Property law can be used. In **France** some provisions have been inserted in the Code of Intellectual Property following the implementation of Directive 2001/29/EC on the harmonisation of certain aspects of copyrights and related rights in the information society, which contributed to improve the efficiency of the CAD application (articles L.331-5, L.332-1 and L.335).

In **Ireland**, Intellectual Property law, Copyright law and Competition law may be used.

⁷⁷ article 550 bis of the loi relative à la criminalité informatique of 28 November 2000 modified by the law of 15th May 2006

In **Lithuania**, some provision on copyright and related rights, competition law and law on advertising are alternatively used.

In **Poland**, The Copyright and Neighbouring Rights Act of 4 June 1994 is also applicable (in particular, Articles 116 and 118⁷⁸).

In **Sweden**, two pieces of legislation can alternatively be used. The horizontal *law on penalties for smuggling*⁷⁹ sanctions the import of prohibited equipments. This law contains provisions on liability for acts relating to illegal importing or exporting goods into and from Sweden. It gives power to prevent, investigate and prosecute offences in accordance to prohibited goods which includes unauthorised decoders or smartcards. The *Act on copyright in literary and artistic works of 1st July 2005* implementing the copyright Directive 2001/29/EC could be used.

In the **United Kingdom**, it appears that pay-TV operators prefer to pursue the offender under Criminal Law and more particularly under “Conspiracy and Defraud”, since the offence carries stronger sentencing powers.

3.2.6 Scope of the infringing activities

Article 4 of the CAD, imposes on Member States to prohibit on their territory:

- a) the manufacture, import, distribution, sale, rental, or possession for commercial purposes of illicit devices
- b) the installation, maintenance, or replacement for commercial purposes of an illicit device;
- c) the use of commercial communications to promote illicit devices

However, some Member States have decided when implementing the CAD in their national legislation to cover other acts of infringement. In particular, **France, Belgium, Italy, Poland, and Spain**, have decided to include as infringing activities the private use of illicit devices.

Besides, **France** adds in its use of infringing activities the participation to a network or concerted practice aimed at circumventing conditional access devices; as well as the reception by third parties of illicit encrypted programs of conditional access.

Spain, in addition to sanctioning the private use of circumventing devices, explicitly sanctions persons “who with commercial purpose, modifies, or duplicates the identification number of

⁷⁸ Article 116 concerns dissemination of someone else’s work without authorization or against its terms and conditions. Such act is punishable by imprisonment of up to 2 years. If this act is committed in order to gain material benefits, the punishment can be imprisonment of up to 3 years. If, however, committing the act becomes a regular source of income – the punishment may be imprisonment from 6 months up to 5 years. According to Article 118¹, a person is liable to imprisonment of up to 3 years or restriction of liberty if they produce equipment or components of such equipment used for removal or evasion of technical security measures or devices which protect against reproduction, recording and copying of works or the objects of neighbouring rights, trade in such equipment or their components or advertise for the purpose of selling or renting it. Whoever possesses stores or uses the abovementioned equipment is liable to a fine, restriction of liberty or imprisonment of up to 1 year.

⁷⁹ Lagen om straff för smuggling SFS 2000:1225

equipment and telecommunications, or commercialises equipment fraudulently altered” (Article 286.2 of the Criminal Code).

Thus, the main difference between the Member States in the definition/scope of infringing activities lies in the application or non-application of a sanction for the private use of illicit devices (private use vs. commercial use). Such a provision appears to be an efficient way to fight against piracy according to several stakeholders. First, it raises the cost for an illegal viewer to use pirated devices, which corresponds to the price of illegal means plus the sanction. Second, it can provide useful information to enable the identification of those who market circumventing tools. Third, it acts as a deterrent to consumers involved in illegal activities, thereby playing an important role in raising public awareness on the problem of piracy.

It seems therefore that the opportunity of including mandatory sanctions for the private usage of illicit devices in case of a possible review of the CAD would be appreciated by business operators as a chance to strengthen the role of the CAD in combating piracy.

The Member States that sanction the private use of illicit devices are presented in the table below:

Scope of sanctions	prosecution of use for commercial purposes	prosecution of use for private purposes
Austria	X	
Belgium	X	X
France	X	X
Germany	X	
Ireland	X	
Italy	X	X
Lithuania	X	
Poland	X	X
Spain	X	X
Sweden	X	
United Kingdom	X	

3.2.7 Sanctions and Remedies

1. The provisions implementing the CAD

Article 5 of the Directive leaves Member States free to apply appropriate sanctions to infringing activities, as long as they are “effective, dissuasive and proportionate to the potential impact of the infringing activities”.

All the Member States cited above have set criminal and civil sanctions (fines, or/and imprisonment), except for **Lithuania** where only administrative sanctions are provided. The level of sanctions varies greatly from one Member State to another.

Sanctions	Fine	Prison sentence
Austria	Fine of up to 360 times the daily rate for marketing, selling, renting or leasing	up to 2 years
Belgium	€25 to €25.000	8 days to 5 years
France	€7.500 to €30.000	6 months to 2 years
Germany	up to €50.000	Up to 1 year
Ireland	Up to €1.500	Up to 1 year
Italy	€2.582 to €25.822	6 months to 3 years
Lithuania	€434 to €1158	-
Poland	Not precised by the law	Up to 3 years
Spain	Not precised by the law	6 months to 2 years
Sweden	Not precised by the law	Up to 2 years
United Kingdom	Not exceeding the statutory maximum	Up to 2 years

The above table is indicative of the minimum and maximum existing sanctions and does not take into account “in between” situations, which are more or less important depending on the Member State (see detailed tables below in point 2). For example, **France** sanctions each activity covered in Article 4 of the Directive with a specific sanction (for which both the prison sentence and the fine will vary), in addition to a separate sanction for the private use of illicit devices; **Germany** does not differentiate and does not specify any amount of fine. As for **Belgium**, its legislation provides that the sanctions are doubled in case of a second offence.

Consequently some Member States have laid down very detailed sanctions while others have adopted a less binding approach. However, it is not clear in practice which approach acts more as a deterrent tool to prevent piracy since overall there is a relevant lack of *case law* and piracy figures are not publicly available.

With regard to civil and/or administrative sanctions, an objective interpretation of Article 5 of the CAD leads one to believe that the list of appropriate remedies is non-exhaustive. However, it seems clear that the will of the EU legislator is to oblige Member States to adopt the appropriate remedies so that the affected persons will receive compensation for any losses that may occur. Thus, even though the national pieces of legislation transposing the CAD do not list the available remedies, in general Member States which are part of the sample accept the claim for damages in parallel of the sanctions set up for the infringing activities. The tables of laws below in point 2 highlight the remedies available in each Member States.

2. Type and scope of sanctions at national level

The following tables present a summary of the sanctions provided for by national legislations implementing the Directive. Two main categories of sanctions have been singled out:

- a. Criminal sanctions
- b. Civil and administrative sanctions

The tables list infringing activities laid down by law and the corresponding sanctions.

- Criminal Sanctions:

Member States	Law implementing the Directive	Illicit activities sanctioned	Criminal sanctions
Austria	Zugangskontrollgesetz, 11 July 2000	(1) the manufacture, import, distribution, sale, rental or leasing and possession as well as the installation, maintenance, repair or replacement of circumvention of devices for commercial purposes (2) Advertising and other measures, such as direct marketing, sponsorship or public relations, designed to promote the placing into circulation of circumvention devices for commercial purposes	<ul style="list-style-type: none"> • Prison sentence of up to 2 year or a fine of up to 360 times the daily rate on any individual marketing, selling, renting or leasing circumvention devices for gain • Seizure • Confiscation
Belgium	Federal Law, 26 June 2000	(a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices; (b) the installation, maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications to promote illicit devices	<ul style="list-style-type: none"> • Prison sentence from 8 days to 5 years, and/or a fine from €25 to €25.000 • Sanctions can be doubled in case of a repeated offence within 5 years from the first prosecution
	French community: arts.153 and 155 added in the Decree of 27 February 2003 on radiodiffusion	<ul style="list-style-type: none"> • <i>idem</i> then federal law • Private use of illicit devices 	Prison sentence from 8 days to 5 years and/or a fine of at least €26

	Flemish community: modified decree of 7 May 2004 on radiodiffusion and television	<ul style="list-style-type: none"> • <i>idem</i> then federal law • Private use of illicit devices 	<ul style="list-style-type: none"> • Prison sentence from 8 days to 5 years, and/or a fine from €25 to €25.000
France	Law on audiovisual of 1986 (as modified by the law of 16 December 1992) art.79; and arts 321-1 of the Penal Code modified on 19 September 2000	(a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices	Prison sentence of 2 years and a €30.000 fine
		(b) the installation, maintenance, or replacement for commercial purposes of an illicit device	Prison sentence of 6 months and a €7.500 fine
		(c) the use of commercial communications to promote illicit devices	Prison sentence of 1 year and a €15.000 fine
		Private use of illicit devices	€7.500 fine
Germany	ZKDSG of 23 February 2002	The manufacture, import, and distribution of circumvention devices for commercial use	Prison sentence of up to 1 year, or a fine
Ireland	Statutory Instrument S.I. Nr.357 of 2000	(a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices; (b) the installation, maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications (including all forms of advertising,...) to promote illicit devices	On a summary conviction, fine may not exceed €1.500; or a prison sentence not exceed 15 months, or both
Italy	Law No.22 of 7 February 2003 amending the legislative Decree No. 373 of 15 November 2000	(a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices; (b) the installation, maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications to promote illicit devices <ul style="list-style-type: none"> • Private use 	<ul style="list-style-type: none"> • Prison sentence from 6 months to 3 years and a fine from €2.582 to €25.822 • For particularly serious cases: prison sentence not inferior to 2 years and a fine

Lithuania	Law on Electronic Communications, 15 April 2004	Prohibition to manufacture, keep, use, import, export, sell lease or otherwise transfer, modify, install and maintain decoders, other equipment or software for commercial purposes enabling illegal access to protected services	None
Poland	Act of 5 July 2002 on the protection of some services provided by electronic means based on or consisting of conditional access	(1) the manufacture of illicit devices for the purpose of introducing them into commercial channels or the sale of such devices	Prison sentence of up to 3 years
		(2) the installation, maintenance, or replacement of illicit devices; the transfer of commercial information for the promotion of illicit devices	Prison sentence of up to 3 years
		(3) the possession or use of an illicit device for the purpose of a financial gain	Fine, or a part-time detention, or a term of imprisonment of up to one year
		Private use of illicit devices	A fine

Spain	Act of 5 July 2002 on the Spanish Criminal Code on 25 November 2003, art.286	(1) the manufacture, import, distribution, making available by electronic means, sale, rental or possession of any equipment or computer programs designed or adapted to make such access possible and which are not authorised in a EU Member State (2) the installation, maintenance or replacement of the devices or computer programs of paragraph 1 * the modification or duplication of the identification number of equipment and telecommunications with commercial purposes, or commercialisation of equipment fraudulently uses (3) the advertisement or promotion of illicit devices	Prison sentence of between 6 months to 2 years and a fine payable from 6 to 24 months
		Private use of illicit devices	Fine for a period between 3 to 12 months
Sweden	Act (2000:171) on Prohibition of Certain Decoding Equipment of 6 April 2000	(a) the manufacture, import**, distribution, sale, rental, or possession for commercial purposes of illicit devices (b) the installation, maintenance or replacement for commercial purposes of an illicit device***	Prison sentence of up to 2 years; or a fine
United Kingdom	Statutory Instrument 2000 Nr. 1175 The Conditional Access (Unauthorised Decoders) Regulation 2000 of 27 April 2000	(a) the manufacture, import, distribution, sale, rental, offer or exposition for sale or hire of any unauthorised decoder; (b) the possession for commercial purposes of any unauthorised decoder;	On conviction of indictment: prison sentence of up to 2 years; or a fine

		(c) the installation, maintenance or replacement for commercial purposes of any unauthorised decoder; or; (d) the advertisement of any unauthorised decoder for sale or hire or otherwise the promotion of any unauthorised decoder by means of commercial communications	
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- Administrative sanctions, civil proceedings/action for damages:

Member States	Law implementing the Directive	Illicit activities sanctioned	Administrative sanctions/Civil proceedings/action for damages
Austria	Zugangskontrollgesetz, 11 July 2000	(1) the manufacture, import, distribution, sale, rental or leasing and possession as well as the installation, maintenance, repair or replacement of circumvention of devices for commercial purposes (2) Advertising and other measures, such as direct marketing, sponsorship or public relations, designed to promote the placing into circulation of circumvention devices for commercial purposes	<ul style="list-style-type: none"> • Injunctions, rectification • Compensation and surrender of profits; • Rendering of account • Temporary injunctions • Administrative fine of €15.000
Belgium	Federal Law, 26 June 2000 French community: arts.153 and 155 added in the Decree of 27 February 2003 on radiodiffusion	(a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices; (b) the installation,	<ul style="list-style-type: none"> • Injunction • Cease and desist • Confiscation

	Flemish community: modified decree of 7 May 2004 on radiodiffusion and television	maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications to promote illicit devices	
France	Law on audiovisual of 1986 (as modified by the law of 16 December 1992) art.79; and arts 321-1 of the Penal Code modified on 19 September 2000	a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices; (b) the installation, maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications to promote illicit devices (d) Private use of illicit device	<ul style="list-style-type: none"> • Cease and desist • Confiscation
Germany	ZKDSG of 23 February 2002	(1)The manufacture, import, and distribution of circumvention devices for commercial use (2) the possession, technical preparation, maintenance and replacement of circumvention devices for commercial purposes (3) the sales promotion of circumvention devices	<ul style="list-style-type: none"> • An administrative fine up to €50.000 • Civil remedies
Ireland	Statutory Instrument S.I. Nr.357 of 2000	(a) the manufacture, import, distribution, sale rental or possession for commercial purposes of illicit devices; (b) the installation, maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications (including all forms of advertising,...) to promote illicit devices	<ul style="list-style-type: none"> • Injunction • Action for damages
Italy	Law No.22 of 7 February 2003 amending the legislative Decree No. 373	(a) the manufacture, import, distribution, sale rental or possession for commercial	A fine from €5,164 to €25,822 in addition to a fine from €5,65 to €285,23

	of 15 November 2000	<p>purposes of illicit devices; (b) the installation, maintenance, or replacement for commercial purposes of an illicit device; (c) the use of commercial communications to promote illicit devices</p> <ul style="list-style-type: none"> • Private use 	for each illicit device. The total amount is limited to €103291
Lithuania	Law on Electronic Communications, 15 April 2004	“For persons or companies which are not concerned with electronic communications, with confiscation of equipment; if the persons or companies are punished for this infringement”	Article 153 of the Code of Administrative Offences: a fine from €434 to €868; or from €579 to €1158
Poland	Act of 5 July 2002 on the protection of some services provided by electronic means based on or consisting of conditional access	<p>(1)the manufacture of illicit devices for the purpose of introducing them into commercial channels or the sale of such devices (2) the installation, maintenance, or replacement of illicit devices; the transfer of commercial information for the promotion of illicit devices (3) the possession or use of an illicit device for the purpose of a financial gain</p> <ul style="list-style-type: none"> • Private use of illicit devices 	<ul style="list-style-type: none"> • Forfeiture • Civil remedies
Spain	Modification of the Spanish Criminal Code; 25 November 2003, art.286	<p>(1) the manufacture, import, distribution, making available by electronic means, sale, rental or possession of any equipment or computer programs designed or adapted to make such access possible and which are not authorised in a EU Member State (2) the installation,</p>	Civil remedies

		<p>maintenance or replacement of the devices or computer programs of paragraph 1</p> <p>* the modification or duplication of the identification number of equipment and telecommunications with commercial purposes, or commercialisation of equipment fraudulently uses</p> <p>(3) the advertisement or promotion of illicit devices</p> <p>Private use of illicit devices</p>	
Sweden	Act (2000:171) on Prohibition of Certain Decoding Equipment of 6 April 2000	<p>(a) the manufacture, import**, distribution, sale, rental, or possession for commercial purposes of illicit devices</p> <p>(b) the installation, maintenance or replacement for commercial purposes of an illicit device***</p>	<ul style="list-style-type: none"> • Forfeiture • Action for damages
United Kingdom	Statutory Instrument 2000 Nr. 1175 The Conditional Access (Unauthorised Decoders) Regulation 2000 of 27 April 2000	<p>a) the manufacture, import, distribution, sale, rental, offer or exposition for sale or hire of any unauthorised decoder;</p> <p>(b) the possession for commercial purposes of any unauthorised decoder;</p> <p>(c) the installation, maintenance or replacement for commercial purposes of any unauthorised decoder; or;</p> <p>(d) the advertisement of any unauthorised decoder for sale or hire or otherwise the promotion of any unauthorised decoder by means of commercial communications</p>	<ul style="list-style-type: none"> • Injunction • Seizure • Civil remedies are available on the same ground as those which apply in the case of copyright infringements

** Rules on unlawful imports are contained in the Act on penalties for smuggling goods
*** The use of commercial communications to promote illicit devices is covered by the Swedish Marketing Act (1995:450)

3.2.8 Relevant Case Law

As a general observation, public authorities of Member States belonging to the sample are not aware of relevant case law prior or post the CAD implementation. On the other hand, it seems that business stakeholders such as CAS providers or pay-TV operators are reluctant to disclose detailed information on legal cases because they fear this may incite potential pirates to emulate illicit actions. More decisively, they do not like the publicity attributed to pirate activities.

The gathering of case law is useful to determine the value of the CAD and the effectiveness of its provision to tackle piracy. Court cases could prove to be a good indicator to assess the impact of the Directive since its implementation. However, due to the lack of willingness from interested stakeholders to share information on this topic, the process has given mixed results. This is only therefore a partial picture of the situation.

It seems that there is little in terms of case law in the different Member States. Many interviewees referred to disputes that were settled out of court or ruled at lower court levels and thus not publicly available.

In some countries such as **Austria**, the lack of case law could be explained because piracy is rather contained. Only a few cases involving shops that sold pirate decoders have occurred but they were solved outside of court and consequently there are no references to those cases. Prior to the implementation of the Directive, there was a case at the High Court of Vienna involving the distribution of decoders that was dealt with under unfair competition rules⁸⁰.

In **Spain**, according to a stakeholder there has been relatively little piracy involving decoders since the switch to digital decoders in 2003. However, a local industry operator could give examples of cases that took place before the implementation of the Directive. In one case, two people in Valencia were sentenced to prison for distributing pirated ONO set-top boxes (*cubos*). The first defendant sold the set-top box through the internet and was sentenced to one and a half years imprisonment. He sold a number of set-top boxes in 2002 and made €39.200 in profit. The other convicted person received microchips and other electronic components needed for manufacturing the set-top boxes and was hence sentenced to 1,9 years in prison. Another case, whose judgment was delivered in June 2003, involved a two phase operation called '*Cubos*', referring to the set-top boxes, in which nine people were arrested. The first phase *Cubos I* served to collect information for the second phase *Cubos II*. In *Cubos II* three people were arrested and they subsequently led authorities to three suspects located in 9 different Spanish regions. It has been calculated that there was €60 million of potential fraud in *Cubos II*. The offenders had acquired more than 20.000 chips used for manufacturing ONO set-top boxes.

⁸⁰ 20.12.1990, ecolex 1996, 612

For **Belgium**, a reference was made to cases preceding the implementation of the Directive in which the pay-TV operator Be-TV had filed several complaints against retailers of illicit devices. However, the only case law we obtained concerns the grey market issue in which a retailer sold, on Belgian territory, French Pay-TV services. In a judgment delivered on the 7th June 2000 by the Brussels Commercial Court (*Tribunal du commerce*) a retailer that was selling TPS and Canal Satellite services and presenting itself as a 'TPS authorised distributor' was partially held liable⁸¹. The Court ordered an injunction to make the illegal practices cease (i.e. the retailer's claim to be an 'authorised TPS distributor' and to fail to mention to customers that they paid for a service that is not as complete as it would be if it were carried out in France). However, Be-TV actually sued the infringing company on the base that they were illegitimately absorbing a substantial amount of their customers given that part of TPS and Canal Satellite programmes were overlapping with Be-TV. As a result, the latter endured damages as it lost a considerable part of its copyright-based remuneration which is calculated according to importance of anticipated customers. The Brussels Commercial Court then referred to the highest Court (*Cour de cassation*) on that point. The highest Court⁸² was to rule whether or not the infringing company was illegally selling TPS and Canal Satellite services. Be-TV changed its original claim, the initial one being to obtain an injunction enabling to cease the selling of TPS and Canal Satellite subscription to Belgian customers. For those proceedings, Be-TV only asked for the cease and desist of illicit advertisement of TPS subscriptions. The latter action was rejected by the higher court on the base that the subject-matter of the claim was not precise enough for an injunction to be accepted. They did not, however, rule on the matter they were referred to i.e. whether selling French Pay-TV subscription infringe Belgian copyright law and whether the company's activity of selling those subscriptions is illegal or not.

In **France**, in 1997 the Criminal Chamber of the *Cour de Cassation* (the French Supreme Court) delivered a decision in which an individual had been found guilty of the possession of illicit devices for commercial purposes, the sale and rental, to get pay-TV programmes. As an employee of France Telecom, he sold electronic components to his work colleague. Those electronic components came along with building instructions. The issue at stake was that the device was sold in parts and had to be assembled by the buyer. The court held that the fact that the device was sold in parts and came with building instructions was not relevant in the finding of the defendant guilty under article 79-1 of the 30 September 1986 act (*Cour de Cassation, Criminal Chamber, 14 May 1997, No. 96-82278*).

In 1998, the French pay-TV operator *Canal+* sued a hotel manager for fraudulent acts. *Canal+* accused him of making collective use of a decoder he had obtained after he subscribed on an individual base to the channel. The court held that there were doubts on material elements and that the case should be re-examined by another Court of Appeal (*Cour de Cassation, Criminal Chamber, 29 September 1998, 97-84490*). Two year later, after the re-examination of the facts, it was found that the hotel manager was in possession of two decoders and had two subscriptions that went along with them. One decoder was used at the hotel bar; the other one was available to clients upon request. Those elements were found as not constitutive of an infringement of article 79-3 of the 30 September 1986 act (*Cour de Cassation, Criminal Chamber, 21 November 2000, No. 99-87453*).

⁸¹ A.C. 02134/00

⁸² N° 2000/AR/2345 p. 1813-1825

The Court of Appeal of Paris delivered a judgement on 21 May 2003 in which a couple was sued by the French pay-TV operator *Canal+* for possessing for commercial purposes and selling illicit devices (article 79-1 of the 30 September 1986 act). The couple were offering for sale the components necessary to assemble a pirate decoder. They were promoting the parts, which could only lead to the fabrication of illicit devices. The charged couple alleged that they completely ignored the destination of the components they were promoting and selling. The Court of Appeal convicted them on the ground that given the fact that those components could not be used for anything else than the fabrication of pirate decoders. The couple was convicted for infringement of 79-1 (Court of Appeal of Paris, 21 May 2003, No. 2002/13661).

More recently, the Criminal Chamber of the *Cour de Cassation* passed a judgement involving TPS. They sued an individual who promoted ways of illicitly receiving pay-TV programmes. The individual had launched a website which explained in detail how to create illicit devices. The website also provided software, keys, codes and files enabling visitors of the page to create their own smartcards. The plaintiff based his claim on article 79-2 of the 30 September 1986 act that forbid to 'conceive, order, organise or circulate a commercial that promote an illicit equipment, material, device'. The Court of Appeal dismissed TPS on the ground that there was a lack of causal connection. Even though it alleged that the plaintiff suffered a loss, the calculation of the loss was too hypothetical to allow the claim. The *Cour de Cassation* held that the Court of appeal was wrong in dismissing TPS as it is within the judge's discretion to evaluate the extent of the loss. The *Cour de Cassation* restated that the loss stemmed from commercial communications that promote illicit devices and the making thereof (Criminal Court, 8 March 2005, No.04-83410).

As for **Germany**, the *Land* court of Hamburg in its judgement from 26 April 2005⁸³, ruled in favour of the German pay-TV provider Premiere and against the provider of decrypting software which had enabled viewers to use the services of Premiere without subscribing. The provided software also included a P2P system which turned every user of the software into a service provider for the decrypted Premiere services. On 14 December 2004, Premiere reached an interim injunction based on Competition law, Copyright law, and on the German transposition of the CAD (ZKDSG). The ruling prohibited the marketing of the software with a direct link to Premiere services for free and the combination of the software with a P2P function. The judges argued that the software was not neutral in its application, as stated by the provider. The services provided by Premiere would clearly fall under the protection of § 2, 1b ZKDSG and therefore the offer and marketing of devices and software designed to circumvent CA encryption was deemed illegal. This was confirmed by the Higher *Land* court of Hamburg in a judgment on 8 February 2006 which granted injunctions to Premiere⁸⁴.

Preceding the implementation of the Directive in German legislation, a decision was released by the Court of Appeal of Frankfurt⁸⁵ concerning the selling of pirate smart cards. The Court deemed that putting pirate smart cards on the German market thus enabling users to decode encrypted pay-TV programmes was anticompetitive. The Court hence banned the sale of those cards. The defendant retorted that the codes were available on the Internet anyway, he wondered why his activity was deemed illegal. The Court answered that he eased the illegal access to pay-TV

⁸³ LG Hamburg, 26.04.05

⁸⁴ OLG Hamburg, decision 08.02.06

⁸⁵ OLG Frankfurt, judgement of 13.06.1995

programmes by offering pirate smart cards with codes and hence not requiring people to have technical or computer knowledge. Last but not least, this decision also mentions the fact that pay-TV operators must regularly change their complex and elaborate codification system, the price of which is ultimately born by the consumer.

Following the implementation of the CAD, several decisions refer to ZKDSG. In 2003, the Court of appeal of Frankfurt⁸⁶ decided to what extent a device could be considered illegal. The question raised in this next lawsuit was whether a device sold for lawful purposes, and which did not advertise for its potential unlawful aptitudes, could be considered a circumvention device. The “Magic Modul” device was sold and advertised for four lawful uses. However, it was wide-spread knowledge on the Internet and well known by the average user that the Magic Modul could also be used as a circumvention device which could decrypt programmes from Premiere. Moreover, it appeared during the proceedings that the four legal uses advertised were actually not yet technically possible or were commercially useless. The Court of Appeal thus held the manufacturer of Magic Modul liable referring expressly to the ZKDSG.

In a decision from the Court of Appeal of Hamburg⁸⁷, the German pay-TV “Premiere” sued the developer company of the software *Cybersky TV* as well as the distributor who sold it online. *Cybersky TV* enabled users to exchange AV programmes through the P2P network *TVOON Media Centre*. The distributor advertised for the P2P service on its websites and in the press by referring to Premiere suggesting that users would be able to access its pay-TV services through their software. The plaintiff called for an injunction against the advertisement of the service and against the right to distribute the Media Centre package including the P2P service, which would enable users to exchange pay-TV programmes. This injunction was confirmed by OLG Hamburg on 14th December 2004 and accepted by the distributor. However, the developer of the P2P software submitted an objection to this decision and argued that the software had not been developed for such a purpose but additionally enabled many other activities which did not infringe pay-TV rights. The Court rejected this objection on the basis that *Cybersky TV*’s website carried links to *TVOON*’s *Media Centre* website. Therefore, they implicitly linked their services to the one that had promoted pay-TV programme piracy in its advertisement. On top of that, the director of *Cybersky TV* company was also the CEO of *TVOON*. The court decided that developers of software that enables users to infringe pay-TV services should do everything necessary and reasonable to avoid infringement by users, such as implementing an appropriate DRM. This had not been done in the case of *Cyber TV*.

There was an interesting grey market case involving Canal+ France in a lawsuit in **Switzerland**. In the French speaking part of Switzerland, decoders enabling the unscrambling of Canal+ programmes were commercially distributed in large quantities. Canal+ did not have the authorisation to broadcast its programmes on Swiss territory. The French pay-TV channel took legal action against the manufacturer and the distributor of the illicit device. However, Canal+’s claim was non-suited. The Swiss court held that Canal+ did not have any economical interest to assert such a right, hence they did not suffer damages. There were no infringements and their claim was thus barred.

⁸⁶ OLG Frankfurt, judgment of 05.06.2003, 6U 7/03 – Magic Modul

⁸⁷ OLG Hamburg, judgment of 08.02.2006

In **Italy**, prior to the implementation of the Directive, national courts, decided on several occasions that the sale of smart cards and codes for the illicit decryption of pay-TV signals through the Internet was prohibited⁸⁸. Those decisions were based on criminal law provisions. Following the enactment of the *law No 373*, which implemented the Directive, legal actions taken against CA violations under criminal law provisions were declared null by the courts on the ground that the legislator intended to only apply civil sanctions⁸⁹. This was confirmed by a ruling of the Supreme Court on 28 November 2001⁹⁰. Following an intense debate stemming from a decision by the Crotona Court in March 2002 to dismiss the criminal prosecution of two individuals who were found with a substantial amount of illicit devices, the legislator decided to reintroduce criminal sanctions against CA piracy. Subsequent to this new decree, the Supreme Court⁹¹ confirmed that criminalisation was appropriate in prosecuting piracy related to CAS.

In **Poland**, Canal+ Cyfrowy, together with the association Sygnal, conducted an operation aimed against control-word sharing on a nation-wide scale, on 11 October 2006, and on the basis of the Act of 5 July 2002 which transposed the CAD. As a result, 117 set-top boxes, 89 smart cards and 100 electronic devices among other goods were seized. In the end more than 1000 individuals involved were identified.

In **Sweden**, there are several cases preceding and following the implementation of the Directive:

- The Market Court, a specialised court that handles cases related to the *Competition Act* as well as cases involving the *Marketing Act* and other consumer and marketing legislation, has stated that marketing of so called blank cards should be regarded as the marketing of unlawful decoding equipment. This verdict was pronounced against Keycard on 30 June 2004 (case 2004:17, Dnr C 4/03). This is the most recent case in Sweden ruling against the sale of blank cards and a significant one since the company Keycard was condemned for selling an important quantity of blank cards. The interesting point of the case lies in the reverse of the burden of proof. Indeed, even though the blank cards could have been used for legitimate purposes (as the company argued), the moment there is massive sale of blank cards, it can be presumed their purpose of sale is for illegally decoding CAS. The case was ruled on the basis of the CAD. The same kind of judgment on blank cards was delivered recently in Denmark in April 2007, with the same burden of proof lying on the infringer.

- The provisions in the *Act (1993:1367) on Prohibition of Certain Decoding Equipment* have been, for example, applied in a case with the Svea Court of Appeal in a judgment issued in April 1996 (preceding the implementation of the Directive). In that instance, a person had manufactured and transferred eleven pieces of decoding equipment and also attempted to manufacture at least 60 more devices. The Court of Appeal sentenced him to pay a fine of SEK 3000.

⁸⁸ See in particular Supreme Court (Corte di Cassazione) – Sez. V penale n. 1904 of 27 March 1998

⁸⁹ See for instance the ruling of the Criminal section of the Turin Court of 30 March 2001

⁹⁰ Corte di Cassazione, Sezione III penale, sentenza 28 Novembre 2001, 42561

⁹¹ See Corte di Cassazione, Sezione III penale, sentenza 12 Ottobre 2004 and Corte di Cassazione, Sezione III penale, sentenza n. 28912 del 2 luglio 2004

- According to the judgment of the Göta Court of Appeal issued in March 2004, two individuals were sentenced to pay fines. The defendants had sold equipment whose purpose was to decode TV-channels. Furthermore, they provided maintenance services for such equipment since they had provided codes and keys for encryption on a website. The sale concerned both blank cards and cards which were already programmed. The defendants were as well sentenced for having supported the sale of unlawful equipment since they had provided a website with links to other websites where pirate cards among other things were sold. However, in September 2004, subsequent to the implementation of the Directive, the Highest Court refused to review the defendants' permit to sell those blank cards.

3.3 Preliminary conclusion

As a provisional conclusion, it can be said that the implementation of the CAD succeeded in harmonising, to some extent, the legal protection of CAS within the internal market. It was far from being the priority of public authorities (compared to copyright law or cyber crime legislation for instance). In fact, in the countries where no specific legislation addressing the circumvention of CAS existed, it is interesting to note that no public consultation or debates were held to transpose the CAD and the transposition was mainly a "copy-paste" action.

Yet, it seems that in these countries the CAD made it easier for the stakeholders to enforce their rights and in that regards it has improved the situation. As explained above, the CAD filled existing legislative gaps insofar as horizontal or very broad legislation such as competition, copyright or criminal law were perceived as rather inadequate tools to fight a specific form of infringement such as CA piracy. The CAD made it easier for concerned stakeholders such as pay-TV operators or CA industries to take legal actions and have legal standing in courts.

On the other hand, in the countries where an existing specific legislation used to exist, the implementation of the CAD brought little added value in terms of protection and mainly consisted in enlarging the scope of the existing law to cover ISS.

In fact, the main difference between the different legal orders with regard to the implementation of the CAD now lies in the sanctions applied to the infringing activities adopted by each Member State, particularly between those countries which choose to sanction the private use and those which choose to only sanction the commercial use of illicit devices. In theory, the inclusion of private use in the list of infringing activities should act as a strong deterrent tool to prevent CA piracy. Yet, the quantity and quality of data collected is insufficient to draw such a swift conclusion. Data on piracy is practically nonexistent at public level and there is also a relevant lack of case law. The development of a legitimate CA-related AV market in different countries is dependent on too many factors to correctly assess the role played by sanctions for private use of illicit devices in determining the growth of the market.

However, based on the results of the economic analysis outlined in chapter 2, it has to be noted that sanctioning the private use of infringing devices would help reduce the moral hazard that exists in the AV value chain at the level of the end consumer, thus strengthening the legitimate offer. Comparably to what exists for counterfeit trademarks, the possession of an infringing device should be considered an offence independently from its usage. If not, private use, whose control is

impossible to enforce and which therefore should remain an exception, creates huge incentives for circumvention. Business operators all call for stronger sanctions, in particular for the private usage of pirate devices – though they are unable to substantiate their claims with evidence showing that piracy is more diffused in countries with lower levels of sanctions or in countries which only include acts carried out on a commercial scale as an infringing activity.

The Digital Millennium Copyright Act (DMCA) and the EU Directive prohibit any kind of DRM circumvention as well as the possession of circumventing devices. In these new laws, which are intended to cater for the digital distribution of content, private use is limited to what is permitted by the encryption system and second sales are not allowed. It has to be recalled that the private use, or fair use provision, had been initially designed for analogue copying (Xeroxcopy, Audiotapes, VHS) for which copying had a cost and downgrading effects on quality. The new laws on digital copying give protection to encryption technologies whatever the reason for circumventing. Even reverse engineering (the dismantling of an encryption system for adapting a complementary product) is prohibited. The economic rationale of these new laws is to make DRM the internalisation tool for fair use. In other words, fair use has to be integrated within the scope of liberalities of use provided by the encryption system. In the case of CAS, fair use was provided by the possibility to record through the analogue “hole” (the analogue output of the television), the decoded signal. The quality then was not digital. With the switchover to digital broadcast, the hole will disappear. Fair use applications (through PVR for instance) will be monitored by content providers.

The lack of case law (it seems that most of the cases are settled out of court) is a major impediment in correctly assessing the importance of the CAD to fight CA piracy. Several stakeholders also report using alternative legal instruments to address piracy problems, as stated above. The CAD operates as a complementary tool to other pieces of legislation protecting copyright or against unfair competition. The major advantage of the CAD for CAS providers is that it allows them to acquire legal standing in cases of CA piracy (whereby right holders can also rely on copyright law).

Overall, it seems that business operators benefiting from the CAD are satisfied with its adoption and its implementation into national law, although most of them call for further upwards harmonisation of the law in terms of sanctions, remedies and inclusiveness of the list of prohibited activities. Yet this call is not accompanied by evidence that the CAD has been effective in tackling cross-border piracy, nor that its objectives in terms of the Internal Market have been met.

Another aspect that needs to be brought to the fore is that the lack of knowledge and interest in the CAD shown by public authorities has had, as a consequence, that no cross-border administrative cooperation has been established on this subject. The CAD was intended to address Internal Market issues but its implementation and monitoring have been carried out without any tangible trans-national dimension. The Commission may remedy this situation by setting up an expert working group (on the model of the expert groups existing in the framework of other Directives such as the E-commerce Directive or the Television Without Frontiers).

With regard to the inherent limits of the CAD in addressing new and unexpected forms of piracy, some examples have been brought to the fore. This issue, which touches upon the core element of this study, will be examined in depth in chapter 4.3 below.

Chapter IV: Assessment of the CAD

This chapter provides an assessment of the effectiveness of the CAD as a legal tool used by industry operators to fight against CA piracy. It presents the views of the different stakeholders consulted and it highlights the improvements brought by the CAD as well as its shortcomings. It then analyses some key questions that have emerged as being particularly relevant to the assessment of the CAD in relation to its main objectives – namely the issue of the CAD as an effective instrument to foster cross-border services and the relevance of the CAD in conjunction with the EC and international regulatory “acquis” developed since its adoption.

It is important to distinguish the Internal Market aspects of the analysis (which are dealt with in section 4.2) from the assessment of the effectiveness of the CAD, compared with other relevant EU and international pieces of legislation, in addressing some key issues of Europe’s media economy as highlighted in chapter 2 (this part is the subject of section 4.3).

The cross-border implications of the CAD are essential to its functioning as the Internal Market is the basis upon which the CAD has been adopted. However, the trans-national aspect of the CAD should not be overemphasised as the fragmentation of European AV markets has structural and historical roots which are unlikely to be overturned by regulatory acts such as the CAD. The grey market issue confirms that cross-border problems exist, yet the grey market is likely to remain as a minor consequence of the national organisation of media distribution markets in Europe. The CAD, as explained below, does not appear to be the appropriate instrument to address this issue. Moreover, it would be ill advised to force trans-national distribution of content by means of legislation, at the risk of undermining the foundations of Europe’s media and content industries.

A review of the CAD would be an opportunity for the EU to re-evaluate some fundamental policies affecting the information society (Internal Market, copyright, competition) with a view to improving the existing regulatory framework in order to establish the basis for a long term industrial policy strategy, capable of sustaining and promoting a viable media and content industry in Europe. Two issues are at stake here. One concerns IP which is the basic internalisation tool of positive media externalities. The unification of this tool at the EU level is a prerequisite of the harmonisation of the EU media markets. The other deals with media price discrimination, or versioning. The EU should better understand the benefits of discriminative pricing strategies for information goods so as to lower its structurally high media discrimination costs.

4.1 Effectiveness of the CAD in tackling piracy

4.1.1 Difficulties experienced in assessing the impact of the CAD

The methodology adopted

First and foremost, it must be observed that it is extremely difficult, not to say impossible, to adequately measure the effectiveness of the CAD in addressing the problem of CA piracy. As explained in the chapters above, working on this task is irreparably hampered by structural lack of data, in particular lack of economic data on piracy and lack of case law as a way to assess the application of the CAD at national levels.

In the absence of these two key parameters, it has not been possible to build relevant indicators upon which an economic model measuring the impact of the CAD could be developed. As an alternative way to assess the effectiveness of the CAD, a wide consultation amongst interested stakeholders has been carried out (the list of interviewed stakeholders is available in annex II). Replies received, as well as interviews and meetings, have allocated a qualitative insight with regard to the appreciation of the CAD. This has been complemented by economic and legal analysis. The following sections detail the main results of this process.

4.1.1.1 Perception

Public authorities and business stakeholders

First of all, it has to be underlined that there is a marked discrepancy in the perception between public authorities and business stakeholders in terms of general assessment of the CAD and its impact on the market.

None of the Member States from which feedback was received are monitoring the impact of their legislation to combat piracy. This seems to be the result of the fact that the national law implementing the CAD is generally considered as a secondary piece of legislation. CA piracy is also considered as a low priority compared to, for instance, internet piracy – at least at the level of public authorities. The growing attention devoted to internet piracy is a key aspect of the analysis.

In general, public authorities feel that the implementation of the CAD in their national legislation is sufficient and filled the gaps of the prior situation. They do not feel that consolidation and amendments are needed. They are, however, unable to describe the market situation or make an assessment on the effectiveness of the Directive in tackling piracy.

It is quite interesting to note that in several Member States it is difficult to even identify the relevant department in charge of overseeing the implementation of this directive; this was the case in Germany, Ireland, Lithuania, Poland and the UK. Public authorities in some countries (notably the UK and Italy) failed to reply to the questionnaire aimed at obtaining their feedback on the

evaluation of the CAD. No cross-border administrative cooperation exists amongst the authorities surveyed; the trans-national aspects of the CAD are generally not taken into account by public authorities when monitoring its implementation.

In respect to the public authorities' point of view, there is a difference in opinions that mainly relates to whether or not there was already a specific legislation on protection of CAS prior to the implementation of the CAD. Countries which already had solid specific legislation that gave protection against piracy of CAS, have a tendency to find implementation of the Directive rather unnecessary, as it did not add significant elements to their existing legal framework. In countries where no specific legislation was in force, the implementation of the CAD played a bigger role.

On the other hand, businesses take the view that the CAD is useful as it contributes to raise the piracy issue at policy and judicial levels, particularly in countries where no such legal protection had previously existed. The position of business stakeholders, however, varies according to the different interests at stake.

CA providers, pay-TV operators and hardware manufacturers welcome the CAD as a significant step forward in supporting the fight against CA piracy. They mention that the CAD has been positively welcomed, especially in countries where no legal protection had existed to battle against the piracy of CA devices (e.g. **Spain, Portugal**) and in the new EU12 countries.

Another positive aspect mentioned is the educational role played by the CAD. The implementation of the CAD increased the awareness on the fact that pirates' activities are a crime. The CAD has contributed to combat piracy as it acted on pirates as a deterrent for their illegal business. In this context, various stakeholders across business sectors have underlined the importance of having powerful criminal sanctions included in the law as they are seen as a stronger deterrent than administrative or civil sanctions.

AEPOC⁹², the trade association regrouping 37 major players in CA related businesses⁹³, considers the CAD as the reference regulatory measure and a useful legal tool for businesses. AEPOC was set up in 1995. At that time its primary objective was to obtain an EC directive tackling the issue of pay-TV piracy – which came into effect three years later as the CAD.

Right holders consulted point out the importance of the CAD in fighting CA piracy. The MPA, the association representing the Hollywood majors, underlines that the importance of protecting CA is proportional to the growth in number and nature of services covered by CA services (IPTV, mobile services, DTT...). On the other hand, both the film sector and sports right owners underline the fact that the CAD does not provide for legal standing of right holders in complaints against CA circumvention, which in their views is a clear inadequacy of the CAD.

Although the CAD provides for a general definition of persons entitled to apply for the application of its measures (all “providers of protected services whose interests are affected by an infringing

⁹² European Association for the Protection of Encrypted Works and Services (Association Européenne pour la Protection des Oeuvres et Services Cryptés) www.aepoc.org

⁹³ AEPOC brings together and represents operators in 4 entrepreneurial sectors: Television Channels, Suppliers of Conditional Access Technology, Suppliers of Transmission Infrastructures and Producers of Hardware

activity” as stated in article 5 of the CAD), right holders consider that this definition does not properly address their interests as piracy of CA services and systems only indirectly affects their rights, whereby service operators and CAS providers have an easy access to the CAD. A specific reference to the possibility for right holders to have legal standing before courts in cases of circumvention of CAS protecting their rights could be added to the CAD in order to clarify the situation. This issue should be the object of investigation from the European Commission.

4.1.1.2 Enforceability

Lack of awareness amongst public authorities

The main problem in the perception of stakeholders seems to be the awareness at the public authorities’ level about the importance of fighting piracy of CA services. Some of the interviewed stakeholders consider that CA piracy is not a priority for both police and courts, if compared to other forms of theft. There seems to be a general lack of awareness on the importance of adequately protecting IP in Europe – although the situation differs across member states.

It seems that police or judicial authorities are lacking in training regarding technology and new media. This is penalising strong enforcement of the CAD. This is a general issue but it was specifically referred to in Austria, Lithuania and Germany. In Lithuania there would not be an expert with the proper qualifications to inspect the equipment used to circumvent CA systems.

It is recognised by industry representatives that it is very complex for the enforcement authorities to tackle CA-related infringements. However, they regret the inconsistent implementation of the CAD in the different Member States and call for more harmonisation of legislation - in that respect they suggest setting up public-private partnerships to educate and assist the authorities to take proper actions, whereby industry representatives would collaborate with enforcement authorities by providing them with the tools (training, software, technical and legal expertise) needed to address all forms of CA piracy.

In order to encourage the development of the CAS markets, authorities should communicate more clearly the existence of the legal safeguards provided by the CAD and its national implementation. The scale of this lack in enforcement problem will increase over time. It is not too great a problem as long as markets remain national. However, for the CAD to work properly, cross-border administrative cooperation is necessary. As this is clearly not the case in the current situation, the Commission may consider setting up a working group composed of Member States’ representatives in order to improve monitoring and discuss ways of enhancing the effectiveness of the CAD.

4.1.1.3 Lack of economic data on piracy and of case law

Stakeholders' reluctance to provide information

It is in any event difficult to assess the effectiveness of the CAD in the absence of reliable data on piracy – in particular, industry operators are not willing to provide such figures on the ground that it risks undermining the confidence of the financial community (and shareholders) and CAS users (as potential customers) on the strength of their business.

This unwillingness to provide piracy data is further reflected in the lack of interest in giving publicity to case law and litigations against pirates. These actions are classified as “business secrets”. CA providers have similar business interest in keeping piracy figures secret as the level of piracy is an indicator of the success of their encryption technology.

Interviewed stakeholders were unable to rank Member States according to the degree of leniency (or, on the contrary, effectiveness) in addressing CA piracy. As observed above, it has been mentioned that some southern European countries (notably Spain and Portugal) had endemic piracy problems aggravated by a lack of specific legislation previous to the implementation of the CAD – in these countries the CAD seems to have produced positive effects in terms of improving the legal tools available to the industry in stemming piracy. However, no concrete figure has been provided to support these statements.

Equally, it has been recognised that pay-TV piracy was rampant in Italy during the 1990s, which led to heavy losses for local pay-TV operators and eventually to the merger of the two largest operators into a single operator. Piracy seems to have diminished in the last years, however, no figure is available and moreover it is not possible to determine whether the reduction in piracy has been triggered by an improvement in legislation following the implementation of the CAD or by increased effectiveness in the CA system and business model (vertical integration) adopted by SKY Italia, or by a combination of these two factors.

On another level, some of the stakeholders interviewed reported on a general lack of “IP culture” or respect of copyright leading to higher rates of CA piracy in some of the newer (EU12) Member States – this sort of “legality gap” seems to affect both consumers and the enforcement authorities who do not see the fight against piracy as a priority. Some countries, such as Slovakia, have been referred to as safe harbours for the production and trade of illegal devices (especially fake smart cards). Again, these statements are of a general nature and have not been supported by any evidence.

Most of the industry operators have pointed out at the fact that although the legal framework across the EU is generally satisfactory, new “hubs” for the manufacture and export of infringing devices and software emerge both close to the EU (North Africa, Eastern Europe and Central Asia) and in South East Asia, calling for greater efforts and cooperation at an international level to tackle piracy.

4.1.1.4 Relevance of case law in assessing the CAD

As mentioned above, little case law has been collected in relation to the application of the CAD, mainly due to the reluctance of business stakeholders to disclose court cases involving infringements of the CAD. The case law presented in chapter 3.2.8 shows that national laws implementing the CAD were in general useful to address specific cases of CA piracy.

The major advantage brought by the CAD, as signalled by business stakeholders, is that it has enabled CAS providers to have a legal standing in complaints against cases of CA piracy. In this sense, the CAD is being used by industry operators as a legal tool which complements existing national legislation, namely copyright law, in helping them building a case before courts.

The CAD is considered to be more efficient than existing “horizontal” legislation (unfair competition law, criminal or civil code, etc) in tackling specific cases of CA piracy. However, the national law implementing the CAD is not always the preferred legal tool used by a business to fight piracy.

The key issues, as highlighted further on, are the level of sanctions and the scope of activities covered by the law. It is often the case that alternative legislation (criminal code, copyright law, law on cybercrime) provides for higher sanctions or is more inclusive in the list of infringing activities which are sanctioned. In these cases, the national law implementing the CAD can be considered as less effective in tackling piracy.

It is, however, impossible to draw a definite conclusion on this point due to the scarcity of data available and from the great disparity in situations that have been brought to the fore, varying across different Member States and sometimes even within the same country.

4.1.1.5 Technological evolution

Internet piracy and its impact on the conditional access market

The key issue which has been brought to the fore by several stakeholders consulted in the context of the study is the growing danger represented by internet piracy. Internet piracy does not per se affect CA systems, except when CA-protected devices are infringed to transmit the broadcast signal over the Internet, mostly through P2P networks. A concrete example of this kind of piracy is given below.

More importantly, internet piracy undermines the whole value chain in the distribution of media content – as shown above (see chapter 2.6), CAS are an integral part of this value chain as they serve to secure the protection of information goods which otherwise would be publicly available. Piracy on P2P networks diminishes the value of media content, making them available for free to the final consumer. It has been examined above how P2P piracy implies a sort of cross-subsidy for the roll-out of network infrastructure. The point of this section is to assess the effectiveness of the CAD in tackling this problem

Widespread internet piracy of AV content is a new form of infringement which relates to the content and not CAS but which has consequences on the pay-TV market. By way of example, an incident of re-broadcasting through P2P occurred in 2006, enabling Italian viewers to illegally access content for which local pay-TV operator SKY Italia had acquired exclusive exploitation rights. Italian authorities, on the request of SKY Italia, ordered to take down two local websites stream-casting Italian football matches through P2P networks which were broadcast on SKY's pay-TV platform. The P2P websites provided the link to the website of a Chinese-based broadcaster owning the rights to these events for the local market.

This incident underlines the loss suffered by European rights holders and pay-TV operators whose potential subscribers might be tempted by the Asian internet-streamed version. The complaint brought against YouTube by the UK Premier League (FAPL) and the French Professional Football League (LFP) as highlighted above in section 2.5.2 belongs to the same category of infringements. In light of these emerging phenomena, stakeholders are calling to review the EU's overall legislative framework on AV piracy, taking more explicitly into account, threats from new technologies.

In these cases, the combination of versioning for different markets and of the multiplication of digital delivery channels show the growing risk for right holders of distributing the same content across various platforms. Even though a single platform might enjoy a satisfying level of technical and legal protection (as is the case with CA systems), parallel platforms may generate new threats for the media content.

Digital delivery of content deeply affects the media industry. Under a digital environment, the multiplication of distributors increases transaction costs: not only does the content owner have to check the reliability of the technical protection system of the distributor (moral hazard), but it also has to check that any platforms distributing content are not distributing its content without its consent. The more licensed distributors, the more expensive it is to check non-authorized diffusion. This is the major issue raised by new distribution platforms such as YouTube.

Another form of piracy that has had a strong impact on the European markets, on which pay-TV operators are present, is the increase in illegal download of films and other TV programmes. ACT reported a substantial increase in the illegal download of hit series which have now become commercially significant. This is clearly detrimental to pay-TV operators who usually have the first-run local rights.

These are examples of substantive IP piracy issues that do not encompass CA violation. However, these emerging, yet already wide-spread forms of piracy undermine European pay-TV business models. Even if it concerns content and not CA, some stakeholders (in particular sports right owners, but also broadcasters and CAS providers) believe that this should be tackled by an encompassing "Content Directive" which should protect content together with technical access measures. Several stakeholders believe that the same rules should apply to CA piracy and copyright. They call for an extension of the Directive to protect not only CA systems and devices but also content broadcast by means of CAS – in practice, industry stakeholders call for an alignment of the Directive on the terms of the EU Copyright Directive 2001/29/EC. This aspect will be further developed in section 4.3 below.

4.1.1.6 Moral hazard issues

Moral hazard cases are present all along the AV content distribution chain, as listed in chapter 2.4. As a consequence, in some cases of piracy attacks, the stakeholders which are directly protected by the CAD – pay-TV operators or/and CAS providers – may not have an interest in using the Directive. Conversely, others, such right holders and set-top box manufacturers cannot use the CAD because they are neither users, nor providers of CAS, even though they may be willing to assist in the fight against piracy.

One reason for this situation, as reported by interviewed stakeholders, is that the formulation of article 5 of the CAD (indicating all “providers of protected services whose interests are affected by an infringing activity” as persons entitled to have legal standing before courts) is not precise enough for industry players other than pay-TV operators and CAS providers to rely on the CAD as effective tool to enforce their rights in case of acts of CA piracy.

Linked to this issue is the question whether the CAD also covers technical protection measures such as DRMs (Digital Rights Management systems). Market players seem to consider that this is not the case – the CAD is mainly used in practice to deal with circumvention of CA systems in the pay-TV market (CAS, set-top boxes), although its use could be extended to new kinds of ISS. The industry has a tendency to believe that ISS are better covered by the EU copyright directive (EUCD) and that the CAD has little application in this area. This situation needs to be clarified by the Commission.

Here are some examples and opinions drawn from interviews with stakeholders.

CA providers stated that they do actively take legal action even if a dissenting set-top box manufacturer felt that this was not true. Unfortunately, they cannot display details of actions as they are protected by business secrets. A CA provider regretted that their clients, the pay-TV operators, most of the time, did not take part in trials as third parties.

A hardware manufacturer considers that CA providers do not take enough legal action which clearly undermines the effectiveness of the Directive. They are aware that construction of a CA case is rather difficult and it is not always easy to legally prove an instance of piracy, however, it is in their power and the responsibilities of CA providers to do so.

As highlighted above, the French Football League (LFP) points out that **the Directive does not protect content**. For the LFP, the Directive (and the French law implementing it) is an effective instrument in the hands of businesses relying on CAS such as pay-TV operator Canal Plus but it is useless for right holders, especially as it does not address the problem of internet piracy. The MPA also regrets that the Directive and its implementation do not give copyright holders standing to sue in respect to the violation of national laws protecting CAS. This is why they are currently using copyright as the main tool against piracy. The same can be said for broadcasters which rely on their neighbouring right to gain legal standing before courts. On the other hand, sports right owners are generally unable to use copyright law tools as their rights are not included in the copyright regime (see below, section 4.3.2 for more detail on the status of sports rights). There is a marked difference in this respect between Anglo-Saxon countries (such as the US and UK) and continental

European countries – in the Anglo-Saxon countries the owners of sports rights are put on the same footing as other copyright owners and can benefit from copyright law protection in cases of the infringement of their rights. This is not the case in continental Europe. This aspect is further developed below in section 4.3.1.

The point is now to suggest possible improvements aimed at increasing the effectiveness of the CAD as a legal tool to fight piracy.

4.1.2 How to improve the CAD's effectiveness

Stakeholders' views differ on the best approach to improve the CAD's effectiveness.

As highlighted above, public authorities surveyed do not feel the need to amend the CAD – in fact they are not particularly aware of its implementation or application. Awareness on the problem of CA piracy is very low at public level. The Commission may improve this situation at EU level by gathering national experts involved in this topic.

On the contrary, industry stakeholders point out several shortcomings of the CAD and are proposing ways to remedy them. The CAD's deficiencies and the proposed solutions are detailed below.

4.1.2.1 The lack of harmonisation

The issue of trans-frontier piracy

The key deterrent to pirate activities remains sanctions and remedies. In regard to piracy issues involving international criminal organisations, the harmonisation of law determines, to a large extent, the effectiveness of the legal protection provided.

However, heterogeneity in national laws implementing the CAD is still high: criminal sanctions are not always included, private use is not always punished (see below). Whilst business has remained national, piracy is obviously an international business: piracy is often the result of international organised crime; thereby the lack of harmonisation may lead to the creation of safe harbours. Heterogeneity in national implementation modes is mainly a result of the flexible nature of the CAD, which only prescribes minimum measures to deal with CA piracy, leaving Member States free to adopt more stringent legislation. No thresholds are set for sanctions and remedies within the CAD which explains the diversity still present across the EU regarding this matter.

Sweden reports that the private possession and handling of unlawful decoding equipment is prohibited in Denmark. As a consequence, Danish pirate companies have targeted Sweden as a territory to promote unlawful decoding equipment for the Swedish audience.

Set-top box manufacturers report an increase in illegal equipment shipped from Asia to Europe. However, this also has the effect of moving 'safe-harbours' further east to neighbouring countries of the EU (Moldavia, Ukraine) or to far-east countries (China, Korea). The CAD has been positive in so far as the place of illegal manufacturing has moved further East since the implementation of the law in the new Member States.

Public authorities consulted are not aware of infringements or circumventions of CA devices in neighbouring or third countries that could affect their market and of the effect of the CAD on such a phenomenon. **France** mentioned that there is an issue with French speaking countries outside the EU such as in the Maghreb countries concerning pay-TV services.

Business contacts have provided no feedback on trans-frontier piracy problems when asked about the impact of infringement or the circumvention of CA devices in neighbouring or third countries.

Therefore, no major intra-EU cross-border problem has been reported by interested parties concerning CA piracy. The international dimension of piracy on the contrary has been brought to the fore by different stakeholders to underline threats coming from third countries, whether immediate EU neighbours or distant safe harbours.

The minimum harmonisation brought by the CAD has been sufficient to eliminate major disparities existing between Member States – although significant differences still exist in the nature and scope of implementing legislations. This is apparently not a problem for business operators. Extra-EU piracy on the other hand is considered as particularly worrying.

4.1.2.2 The level of sanctions

Industry contacts state that sanctions chosen are not always the most effective ones. In particular, different stakeholders affirm that as national laws leave the choice to courts in applying fines or prison convictions, fines are more often applied in practice, whereas prison is considered to be a more effective deterrent to piracy. In fact, stakeholders wish the Directive had left less freedom to Member States in choosing which sanctions to apply to the infringing activities. The idea is that a minimum threshold for fines and prison sentences should be set up. AEPOC insists that a minimum threshold for economic fines should have been clearly set.

A business stakeholder says that even though the national implementation has been very useful, it is regretful that there are not enough decisions sanctioning piracy with jail sentences. Jail sentences are considered to be the most effective tool to prevent piracy. Fines are very difficult to obtain because individuals prosecuted are often small groups or organisations and very often insolvent.

Similarly, it is felt that seizure of material is not a sufficient deterrent as the week after another shop in the same district can easily start a new business selling illicit devices. Thus, the sanctions imposed are in practice inadequate, as in most cases the infringer is not penalised.

In general, the industry continues to rely on criminal law since only criminal procedures offer the chance to really investigate crimes and the real structure behind piracy, which is crucial. Moreover, in some cases the cost of judicial redress may increase when plaintiffs have to rely on civil law.

It is interesting to point out in this context that the proposed Directive on Criminal Sanctions for infringements of IP rights⁹⁴ provides for minimum thresholds in terms of monetary fines and years of imprisonment for acts of infringement of IP rights, thereby ensuring the harmonisation of minimal sanctions across the EU. It has been suggested by some of the interviewed stakeholders that a similar approach should be adopted by the CAD regarding acts of CA piracy.

4.1.2.3 Private use, commercial use

Another important point is the issue of whether national laws implementing the CAD address private use of illicit devices. The CAD only provides for minimum harmonisation of sanctions for activities carried out with commercial purposes (article 4). However, recital 21 of the CAD expressly mentions the possibility for Member States to adopt measures prohibiting the private possession of illicit devices. Only five amongst the countries of our sample include sanctions for infringing activities at private level (**Belgium, France, Italy, Poland** and **Spain**). Sanctioning private use and/or possession of illicit devices has been mentioned by several business stakeholders as a key element which would step up the effectiveness of the CAD in stemming piracy.

Several trade associations mention that sanctioning the private use of illicit devices in all Member States would be an effective measure to fight against piracy. It appears that the proof of a “commercial purpose” as constituent fact is often difficult to show, which constitutes a real obstacle to a successful legal challenge against a pirate. However, no concrete evidence has been provided on the supposedly higher effectiveness of legislation in the countries sanctioning private use of illicit devices.

The commercial purpose is also interpreted very unequally through the Courts. The “commercial purpose” should therefore be deleted from §4 of the Directive (infringing activities) – it should be sufficient to establish a commercial purpose in the act of the private person – i.e. his internal motivation to generate income from his activity. Business operators believe it is generally quite difficult to establish a commercial purpose in the activity of the pirates, and this condition constitutes a main argument of protection for many pirates by claiming to be acting on private grounds, without commercial activity.

With regard to the proposed Criminal Sanctions Directive mentioned above, it has to be noted that although it sets minimum thresholds for applicable sanctions, only infringements committed on a commercial scale are addressed by this instrument in its current provisional version - which explicitly excludes from its scope acts carried out for private use (such as downloading illicit files from P2P networks). This aspect has been vividly criticised by some of the stakeholders interviewed. Paradoxically, it seems that the flexible approach adopted by the CAD has been more

⁹⁴ [COM/2005/276/FINAL](http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0276en01.pdf) SEC http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0276en01.pdf

effective, enabling Member States to significantly enlarge the scope of infringing acts and to cover acts of private infringement.

4.1.2.4 The problem of new forms of CA piracy

Article 4 of the CAD enumerates a list of infringements. Illicit activities range from preliminary commercial deeds to maintenance of sold illicit devices⁹⁵. Interviewed stakeholders have been asked to identify the major infringements related to their business and whether the CAD should be amended in order to cover other activities. AEPOC answers that ‘classic’ infringements comprise of illegal decryption, commerce of illegal decoders and smart-cards, and card-sharing. They state that, except for France, before the implementation of the CAD those infringements were not correctly taken into account by the national laws, but that after the implementation the situation developed positively.

However, AEPOC and STOP⁹⁶ raise the issue of the development of new forms of infringement that are not taken into account by the CAD (and by the national laws implementing the CAD) as the Internet did not have the same level of importance in 1998 as it does today (when the CAD was adopted). Indeed the **Internet** has become the most popular platform for pirates to distribute illegal access codes and updates to illegal decoding software. New forms of piracy have evolved and new illegal business models have developed as a result of technological developments. Those internet-related piracy infringements spread out during the last two years.

For instance, CA violation through card-sharing activities does not require any hardware equipment or password violation. However, it is the illicit sharing of a secret code. This is why STOP suggests that the distribution of codes and software should be prohibited.

The MPA also asks for the extension of the scope of illicit activities to code-word sharing. They stress the fact that when the CAD was passed in 1998, circumvention of CA was entirely concerned with physical devices. The current CAD is hence not very effective against those new forms of piracy which have emerged as a result of the Internet.

Furthermore CA providers mention a problem regarding ‘free access’ market. It concerns set-top boxes which are sold as neutral, blank devices but can be used to emulate licensed set-top boxes. These set-top boxes are “empty”, i.e. their principal function is to give access to FTA satellite channels (not included into a bundle of programmes offered by pay-TV operators) but a software

⁹⁵ Article 4 of Directive 98/84/EC states:

“ Member States shall prohibit on their territory all of the following activities:

- (a) the manufacture, import, distribution, sale, rental or possession for commercial purposes of illicit devices;
- (b) the installation, maintenance or replacement for commercial purposes of an illicit device;
- (c) the use of commercial communications to promote illicit devices.”

⁹⁶ Scandinavian Tv-Organisation Against Piracy, a Scandinavian organisation that works on behalf of the TV-industry to prevent piracy against the programmes distributed by the pay-tv-companies.

can easily be downloaded which transforms these set-top boxes into a “fake-licensed” set-top boxes, circumventing the protection provided by CA services and therefore able to receive pay-TV programmes illicitly. The problem is that this type of infringement is very difficult to prove and is not covered by the CAD.

Some stakeholders suggest improving the wording of the Directive to include not only “ready-to-use” pirate devices but also devices that could become pirated when used in connection with other items (software, illicit card, etc). It is difficult to follow this approach as many of the devices targeted, such as the empty set-top boxes described above, are not illegal per se. The same can be said for a personal computer or the Internet, which have multiple legitimate functions besides being a tool for IP circumvention.

The threat of new technologies is a recurrent point of concern for stakeholders. The Directive should take these new technological threats into account more explicitly. This point has been mentioned by several stakeholders as a major insufficiency. They are in favour of a review to update the Directive, taking into account technological developments. In that regard, a CA provider suggested that instead of further amendments to the Directive, an annex list should be created. This would keep track of updated technological changes (regarding new forms of piracy).

Nevertheless, the technical approach which is suggested by many industry operators has some inherent structural flaws. A directive is a piece of legislation which cannot be constantly amended in order to take account of ever emerging and fast changing circumvention techniques. As many stakeholders have pointed out, once the CAD was approved and implemented into national law, pirates had already found new inventive ways to circumvent the legislation – either by setting up in safe harbours at the border of the EU or by devising infringing activities not covered by the legislation.

4.1.2.5 The inability of content owners to use the CAD

Several issues have been brought to fore in the course of the analysis due to the fact that the CAD approach seems to be technology-driven. The economic analysis in Chapter II showed that CAS are devices that protect AV content and organise the whole vertical chain, from right holders to retail distributors. However, the CAD approach does not refer to AV content economics. It then ignores some aspects of AV content markets, namely their horizontal organisation based on territoriality and versioning as well as its vertical structure (right holders included) characterised by moral hazard issues.

As a consequence, a major issue has emerged as being particularly relevant to the assessment of the CAD as an effective means to tackle piracy of CAS.

This issue concerns moral hazard problems that the CAD does not tackle, given that some of the stakeholders involved in AV content distribution channels, notably right owners, estimate they are excluded from the scope of the Directive. As a result the structural inadequacies of the CAD to

provide effective protection to CAS have been brought to the fore. This is because of some shortcomings in its formulation that need clarification and due to the emergence of new forms of piracy since its adoption that aim to undermine the markets which CAS are supposed to secure – namely AV markets.

The key question in this context is therefore how to address the fact that right owners, who are at the origin of the AV value chain, are not explicitly included the scope of the CAD. This issue is further developed in the following sections.

4.1.3 Provisional conclusion

The effectiveness of the CAD in tackling piracy cannot be properly measured because of significant lack of relevant data. On the one hand, the CAD has been well received by industry stakeholders, and in particular by operators active in CA-related areas (pay-TV operators and CAS providers) as it has granted them standing to act in justice independently of right holders and therefore to protect their technology. On the other hand, the level of harmonisation achieved by the CAD would be too low, especially in terms of level and nature of sanctions and of the list of activities covered. Disparities across Member States in this respect are still relevant, and other legislative measures are still preferred by business operators as more effective tools than the CAD to fight piracy cases.

In a wider perspective, the CAD shows intrinsic structural shortcomings in addressing emerging issue such as internet piracy due to its technical focus. In particular, the CAD appears to be less adapted than the EU copyright legislation to take into account the problems brought on by internet piracy and P2P networks to the AV industry. This point is examined in depth in section 4.3 below.

4.2 Effectiveness of the CAD in promoting cross-border services

4.2.1 The issue of territoriality of content

The AV market, including pay-TV, is characterised and fragmented by cultural specificities, linguistic barriers and preferences in each country. Even though the internal migration of European citizens has grown, AV content is usually distributed and consumed at national level. Some content transcends borders, such as Hollywood blockbusters, but they undergo subtitling or dubbing. Hollywood majors do not offer pan-European licences but, on the contrary, have subsidiaries in each country. Content does not necessarily go across borders *per se* without adaptation. The same goes for major international sports events which are commented in different languages. Sports events do go across borders but right holders sell the rights to national channels and not on a pan-European base. There are very few operators active across several countries, and when they are, they usually segment their offer along territorial lines to offer a local service in a local language. The economic consequences of the issue of cultural versioning are examined in chapter 2.2.5 above.

This issue touches upon the aspects of the study related to the analysis of Internal Market aspects and on the impact of the CAD on cross-border provision of AV services. Whilst the objective of the Directive is the free-crossing of information all over Europe, the economic nature of information goods requires, on the contrary, separate exploitation contracts adapted to the specific value of each content on each national or linguistic market. The content markets in Europe will remain segmented because content is priced according to their utility and this utility strongly varies among countries. The Lithuanian football championship has little value in Spain. The German *Bundesliga* is better valued in Sweden, compared to Italy or in France, where the national championship relies on a few local teams.

The AV market is also characterised by release windows used to maximise revenue collection. These windows are regulated according to different national rules or industry practises. The whole value chain is equally enhanced by this system. The current revenue structure of the chain is dependent on this form of exploitation.

Territoriality of copyright is enshrined in the Berne Convention of September 9, 1886⁹⁷ which requires its signatories to recognise the copyright of works of authors from other signatory countries (known as members of the *Berne Union*) in the same way they recognise the copyright of their own nationals. This means for instance, that French copyright law applies to anything published or performed in France, regardless of where it was originally created. In fact, some articles refer to the domestic law of the country of origin of the author's work, residence, protection or claim (article 5(3); article 10bis(1); article 13(1); 14bis and 14ter), which underline the national treatment granted by the Berne Convention to copyright.

The territorial nature of copyright AV content was also examined by the European Court of Justice (ECJ) in the "Coditel" decision⁹⁸, whereby the ECJ gave a flexible interpretation of article 59 (now article 49) of the Treaty (which prohibits restrictions to the freedom to provide services) with regard to right owners of IP rights in the internal market, albeit on the condition that those rights are not an abuse to artificially partition the Internal Market. The Coditel jurisprudence is now being tested by the recently opened investigation of the Commission against major record companies on grounds of competition policy issues. In this case, territorial sales restrictions imposed by some music majors when licensing their rights to Apple's *iTunes* music service would prevent competition between national *iTunes* stores on price and availability of catalogue.

Besides copyright works, other categories of information goods (as highlighted above) such as sports events, news and other TV programmes are usually licensed by right holders on a territorial basis as they appeal to a limited national audience.

⁹⁷ http://www.wipo.int/export/sites/www/treaties/en/ip/berne/pdf/trtdocs_wo001.pdf

⁹⁸ SA Compagnie générale pour la diffusion de la télévision, Coditel and others v Ciné Vog Films and others, Case 62/79

4.2.2 The CAD and the EU regulatory acquis

The objective of the CAD, as stated in its initial recitals, is to remove obstacles to the establishment of an Internal Market where the free movement of AV services is ensured.

In order to better understand this goal, it is useful to draw some comparisons with parallel pieces of EU legislation sharing the same objective as the CAD and partially overlapping the scope of the CAD – this is the case with the Television Without Frontiers Directive, the Cable and Satellite Directive and the e-commerce Directive.

The Television Without Frontiers Directive⁹⁹ (hereinafter TWFD) is the underpinning legal framework of EU's AV policy. Its core objective is to enable the free movement of European television programmes within the Internal Market. If the TWFD does not tackle piracy issues, its aim has the same objective as the CAD i.e. to ensure cross-border provision of television services in Europe. More precisely, the TWFD aims at obliging Member States to respect the principles of the country of origin and the freedom of reception. A Member State cannot hamper retransmission on the national territory of European AV works stemming from other Member States. The TWFD is currently being amended through the proposed Audiovisual Media Services Directive (AMSD)¹⁰⁰ which aims at extending TWFD rules to all AV services independently of their mode of transmission.

The Satellite Broadcasting and Cable Retransmission Directive¹⁰¹ (hereinafter: Cable and Satellite Directive) was adopted in 1993 in order to stimulate cross-border broadcasting of satellite programmes and their cable retransmission. It aimed at removing disparities between Member States' legislations in terms of the exploitation of copyright and related rights, as well as asserting more legal certainty in this domain.

The electronic commerce Directive¹⁰² (hereinafter: e-commerce Directive) was adopted in 2000 in order to establish an Internal Market framework that would allow and encourage e-commerce services to go across national borders. The e-commerce Directive aims at providing legal certainty to both business and end users. The e-commerce Directive covers ISS and refers in the same way as the CAD to article 1(2) of Directive 98/34/EC to define them. However, television and radio broadcasting are clearly excluded, as only services provided at 'individual request' fall under the scope, such as for example VoD¹⁰³. The Directive makes thereby a clear distinction between radio and television broadcasting *stricto sensu* which does not fall within the definitional ambit of ISS and so-called point-to-point services, such as VoD, which fall under the ambit of the definition. Furthermore, copyright and neighbouring rights are excluded from the scope of article 3 of the e-commerce Directive on Internal Market¹⁰⁴ (this article is referred to as the Internal Market clause). This is the result of the lack of harmonisation of copyright law at EU level at the time.

⁹⁹ Directive 89/552/EEC

¹⁰⁰ Proposal COM/2005/646 final

¹⁰¹ Council Directive 93/83/EEC of 27 September 1993,

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31993L0083:EN:HTML>

¹⁰² Directive 2000/31/EC; http://europa.eu/eur-lex/pri/en/oj/dat/2000/l_178/l_17820000717en00010016.pdf

¹⁰³ Directive 2000/31; recital 18

¹⁰⁴ L178/16 Annex: derogation from article 3

http://europa.eu.int/eur-lex/pri/en/oj/dat/2000/l_178/l_17820000717en00010016.pdf

All of the above mentioned regulatory instruments share the objective to ensure the smooth functioning of the European Internal market.

The TWFD and the proposed AMSD (Audiovisual Media Services Directive) aim at facilitating the free movement of AV media services including both linear and non-linear services within the EU Internal Market. However, the television market in the EU remains a rather nationally confined market. European programmes do not cross borders as easily as was aimed with the TWFD, except in cases of countries sharing the same language. Some international productions (Hollywood films or *telenovelas*) seem to benefit more from the Internal Market than EU products – however, it is right to say that Internal Market rules have been the basis for the establishment of trans-national broadcasting services and have facilitated circulation of AV works within the EU.

Similarly to the CAD, the Cable and Satellite Directive aims at enhancing the cross-border broadcasting of programmes in the Internal Market. However, if the Cable and Satellite Directive has contributed to improve harmonisation of some Member States' provisions on cable and satellite broadcasting services, 'cross-border broadcasting of television programmes by satellite and their retransmission by cable from other member states [is] still being hampered by a degree of legal uncertainty arising from disparities in the national provisions on copyright'¹⁰⁵. More interestingly is the fact that both directives face the same issue of the grey market. This issue is further examined here below.

The e-commerce Directive intends to ensure the free movement of ISS¹⁰⁶. The Internal Market clause increases legal certainty by making the country of origin principle prevailing. ISS are hence, in principle, subjected to the legislation of the Member States in which the service is established. In terms of objectives, the e-commerce Directive was clearly more successful in stimulating the proper functioning of the ISS in the Internal Market than the CAD. According to the first report on the application of the e-commerce Directive¹⁰⁷, it has created 'a straightforward Internal Market framework which allows e-commerce to go across national borders'¹⁰⁸.

However, as highlighted above, copyright is excluded from the e-commerce Directive's Internal Market clause. Indeed, if one concentrates on copyright protected content and others such as sports content, territoriality is still a challenge to the free movement of electronic services in the Internal Market. A concrete example is provided by Apple's *iTunes* music service, which has been set up at a national level and not on a pan-European basis. This example is similar to the cases of MTVE and YouTube highlighted above in chapter 2.2.3. It illustrates that even though technological developments allow for the uninterrupted flow of information on digital platforms across national

¹⁰⁵ COM 2002/0430 final – Report from the European Commission on the application of Council Directive 93/83/EEC on the coordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable retransmission

¹⁰⁶ Directive 2000/31/EC; recital 8

¹⁰⁷ COM(2003) 702, final First Report on the application of Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market, http://eur-lex.europa.eu/LexUriServ/site/en/com/2003/com2003_0702en01.pdf

¹⁰⁸ *Ibid*, p.3

(and even continental) boundaries, it is still more viable to maximise economic rent through territorial fragmentation.

The CAD has not been more effective than other pieces of EU legislation in promoting trans-frontier circulation of AV and media services. This is the consequence of the territorial (national) nature of most of AV content. However, for some categories of content such as music, territoriality may be put into question as testified by the EC Recommendation on Cross-Border licensing for online music¹⁰⁹ and the above mentioned investigation on Apple's *iTunes* music service. Yet, as explained above in chapter 2.1, a distinction must be made between different categories of content such as music and AV for instance, which implies that territoriality is likely to remain the cornerstone of the European AV market.

4.2.3 The Internal Market and grey market issues

Grey market, as defined above (see chapter 2.5.3) is a direct consequence of the territorial nature of AV media content. Grey market is the main form of trans-frontier broadcasting in the Internal Market. The grey market is borderline – not exactly piracy but an infringement of contractual obligations imposing territorial restrictions to rights exploitation.

As most stakeholders state, grey market issues are not included in the CAD's scope. Indeed, all the devices required – smart card and set-top box – are not illegal *per se*. There may be the illicit intervention of some intermediary or middleman, but nothing prevents a European consumer from buying the necessary devices, paying his subscription to the broadcaster and transferring the devices into another EU country. In doing so, the consumer would infringe the contractual rules usually laid down in the subscription contract, which stipulate that the service can only be available in the broadcaster's home country. However, this is essentially different from illicitly accessing pay-TV services through pirate devices – which is the kind of activity sanctioned by the CAD.

In fact, several outlets exist in European countries providing the basic hardware and software devices needed to access pay-TV services which, in principle should not be available in those countries. The grey market therefore exists and illustrates the interest of EU citizens to access their favourite TV programmes outside their home country. As stated in the 2002 Commission report on the application of the Cable and Satellite Directive¹¹⁰, a viewer willing to watch a programme outside the Member State where the transmission is organised, mostly ready to remunerate a pay-TV broadcaster, would be prevented from doing so. Broadcasters usually do not have the right to broadcast in the Member States other than the one they hold the right thereof, although the Cable and Satellite Directive lays down the principle of the transfer of rights under the law of the country of introduction of the communication for the entire footprint. This provision aims at preventing fragmentation of the market encouraged by nationally based transfers of rights.

¹⁰⁹ Commission Recommendation of 18 May 2005 on collective cross-border management of copyright and related rights for legitimate online music services (2005/737/EC)

¹¹⁰ COM 2002/0430 final, § 3.1.1.

Nevertheless, the Cable and Satellite Directive failed in enhancing cross-border broadcasting of programmes in the Internal Market as its offer of pan-European licensing in relation with right exercise on a territorial basis was never taken up.

The grey market issue directly relates to the territoriality and fragmentation of AV content. The territoriality principle is in itself a consequence of the cultural and linguistic versioning of media content explained above in section 2.2.3. It is in this framework that grey market issues should be tackled. Rights are granted on a territorial basis, reflecting the utility of a given content for the local audience and in order to maximise the content's value chain; hence grey markets amount to an infringement of contractual obligations and does not concern the protection of CA devices or services.

However, grey market is tolerated for products whose consolidated market value in a given territory is small. Service providers are reluctant to license content on an ad-hoc basis for marginal audiences (such as expatriates in a given country for instance) because this would imply additional costs in terms of distribution channels, after-sale service, etc. Grey markets allow right holders to be remunerated even for those smaller audiences without having to abandon the principle of versioning which is at the base of their business model. There seems to be a consensus amongst all industry players that the issue of the grey market is better tackled by contracts between right holders and broadcasters and should not be addressed at regulatory level.

It can be also argued that the CAD is not the appropriate instrument to address the grey market issue. The CAD aims first and foremost at reducing piracy intended as circumvention of IP rules resulting for the final consumer in the illegal access to proprietary content at free or discounted price. As explained above, the grey market does not constitute piracy in this sense – it is rather a breach of the right holders' territorial contract. The two problems need different approaches.

From an Internal Market point of view, the grey market shows that the trans-national dimension of content distribution is increasingly at loggerheads with the national and cultural versioning of media content. The Internet has accelerated this process which now goes beyond Europe's frontiers.

In view of the growing size of grey markets across Europe, the Commission might consider the possibility of legalising the grey market by discussing this situation with representatives of rights holders, distributors and consumers. A possible solution may entail the setting up of proportionate remunerations according to the level of subscribers in a given market, maintaining the territoriality principle but gradually "whitening" the grey situations.

Nevertheless, the need to address the problems raised by the grey market should not impair the development of Europe's media industry. Europe will never benefit from a unified content market based on the model of the US, India or China. Cultural diversity reflected in national versioning strategies cannot be overcome by the promotion of cross-border policies. The economics of media content in Europe requires a rethinking of public policies with a view to reinforcing the position of European content owners, which implies reviewing the EU's Internal Market and Competition policy. Such a rethinking should be based on the evaluation of the media externalities so as to define a common way to internalise them through efficient market procedures. This will lead to a better understanding of the media pricing mechanisms based upon discrimination. The grey market reflects the need, not to suppress discrimination, but to minimise discrimination costs. It is a

consequence of the EU's fragmented media landscape and should not stand as a barrier to the support of a coherent industrial policy for Europe's media industry. These policy aspects will be further developed in the conclusion of the report.

4.3 The CAD and the international regulatory framework

4.3.1 The EU and international IP framework

Legal protection against infringements of AV content is currently provided at EU level essentially by the EU Copyright Directive (EUCD) which is aimed at harmonising certain aspects of Copyright and related rights in the Information Society¹¹¹. The objective of the EUCD is to implement international obligations stemming from two 1996 WIPO treaties¹¹² and corresponds to the Digital Millennium Copyright Act (DMCA) implemented in 1998 in the US. The EUCD also seeks to harmonise, to a certain extent, Member States' legislations on copyright and related rights in order to adapt it to technological changes entailed by the digital revolution. The main differences between the Anglo-Saxon copyright regime and the *droit d'auteur* approach are highlighted in the following table.

Droit d'auteur vs Copyright

The main distinction between right of author – *droit d'auteur* - and Anglo-Saxon copyright law, although simplistic, is based on two very different doctrines. They were both developed in the eighteenth century but on two rather different foundations. While the first protects first and foremost the creative artist, Anglo-Saxon copyright law (in the EU in force in the UK, Ireland, Malta and Cyprus) focuses on the investor. This is natural consequence of a fundamental distinction between the two laws, the Common law being more business-oriented than continental Civil law which derives from Roman law. The first is a mercantile law whereas the second is more focused on the person.

This distinction is hence visible in the two opposite conceptions of copyright. The *droit d'auteur* is of a hybrid nature, a mix between property law and personality law. The *droit d'auteur* grants to the right holder (author, performer, producer or broadcaster) proprietary and non-proprietary rights on an intangible object i.e. the exclusive right to use and exploit her work for financial gain. The work protected must be a work of the mind. There is a strong idea of human intellectual contribution in the right of authors which is not particularly present in the Anglo-Saxon notion. In the conception of *droit d'auteur*, the object of protection emanates from the author's personality. It is thus endowed with absolute protection i.e. inalienability and indefeasibility. The performer and the investor in works of art (producers essentially) are granted a neighbouring right – a right that derives from the right of the author.

¹¹¹ Directive 2001/29/EC

¹¹² WIPO copyright treaty (WCT) and the WIPO performances and phonograms treaty (WPPT)

Conceived in a Common Law system, Copyright law on the other hand is a much more pragmatic law based on economics. The work is not seen as a work of the mind, a creation of an author but as a product likely to be commercialised. Copyright law protects the financial risk taken by the investor, not the author's artistic creative endeavour. However, *droit d'auteur* is often accused of being individualistic and centred on the person whereas copyright law takes the commercial interest of digital operators into better account.

The difference between the two conceptions was reduced in the EU when the UK and Ireland joined. Following the need to adapt to harmonised EU rules on copyright and neighbouring rights, the EU copyright countries, for example, recognised a form of moral rights granted to creators. It also led to the recognition of specific rights to performers as individuals.

Following the changes entailed by the digital revolution, some question the relevance of resorting to right of authors to deal with internet piracy. They argue that *droit d'auteur* shows some limits in addressing the developments (and potential threats) of new distribution channels of a work, namely the Internet. In the copyright regime, even though sports events are not covered by copyright per se, sports organisations licensing their rights for broadcast are put on the same footing as copyright holders and may enjoy legal standing in courts against infringements of their rights. The class action suit filed by the English Premier League against YouTube (see section 4.3.2 below) is a prime example in this respect – the suit was filed on the basis of the US copyright law, the DMCA.

In continental European countries, owners of rights which do not fall within the authors' rights framework are less protected against this kind of infringement and have to rely upon actions taken by broadcasters which are entitled to act as owners of related rights for their broadcasts.

Some also take the view that copyright is better adapted to deal with digital distribution than authors' rights as it centralises the exercise and the management of the rights in the hand of the commercial operator, thus diminishing the number of intermediaries in the licensing process. However, this can be achieved without putting into question the authors' right through a mechanism of presumption of rights acquisition or assignment, as these exist in relation to the licensing of AV works. In this occurrence the producer of a cinematographic work for instance is responsible for the commercial exploitation of the work and is the main interlocutor of users seeking a licence in relation to the distribution or performance of the film.

Following the implementation of the EUCD, a directive on the enforcement of IP rights (hereinafter 'Enforcement Directive') was adopted in 2004¹¹³ seeking thereby to remove disparities between the means Member States have recourse to in respect of enforcement of IP rights¹¹⁴. The Enforcement Directive has proved to be limited in the scope of the sanctions it covers (civil sanctions only) so it was eventually necessary to propose a directive on criminal sanctions as well. The proposed Directive on Criminal Measures (hereinafter 'Criminal Sanctions Directive')¹¹⁵ is meant to complement the Enforcement Directive and covers the same scope of application (IP

¹¹³ Directive 2004/48/EC; http://europa.eu.int/eur-lex/pri/en/oj/dat/2004/l_195/l_19520040602en00160025.pdf

¹¹⁴ Directive 2004/48/EC; recital 8

¹¹⁵ [COM/2005/276/FINAL_SEC](http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0276en01.pdf) http://eur-lex.europa.eu/LexUriServ/site/en/com/2005/com2005_0276en01.pdf

rights excluding patents). On 25th April 2007, the European Parliament approved, with amendments¹¹⁶, the Commission's proposal. The text adopted by the Parliament is still being discussed in the Council. This Directive is the first one to cover criminal law. Nonetheless, some Member States contest the Commission's competence to legislate on criminal sanctions. The proposed directive will probably be challenged during future Council discussions.

Outside the EU legal framework, an important piece of legislation is currently under discussion at WIPO. Following several meetings of the WIPO Standing Committee on Copyright and Related Rights (SCCR), it was decided in 2003 to engage discussion on a treaty for the Protection of the Rights of Broadcasting, Cablecasting and Webcasting Organizations¹¹⁷ in order to enhance the system of protection of the rights of broadcasting organisations. In September 2006, at the 15th session of the SCCR, a 'revised draft basic proposal for the WIPO treaty on the protection of broadcasting organizations' (hereinafter the Draft Treaty) was proposed. A Diplomatic conference is planned at the end of 2007 in order to adopt the proposed treaty. A non-paper¹¹⁸ was circulated on 20th April 2007 and suggests ideas for the orientation the Treaty is taking. It was decided in the last SCCR special session on 18th June 2007 that the treaty is still a work in progress and that participants and stake holders should continue striving to achieve an agreement on the objectives, specific scope and object of protection as mandated by the General Assembly.

The WIPO Draft Treaty includes the two transmission technologies covered by the 1961 Rome convention, namely traditional television and radio; it also encompasses transmission by satellite and the wireless transmission of encrypted signals. It also covers cablecasting, which signifies the transmission of signals by wire, encrypted or not¹¹⁹. In that respect it overlaps with the CAD regarding pay-TV. However, the Draft Treaty excludes transmissions over computer networks, although a proposal in this sense was made by the European Commission. The proposal to extend the Draft Treaty to rights of broadcaster simulcasting on the Internet was left aside at the 2006 May meeting that settled on the scope of the Treaty.

The WIPO Draft Treaty grants protection which is restricted to the signals used for the transmissions by broadcasting organisations in respect of their broadcast and does not cover works and other protected subject matters carried by such signals. It does not protect retransmission and on-demand services (PPV, VoD, etc)¹²⁰. Up to now there was still some doubt as to which approach was to be adopted in the Draft Treaty, a 'rights' approach or a 'signal-based' approach. The latter, a more narrow one, seems to have retained full recognition in the non-paper¹²¹, as stated in article 1: 'The objective of this Treaty is to provide effective and uniform international legal protection, on a signal-based approach, for broadcasting organizations against unauthorized use of their broadcasts'.

¹¹⁶ Position of the European Parliament adopted at the first reading on 25 April 2007 on the proposed Directive on criminal measures aimed at ensuring the enforcement of intellectual property rights

<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2007-0145+0+DOC+XML+V0//EN&language=EN>

¹¹⁷ SCCR 15/2 Consolidating text for a treaty on the protection of broadcasting organization;

http://www.wipo.int/documents/en/meetings/2004/sccr/pdf/sccr_11_3.pdf

¹¹⁸ Non-paper on the WIPO Treaty on the Protection of Broadcasting Organizations, 20th April

¹¹⁹ Article 5: definitions SCCR/15/2

¹²⁰ Article 6 : Scope of application SCCR/15/2

¹²¹ See Non-paper 20th April, Article 1: Objectives

This is the general legislative context in which the CAD is situated. The CAD being a rather early instrument in comparison of the extensive legislation that follows, it is legitimate to take into account the fact that the AV and media market has rapidly evolved since its adoption. In particular, the emergence of widespread IP infringements through P2P piracy networks (see above chapter 2.6.2 for an economic analysis of this trend) has deeply modified the context to which the CAD was initially referred.

With reference to the mentioned WIPO Draft Treaty, it is important to point out that this piece of international legislation would enhance the neighbouring rights enjoyed by broadcasters adapting them to the digital environment (albeit with the exclusion of internet simulcasting). As a consequence, broadcasters would be reinforced as right holders in the fight against piracy and would be less dependent on the CAD, which would then essentially serve the needs of CAS providers.

4.3.2 Legal protection of media content

The EUCD and the two following enforcement directives focus on IP content, however thereby restricting protection to copyright and related rights works and excluding other AV contents (such as, for instance, sports event).

The EUCD may overlap in some respects with the CAD; however, the legal protection it grants is restricted to **copyright**¹²² **protected works**. Indeed, article 6(3) states that there are 'protected only' measures which are 'designed' to protect copyright or any related rights, as well as the *sui generis* right provided for in Chapter III of Directive 96/9/EC on the legal protection of databases.

This implies that devices protecting works or subject matters that are not protected by copyright or any related rights would not fall within the ambit of the EUCD. The Directive only covers information goods which enjoy a specific form of IP protection – namely copyright and related rights. The EUCD leaves aside an important category of content examined by the study – **sports rights**. Sports rights (in particular, because of the economic relevance of football amongst the European public, football rights) are therefore the subject of specific attention in relation to the suggestions made in the study on how to improve the effectiveness of the CAD in tackling piracy.

The box below illustrates the status of sports rights as a special category of media content:

¹²² The term copyright is hereinafter used as a unique concept encompassing traditional copyright (or authors' right) and related rights such as the rights of performers, producers and broadcasters

Sports rights and copyright¹²³

Contrary to copyright standards, no harmonisation of sports rights has taken place at EU level. Sports rights are defined and managed at national level. It can be argued that sports events, when they are organised as entertainment for public audiences, should be granted legal protection in order to be properly protected against piracy and counterfeiting, on par with the level of protection currently enjoyed by right holders under the IP system.

At the national level, the organisers of a sports event are generally considered as the owners of the rights to that event, including the exclusive economic exploitation rights. This is explicitly recognised by France's Sports Act of 16 July 1984. France is the only country laying down provisions on the rights of sports events' organisers by law; in other jurisdictions, this is an unwritten accepted rule. Sports events do not constitute works in the sense of copyright law – they are not created by a natural person, they cannot be reproduced, they are always unique and new.

Copyright protection, under the form of the related rights granted to broadcasters for the transmission of their programmes, can on the other hand be given the AV recording of the sport event. Therefore organisers of sports events rely on broadcasters to implement and enforce their rights.

Besides ownership rights related to the event, organisers may also acquire, from the athletes, the rights to their personal image – image rights are derived from personality rights and can be transferable.

There is no definition on the notion of an organiser of a sports event at EU level. At Member State levels, the definition varies from member to member. The French Sports Act mentioned above provides for a clear definition of rights stating that the exploitation rights for sports events belong to either the sports federations or the organiser of the event. Organisers may be private individuals. In other countries, the notion of organisers is disputed – however, in principle the organiser is defined as the person/organisation responsible for most of the organisational work and bearing the economic risk for the event. For football leagues, the clubs are generally considered as the original holders of the rights; national and international federations are often considered co-organisers.

Exploitation rights are granted to organisers of the event according to national rules varying across different countries. National rules determine how exploitation rights may be transferred and whether organisers own the right to broadcast the event. The free transfer of sports rights is limited at EU level by competition law rules and by rules related to public access to information such as provisions in the TWFD on events of major importance and on the right to short reporting.

Some sports rights representatives, in particular UK and US stakeholders, have no doubts on the fact that sports events fall within the scope of the copyright regime, and benefits from the same level of protection granted to copyright holders.

¹²³ The content of this section is derived from an article published in March 2004 in IRIS Plus, the Legal Observations of the European Audiovisual Observatory, with the title "Sport as Reflected in European Media Law"

This, however, raises some questions because, as stated above, no national legislation defines sports events (including football matches) as works protected by copyright. The main explanation comes from the difference in the nature of copyright law existing in the UK (more broadly, the Anglo-Saxon system of copyright also in force in other countries such as the US) when compared to the “droit d’auteur” regime in continental Europe. The Anglo-Saxon copyright system protects investment and privileges exploitation of works. The continental “droit d’auteur” regime, which implies that copyright is granted to artistic and intellectual creations, automatically excludes sport events or performances from copyright protection.

In some cases (e.g. UEFA’s Champions League), the organisers of sport events are considered to be owners of the copyright to the event itself in relation to various items, such as the broadcast of the event, often by means of contractual clauses concluded with the licensed broadcasters, as well as various graphic and AV elements accompanying the broadcast of the event (logos, music, etc).

Apart from the broadcast of the event, the listed copyrights relate to “ancillary” works of creation which naturally fall within the scope of copyright regime but which are not inherent to the sports event per se – they constitute a range of additional graphic and sound elements used to provide a uniform version of the broadcasts of the event to licensed broadcasters.

This is a weak form of protection because if all these ancillary elements are eliminated by the retransmission of the sports event, no copyright would be infringed. Protection is not granted to the sports event per se but to its broadcast.

The issue at stake is the equal recognition of sports rights on the same footing as the current IP regime. This position is strongly held by some sports’ right holders such as the LFP, the organisers of the Tour de France (ASO), the organisers of Roland Garros’ tennis tournament (FFT), the Bundesliga and the German national Olympic Committee. They argue that the current IP regime is not adapted to protect sports rights against piracy. In particular, they call for the inclusion of sports into the IP regime, or an equivalent regime, as this would allow them to have access to a range of procedures and sanctions against piracy.

French stakeholders suggest enlarging the IP regime to include sports rights. In their view, this should be done at European level. German sports federations have put forward a concrete proposal at national level calling on the German authorities to grant a *sui generis* rights on the model of IP to organisers of sports events.

One of the key provisions of the EUCD is article 6(1), it grants legal protection against circumvention of technological measures. ‘*Technological measures*’ are broadly defined in article 6(3) as being ‘any technology, device or component that in the normal course of its operation is designed to prevent restricted acts, in respect of works or other subject matter¹²⁴’. The EUCD distinguishes between two categories: copy control systems on the one hand and access control on the other. It is the second one which overlaps with the CAD as the EUCD states that it encompasses ‘*encryption, scrambling or other transformation of the work or other subject-*

¹²⁴ Directive 2001/29/EC, article 6 (3)

*matter*¹²⁵. Cryptography, passwords and digital signatures that secure the access to information and protected content fall under this category. Nevertheless, the overlap is restricted to technologies that protect copyright content. No mention is made of remuneration requirement. The core difference between the CAD and the EUCD is that the first protects access control to a service whereas the EUCD protects the IP protected work itself.

In the exact same way, although the Enforcement Directive also aims at fighting piracy, its scope¹²⁶ differs from the CAD's as it only protects content, copyright and related rights but not the CA device itself or CAS. It could however be seen as a complementary directive. This underlines the fact that the CAD has a technical approach to the piracy issue whereas the Enforcement Directive is content oriented. The sanctions and remedies provided for in the Enforcement Directive are better defined and more precise than the measures laid down in the CAD. In this respect, the Enforcement Directive is a very useful legal tool. However, the fact that it only covers IP content prevents other types of AV and media content to benefit from it.

In the same way as the EUCD and the Enforcement Directive, the Criminal Sanctions Directive only covers IP rights, with the exception of patent rights (copyright, rights related to copyright, trademark rights)¹²⁷. The purported Directive aims thus at harmonising certain criminal sanctions in order to effectively combat counterfeiting and piracy in the Internal Market¹²⁸, namely with regard to the level of sentencing for natural and legal persons, especially in terms of prison sentences, fines and confiscation¹²⁹. Moreover, provisions should also facilitate criminal investigations and involve the cooperation of holders of IP rights.

The set of penalties and the minimum thresholds envisaged by the proposed Criminal Sanctions Directive would fill the loopholes of the CAD in terms of nature and levels of sanctions. Indeed, stakeholders very often complain about the lack of enforcement in the Directive and especially called for a minimum threshold for prison sentences and fines. The Criminal Sanctions Directive, by harmonising the abovementioned sanctions, will certainly fill those gaps particularly since a recital was added to ensure that it covers CAS. Recital 17 states that '*it is necessary to ensure adequate protection of intellectual property rights in the audiovisual sector, as indicated by Directive 98/84/EC of the European Parliament and of the Council of 20 November 1998 on the legal protection of services based on, or consisting of, conditional access*'. However, the Criminal Sanctions Directive only addresses IP content and thereby excludes any other non-copyright protected content.

¹²⁵ Directive 2001/29/EC, article 6 (3)

¹²⁶ Statement by the Commission concerning Article 2 of Directive 2004/48/EC of the European Parliament and of the Council on the enforcement of intellectual property rights (2005/295/EC) 13.04.2005

¹²⁷ Article 2, *Ibid*

¹²⁸ Recital 5, Position of the European Parliament adopted at the first reading on 25 April 2007 on the proposed Directive on criminal measures aimed at ensuring the enforcement of intellectual property rights, P6_TC1-COD(2005)0127

¹²⁹ Recital 8, *Ibid*.

4.3.3 The effectiveness of legal instruments to address media content piracy

The EUCD offers a harmonised level of protection to copyright and related rights owners across the EU against the infringement of their rights. The EUCD in particular provides legal protection for technical protection measures applied to digital content, and represents an effective legislative instrument in the hands of right holders to address internet piracy. Apart from the difference in scope of protected subject-matter, the main difference is in the fact that the CAD only covers commercial acts (although it leaves the possibility to Member States to go beyond this provision). The EUCD in that respect is more encompassing: whereas the CAD targets exclusively commercial dealing in devices that allow unauthorised circumvention (whilst leaving Member States the ability to incriminate private circumvention), the EUCD targets the act of circumvention itself which therefore systematically encompasses private behaviours.

The proposed Criminal Sanctions Directive will cover 'all intentional infringements of an intellectual property right on a commercial scale, and aiding or abetting and inciting the actual infringements [which] are treated as criminal offences'¹³⁰. According to the latest text as amended by the European Parliament, criminal sanctions should then be rather restrictive and only apply to infringements purposely carried out to achieve a commercial benefit. Private users committing infringements for personal and non-for-profit purposes are currently excluded from the scope of the draft Directive. The Directive would be aimed at serious organised crime and not at private users. This is disappointing in the views of many right holders as extensive illegal download i.e. P2P could not be liable to severe penalties. They argue that this will have the effect of weakening IP in general and that it will encourage illicit P2P practices.

On the other hand, the WIPO Draft Treaty proposes to create new exclusively based rights in broadcast signals that would enhance the existing legal protection of broadcasts to take into account technological changes since the 1961 Rome Convention. Those rights will grant abovementioned broadcasting organisations with: exclusive right of authorising retransmission of their broadcasts¹³¹; exclusive rights of communication to the public upon payment of an entrance fee¹³²; exclusive right of the initial fixation of their broadcast¹³³; exclusive right of authorising direct or indirect reproduction, in any manner or form, of fixation of their broadcasts¹³⁴; exclusive right of authorising the making available to the public of the original copies of fixations of their broadcasts¹³⁵; exclusive right of transmission following fixation¹³⁶ and finally exclusive right of making available to the public of fixed broadcasts so that people can access them from a place and a time chosen by them¹³⁷. The non-paper indicates that those exclusive rights should be extended to retransmission and deferred transmission. The Draft Treaty provides legal protection for the signals of the broadcasting and cablecasting organisations¹³⁸ but does not affect or address the rights on content carried by the signal.

¹³⁰ Article 3, *Ibid.*

¹³¹ Article 9 : right of retransmission SCCR/15/2

¹³² Article 10 : rights of communications to the public SCCR/15/2

¹³³ Article 11: right of fixation SCCR/15/2

¹³⁴ Article 12: right of reproduction SCCR/15/2

¹³⁵ Article 13: right of distribution SCCR/15/2

¹³⁶ Article 14: right of transmission following fixation SCCR/15/2

¹³⁷ Article 15: right of making available of fixed broadcasts SCCR/15/2

¹³⁸ Article 16: protection in relation to signals prior to broadcasting SCCR/15/2

Article 19 of the Draft Treaty regarding obligations concerning technological measures is the main overlapping point with the CAD. Regarding that point, the non-paper is more precise as it encloses an *article 9* on protection of encryption and Rights Management Information stating that states shall provide: *'adequate and effective legal protection against unauthorised decryption of an encrypted broadcast, or circumvention of any technological protection measure having the same effect as encryption; manufacture, importation, sale or any other act that makes available a device or system capable of decrypting an encrypted broadcast; and removal or alteration of any electronic rights management information used for the application of the protection of the broadcasting organizations'*. It differs from the wording of the CAD which focuses on the commercial aspects of the infringement and includes 'the installation, maintenance or replacement for commercial purposes of an illicit device' and 'the use of commercial communications to promote illicit devices'¹³⁹. The Draft Treaty on the other hand does not mention any commercial requirement for an act to be infringing as long as it makes available a device or system decrypting broadcasts or circumventing a DRM.

The Draft Treaty also includes a provision on the enforcement of rights. The signing states must guarantee that the measures necessary to ensure the application of the Draft Treaty are adopted, and additionally that enforcement procedures are available under national law to permit effective action against abovementioned infringing acts¹⁴⁰.

This piece of legislation overlaps with the CAD as it protects the signal of broadcast programmes. The advantage of the WIPO Draft Treaty in respect of these two pieces of legislation is that it not only covers technical issues (like the CAD) but it provides protection to BOTH content (defined as broadcast) AND technical protection measures such as CAS. From the perspective of broadcasters, the major limit of this Treaty is that it does not properly address internet piracy, as simulcasting is excluded from its scope.

It can be argued that the same level of protection granted by the WIPO Draft Treaty should be extended to all types of media and AV content. The issue at stake is how to grant an appropriate level of legal protection to owners of content, going beyond the current IP system, in order to better tackle piracy problems brought about by technological evolutions, in particular by the widespread usage of illicit P2P software.

These problems are currently not addressed by the CAD, which essentially constitutes a tool in the hands of CA providers to fight against the circumvention of CA systems. The indications listed in the sections above on possible improvements to reinforce the effectiveness of the CAD should therefore be accompanied by a wider reflection on how to upgrade the level of protection offered to content so as to reinforce the whole AV value chain.

¹³⁹ Directive 98/84/EC, article 4 (b) and (c)

¹⁴⁰ Article 24 : provisions on enforcement of rights SCCR/15/2

Chapter V: Conclusions

5.1 Main findings of the study

The directive on the legal protection of services based on, or consisting of, conditional access (Directive 98/84/EC, hereinafter CAD) was adopted on 20 November 1998.

The objective of the CAD is to provide conditional access (CA) systems protecting cross-border services that are remunerated, effectively Pay-TV and on-demand services, with a common standard of legal protection. In other words, it aims at compelling all Member States to adopt a certain level of sanctions and remedies in order to efficiently fight CA piracy.

The CAD covers both broadcasting (television and radio) and interactive online services (information society services - ISS) that use some form of conditional access.

The CAD includes references to a wide range of policy motivations. Its legal basis, internal market, implies that its primary objective is to facilitate cross-border CAS provision in order to facilitate cross-border AV services. It mentions a number of associated policies with the noticeable exception of IP protection. Essentially it promotes the idea that a better securitisation of remunerated information services will facilitate cross-border trade of the services within the Internal Market.

In the following sections, we will distinguish between economic and legal conclusions with a view to making concrete proposals in respect of each of the issues that remain to be addressed.

The study shows that it is impossible to assess the CAD in isolation from other relevant pieces of EU and international legislation affecting the European media landscape in general and notably regulations related to IP protection, content regulation or competition law.

5.1.1 The economic findings

Media and non-media ISS

A first distinction has to be made with regard to the economics of CAS: CA systems apply both to monetary transactions such as e-commerce or e-payments, and to the shaping of intellectual property (IP)-based entertainment and audiovisual (AV) media industry, markets and distribution systems. The status of the information underlying these activities and the externalities attached to them are deeply different in nature.

Non-media Information Society Services (ISS) are based on the exchange of private information. Such information is critical for the supply of the service but has no intrinsic market value. Its encryption is part of the securitised service billed to the consumer: it is embedded, not

standardised, and generates marginal incentives to be hacked. The externalities associated with the reliability of those services are covered by telecoms or banking service regulations and by general criminal laws.

On the other hand, media are information goods addressing massive audiences. They carry specific positive and negative externalities. The assessment and the internalisation process of these externalities have followed different routes depending on the national history of each country. The first internalisation tools have been IP (copyright and authors' right) and censorship rules which show different patterns in each country. The US has constantly followed a route based on a powerful internalisation of the media externalities by the market. The US media industry, and especially the AV sector, has been structured according to market efficiency criteria. It is highly concentrated and vertically integrated. In the European countries, the AV sector was born as a public service and has progressively been opened to private companies while public authorities have been regulating their respective markets. The European AV industry is therefore highly scattered, fragmented and heavily regulated.

Europe and media economics

The EU has been quite successful in creating common internalisation rules adapted to the telecoms — private information communication — externalities. The setting up of the GSM standard and its roll-out under a common CPP (calling-party-pays) pricing rule has allowed Europe to unify, through a brand new infrastructure, its telecom industries and markets. However, the problems posed by the media externalities are far more complex. The idiosyncrasy of these externalities, the choice of the internalisation tools and the path-dependency of the existing media markets, make the harmonisation of these markets highly difficult to achieve.

Moreover, media economics are based on price discrimination. The heterogeneous distribution of individual preferences and the high failure risk in production and distribution require pricing the products at the consumer's marginal utility. Efficient discrimination brings better returns to the content industry while maximising the consumer satisfaction. If markets are rewarding, these returns may be reinvested in new product creation.

An important characteristic of Europe is the linguistic and cultural segmentation of its media markets: such segmentation amplifies the diversity and the national disparities of consumer preferences. Each content being marketed on smaller segments, it also amplifies the risk in media production and distribution. Moreover, it generates higher discrimination costs. European media industries then face bigger failure risks and higher marketing costs than their US competitors. This situation results in an average revenue per household for the US media industry which is twice as high as the European one.

Therefore, for a series of reasons which are either structural (linguistic and cultural differences) or which could be transitory (fragmented national regulatory frameworks that are the result of strong political values and historical traditions), the European media markets are characterised by high discrimination costs.

To date, European policy has not been successful in reducing these costs. Yet, unless this issue is tackled at EU level, a growing gap is to be expected between the performance of ISS and media industries in Europe compared to the US.

Conditional Access Services

CAS have appeared to better discriminate AV media goods through pay-TV services. The economies of scale in such devices have raised the need for a European regulation protecting them cross-border against piracy. While piracy affects the efficiency of discrimination, the CAD contributes to containing discriminations costs.

The CAD has been well fitted to the needs of the pay-TV industry. This industry has been able to receive legal protection for its technical delivery systems and therefore, for the added-value of its business. The CAD has reinforced the legal arsenal at the disposal of pay-TV operators, allowing them to get the best efforts from their technology suppliers so as to secure their content delivery. However, the implementation of the Directive has not been sufficient in eradicating piracy or in promoting cross border activities.

5.1.2 The legal findings

The study shows that the implementation of the CAD has succeeded in harmonising to some extent the legal protection of CA services within the internal market. Yet, it also reveals that CA piracy and legislation addressing this problem are far from being the priority of public authorities (compared to copyright law or cyber crime legislation for instance). In fact, in the countries where no specific legislation addressing the circumvention of CAS existed prior to the adoption of the CAD, no public consultation or debates have been held to transpose the CAD and the implementation has been mainly a “copy-paste” of it.

However, it seems that in general the CAD has made it easier for the stakeholders to enforce their rights and in that regard it has improved the situation. The CAD in particular has filled existing legislative gaps insofar as horizontal or very broad legislation such as competition, copyright or criminal law were perceived as rather inadequate tools to fight a specific form of infringement such as CA piracy. The CAD has made it easier for concerned stakeholders such as pay-TV operators or CA industries to take legal actions and have legal standing in courts.

The implementation and application of the CAD – main weaknesses

1. The general lack of interest from Member States in the implementation and monitoring of the CAD. Public authorities are unaware of the trans-national effects of the CAD. No cross-border co-operation has been established in this domain. To remedy this situation, the Commission should consider setting up a working group composed of Member States’ representatives in order to improve monitoring and discuss ways of enhancing the effectiveness of the CAD, on the model of the expert groups existing in the framework of other Directives such as the E-commerce Directive or the Television Without Frontiers Directive.

2. The inadequacy of the CAD to address new forms of CA piracy that emerged since its adoption. As signalled by industry stakeholders, technology has evolved quickly in the last years and specific infringing acts (such as code-word sharing or multi-post cards) are not properly addressed by the

CAD. The wording of the CAD should be reviewed in order for its provisions to be flexible enough to take into account new types of CA piracy.

3. The low level of harmonisation achieved by the CAD, which only includes minimal prescriptions with regard to the level and nature of sanctions applicable to the circumvention of CAS. Sanctions and enforcement are considerably different across member states, and some safe harbours still exist. The majority of stakeholders involved in the CAS-related media business (right holders, pay-TV operators, ISS providers, CAS providers, hardware manufacturers) underline the importance of including the private use of infringing devices in the list of activities subject to sanctions. Stronger sanctions (in particular, criminal sanctions) are also considered to be more effective in fighting piracy and should be made mandatory by the CAD.

5.2 IP protection and the CAD

The economics of IP content distribution shows that vertical relations along the chain joining the right holder to the final consumer carry numerous moral hazards. Piracy, which results in allowing the final customer to get more than he pays for is one of these. Because of moral hazard, economic incentives exist all along the distribution chain to provide consumers with unpaid content.

The unwillingness of industry stakeholders to provide data on piracy is symptomatic of the moral hazards which are endemic across the whole distribution chain. Lack of data on piracy (which is considered as commercial secret) makes it very difficult, not to say impossible, to correctly assess the efficacy of existing regulatory measures such as the CAD in addressing piracy.

Notwithstanding its shortcomings, it seems that business operators benefiting from the CAD are satisfied with its adoption and its implementation into national law, although most of them call for further upwards harmonisation of the law in terms of sanctions, remedies and inclusiveness of the list of prohibited activities. Yet this call cannot be accompanied by empirical evidence that the CAD has been effective in tackling cross-border piracy nor that its objectives in terms of Internal Market have been met.

The CAD seems not to be adequate to tackle some moral hazard issues that have been brought to fore in the economic analysis (see the following section for more insight on this question) – in particular, the CAD appears as inefficient in the eyes of industry stakeholders to deal with circumvention of IP occurring in new media ISS. At least, the CAD is not used in this context, or other legislative tools as considered as more effective.

The study shows that the CAD cannot be assessed in isolation from a range of other pieces of European and international legislation affecting the media sector such as copyright, e-commerce, telecom and new media services regulations. All these instruments play an important role in the development of an internal market for AV services and the fight against piracy.

5.2.1 The importance of right holders in the structuring of AV markets

The economic theory suggests that private contracts based on the preliminary consent of the right holders are the best economic tools to monitor moral hazard existing along the media distribution systems. Protection of the right holders should be strengthened in order to better structure distribution markets. The vertical fragmentation of the industry, which has given more visibility to service providers such as pay-TV operators and ISS providers (and to CAS providers) than to the right holders, is reflected in the CAD which appears at first sight more focused upon CA system than on IP protection.

The IP legal status of digital content and its effective enforcement and application appear as the key driver of efficient markets and distribution systems. This driver appears not to be properly addressed by the CAD. Right holders consulted in the course of the study estimate that as they are not explicitly included in the scope of the CAD, they have no legal means, through this instrument, to fight downstream piracy by themselves. They therefore rely on their pay-TV distributors or CAS providers whose market power is, in theory, reinforced by that tool.

Although the CAD provides for a general definition of persons entitled to apply for the application of its measures (all “providers of protected services whose interests are affected by an infringing activity” as stated in article 5 of the CAD), right holders consider that this definition does not properly address their interests as CAS piracy only indirectly affects their rights, whereby service operators and CAS providers enjoy an easier access to the CAD. This issue should be the object of careful consideration from the European Commission in the context of a possible amendment of the CAD.

The CAD shows important shortcomings in unifying the European market for audiovisual media services, which is one of its main objectives. This is due to both structural reasons linked to the fragmentation of the European market along national and/or linguistic borders and to deep differences in the way national regulations have developed in this field. The grey market situations resulting from this failure have to be examined by the Commission in this context.

In general, the grey market appears not to be conflicting with the CAD. An essential distinction has to be drawn between the infringement of CAS (piracy) which is the object of the CAD and the breach of contractual obligations imposing territorial restrictions to rights exploitation, which is in fact a tool to discriminate at the cheapest costs the disseminated consumers living out of their cultural zone. Such an objective is in line with the containment of discrimination costs provided by the CAD. Right holders should be adjusting their contracting strategy when the transaction costs of grey markets overwhelm their benefits.

However, in view of the growing size of grey markets across Europe, and taking into account the political goal of establishing an Internal Market, the Commission could broker some discussions with stakeholders on a better apprehension of the grey market and its handling to prevent copyright infringements. The political goal of establishing an Internal media market should be in line with improving discrimination efficiency while reducing transaction costs.

5.2.2 Technical-oriented vs IP-oriented regulation

From an economic perspective it is up to the right holders to master the multimedia exploitation of their products according to the relative efficiency of each versioning channel. This is the only way to optimise the price discrimination of media goods. Otherwise, competition between distribution channels cannot be economically arbitrated. The CAD allows pay-TV distributors to get specific technical protection for their channel. Such a situation may induce regulatory capture if this channel gets better protection than another. The risk is that the CAD might be perceived as a technical regulation, improperly geared towards protection of technical systems (in this case, CAS) against protection of rights.

Technology based regulation is threatened by obsolescence, complexity, and inefficiency. In this context, it is useful to draw comparisons with other pieces of EU and international legislation addressing similar issues as the CAD. The EU Copyright Directive as well as the Enforcement Directive, the proposed Criminal Sanctions Directive and the Draft WIPO Broadcasting Treaty appear more suited to rule fair economic relations in content distribution systems. In particular, they affirm the economic value of IP goods and explicitly condemn all forms of circumvention of “effective technological measures” at every stage and for any purpose.

It appears that a convergence of the CAD with the approach set out in the above mentioned pieces of legislation would reinforce its role as an essential tool in the legal arsenal available at European level to counter IP piracy across all digital platforms. The protection of technical systems (which is inefficient per se) should be the consequence of the protection of content and not the opposite. As it stands, the CAD seems imbalanced in favour of providers of technical systems. The European Commission should redress this situation.

Linked to this issue is the question whether the CAD also covers technical protection measures such as DRMs (Digital Rights Management systems). Market players seem to consider that this is not the case – the CAD is mainly used in practice to deal with circumvention of CA systems in the pay-TV market (CAS, set-top boxes), although its use could be extended to new media. The industry has a tendency to believe that non linear media services are better covered by the EU copyright directive (EUCD) and that the CAD has little application in this area. This situation needs to be clarified by the Commission.

Adequate sanctions should be applied to any form of circumvention of content protection, whatever the use or the reason may be – private use of infringing devices should not be excluded from sanctions. An appropriate combination of civil law and criminal law provisions would improve the efficiency of the CAD in addressing all sorts of pirate activity.

If amended following the suggestions provided above, the CAD has its place alongside the other regulatory instruments examined by this study in the framework of a concerted effort to enforce IP and to secure media markets across Europe. However, additional efforts should be undertaken at EU and international level to modernise IP regulation and enforcement mechanisms.

5.2.3 ISPs' liability in copyright enforcement

Moral hazard issues are also endemic in the roll-out of broadband networks. P2P circumvention operates as a free additional utility associated with broadband services. The economic impact of P2P circumvention depends on the patterns of multi-system competition as well as on the willingness of public authorities to prioritise IP protection versus infrastructure roll-out. The expansion of P2P practices creates a structural moral hazard in content distribution over broadband networks: any Internet Service Provider (ISP) is simultaneously a deliverer of legal and illegal content. As a consequence, as long as broadband networks are seeking new customers, they have no interest in fighting against piracy.

Currently, ISPs are protected by the limited liability conditions laid down by the E-commerce Directive; privacy and data protection laws at EU and national level may be used with the aim of shielding P2P final users from legal actions initiated by right holders on grounds of IP infringements. The Commission should consider opening a debate on the role of access and service providers in contributing to a secure digital media environment, with a view to fostering collaboration between all industry players and consumers on how to achieve sustainable business models and enhance Europe's competitiveness on a global scale. A cross-industry code of conduct could be facilitated by the Commission in this context. The forthcoming review of the E-commerce Directive and the review of the EU electronic networks regulation (telecom package) provide an opportunity for the Commission to take an initiative in this context.

The Commission should also consider examining more in-depth the whole question of piracy on P2P networks by for instance launching a study on consumer behaviours and expectations on new ISS platforms, as well as a study on the adequacy of the existing EU regulatory framework to deal with P2P infringements.

5.2.4 Expansion of IP protection to new right holders?

The course of the study has shown a demand for a better protection of sport events. The protection of sport rights seems to be a pressing issue considering their economic importance for clubs, federations, event managers or broadcasters.

Sports rights are defined and managed at national level. It can be argued that sports events, when they are organised as entertainment for public audiences, should be granted legal protection in order to be properly protected against piracy and counterfeiting, on par with the level of protection currently enjoyed by right holders under the IP system.

Sport events do not constitute original works in the sense of author rights' law. Organisers of sport events argue for protection under the copyright regime which is more adapted to enable the protection of investments. Copyright protection, under the form of the related rights granted to broadcasters for the transmission of their programmes, can on the other hand be given to the AV recording of the sport event. Therefore organisers of sports events rely on broadcasters to implement and enforce their rights. Protection is not granted to the sports event per se but to its broadcast or streaming.

The question of the legal protection of media right holders currently deprived of proper IP protection (such as sports right owners) should be examined. A consultation would enable the Commission to clarify the issues at stake in the context of rapid market and technological developments.

5.2.5 Rights licensing

Linked to this issue, a question that needs to be raised is the analysis of the relations linking different categories of right holders and digital service providers. The Commission through its October 2005 Recommendation on collective licensing for online music distribution has proposed some changes in the way the licensing of music rights takes place.

In particular the Recommendation aims at achieving a higher level of integration in the Internal Market for online music by inviting individual right holders to choose their collective rights manager in relation to usage going beyond national borders; on the other hand collective rights managers are supposed to issue trans-national (potentially pan-European) licenses for the commercial exploitation of their music rights.

This process has encouraged significant market developments which may extend to the whole media sector. The issue at stake is the possibility for service providers to obtain multi-territorial licenses for distributing media content, while preserving and enhancing the value of rights. Structured dialogue amongst all the interested stakeholders is needed in order for this process to open new opportunities to media players willing to operate on a pan-European basis.

Two additional investigations from the Commission as part of competition complaints (one about CISAC's model contract and the other one about Apple's *iTunes* commercial practices that would fragment the market of online music distribution) are to be considered in this context.

The issue of licensing of rights is also addressed by the forthcoming Communication from the Commission on *Content Online* expected later this year.

5.2.6 Competition policy and media industry

A further point concerns the need to reflect on the relation between competition policy and the competitiveness of the European media industry. It has emerged in this study that a certain degree of vertical integration in the AV industry is a precondition for the sector to thrive and expand. In particular the study has revealed that moral hazard is greatly reduced in cases where there is a strong link (vertical integration being an example of such strong links) between CAS providers and pay-TV or service operators.

The pursuit of technological interoperability in the field of CA and other protection measures such as DRMs may impair the industry's ability to ensure safe delivery channels for its products across

the whole range of digital platforms. Interoperability is important to ensure consumer acceptance of new technologies and products; however it should not come at the expenses of security and reliability of technical protection measures.

This is a topic of discussion at EU level between the European Commission and relevant stakeholders.

5.3 Final remark

The CAD has been conceived as an internalisation tool for expanding digital service markets. Its evaluation through this study brings an opportunity to re-think the externalities and the harmonisation of the European media markets. Media markets will not be harmonised through technology because, conversely to telecoms, their value is directly related to content. IP is then the key internalisation tool of positive media externalities. A possible review of the CAD provides an opportunity to discuss at EU level the adequacy of the existing corpus of IP rules in addressing the problems brought by new digital platforms to Europe's media market.

The digital environment sets up a new vision of media goods in which such products are no more attached to a specific production process (intellectual creation) or to particular physical media, but rather to the utility carried by information goods. In other words, the industrial organisation of this sector, which, through the long history of European countries, has been strongly relying upon public intervention in fostering creation, should be now more in line with the specific functioning of media markets. Those markets should be designed so as to maximise IP rights revenues, which would have to be reinvested in new creations, at a rhythm which could match up that of the EU's major competitors. A discussion on the state of IP rights across Europe should tackle the following issues: how to facilitate all transactions involving such rights; how to help rights concentration and risk management through wider portfolios; and how to enhance rights exploitation through more efficient distribution systems.

This would require, of course, a strong commitment on the side of the Member States which will have to abandon some of their prerogatives in monitoring media externalities. In counterpart, it would allow the EU to discuss ways to improve all the IP rules applicable to digital media goods, with a view to facilitating commercial transactions as well as, probably, a wider and more efficient vertical integration in the industry.

This approach has wide-ranging implications touching upon key aspects of the EU's Internal Market, competition and information society policies. A wide consultation with the interested parties is therefore recommended, in order to consider the future of the European media industry in the digital environment.

Chapter VI: Annexes

ANNEX I	Existing national legislations before the implementation of the CAD
ANNEX II	Interviews on CAD implementation
ANNEX III	Statistics on the diversity of AV content markets and digital distribution systems over Europe
ANNEX IV	Glossary: acronyms, abbreviations, technical and economic vocabulary