# REGULATING CONVERGENCE: Approaches of the EU and the UK, and New Issues in Media Regulation

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#### Abstact

Traditionally Tele-communications and broadcasting originated from different regulatory cultures. In the past Tele-communications and Broadcasting markets within the EU were state-owned monopolies. In the 90's the EU forced Member States to liberalize their Tele-communications markets. On the Broadcasting side EU found it difficult to develop a regulatory regime concerning content and culture. Member States had the sole power over these issues. But convergence between these sectors and information technologies allow the EU to regulate this new area. This article will examine the development of convergence and its legal and regulatory implications.

#### 1.Introduction

The dictionary<sup>1</sup> definition of Convergence is 'the act of converging and especially moving toward union or uniformity'. According to Gibbons, there are three types of convergence; technological convergence, trans-frontier convergence and regulatory convergence.2 Technological convergence may occur within an industry or different types of industries regulated by different rules and regulatory bodies. The first type (intra-sector) may occur mostly in the telecommunications sector. On the basis of technological developments, the difference between mobile networks and fixed networks type (inter-sector) was minimized. The second telecommunications and media (i.e. broadcasting) sectors. The Information Technologies sector can also be added to these two. In this article, we deal with inter-sector convergence and the future of regulatory bodies in telecommunications and media sectors.

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By following Gibbons' classification this article deals with Technological convergence and its implications for regulatory space. As described below, convergence covers a huge area. And within the context of this article only a limited area of convergence is examined. Now Digital TV is a common form of convergence. Over a quarter of UK households have digital TV. After examining the European and British approach to convergence, the regulation of Digital TV will be the point to focus on.

## 2. Description

OFTEL<sup>3</sup> (in its second submission to the Parliamentary Select Committee: Beyond the telephone, the television and the PC III) described convergence as the coming together of the following activities:

- a. Telecommunications voice and data services-
- b. Computing both hardware and software-
- Broadcast and other networked audio-visual services
- d. Any combinations of the above (e.g., interactive services)

In the Commission's Green Paper the examples of convergence are given as below:

- Home-banking and home-shopping over the Internet,
- Voice over the Internet;
- E-mail, data and World Wide Web access over mobile phone networks, and the use of wireless links to homes and businesses to connect them to the fixed telecommunications networks;
- Data services over digital broadcasting platforms;
- On-line services combined with television via systems such as Web-TV, as well as delivery via digital satellites and cable moderns;
- Webcasting of news, sports, concerts and of other audiovisual services.

There are two groups in the convergence debate: 'maximalists' believe that convergence will occur in every area and there will be faster movement towards converged environment. However, 'minimalists' argue that convergence will not take place in a short period of time and it will not occur over the whole market. They give Digital TV as an example. Digital TV was basically built on the conventional TV concept and provides some new converged services. But it is still seen as TV.

## 3. Regulating Telecommunications and Media: The Differences

The Telecommunications and Broadcasting sectors come from different regulatory traditions.

The Telecommunications Sector:

- a. 'Carrier-regulated' with the obligation to ensure universal service
- b. To provide non-discriminatory access and
- Not to interfere with content.

The Media sector has been highly regulated with controls on the content of the broadcast.

In the Telecommunications Sector the flow of communication is

- Interactive and
- b. One-to-one

In Broadcasting, the communication flow is traditionally

- a. One-to-many and
- b. Non-interactive

Telecommunications has nothing to do with content. This is because it comes from voice telephony, and in voice telephony the important rule is privacy. But the Broadcasting Media comes from radio and television and public influence is the main issue.<sup>4</sup>

Almost every government has used broadcasting as a means to promote its ideas and policies. In addition, taking into account the significant role that broadcasting plays in the functioning of a democratic society, there were measures to preserve pluralism and a balanced range of choices/programmes so as to cater for different groups/ audiences (e.g. minors, minorities, etc.) as well as to promote national heritage, cultural diversity and different viewpoints.<sup>5</sup>

The focus of the regulatory framework for the telecommunications sector has been on networks and service provisions but not on the content regulation carried over those networks.

In telecommunications services all users are treated alike in terms of prices and provision of service quality. But in the broadcasting sector all users are not treated alike. Content regulation takes account of the different needs expressed by the audience: children, cultural minorities, religious beliefs etc. Media regulation is more complicated compared to telecommunications because it has cultural, social and political concerns and these concerns change from community to community and from state-to-state. But telecommunication rules are universal and they are applicable to ail states.

## 4. The problems of EU regulation of Convergence

I. The industrial sectors that are subject to convergence start from very different levels and methods of regulation. The telecommunications sector is liberalised but not uniformly so, supervised by independent national regulators, with a comprehensive EU law framework, and subject to general antitrust review. The breadcasting sector remains heavily regulated nationally, with minimal EU rules in place, and without mandatory arm's length supervision. Information technology has generally escaped regulation at either level. Hence, current regulation is highly asymmetrical.<sup>6</sup>

Commission directives have proved very important in promoting liberalization. Article 90(3) of the Treaty entitles the Commission to issue directives or decisions directly to member states in order to ensure the application of competition rules provided in the Treaty to undertakings (be they private or public) with special or exclusive rights. Since this provision includes public telecommunications operators (PTOs), the Commission has been able to use it to bypass the voting of directives by the Council of Ministers. On that basis, a number of directives were issued by the Commission for the liberalization of telecommunications terminal equipment, services, satellite communications, cable television networks, mobile and personal communications and for full competition.<sup>7</sup>

Member states want to regulate the broadcasting sector with domestic legislation. One of the very few instances of EU legislation in the broadcasting sector is 'The Television Without Frontiers' directive. In the legislative process the German delegation insisted on the Council attaching a written statement to the Directive describing the provision as 'politically' rather than 'legally' binding. This change made the Directive open to interpretation and, furthermore, effectively prevented the Commission from bringing Member States to court for failing to reach quota goals, and thus breaching the Directive.

2. From an institutional perspective, the dual problems of the requisite scope and level of regulation present themselves with particular urgency in this

area, where market developments regularly outpace attempts at regulatory reform.

3. These problems are compounded by the lack of a coherent legal framework within which they can be addressed, other than general principles of EU law.

Unlike the convergence between technologies, convergence through EU Law is not mainly a horizontal process; it has an important vertical, or hierarchical, dimension. It is predicated upon the supremacy of European law toward the legal norms established at a higher systematic level. Inversely, such convergence takes place through the implementation at national level of EU norms elaborated by way of harmonisation.<sup>9</sup>

# 5. The Green Paper on Convergence 10

The Convergence Green Paper is based on three fundamental premises:

- a. That a technology and market driven process of convergence is occurring;
- b. That this process is of pre-eminent potential significance to job creation, growth, regional and global economic integration, as well as overall European competitiveness,
- c. That obtaining the requisite regulatory mix to promote the convergence process is key to maximising the desired benefits thereof.

In taking these reflections further and building on the areas identified above, the Commission believes it would be useful to deepen the debate on three key issues<sup>11</sup>, namely:

- 1. Access to networks and digital gateways in a converging environment
- 2. Creating the framework for investment, innovation, and encouraging European content production, distribution and availability, and
- 3. Ensuring a balanced approach to regulation

These are three of the key themes raised in the oral and written comments.12

#### 6. What to Regulate

The development of multi-channel service provision and the anticipated use of digital technology have essentially removed the spectrum barrier to entry. As the UK Green Paper on Convergence<sup>13</sup> states "(t)he presumption that broadcasting and communications should be regulated should therefore in general be reversed." So, negative content regulation becomes more important than positive content regulation and new issues, apart from content regulation, gain more importance.

There are three issues raised in the concept of regulating Digital TV:

- a. Conditional Access Systems (CA)
- b. Parental Control Systems
- e. Electronic Program Guide (EPG)

Apart from these categories ownership limits and cross-media ownership subjects are also discussed among writers but they are common issues of media and broadcasting sectors and not specific issues for convergence. Here only the issues raised from convergence are examined.

# a. Conditional Access Systems:

Access systems have been used for two decades. They were used in analogue technology as well as digital. But the significant difference between the two is the expansion of subscription broadcasting services and interactive services.

The operators of these CA systems are commonly referred to as "gatekeepers". Because they control the viewers' access to services. In other words, only viewers who have the suitable equipment for reception and pay for it can access the services supplied by these operators.

There is a common digital broadcasting standard within the EU (DVB) but there is no conditional access standard. The European Commission's attempt to impose a common standard for CA failed because of opposition from broadcasters dominant in the existing analogue pay-TV market. The existing broadcasters have already developed their own CA systems and made investments.

Upon this failure, the European Commission developed another approach that is called 'multicrypt'. There will be a common interface on the set-top-boxes in addition to the embedded CA of broadcaster, and viewers can purchase a card (similar to PCMCIA cards used in laptops) and watch other subscription services.

On the one hand, the EU tried to launch the multicrypt system as a EU standard, on the other hand it regulated the existing operators of digital platforms. Directive 95/47 on the Use of Standards for the Transmission of Television Signals stated that:

Member states shall take all necessary measures to ensure that the operators of conditional access services, irrespective of the means of transmission

-offer to all broadcasters, on a fair, reasonable and nondiscriminatory basis, technical services enabling the broadcasters' digitally-transmitted services to be received by viewers authorized by means of decoders administrated by the service operators, and comply with Community competition law, in particular if a dominant position appears.

-keep separate financial accounts regarding their activity as conditional access providers.

Within this perspective, OFTEL published a document on the Pricing of Conditional Access Services for Digital Television in October 1997<sup>14</sup>, According to this document:

- 2.3. The equipment in most viewers' homes will only give access to pay television services using the particular conditional access system incorporated in to the set-top-box. Conditional access system B is therefore not a substitute for conditional access system A. Since set-top-boxes will, at least initially, be relatively expensive' there are likely to be significant switching costs for households wishing to change to a different conditional access system requiring the use of a different set-top-box.
- 2.4. Content providers are likely in turn to use the system giving access to the greatest number of subscribers. The position is therefore likely to be one which is self-reinforcing and which rival systems are likely to find difficult to break.

Apart from these sector specific regulations, competition law is another way to regulate CAs. By the 90s, 'essential facilities doctrine' had been the subject of attention. It started with Commission's decision in Sealink/B&I-Holyhead 15 in 1992. The expression 'essential facility' was used in situations where an undertaking seeks access to a physical infrastructure such as a port, airport or pipeline and case law add other situations like to

supply raw material (Commercial Solvents<sup>16</sup>), spare parts (Hugin<sup>17</sup>), intellectual property rights (Magill<sup>18</sup>). According to Whish, in the context of Article 82, the essential facilities doctrine is a natural consequence of the judgement in Commercial Solvents, that a refusal to supply a customer in a down stream market would amount to an abuse if the effect would be to eliminate all competition in that market.<sup>19</sup> Holyhead is a scaport and base for ferries navigating from UK to Ireland. After privatisation Holyhead was operated by a firm, which also ran a ferry service. Other ferry services argued that the port operator gave priority to its own ferry services. As seen from the context, this case is very similar to situations in CA. Generally CA operators also own a number of TV channels. So, they could give priority to their channels. The management structure is not transparent and they could treat differently to different channels.

The main point in the 'essential facilities doctrine' is the nature of the facility; it must be impossible or very difficult to duplicate this facility. In Oscar Bronner<sup>20</sup> Commission decided that a newspaper distribution network (home delivery) is not an essential facility, because there are several other ways for newspaper delivery, and it is not impossible to establish another home delivery system.

Here, in digital TV, set-top-boxes with simularypt coding systems could form an essential facility. It is very difficult to duplicate the service; each set-top-box costs not less than  $\in$ 200 and if a digital platform reaches more than five million homes, as in the case of Sky digital, it is nearly impossible to duplicate this service.

# b. Parental Control Systems

In their final report DVB Regulatory group described the key principles of parental control in converged environment as below<sup>21</sup>:

- Within a converged world, a technological or platform-neutral solution for horizontally unified regulatory treatment of content can provide greater consistency, both for content packagers and consumers.
- In a media environment that includes Internet content, both the principle of scarcity and the practicality of traditional government broadcast regulation may be diminished.
- Traditional regulatory systems in a converged environment may be maintainable only through inconsistent treatment of content. Grounds for isolating particular content as an object of orgulation could include (a)

technological means of delivery, (b) domestic origin of content, and(c) size of audience. All of these would raise practical, policy, and administrative difficulties.

- As volume of content increases, viewers may increasingly rely on metainformation about content and filtering or navigating methods for sorting metainformation, both for positive selection of desired material and blocking of offensive material. Markets in metainformation may play a central role in a converged environment. Parents, governments, or content packagers, however, may prefer that access to metainformation for parental control not be market-dependant.
- Availability of rating and filtering systems may make self-regulation for parental control purposes an increasingly viable option in the converged media environment.

Parental control systems are mostly related with content regulation. Before the digital revolution the spectrum was too narrow to broadcast thematic channels and regulators tried to keep the balance. With Digital TV it becomes easier to faunch hundreds of channels, so adult and violent contents are commonly broadcasted in digital platforms.

One of the main goals of European content regulation is 'restricting children from access to adult content'. In order to reach this goal filter tools and EPGs can be used in the following two ways:

- a. Traditional way of protection is parental lock on TV sets. The channel showing adult materials can be locked and the child is not able to watch them.
- b. Filtering Tools: traditional parental lock is only locks the channels but nothing to do with ordinary channels showing adult material in their schedule. In 1996 the V-chip was mandated by US government. TV sets having screens bigger than 13 inches installed with V-chip. The content is marked and the V-chip controls, if there is programming of adult material the TV set does not show it. This technology is for analogue TV sets but it can be easily transferred to digital.

#### c. Electronic Program Guide

EPG can be listed under CA but it is increasing its powers and therefore needs to be examined separately. EGP is a new kind of teletext, but it is more than teletext. According to ITC code of conduct<sup>23</sup> 'EPG Service' is an information service, which can include visual images, relating to the promotion, listing or selection of television programmes or services, or other services where more than one service is available (para.8). The consumer is able to navigate between services without reference to the multiplex that carries them, the EPG thereby concealing the complexity from the viewer. With EPG one can easily reach program listings and detailed information, and mark the program he wants to watch. So, EPG is very important for competitors in the market. At the very beginning, platform operators only put their own channels to the listings.

From a regulatory perspective control of the EPG is important as it provides a daily opportunity to influence viewing shares. The navigation technology provides for strategic control of the digital TV industry, as they are the first service that confronts the viewer and they inform the consumer of the services that are available. The EPG will be the de facto method by which the consumer will control daily scheduling as well as the means by which service providers will market their content to consumers. As the audience becomes increasingly fragmented across multiple channels the navigation software will become the crucial tool for influencing viewing patterns.<sup>24</sup>

The potential for abuse is obvious given the purpose of the EPG. Consumer selection of programming services may be influenced by the navigation software, and any bias in the listing will have serious implications for content providers.

Oftel<sup>25</sup> has taken a very broad definitional view of conditional access services; it has claimed the disputed right to regulate all EPGs that are married to a conditional access system, taking the view that the EPG is an integral element of the conditional access system. Although not specific on the details, Oftel will, by regulation, seek to prevent any restriction of competition between broadcasters on the EPG.

The EPG provides an example of a regulatory issue where arguably the responsibilities of both the ITC and Oftel overlap, as the ITC has published a Code of Conduct for the provision of EPG systems. While the Code is very detailed, the terms of access are very vague, stating only that access must be provided on fair, reasonable and non-discriminatory terms.

## 7. How to Regulate: De-regulation, Re-regulation, Self-regulation

If you consider the media products as purely commercial and without political and social significance then regulation will no longer be necessary in the middle and the long term. Nowadays it is true that broadcasters primarily deal with entertainment but they also have potential of 'mediation'. They are windows of our houses that are open to the world. We watch their choices. Therefore, there is a public interest and need for regulation.

With news forms of media the main issue is not de-regulation but reregulation. Of course media owners argue for de-regulation but it does not serve public interest. The need for existing regulatory bodies in order to fit the new values of converged age forced governments to change.

Do convergent media needs convergent regulation?

The response of the UK to this question is OFCOM, 26 In the Telecommunications White Paper 27 the reasons were given as below

- 8.2.1 The current framework for regulation of communications in the UK is complex. Technology has also moved faster than regulation can keep up. As convergence continues to accelerate, such complexity and potential for confusion will only increase unless regulation is reformed
- 8.2.2 We therefore need a simpler and more flexible system. It will be essential for the regulator to have delegated powers to act independently in response to fast-changing circumstances. The system should also recognise that content and networks, in economic terms, are becoming more and more intertwined. Networks are often worthless without content, but, in the early stages of network development, a company can't sell content unless it can build out its own network or get access to someone else's.

There is also a debate between sector specific regulation and competition law. Competition rules are applied in convergence as well. It is true that the sector-independent character of competition law makes it a flexible horizontal tool setting the broader regulatory framework. Nevertheless, as inferred from the analysis above, the fulfilment of explicit objectives, especially public interest aims, requires concrete regulation. Such specific regulatory measures can safeguard public interest objectives while at the

same time provide a more clear and consistent framework for the application of competition rules.

#### 8. Conclusion

According to Oftel's latest research<sup>28</sup> 11 million UK homes - 45% - are connected to the Internet. However, almost all of these houses are connected via narrow band dial up access. Narrowband access does not allow users watching video as they do with TV sets. Another Oftel research work on Digital TV<sup>29</sup> (published in September 2001) shows that people think digital TV means more channels and more choice. They rarely use interactive services, only a few of them have used e-mail via set top-box. Although the regulators attach excessive importance to the EPG, people take 'the list' as a continuous one, rather than a hierarchical one. However, channel identity and branding have become crucial, given the few seconds (maximum) which viewers will give a channel to 'prove' itself of interest.

The Culture, Media and Sport Committee of the UK House of Commons, in its Fourth Report on the Multimedia Revolution suggested that the Internet would become increasingly a platform for audio-visual content barely distinguishable from broadcasting content. This does not mean that it can be subject to regulation comparable to broadcasting (para.114).

A further point of some importance is that there is no single new media form or market, and it is likely that such uniform markets will remain distinct from each other; for instance, there is still a clear distinction between television-type services and on-line services. Technologic convergence may be imminent in the form of television internet access (or Web TV) becoming cheaply available, but the cultures remain radically different.<sup>30</sup>

As mentioned before the difference in regulatory traditions of internet and broadcasting influenced the regulation efforts of convergence.<sup>31</sup> The market is getting bigger and players are also growing very rapidly. Players want the market regulated by competition rules. The general competition provisions of the EU Treaty alone are not adequate to dealing with the challenges of convergence.

The restrictions on ownership should be removed. Convergence and digital TV need more investment than analogue broadcasting does. Supplying settop-boxes, more satellite transponders, software, CA systems mean more investment and these investments can only be made by 'cross-subsidisation'. For digital platforms, monopolization of market is not such a harmful development. The important point is regulating the digital platform

and letting it open to all competitors in the broadcasting market. It should be noted that in some EU countries such as Greece single digital platform is anticipated. In order to prevent misuse sources having single platform shall be preferable. The UK should follow the same approach and let Sky TV dominate the market. But on the other hand all free-to-air channels and other subscription channels must take place on the Sky platform (from the end of 2001 most of them already on sky digital) and conditions supplied must be adequate to all competitors.

It appears that regulating convergence by the EU will not create a Europe-wide regulatory body. The EU will prepare some guidelines for members when necessary and national regulators will be in charge in the foreseeable future. Regulating media is still a national issue and it is very difficult for convergence to change this situation. With slight changes, conventional TV still remains as the best choice for most houses. Regulation in ordinary broadcasting will be needed for a long time. In the multi-channel world content regulators should smoothen the rules and let people self-regulate themselves.

#### Endnotes

- <sup>1</sup> Merriam-Webster Online Dictionary, <a href="http://www.webster.com">http://www.webster.com</a>
- <sup>2</sup> Thomas Gibbons, Regulating the Media, Sweet & Maxwell, London-1998, pp.14-18.
- $^3$  Culture, Media And Sport Committee Inquiry Into Audio-Visual Communications And The Regulation Of Broadcasting "Beyond The Telephone, The Television And The Pc  $\Pi\Gamma$ "
- <a href="http://www.oftel.gov.uk/publications/1995\_98/broadcasting/dcms398.htm">http://www.oftel.gov.uk/publications/1995\_98/broadcasting/dcms398.htm</a>
- <sup>4</sup> P. Cincera, "The European Union content regulation in the converged communication environment", in European Telecommunications Liberalisation, ed. Kjell A. Eliassen and Marit Sjovaag, Routledge, London-1999, pp.85-86.
- <sup>5</sup> M. Michalis, "European Union Broadcasting and Telecoms Towards a Convergent Regulatory Regime?" European Journal of Communication, SAGE

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Publications, 1999, Vol 14(2), p.149.

- <sup>6</sup> W. Sauter, "Regulation for Convergence: Arguments for a Constitutional Approach", in Chris Mardsen & Stefaan Verbults (editors), Convergence in European Digital TV Regulation, Blackstone press, London-1999, p.66.
- 7 M. Michalis, op.eit., p.151.
- <sup>8</sup> P. Cincera, op.cit., p.78.
- 9 W. Sauter, op.cit., p.75.
- <sup>10</sup> Green Paper on the Convergence of the Telecommunications, Media and Information Technology Sectors, and the Implications for Regulation. Towards an Information Society Approach (COM (97) 623)- December 1997 <a href="http://europa.eu.int/ISPO/convergencegp/97623en.pdf">http://europa.eu.int/ISPO/convergencegp/97623en.pdf</a>>
- <sup>11</sup> BC Commission, Summary of the Results of the Public Consultation on the Green Paper Convergence of the Telecommunications, Media and Information Technology Sectors; Areas for Further Reflection, Working Document [Sec(98)1284]

<a href="http://europa.eu.int/ISPO/convergencegp/workdoc/1284cn.pdf">http://europa.eu.int/ISPO/convergencegp/workdoc/1284cn.pdf</a>

- OFTEL, Oftel response to the European Commission on the Green paper on the convergence of the telecommunications, media and information technology sectors, and the implications for regulation (COM (97) 623) Response (3/98) <a href="http://www.oftel.org.uk/publications/1995\_98/broadcasting/eu398.htm">http://www.oftel.org.uk/publications/1995\_98/broadcasting/eu398.htm</a>
- <sup>12</sup> OFTEL, Oftel's response to the European Commission's working document summarising the results of the public consultation on the Green paper on the Convergence of the Telecommunications, Media and Information Technology sectors.
- <a href="http://www.oftel.org.uk/publications/1995\_98/broadcasting/eu1198.htm">http://www.oftel.org.uk/publications/1995\_98/broadcasting/eu1198.htm</a>
- $^{\rm i3}$  OFTEL. Oftet's response to the UK Green Paper Regulating communications: approaching convergence in the information age
- <a href="http://www.oftel.org.uk/publications/1999/broadcasting/gpia0199.btm">http://www.oftel.org.uk/publications/1999/broadcasting/gpia0199.btm</a>
- OFTEL. The Pricing of Conditional Access Services for Digital Television, Consultative Document, October-1997

- <a href="http://www.oftel.gov.uk/publications/1995\_98/broadcasting/cat097.htm">http://www.oftel.gov.uk/publications/1995\_98/broadcasting/cat097.htm</a>
- 15 Sealink / B and I Holyhead: interim measures, [1992] 5 CMLR 255.
- <sup>16</sup> Commercial Solvents (C 6/73 and 7/73) [1974] ECR 223
- <sup>17</sup> Hugin v. Commission (C22/78) [1978] ECR 1513
- <sup>18</sup> Radio Telefis Eireann v Commission of the European Communities (C241/91P) [1995] 4 C.M.L.R. 718 (ECJ)
- <sup>19</sup> R Whish, Competition Law, Fourth Edition, Butterworths, London-2001, p.615.
- <sup>20</sup> Oscar Bronner GmbH & Co KG v Mediaprint Zeitungs- und Zeitschriftenverlag GmbH & Co KG (C7/97) [1999] 4 C.M.L.R. 112 (ECJ), [1998] ECR I-7791.
- <sup>21</sup> DVB Regulatory Group, "Parental Control in a Converged Communications Environment", October 2000, p.7.
- <a href="http://europa.eu.int/comm/avpolicy/regul/new\_srv/dvbgroup.pdf">http://europa.eu.int/comm/avpolicy/regul/new\_srv/dvbgroup.pdf</a>
- <sup>22</sup> B. S. Noveck, "Thinking Analogue about Digital Television? Bringing European Content into the Information Age", in Chris Mardsen & Stefan Verhults (editors), Convergence in European Digital TV Regulation, Blackstone press, London-1999, p.50.
- <sup>23</sup> Independent Television Commission, ITC Code of Conduct on Electronic Programme Guides, June-1997.
- <sup>24</sup> C. Cowie & C.Marsden, Convergence, Competition and Regulation, p.9 <a href="http://www.ijclp.org/1\_1998/rtf/ijclp\_webdoc\_6\_1\_1998.rtf">http://www.ijclp.org/1\_1998/rtf/ijclp\_webdoc\_6\_1\_1998.rtf</a>
- <sup>25</sup> OFTEL, The Regulation of Conditional Access for Digital Television Services: OFTEL Guidelines
- <a href="http://www.oftel.gov.uk/ind\_info/broadcasting/conace.htm">http://www.oftel.gov.uk/ind\_info/broadcasting/conace.htm</a>

- M. Thatcher. The politics of Telecommunications: National institutions, convergence, and change in Britain and France, Oxford University Press, New York 1990.
- <sup>37</sup> Department of Trade and Industry and the Department for Culture and Media and Sport, Communications White Paper <a href="https://www.communicationswhitepaper.gov.uk">www.communicationswhitepaper.gov.uk</a>
- \*\* OFTEL. Effective competition review: dial-up Internet access 29 January 2002 <a href="http://www.oftel.gov.uk/publications/internet/imr0102.htm">http://www.oftel.gov.uk/publications/internet/imr0102.htm</a>
- OFTEL, Digital Television Consumers' Use and Perceptions A Report on a Research Study, September-2001 <a href="http://www.oftel.gov.uk/publications/research/2001/digty0901.pdf">http://www.oftel.gov.uk/publications/research/2001/digty0901.pdf</a>
- <sup>30</sup> D. Goldberg, T. Prosser, S. Verhulst, Regulating the Changing Media: A Comparative Study, Oxford University Press, 1998,pp.298-299.
- Moenig, C. & Etnst Röder, Converging Communications, Diverging Regulators? Germany's Constitutional Duplication in Internet Governance <a href="http://www.ijclp.org/1\_1998/rtf/ijclp\_webdoc\_1\_1\_1998.rtf">http://www.ijclp.org/1\_1998/rtf/ijclp\_webdoc\_1\_1\_1998.rtf</a>