

Beyond Codes, Pipes and Bytes:  
Back to the Principles of Audiovisual Policy  
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**(ii)**

**Abstract**

In this paper I look at the new scenario in communications that has been brought about by the widespread use of the Internet and digital technologies. As I contend, the Internet must be regarded as a paradigm whose legal principles must be sought after beyond the technology it relies on (pipes, technological codes). Only from such a perspective will we be able to place human beings at the centre of regulatory attempts. My analysis is therefore addressed to anyone interested in understanding the Information Society from a multi-disciplinary perspective: academics, policy-makers, and media and organization leaders committed to a just society.

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**Keywords**

Digital Media, Convergence, Internet Governance, Principles of Audio-visual Policy, Public Domain.

#### (iv) Text

##### Introduction

Academics are often suspicious of the policies and regulations that have been applied to the Internet and other digital media. They may ask, is there someone who has can actually *think* about this topic, get to the bottom of it and furnish users, analysts and policy-makers with concepts that make the place of the Internet in our society more intelligible?

In this paper I give an affirmative answer to this question. Indeed, there exist important theoretical contributions that have sought to understand the Internet as a new and inescapable paradigm for humankind and society.<sup>1</sup> Starting from this theoretical premise, in what follows I attempt to retrace the meaning of some basic concepts utilized in Information Law and policy-making in order to understand how they have been affected by the Internet paradigm, especially by the new understanding of space and time it entails. In particular, I look at the concepts of information –in its twofold sense of “code” and “datum”- and freedom of information.

After this preliminary inquiry, I focus on the application of Cyberspace Law to biotechnological research, media convergence in the Internet and in other media. As I hope to show, one of the paradoxes brought about by the Internet paradigm is

that the new “geography” of media and information it forces upon us requires that we turn to the principles of law for assistance in designing a satisfactory regulatory framework for Internet communication.

## 1. The digital world as a paradigm

### 1.1.- The rhetoric of geography

The first issue that must be addressed is how the Internet’s very particular “geography” affects the legal configuration of cyberspace, and sheds light on the rhetorical use of the public/private distinction as it is frequently employed in legislation.

The term “virtual” has been used to refer to that intangible and hardly placeable reality that we enter when we connect to the Internet. Of course, television watchers have already assumed the idea of intangible media, even if they hardly wonder about what there is beyond their antennas. The average Internet user, however, doesn’t know exactly *where* a given cable or WI-FI connection is taking her. Indeed, the data she handles is not –with the exception of downloads- to be *found* in a given hard drive. Similarly, a list of links on a website is not to be understood as a table of contents that allows the user to move back and forth on a single text.

These are important issues of space and time that must be taken into consideration if we want to understand the important challenges posed by the Internet paradigm.

It is thanks to communications agreements and protocols (the familiar TCP/IP) that the Internet has been made a manageable and efficient tool, and not just an obscure technological network. Such protocols give an idea of the kind of jurisdiction and control systems that have regulated the Internet even before the World Wide Web brought its boom in the mid nineties.

Moreover, only ten years after, the term “Internet” is no longer comprehensive enough for our aims, as last generation telephone devices and WI-FI modes of connection to IP networks offer us similar opportunities of communication and data access.

A first question arises when we think about Law and policy-making: jurisdiction, authority and applicable regulation. Where are we exactly when we log-on? A basic answer is: *we agree*, we have a *relationship*. From this standpoint, the Internet paradigm is a convention, a pact. There is no physical reference, no borders –jurisdictional principle of states- but this is of little consequence, because it is not “a place”.

Analogously, we may wish to note that when one is *in love*, one is not at a specific place; and yet we usually do not question the existence of such a reality or the rules that govern it. This is precisely the way we ought to think about Internet

jurisdiction. Politicians must accept the fact that the Internet has reduced their share of power over the medium and the messages, rather than try to preserve this power by means of ever-sophisticated legislation. We will come back to this in our discussion of the present society as a *society of relations*, with special attention to the work of Castells and Nieto.<sup>ii</sup>

The internet paradigm, then, presents us with a number of challenges that escape traditional ways of thinking that rely on positivism and parliamentary legalism. In this sense, we should not forget that both custom and the general principles of law also function as juridical sources, and hence can determine rights and obligations.

#### 1.2.- The rhetoric of the code vs. information

The so-called Information Society could be defined as society's definitive move from the tangible to the intangible. In other words, it is an environment where information does not require tangible and visible media. Of course, this has always been the case with radio broadcasting, but today is becoming widespread among all media. In such an elusive environment, where contents are intangible, we run the risk of identifying "information" with computers, software or electronics – all of which rely on binary codes. And yet information need not be stored in ones and zeros, nor those who handle information need be limited to computer manipulation.

The Information Society has also enabled the linking of traditional messages to DNA language (As, Gs, Cs, Ts) or software algorithms. The best example of this

can be found in biotechnology and biomedicine. Chemical and pharmaceutical companies have sought recognition of their intellectual property of “genetic material and organisms”, precisely on account of the fact that their results rely on the manipulation of “information”.<sup>iii</sup>

This is why it is increasingly necessary that research in this field deal with the juridical and political issues raised by our new information environment. This implies, particularly, analysing the concept of information that is being constructed around the binary code. Such a concept, -dealt with by several fields of study- has important consequences, among them an unhealthy tendency toward deterministic attitudes.

Among the most important of these consequences is the push toward making information increasingly homogenous. In this way, all that is digital is reduced to one single system. For Boyle, this puzzle contains information technology, genetic data, personal information and dataflow between information sources, and intellectual property.<sup>iv</sup> To which we should add other elements such as goodwill, intellectual capital, organization or trademark, all of which make up the intangible quality of information relations.<sup>v</sup>

The Moore case (*Moore v. the Regents of UCLA, 1990*) highlights the importance of *rhetoric*. Moore accused the University of California of appropriating his genetic information in the form of a patent after studying his leukaemia. He was, however, mistaken to express his claims in terms of property rights, when the issue was one of personal information<sup>vi</sup>.

Here the rhetoric of the public and the private was once again proven misleading, as the fact that Moore's cells entered the public sphere –as blood was drawn out of his body- did not entail a withdrawal of the protection owed to his private life.

Another common mistake in this kind of debate is to consider only the economic (public) aspect of things. In this way, references to intellectual property become tied to *wealth*, obscuring its moral dimension. But this makes them incomplete. Authorship rights have economic consequences, but they are primarily *personal rights*.

It is customary in the U.S. to discuss legal issues with reference to the sphere where they are located, public or private.<sup>vii</sup> This is why it has been said that intellectual property is the “legal form” of the information society.

In this respect, if information is “patrimonialised” it will be forced into the public, which, as I see it, is mistaken. For Boyle, we are dealing more with an ethical and political question than a real one.<sup>viii</sup> For in no case can a geography of the private and the public be set as a justice criterion when dealing with information.

There have been other, somewhat comic, cases of this positivistic way of thinking. Adobe's license for the e-book version of *Alice in Wonderland* prohibits users – normally parents and children- to read aloud. In the opinion of Paul Samuelson, license or editorial restrictions derive their power from the fact that they could only be reversed by a long lawsuit:

“Many will simply be chilled from engaging in activities that would be determined legitimate had they been able to challenge a UCITA licence term. Parents may blithely ignore the licence term for the Adobe e-book version of Alice in Wonderland, but libraries have greater reason to worry about the potential enforceability of such a term<sup>ix</sup>”

Ultimately, the restriction is defined in terms of physical parameters, space and time. Reading alone or in someone’s company.

On the other hand, we should ask whether property rights –where authorship rights belong, according to the Anglo-American tradition- belong to the sphere of the public or the private, and how they can be made flexible depending on their uses and their users’ relations.

Indeed, ideology and rhetoric contribute to create unnecessary tensions between the two spheres. Many consumers are not willing to have people processing their biographical data, which they consider to be “private” information. Others believe that the government should protect their private lives from, say, telemarketing. By contrast, database owners who own and use this information may object to government interference in (private) matters of (private) property.

“The law draws [...] the line between public and private”, writes Boyle.<sup>x</sup> The liberal view argues that the government will eventually invade the private sphere,

so the dilemma must be solved by the law –in the sense of specific regulations passed. By defining the necessary boundaries between the two spheres and between citizens, the law provides a solution in a world that is neither governed by a totalitarian state nor by the state of nature.

So far, we have merely provided a preliminary sketch of some of the more important issues that are at stake. A process that leads to information becoming increasingly homogenous may lead to a similar homogenization of the juridical system that is supposed to order what are in fact very diverse situations. What are the juridical consequences of this process, and why should they be deemed harmful?

## 2. Law for the Society of Relations

We all agree that the world we are looking at is a complex one. However, considering that the paradigm brought about by the Internet and digital networks is defined by the importance of relations, we must go beyond a merely patrimonial understanding of information. In doing so, we must also avoid the oversimplification of reducing socio-informative elements to just digits and codes.

Leaving aside geographical and technological principles, Information Science provides a fruitful methodology for understanding the present communications paradigm. I am thinking especially about Nieto's incisive analysis. According to him, if prior to 1990 the information society was defined by content exchange, the post-1990 stage is best understood in relation to *time*, *becoming* and *relations*. As

technology today constantly reinvents itself, academics and policy-makers must pay a greater attention to the users of that technology.

This is precisely the approach of information scientists. As Nieto suggests:

“The name ‘Information Society’, used to describe Western societies in the second half of the 20<sup>th</sup> century, captures the meeting of a market economy, the new information technologies and the freedoms of business and opinion”.

In the Information Society, market economies are made up of relations of supply and demand of goods and services that are mainly *intangible*, resulting directly from the human intelligence.<sup>xi</sup> Moreover, the relations are between minds in need of information and entertainment and highly creative minds who strive to give the most attractive answer to those needs.

In the present stage, the media scenario is enriched by the importance of time and relations. Indeed, what Castells calls “the Network Society” defines a way of dealing with one another regardless of the physical location of people and organizations, and which extends to both the private and the public spheres.

The economy of appearance is especially relevant to the Internet, not only in what regards the user’s juridical and economic status, but also its free cost. But, as Nieto points out, this “free cost” is only apparent, as ultimately people on the Internet allow each other *time*. We rent and buy “periods” of entertainment, culture, etc, making time a more valuable good than money itself.

Attention is another important feature of the relations we are describing. When readers, hearers or users utilize digital media, “time stopped” or personal attention becomes of paramount importance. For digital media do not merely want to be browsed or have contents downloaded; rather, they seek user response and feedback, as evidence of attention.

As I have been warned by some colleagues that have discussed with me an earlier draft of this paper, it is necessary to go deeper into the nature of the moral obligations and even agreements that must govern this virtual environment, as well as any relevant connections to applicable national legal systems.

This will involve considering the Internet user’s relation to the *medium* that allows her to visit or download contents. Such an analysis to a sequence of relations of the user with, for example, the web-page she logs on to, or the specific services she accesses. (These relations may or may not be specified by contracts or accepted social practices). Moreover, if the user *enters* (in relation with), reference will have to be made to his obligations, as well as to possible consequences of his actions in terms of money, time, data transfer, and so on.

Yet, beside deciding whether or not to *enter* or *consume* the available information, users also decide how much attention to give. Consequently, legislation must address not only contents but also the relation as such. It should take into account the fact that users spend *time* on such contents, and perhaps think about ways to guarantee that this time is not expropriated.

### 3. -Juridical consequences of the rhetoric of geography

I will now return to the discussion of the analytic standpoint that insists on the homogenisation of information.

The U.S. already recognizes the concept of *copyright* applied to biotechnology.<sup>xii</sup> In this respect, the European Union has also passed a Directive that allows to register and protect inventions and biotechnological research in humans or animals by means of patents.<sup>xiii</sup> Further, copyright of computer program algorithms has already been recognized.<sup>xiv</sup>

As an American White Paper has denounced, the development of a “Biotechnology Law” proper has led to an abuse in patent requests on the part of the biotechnological industry in general and pharmaceutical companies in particular.<sup>xv</sup> The latter have utilised copyright to bar access to their research or markets to competitors, and to pave the way of their forthcoming products.

Fortunately, the EU Directive considers that “a mere [DNA] sequence without indication of a function does not contain any technical information and is therefore not a patentable invention”.<sup>xvi</sup> Further, the Directive understands that “the dignity and integrity of the person [...] including the sequence of a human gene, cannot be patented.”<sup>xvii</sup> For all this, only genetic information obtained by a technical proceed may constitute a “patentable invention, and it is mandatory to specify the industrial application of the patent.”<sup>xviii</sup>

Together with the protection of the genetic “code”, the protection of software algorithms should also be highlighted. In this sense, the EU in general and Spain in particular offer us a good example of this tendency toward protecting “any type of information”, without necessarily addressing a specific social concern. What I have in mind is the new Spanish Law of Intellectual Property, which grants privileged protection to software over other intellectual works listed in the current legislation, which will be reviewed shortly in accordance with the 2003 Directive concerning authorship rights in the Information Society.

#### 4.- Why we should turn to Law in order to understand the Information Society

The changes I have been pointing to do not take place in a vacuum or abstract space. Even if this new space alters our traditional understanding of jurisdiction in space and time, technological changes have a form and are (in)formed by ideology and Law. At a simple level, we can see that intellectual property is becoming increasingly important in the World’s economy. For example, copying a product is easier and cheaper than buying it; hence piracy becomes a problem that has to be addressed by legal measures.

Moreover, as Boyle and Longstaff suggest, the Law’s expansive vision is helpful to avoid any form of reductionism.<sup>xix</sup>

After having mentioned the Moore lawsuit and legal restrictions on *Alex in Wonderland* in e-book format, we may also wish to refer to the Microsoft case,

especially the anti-trust lawsuit that began in the U.S. in 1997 and that has also taken place in Europe. This case has been taken as a paradigm of media convergence in Internet, new forms of information monopoly, and even as the typical instance of justification of technological determinism.

What is the use of these cases? Any professor of Law, Ethics or Politics will see in them a source of suggestive ideas, a place to locate the principles of law and a way to make legal doctrine more accessible.

Law is a fertile source of assumptions about our world. It provides us with legal sources and arguments to understand them. Furthermore, “Law” is also made up of research conclusions that are incorporated to parliamentary debates, judicial deliberations, conflict resolution and contract drafting.

When we deal with the function of Law in networks –particularly the Internet- we must turn our attention to relevant documents produced by public bodies and agencies dealing with information policies and infrastructures. I have in mind the different EU “Green Papers”, the American “White Paper” and commission reports, such as those produced by the Spanish Senate. For it is precisely these documents that produce Internet regulation and self-regulation policies.

In fact, 2005 has been a particularly important year in defining “Internet Governance”.<sup>xx</sup> In November, a UN encouraged Working Group has met in Tunis to discuss the role of nation states and surveillance organizations in the Internet.

This World Summit on the Information Society (WSIS) has addressed other important principle, because WSIS “has helped to foster discussion worldwide on the need for unhindered and equal access to the means of communication and information content”.<sup>1</sup>

Whatever the case, we must also agree that specific policies and norms must take into account the rapidly-changing nature of these emerging technologies. They must therefore leave some room for correcting mistakes and improving their adaptation to the new communications scenario.

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I have dealt elsewhere with the consequences of all these convergence processes on Information and Audiovisual Law, and specifically on the information market.<sup>xxi</sup> On the other hand, legislation has had an influence on the increasing liberalization and growth enjoyed by the information technologies.

#### 4.1.- Rethinking Audiovisual Law: Back to the Basics

Attention to general principles of law has perhaps never been as urgent or useful as it is today. Faced with the difficulty of integrating the new information paradigm in a coherent structure, we will do well in turning toward the more permanent features of our legal systems. Indeed, the new information paradigm demands that the precise function of the law be rethought. The point is to avoid

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<sup>1</sup> As *International Researchers' Charter for Knowledge Societies* says. This Charter is an IAMCR (International Association for Media and Communication Research) contribution to this World Summit. URL (visited December 2005: [www.iamcr.net](http://www.iamcr.net))

confusion in citizens, media users, companies and investors. The just law –the only true law- must favour progress by assuring stability.

In the European case, attention to the general principles of law implies referring to the fundamental rights that are recognized in the new European Constitution as well as in national ones, since they make up a basic source of legal assumptions and common places. Especially important among them is the principle of freedom.<sup>xxii</sup>

The principle of freedom must cover media creation and use.<sup>xxiii</sup> In Spain, audiovisual media have traditionally been subject to a higher degree of control than printed media –with the result of a well-known system of concessions and authorizations which may impose government surveillance on media ownership. In this sense, the governmental faculty of *administering* radio waves has been confused with a need to *manage* them, to the extent of directing the media and hence hindering not only media plurality but the exercise of freedom.

But the principle of freedom points towards an ideal limit: it demands that we strive to give it the fullest possible application. Now that the widespread use of cable and satellites is making the physical limits of communication recede, we are approaching ideal conditions for a full freedom. Whatever the case, the traditional juridical-political argument in favor of limiting the communication spectrum is no longer applicable.

Freedom as a principle has traditionally been connected to another principle, namely, *universality*.<sup>xxiv</sup> In some countries, this connection has been rather chimerical, for independent radio and television broadcasting has only become an option once Parliament legislated in its favour.

Following the 1948 Universal Declaration of Human Rights, international documents on information law consider that the right to receive and impart information should be exercised “through any media and regardless of frontiers”.<sup>xxv</sup>

Furthermore, there are two other legal principles that the new communications paradigm is bringing back to discussion: the principle of governmental *laissez faire* and the principle of *subsidiarity*.<sup>xxvi</sup>

The *principle of laissez-faire* must not be taken literally, or in an absolute sense. The government cannot step back from its duty of guaranteeing a human right such as the right to information; at least it must do its share to ensure the adequate socio-economic conditions for information to be made readily available. That is why governmental intervention must be limited to safeguarding the media’s social interest. The government must only promote media creation when there are not enough independent initiatives.

In this respect, when our laws and governmental policies force telecommunications operators to finance what is considered to be a “universal service”, it is acting positively to ensure universal access to information.<sup>xxvii</sup>

Today, it may be said that access to the main information networks guarantees access to information.

I will make a last point about the place of Law in this new space that some have called cyberspace.<sup>xxviii</sup> In cases where the freedom of information is abused, there is no doubt that national laws can be enforced even in such a complex legal geography as the Internet. In this sense, parliaments retain the last word in imposing legal frameworks on new social situations, and judges the *auctoritas* to determine what practices and activities are illegal. The fact that responsible parties may not always be easily found or identified should not lead us to think that the Law should abstain from regulating this space.

On the contrary, careful application should be made of general legal principles such as the *freedom to access and impart information, respect of fundamental human rights and competition laws*. These principles are supported by different international treaties, and compliance to them may be demanded by supranational organizations or arbitration systems.

In fact, arbitration and self-regulation are prestigious control systems assumed by Information Law from its very beginnings. In practice, this understanding has been accepted by the Internet community, specifically among internet providers,<sup>xxix</sup> in e-commerce<sup>xxx</sup>, granting domains and protecting consumers and authorship rights.

## 5. Conclusions

Information Law and policies regarding information must be designed taking human beings as a starting point, rather than following the logic of homologating all the technologies that rely on the binary code. In this sense, the achievements of computer science, biomedicine or engineering cannot be “transcribed” to the context of communication media.

On the contrary, legal reflection will do well in paying attention to the underlying factors of the present communications paradigm: the kind of relations that arise from the Internet and other emergent technologies (such as UMTS or WI-FI applications). That is, to the rights and obligations of the real players in this society.

Moreover, the need to design a stable and sufficient legal framework in the ever-changing world of technology should make us take a closer look at the principles of law, in search of those elements that resist change.

Policies and regulation in the Information Society must not only be prudent, but must include feedback mechanisms. This will ensure that the specific measures adopted stay closely related to the original regulatory ends.

Universities and scholars must keep playing an important role in evaluating specific policies, always staying in touch with the reality of the media and other organizations.

Law, in any case, marches behind reality, *in-form*-ing it, giving it normative form, but allowing the necessary flexibility not to hinder innovation and human development.

## (v) End notes

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<sup>i</sup> See, for example: Lessig, L. (1999) *Code and other laws of Cyberspace*, Basic Books, Perseus Group; Mansell, R. Wehn, U. Editors (1998). *Knowledge societies: information societies for sustainable development*. Published by Oxford University Press for the United Nations Commission for Science and Technology for Development; Samuelson, P. (2003) Mapping the Digital Public Domain, in *Law and Contemporary Problems* (Vol 66:147) 147 a 171; Longstaff, P. (2004) Security in Complex, Unpredictable Systems: The Case for Resilience Planning, ITS Berlin, available currently at (consulted Sept 2005): [www.pirp.harvard.edu](http://www.pirp.harvard.edu); Kahin and Ernest Wilson, eds. (1996), *National Information Infrastructure Initiatives: Vision and Policy Design*, Cambridge: MIT Press; Boyle, J. (1996) , *Shamans, Software and Spleens: Law and the Construction of the Information Society*, London: Harvard Univ. Pr.; Castells, M., especially his trilogy on the Information Era: *The Rise of the Network Society* (1996), *Power of Identity* (1997) and *End of Millennium* (1998), Malden, Mass.: Blackwell.

<sup>ii</sup> See Nieto, A. (2000). Persona, relación marketing, *Colección Cuadernos Australes de Comunicación*, Buenos Aires; Economía de la Apariencia y mercado de la información, *Comunicación y Sociedad*, XIV (2) December 2001, as well as Castells, M., (2001) *La sociedad red*.

<sup>iii</sup> For an enlightening discussion of this issue, see Rai, Arti K. and Eisenberg, R., (2003), Bayh-Dole reform and the progress of medicine, *Law and Contemporary Problems* 66, 289-314, which deals with policy-making aimed at supporting scientific research and protecting its discoveries.

<sup>iv</sup> See Boyle, J., *op. cit.* , 26

<sup>v</sup> In this respect, Alfonso Nieto's forthcoming, *Economia de la Communicatione Istituzionale*, Upsc, Rome, will be of special interest.

<sup>vi</sup> As stated in the sentence itself, the subject matter of the Regents' patent--the patented cell line and the products derived from it--cannot be Moore's property. This is because the patented cell line is both factually and legally distinct from the cells taken from Moore's body.<sup>vi</sup> [FN35] Federal law permits the patenting of organisms \*142 that represent the product of "human ingenuity," but not naturally occurring organisms. (*Diamond v. Chakrabarty* (1980) 447 U.S. 303, 309-310, 100 S.Ct. 2204, 2208, 65 L.Ed.2d 144.) [FN36] Human\*\*\*160 \*\*493 cell lines are patentable

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because "[l]ong-term adaptation and growth of human tissues and cells in culture is difficult--often considered an art ..., " and the probability of success is low. (OTA Rep., supra, at p. 33; see fn. 2, ante.) It is this inventive effort that patent law rewards, not the discovery of naturally occurring raw materials. Thus, Moore's allegations that he owns the cell line and the products derived from it are inconsistent with the patent, which constitutes an authoritative determination that the cell line is the product of invention. [FN37] Since such allegations are nothing more than arguments or conclusions of law, they of course do not bind us. (Daar v. Yellow Cab Co., supra, 67 Cal.2d at p. 713, 63 Cal.Rptr. 724, 433 P.2d 732.)

<sup>vii</sup> As a result, we are faced with the paradox that in the U.S. health care is a private matter (it is contingent on me paying for it) whereas the possibility legal assistance does not depend on my status and can therefore be considered as public.

<sup>viii</sup> See Boyle, J. (1996). *op. cit.*, 27

<sup>ix</sup> Samuelson, P. (2003). *op. cit.*, 157-158

<sup>x</sup> Boyle 1996, *ibid.*

<sup>xi</sup> For an interesting approach to intangibles, see Kahin, B. (2004), 'Through the lens of intangibles', in *Patents, Innovation and Economic Performance*, proceedings of the OECD conference on IPR, Innovation and Economic Performance, 28-29 August 2003.

<sup>xii</sup> *Copyright*, or "right of copy", is the expression of the author's material or reproduction rights over his work. Specifically, when in Europe we use the sign ©, we are referring to a "reserve" imposed by the author on her work, so that it cannot be reproduced.

<sup>xiii</sup> European Parliament and Council Directive 98/44/CE, 6 July 1998, dealing with the juridical protection of biotechnological inventions (EOJ, L 213, 30/07/98, p. 13).

<sup>xiv</sup> Starting with Directive 91/250, 14 May, about the juridical protection of computer programs. This directive has been subsequently integrated in the Spanish Law of Intellectual Property of 1996.

<sup>xv</sup> White Paper, *Intellectual Property and the National Information Infrastructure, The Report of the Working Group on Intellectual Property Rights*. See (consulted Oct 2005):

<http://www.uspto.gov/web/offices/com/doc/ipnii>

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<sup>xxvi</sup> Directive 98/44, *Whereas* 23

<sup>xxvii</sup> Directive 98/44, *Whereas* 16.

<sup>xxviii</sup> Directive 98/44, Article 5.

<sup>xix</sup> Longstaff, P. (2004). *Security .. op. Cit*

<sup>xx</sup> See web page of the Working Group on Internet Governance at (consulted Oct 2005):

[www.wsis.org](http://www.wsis.org)

<sup>xxi</sup> See Corredoira, L. (2001) *Paradojas de Internet*, Madrid: Editorial Complutense .

<sup>xxii</sup> This has been studied at length by Professor María Luisa Fernández Esteban (1998). See her book *Nuevas Tecnologías, Internet y Derechos Fundamentales*, Madrid.

<sup>xxiii</sup> See Bel, I. and al. (1992): *Derecho de la Información (I)*, Madrid: Editorial Colex, and Desantes Guanter, J.M. (2004). *Derecho de la Información (II)*, Madrid: Editorial Colex.

<sup>xxiv</sup> This connection is reflected in article 20 of the Spanish Constitution of 1978.

<sup>xxv</sup> See article 19 of the Universal Declaration of Human Rights (1948), and, more recently article II-71 of the European Constitution signed in 2004.

<sup>xxvi</sup> In the Spanish case, there has been a fair degree of unanimity on the application of these principles on the part of Spanish MP's. In November 1998, for instance, the Lower Houses's Commission of Infrastructures passed unanimously a motion put forward by the Catalan minority, which asked that internet and telephone providers should not charge users for failed connections, and that reduced telephone rates should apply to internet connections. By contrast, an amendment put forward by the Socialist and the People's Party asking for the flat rate was rejected. The House did accept a further amendment presented by the People's Party, asking for measures to promote "a specific framework for internet users with educational, cultural, sanitary and business development ends".

<sup>xxvii</sup> Law 11/1998, April 24. The concept of "universal service" had never been given such a wide legal coverage until this Law.

<sup>xxviii</sup> Notably *cyberpunks*, who, according to Boyle, are the real theoreticians of the Information Age. See Boyle, J., *A Politics of Intellectual Property*, paper presented at XXIV Telecommunications Policy Research Conference, 4-6 October.

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<sup>xxix</sup> The first case was that of Canadian providers; see (consulted Oct 2005): <http://www.caip.ca>. In Spain there exists a providers code since 2000 available at (consulted Oct 2005) <http://www.asimelec.es>.

<sup>xxx</sup> Different associations offer different codes of Ethics for e-commerce: see for example those of *AECE* and *AENOR*. (consulted Oct 2005): [www.aenor.es](http://www.aenor.es)

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