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### Copyright in Cyberspace

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*Intellectual property is an extraordinary complex subject. We are almost clueless about how to handle digital ... works and digital fair use. In a digital world, the bits are endlessly copyable, infinitely malleable, and they never go out of print. Millions of people can simultaneously read any digital document - and they can also steal it.*

Nicholas Negroponte, 'A Bill of Writes', Wired 3.05

*It is difficult for intellectual property laws to keep pace with technology. When technological advances cause ambiguity in the law, courts rely on the law's purposes to resolve that ambiguity. However, when technology gets too far ahead of the law, and it becomes difficult and awkward to apply the old principles, it is time for re-evaluation and change.*

Working Group on Intellectual Property Rights (Information Infrastructure Task Force), Intellectual Property and the National Information Infrastructure (Preliminary Draft, July 1, 1994)

### Abstract

The interaction of copyright and the Internet technologies have resulted in several problems (technological, sociological and legal) that require immediate action. The international nature of cyberspace calls for a cross-jurisdictional approach for the problems to be effectively dealt with. Analysing the emerging problems and their nature from such a point of view makes the identification of possible solutions easier.

### Introduction

Copyright is a branch of the generic system of Intellectual Property law.<sup>[1]</sup> The latter protects applications or expressions of ideas and information, as well as subject matters, which have commercial value by conferring monopolistic exclusionary rights in the marketplace. Intellectual property evolves in response to technological change and the rights it awards are usually dealt with by broad analogy to property rights in tangible moveables.

Copyright, in particular, awards long-lasting rights<sup>[2]</sup> in original literary, dramatic, artistic, and

musical creations,[3] stored in tangible media, by prohibiting certain types of conduct when pursued without the right-owner's consent, like, for example, copying, distributing copies to the public, etc. The technological advances of the last thirty years have seen intellectual property, and copyright in particular, to be in demand as never before. Those who undertake research or create works of learning, culture, entertainment and information, etc. all need legal protection against those who would try to appropriate their skills and intellectual labour. Copyright is considered an indispensable way of sustaining the value of this labour, or, in some cases, the creators' investment in what is theirs. This applies to creations varying from arts and writing, to computing or telecommunications.

The purpose of this paper is to pinpoint and briefly analyse some of the major problems arising from the interaction of copyright law and the Internet technologies. The paper attempts to offer a cross-jurisdictional[4] approach, thus recognising the international dimension of the Internet, and proposes possible solutions that can be implemented internationally, and not only within a specific jurisdiction.

## Copyright the Internet - Vacuum of rules?

One of the most significant legal questions surrounding the emerging Internet technologies is, admittedly, how copyright (and intellectual property in general) applies when unimaginably vast amounts of information can be digitally stored, copied and transmitted, cheaply and speedily.[5] For many, we have entered a new era where copyright protection is still necessary, but its enforcement is may no longer be effective, or, even, possible.[6]

Copyright is a by-product of the Gutenberg press,[7] created originally for the protection of printed materials[8] and amended in the last hundred years to include photographs, films, sound recordings, broadcasts and cable programmes. In the 20<sup>th</sup> century, copyright regimes had to adapt, in order to offer sufficient protection against the challenges created by the emerging copying technology. However, whereas most technologies (e.g. camcorders, video recorders, etc.) would simply make copyright protection more difficult, digital computers managed to alter the fundamental concepts behind copyright.[9] Especially when combined with telecommunications networks, they pose `issues completely at odds with copyright traditions based on the printing press of 400 years ago.'[10]

This is because advances in computer technology have made copying extremely easy, fast, undetectable, cheap, and, most importantly, of the same quality as the original.[11] Furthermore, Internet and cyberspace[12] add another angle to this multilevel problem, since the very way in which the Internet works is, according to the traditional notion of copyright, an outright infringement.

The perspective from which the copyright - cyberspace interaction is viewed by lawyers, jurists and cyberspace theoreticians has resulted in the creation of several different trends that can be broadly categorised as follows:[13]

**I. Copyright Radicalism** is a trend created by Internet users for Internet users. Despite being advocated by many prominent `netizen' figures,[14] and communication theoreticians,[15] it cannot be considered a uniform theory. Its main characteristic is the belief that copyright law has become less important[16] in the age of electronic networks, and that regulation by utilising alternate methods, e.g. ethics, various profit-making methods, encryption, etc., will eventually prevail.

**II. Copyright Revisionism** stands for the revision and amendment of existing copyright law rather than its substitution with different methods of control. Its supporters[17] (who mostly have a legal background) believe that copyright law should be thoroughly revised, in order not only to adapt to the challenges offered by the new technologies, but also to serve the general public's right for information access and dissemination.[18] Furthermore, they argue that the name `copyright' may no

longer convey the content of the owner's rights and should be substituted with other more appropriate terms.[19]

III. **Copyright Traditionalism** is perhaps the less popular of these trends. The major concept behind it is that although copyright issues can be pervasive in cyberspace, it is premature to conclude that traditional copyright law is unable to deal effectively with them.[20] Existing law requires only some 'fine tuning', in order to retain its efficacy in the face of new technologies. Those that believe that copyright law will survive without difficulty in cyberspace rely on the historical precedent of copyright dealing with new technologies, such as films or satellite programmes.[21]

IV. **Copyright Maximalism**[22] seems at first glance a stronger version of Copyright Traditionalism, but the truth is that its approach is far more dynamic than the latter's. Instead of regarding the existing regime as sufficient, copyright maximalists favour tight copyright control over all uses of digital copyrighted works, even despite special characteristics of the Internet that may require serious adjustments.[23] The most common of their arguments is that intellectual property creators will be reluctant to produce works for the electronic environment, unless they are made feel that their interests are adequately protected on-line. The best perhaps example of maximalist thinking is the U.S. Government's White Paper[24] where an extensive list of copyright protection measures is described in detail.[25]

## **Outlining the Major Problems**

At first glance, most major problems of copyright in cyberspace seem to fall under one of the following categories:

- a) Users' attitude towards materials found on the Internet;
- b) Characteristics of the Internet as an inherently technological environment and technical specification of its tools; and
- c) Problems of jurisdiction.

### **a) Users' attitude towards materials found on the Internet**

Until now, the use of the Internet was associated with free information access and sharing.[26] This might have not been a problem at the emergence of the Internet, when the number of users was relatively small and they mostly originated from the academic community. Nowadays though, due to an increasing interest in the Internet caused by extensive publicity, more and more people from different segments of society connect to this global system, and use it for information retrieval and distribution, communication, and interaction. These new users do not feel bound by academic standards, or the set of rules (known as 'Netiquette')[27] that previously governed users' conduct in cyberspace. Moreover, due to a general lack of public awareness of intellectual property rights,[28] for most of them, anything found on the Internet is public domain material (and thus, 'fair game'). The fact that it might have a copyright notice attached to it is considered of no consequence, since its presence on the Net is regarded as a termination of the copyright protection it might have enjoyed before.

As such a public domain material, it is quoted without attribution,[29] reproduced without permission, or presented as one's own.[30] The problem of improper use of copyright - protected materials is further amplified by the incredible ease with which World Wide Web pages can be created, and which allows virtually anyone to become a web publisher.[31]

### **b) Characteristics of the Internet as an inherently technological environment and technical specification of its tools**

New technologies create new types of situations, which pre-existing law could not have predicted, and, therefore, cannot effectively control. Take, for example, several purely technical issues arising from the very existence of the Internet, or its most popular tool, the World Wide Web.[32] The major problem among them is called 'caching,'[33] and is an integral part of Internet's modus operandi. Copyright is the exclusive right of the author to control copying of his or her original works. The Internet, on the other hand, operates on a ubiquitous 'copying and transmitting fashion,' i.e. information is accessed by duplicating data stored in binary files before sending it across the globe. [34] Although 'cached' copies are purely transitory and will be discarded as soon as the computer used is shut down, it has not been so far clarified decisively,[35] whether file-caching could be regarded as legitimate use ('fair dealing'[36] or 'fair use') of the material. To put it as simply as possible, the question copyright law will have to clarify, in order to survive on the Internet, is whether browsing is analogous to photocopying or scanning into a computer's memory an entire book or can be considered similar to bookstore or news-stand browsing.[37] In fact, in the context of contemporary U.K. copyright law, temporary storage of a copyrighted work in a computer's RAM memory is prima facie an infringing reproduction, therefore browsing could also be, despite the fact that without a transient copy there is no access to on-line information.

Only the EC Green Paper on Copyright and the 1997 Proposal for a Directive[38] take a different approach, by considering it 'fair dealing.'[39] This is merely one piece of evidence that clearly shows how inappropriate the current interpretation of copyright law is, and the paradox that is created in the process of applying pre-existing law to modern technology.

To make things even worse, the most popular of Internet tools, the World Wide Web (or the Web, as Internet users affectionately call it), operates on an associational browsing mode ('(hyper)linking'). This means that user navigation is non-linear and is achieved by means of cross-referenced links[40] to associated items of information.[41] Furthermore, the World Wide Web, which is officially described as a wide-area hypermedia information retrieval system based on the client/server model, is, unlike the rest of the Internet tools, a hypermedia system.[42] As such, it is capable of handling documents with embedded hypertextual navigation links, non-textual forms of data ('multimedia'), such as sound, images, movies, etc., as well as information available via other Internet tools, e.g. Gopher or ftp. This characteristic makes the World Wide Web not only the most popular Internet tool, but also the one with the most potential. Moreover, when combined with its user-friendly graphical interface, which allows even the most ignorant of users to access any resource easily, it further amplifies the danger that the World Wide Web poses to intellectual property.

The past couple of years have witnessed claims that hypertextual navigation links infringe copyright [43] and that they should not be permitted. All around the world (from Scotland to New Zealand,) [44] similar cases are brought before the courts, that, most of the times, are at loss how to deal with this kind of situation. The problem is probably one of understanding (or misunderstanding) of what a hypertext link is. Given the ease, with which material is retrieved through links, a lot of people conflate them with content. In reality, a link is no more than a URL address for the end user's web browser. Therefore, a link by itself cannot violate any site owner's rights, because it does not stake any ownership claims on the material on behalf of the person making the link. URL addresses, much like normal addresses, are statements of location, i.e. mere facts not copyrightable under the U.K. Copyright, Designs and Patents Act 1988 (CDPA) or any other copyright legislation or case law[45] for that matter.[46] Outlawing the navigational links could potentially lead to the end of the World Wide Web as we know it, since surfing on the Internet would become an arcane knowledge to be found only among the computer-literate. As it has been pointed out,[47] 'linking is permissible because otherwise the web would end'.

In fact, it has been argued that by placing their materials on the Internet, copyright owners are granting 'implied licences' to the rest of the users to link to this information.[48] The rationale for that is based on the nature of the Internet itself as a meta-network, i.e. the network of networks, which requires guidance by pointers for users to locate the vast amounts of information stored on it.

[49] Linking is custom and practice, and the reason for the World Wide Web's success. So, there is, more or less, an implied licence for linking,[50] unless the site owner has expressly stated an objection. However, when in doubt, Netiquette offers a solution: e-mail a request to the owner of the site for permission to link.

A well-known case involving World Wide Web links is the Scottish case of *Shetland Times v Dr. Jonathan Wills and ZetNews Ltd.* The facts of the case are quite straightforward: Both parties offer Internet-based news services. In October 1996, Shetland News (the defendants) used headlines of Shetland Times stories as links to the latter. The judge granted a temporary ban of links, and, finally, the parties settled out of court. At that time, the case received a lot of publicity as being the 'end of links and the World Wide Web', but in reality, there was nothing in the preliminary decision suggesting that hyperlinks infringe copyright.[51]

A problem closely related to hypertextual links is 'inlining'. [52] Inlining is a technique, which enables creators of web pages to embed content (e.g. text, or images) by including a reference[53] to the URL location of the material. No cache copy of the inlined material is made on the host server, since it is retrieved every time from the original source, yet many information providers feel threatened by this practice, because the inlined content appears as integral part of the page,[54] to which it is inlined. So far, there has been only one dispute arising from inlining. It involved the comic strip 'Dilbert' and has settled out of court with removal of the materials involved.[55]

'Framing' is another common practice on the World Wide Web that has become a source of controversy.[56] Conceived in early 1996 by Netscape Communications Corporation as a proprietary feature of their web browser, the <FRAME> tag allows the viewer screen to split into multiple scrollable sections ('frames') that operate as independent windows containing text, graphics, multimedia, or other frames. Quite frequently, frames are used for the creation of static windows presenting elements, such as title graphics, tables of content, and control bars, which users always see when visiting a particular web site. Unlike links or inlining, frames permit the incorporation of entire remote sites without ever leaving the linking site. In this way, site owners can incorporate web sites (in part or as a whole) produced by third parties and surround and juxtapose them with their own logos, advertisements, and materials, while the URL address shown remains that of their own (framing) site.[57]

It is evident that end users may be easily misled to believe that all material on screen originates from the same server. Only site owners themselves can ensure that there is no confusion as to the ownership of the materials presented within the frame. Furthermore, it is arguable whether framing can be covered by the scope of the implied licence for linking, since it does not take the end user to the web site, but rather brings the site to the user through another (framing) site, thereby altering his or her perception of the material.[58]

There have been many framing cases, but the one that attracted much legal discussion was *Washington Post Co. v. Total News*,[59] a case, which, again, settled out of court. Total News is a site featuring a long list of links to web sites of international news organisations, surrounded by advertisements. The site operates through a frame system that allows the users to activate a link from the list and view its contents within a frame. Washington Post and five other media giants (i.e. Time Inc., Dow Jones, etc.) sued[60] Total News for copyright and trademark infringement arising from linking without permission and displaying their web site within frames. As part of the settlement, Total News received a licence to link but not frame any of the plaintiffs' web sites in the future. This is the first time an explicit licence is required for linking.

### c) Problems of jurisdiction[61]

Another major issue when dealing with intellectual property on the Internet is jurisdiction. Until now, intellectual property has been protected by national legislation confined within the territorial

borders of states. International protection is granted through the implementation of international treaties, like the Berne Convention for the Protection of Literary and Artistic Works[62] (1886), the Universal Copyright Convention (UCC)[63] (1952 and 1971), the WIPO[64] treaties (the last[65] being that of Geneva on Dec. 20, 1996), or TRIPS (Trade Related aspects of Intellectual Property rights). Basically, the aim of these treaties is the synchronisation of different territorial laws on copyright and intellectual property to lessen inconsistency in protection, by laying down some minimum standards. The signatory states undertake to enforce the articles of the treaties and secure copyright protection for the works of non-citizens, as long as the author has a personal connection with a member - state or his/her work is first published there. Subsequently, these treaties are binding only for the signatory states.

Cyberspace, on the other hand, has no geographical boundaries, being merely an abstract notion serving as conceptualisation of the Internet.[66] Information and data are transmitted across state borders at incredible speeds. Bonds to geographical jurisdiction are fragmented, if non-existent, and questions as to where copyright infringements occur arise. The following example by Oberding and Norderhaug[67] is characteristic of the situations created by on-line infringement: A company in Norway puts up a web site on a server in Singapore with Disney's copyrighted images and the images are downloaded, cached, browsed, copied, etc. in many countries all over the globe. Whom would the copyright owner pursue? What law(s) would apply?[68] Which state has jurisdiction: the one, in which the infringing company is based, or the state where the infringed images are stored on a server, or the one where the infringed files are accessed from, and so on.[69] According to private international law, all involved states have equally the right to claim jurisdiction based on *lex loci delicti*, or *lex fori*, or *lex domicilii*, etc. However, since there are no borders in cyberspace, the infringement would eventually become a delict in transit.

The disjunction between the territoriality of legal disputes and the ubiquity of cyberspace has led to several proposals concerning the creation of a separate jurisdiction for cyberspace ('cyberjurisdiction'). The basic argument against cyberjurisdiction is that computer network transmissions have no distinguishing characteristics warranting different treatment from satellite, broadcast, fax, or telephone transmissions. Any activity on the Internet takes place neither in outer space nor in a parallel, virtual universe; therefore, it should not be outside the jurisdiction of the states from which it originates or to which it is sent.[70] On the other hand, and despite the fact that the mentioned arguments have some merit, most of the time, it is difficult to identify the territorial states from which the computer network transmissions originated or the states to which they are sent. Recognising cyberspace as a distinct place with cyber-specific substantive laws ('cyberlaw') would simplify some of the arising matters, and cyberlaw would account for some of the special characteristics of cyberspace.[71] Nevertheless, nobody has so far suggested a method of establishing such a cyber forum, or creating and enforcing cyberlaw. Related problems that need to be addressed include lack of consensus among the Internet users ('netizens'), absence of a centralised law-making authority, etc. Furthermore, the 'duality' of the resulting system, where every country will have two sovereigns governing different areas of law, would create vast grey areas between them that could render the proposal ineffective.

## Conclusions and Proposals

This paper offers many questions, and in turn very few answers. Internet is an unprecedented form of communication, from which new types of institutions, behaviour and relationships emerge. Existing law-making processes work too slowly to deal effectively with this totally different environment. The copyright's inability to adapt to these new situations can impede seriously any progress towards a new more efficacious model of regulation. In fact, a step towards the right direction is identifying the problems.

First of all, we need to recognise that copyright law is essentially an artefact of the 18<sup>th</sup> and the 19<sup>th</sup> century, intended for specific types of works. Digital works are an entirely different category, both

conceptually and technically. Whether we approach this matter from a progressive or conservative point of view, the bottom line should be that there is an urgent need for copyright law to be able to deal with the new challenges posed by Internet technology.

Any attempt to map traditional notions of copying and copyright infringement onto cyberspace transactions should be done with extreme caution; otherwise, it will certainly produce dubious results. Take, for instance, 'caching.' The creation of temporary copies is an inherent technical characteristic of the design of the Internet and the World Wide Web, and, therefore, necessary for their appropriate function. Thus, expecting the Internet technology to conform to the restrictions of pre-existing copyright law would only impede technical design. In fact, it would be much more easier, if the law would adapt,[72] by either considering these transient copies created purely for the system's operation as 'fair dealing' (as it, in fact, proposed by the EC Green Paper)[73] or by creating a 'privilege'[74] for them, and thus legitimise them. Inlining and frames can also become legitimate, through specification of their acceptable uses.

Furthermore, technology can provide several alternative methods of ensuring revenue for copyright owners in cyberspace.[75] One of these methods is employing electronic copyright management systems (ECMS).[76] Although there are several legal issues associated with their use,[77] they are much more preferable to encryption, since they can be set up to allow viewing and reading for free, but exact a fee for permanent storage and downloading, if these cannot be covered by 'fair dealing.' Closely related to the ECMS is 'Transcopyright,'[78] a notion developed by Ted Nelson in conjunction with his project 'Xanadu.' Xanadu publishing is a long-standing proposal for a new literary medium (very much like the World Wide Web) that would preserve integrity, copyright and royalty for digital works, and yet allow everyone to reuse already existing materials. This project has been going on for several decades, but until now Xanadu has not been realised, so we cannot really comment on its feasibility, or its success.

New international treaties should deal with the problem of effective protection of digital works in cyberspace and come up with mechanisms that will allow all problems, jurisdictional and technical alike, to be solved. The EC Green Paper[79] recognises the restricted territorial scope of domestic copyright law, and, subsequently, identifies the need for a coherent regulatory framework, not only at a (member - state) national and community level, but also at an international level.[80] Even before the presentation of the Green Paper in 1995, but even more after that, the European Union has produced several directives aiming at the harmonisation of legislation in all member-states in the field of intellectual property[81] among others. For the European Union, this initiative[82] may result to a leading role in the international harmonisation of copyright legislation, since EU legislation has an overall impact, not only on its member - states, but also on the rest of the European countries that aspire to join it. In effect, one could argue that EU legislation on harmonisation is legislation for all Europe. This fact can definitely elevate the European Union to a position to challenge U.S. influence on the drafting and implementation of international treaties on copyright, especially when 'caching' is considered 'fair dealing' by the Union.

Jurisdictional problems can be tackled on an international level by either creating a special international court for on-line disputes arising from intellectual property infringements, or by introducing an international advisory and arbitration organisation that will assist national courts in dealing with them. A potential model upon which this international court or organisation can be mapped is the 'Virtual Magistrate Pilot Project'[83] of the Cyberspace Law Institute (CLI), a new on-line tribunal not bound by territorial borders. The project is carried out by eight 'magistrates' (usually with an in-depth knowledge of technical as well as legal matters) who conduct arbitration via e-mail and publish their decisions on the institute's web site. The decisions cannot award damages, only injunction - type remedies; nevertheless, they are issued much faster than any decision of a national court. So far, the magistrates have only dealt with e-mail disputes, but it may not be too long before they will have to arbitrate intellectual property cases.

Some level of accountability for Internet service providers (ISPs) and/or system administrators ('sysadmins') may be necessary for alleviating the ubiquitous copyright infringements by users; nevertheless, any criminal liability should exist only for their own possibly infringing behaviour. Their tasks should be aiming at protecting the functional operation of the system without undertaking the role of policing content. This can be achieved by strict definition of all acceptable Internet uses [84] as well as by informing their subscribers about copyright law, the consequences of infringements, and the sanctions imposed by the service providers themselves to users who violate copyright, or any other law.

Defining the meaning of copyright law on the Internet will become a serious task for both courts and legislators in the next few years. A change of perspective may be in order for a redefinition that will be flexible and suitable for tackling the difficult problems arising from digital technology. Until now, we have been examining digital technology from the perspective of copyright law, i.e. with a mechanistic approach, and always trying to make technology fit the existing constructions of copyright law. From now on, we may have to critically examine copyright law from the perspective of digital technology [85] and the new meaning it gives to creation and dissemination of information.

The debate over the future of copyright law should regard digital technology as a challenge, and not as a threat to the rights of copyright owners. After all, what digital technology can take away, it can also restore, and it most definitely can introduce other, perhaps more effective, means of ensuring protection for copyrighted works on-line. Continuous use of the conceptual framework of copyright law may shift attention from the interests at stake. The rights of copyright owners are an important component of the copyright equation, but so are the rights of public for information dissemination, freedom of expression and informational privacy. [86] The community of Internet users has its own sets of interests and values that need to be examined thoroughly, before any decisions are made. It is obvious that instead of leaving the courts to 'fend for themselves' while trying to apply outdated principles, the legislature should re-evaluate the interests of all those involved and legislate towards a new more flexible copyright framework, suitable for the digital age. -

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  - Shetland News v Dr. Jonathan Wills and ZetNews Ltd. 1997 SLT 669 <<http://www.shetland-news.co.uk/opinion.html>>.
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[1] The other branches include patents, trade marks, designs, confidence, etc.

- [2] The period of time for which copyright is conferred may differ according to the type of the work. For more details, see Michael Edenborough, *Intellectual Property Law* (1995), 51-6.
- [3] David I. Bainbridge, *Intellectual Property* (1994), 38-41.
- [4] Most sources, though, originate from the United States and Great Britain.
- [5] David Post, 'New Wine, Old Bottles: The Case of the Evanescent Copy', *American Lawyer* (May 1995) <[http://www.cli.org/DPost/X0016\\_NEWWINE.html](http://www.cli.org/DPost/X0016_NEWWINE.html)>.
- [6] Ithiel de Sola Pool, 'Whither Electronic Publishing', in: Martin Greenberger, *Electronic Publishing Plus: Media for a Technological Future* (1985), 217.
- [7] Bainbridge, *op.cit.* 27ff.
- [8] The first copyright statute was the English statute of Queen Anne of 1710.
- [9] Pamela Samuelson, 'Copyright, Digital Data, and Fair Use', in: Ejan Mackaay *et al* (eds.), *The Electronic Superhighway - The Shape of Technology and Law to Come* (1995), 119.
- [10] Richard J. Solomon, 'Computers and the Concept of Intellectual Property', in: Martin Greenberger, *op.cit.* 231.
- [11] Eric Schlachter, 'The Intellectual Property Renaissance in Cyberspace: Why Copyright Law Could Be Unimportant on the Internet', 12 *Berkeley Technology Law Journal* \_\_ (Spring 1997) <<http://server.berkeley.edu/BTLJ/articles/12-1/schlachter.html>>; Samuelson, *op.cit.* 124.
- [12] For the purposes of this paper, cyberspace is used as another word for the Internet as a global matrix.
- [13] The terms used are mine, except 'maximalism' (*supra* note 17).
- [14] John Perry Barlow, 'Selling Wine Without Bottles: The Economy of Ideas', *Wired* 2.03 (Mar. 1994), 85 <<http://www.wired.com/wired/2.03/features/economy.ideas.html>>; Esther Dyson, *Release 2.0 - A Design for Living in the Digital Age* (1997), 134-154; Nicholas Negroponte, *Being Digital* (1995), 58-61.
- [15] Ithiel de Sola Pool, *Technologies of Freedom* (1983), 214.
- [16] Hal. R. Varian, 'Economic Issues Facing the Internet', 33-4, 39-40, in: Institute for Information Studies, *The Internet as A Paradigm* (1997).
- [17] Jessica Litman, 'Revising Copyright law for the Information Age', 75 *Oregon L. Rev.* 19ff. <<http://www.law.cornell.edu/commentary/intelpro/litrvtxt.htm>>; Charles R. McManis, 'Taking TRIPS on the Information Superhighway: International Intellectual Property Protection and Emerging Computer Technologies', 41 *Vill. L. Rev.* \_\_ (1996) <[http://vls.law.vill.edu/students/orgs/law-review/Vol\\_41/Issue\\_1/mcmanis.htm](http://vls.law.vill.edu/students/orgs/law-review/Vol_41/Issue_1/mcmanis.htm)>.
- [18] Jessica Litman, 'The Exclusive Right to Read', 13 *Cardozo Arts & Ent. L.J.* 29ff. (1994) <<http://www.msen.com/~litman/read.htm>>.
- [19] For example, 'access right', 'browsing right', etc.

[20] Edward Cavazos and Gavino Morin, *Cyberspace and the Law: Your Rights and Duties in the On-Line World* (1995) 47ff., where the authors show how existing copyright law applies to specific areas of Internet communications, e.g. news articles, e-mail, digital images, chat, etc.

[21] Morton David Goldberg, 'Copyright and Technology: The Analog, the Digital, and the Analogy', in: World Intellectual Property Organisation (WIPO), *Proceedings of the WIPO Worldwide Symposium on the Impact of Digital Technology on Copyright and Neighbouring Rights*. (1993), 31-54.

[22] The term originates from Pamela Samuelson, 'Big Media Beaten Back', *Wired* 5.03 (1997) <<http://www.wired.com/wired/5.03/netizen.html>>.

[23] William Strong, *Copyright in the New World of Electronic Publishing* <[http://www.eff.org/pub/Intellectual\\_property/copyright\\_in\\_new\\_world.paper](http://www.eff.org/pub/Intellectual_property/copyright_in_new_world.paper)> (June 17, 1994); Marshall Leaffer, 'Protecting Author's Rights in a Digital Age', *27 U. Toledo L. Rev.* 1ff. (1995).

[24] Information Infrastructure Task Force, *Intellectual Property and the National Information Infrastructure - The Report of the Working Group on Intellectual Property* (cited as *NII White Paper*) (Sept. 5, 1995) <<http://www.uspto.gov/web/offices/com/doc/ipnii/>>.

[25] For a critical review, see Pamela Samuelson, 'The Copyright Grab', *Wired* 4.06 (Jan. 1996), 134 <<http://www.wired.com/wired/4.06/features/white.paper.html>>.

[26] This is called the 'information wants to be free' attitude.

[27] For the general principles of Netiquette, see Virginia Shea, *NETiquette* (1994).

[28] Litman, 'Right to Read', *loc.cit.* 50-1.

[29] For the importance of attribution, see Schlachter, *loc.cit.*

[30] This is one of the areas that the copyright maximalists have targeted in the White Paper's eight-point agenda, where it is proposed that children receive lessons about copyright and non-sharing from kindergarten to college, in an attempt to have new patterns of behaviour instilled for the digital age, and ensure that future generations will cease sharing copies of copyrighted works in digital (or not) form. See also Samuelson, 'Copyright Grab', *loc.cit.*

[31] In January 1997, the number of existing web pages was approx. 32 million, and it is estimated that by now it must have exceeded 100 million.

[32] For an overview of the World Wide Web, see John December and Neil Randall, *The World Wide Web Unleashed* (1994), 42ff.; Brian Kelly, *An Introduction to the World Wide Web* <<http://www.man.ac.uk/MVC/SIMA/WWW/introwww.html>>.

[33] Caching can be defined as the automatic copying of an Internet resource (e.g. a web page, etc.) when first accessed by the system, and storage of the copy created for speeding subsequent access. It can occur both locally on the user's computer or on the server used ('proxy caching'). See also Henry H. Perritt, *Law and the Information Superhighway* (1996), 234-236; Cyberlaw Law Institute (CLI), *Copyright law on the Internet: The Special Problem of Caching and Copyright Protection* (Sept. 1, 1995) <<http://www.cli.org/Caching.html>>, where three illustrative examples can be found in Appendix A.

[34] Terje Norderhaug and Juliet M. Oberdink give a very illustrative description of the ways in which a browsed document can be copied, in 'Designing a Web of Intellectual Property', 27

*Computer Networks and ISDN Systems*, 1037-46 (1995)  
<<http://www.ifi.uio.no/~terjen/pub/webip/950220.html>>.

[35] In the United States, two court decisions supported that file caching constitutes copyright infringement, namely *MAI Systems Corp. v Peak Computer* (991 F2d 511, 9<sup>th</sup> Cir. 1993) and *Advanced Computer Services of Michigan Inc. v MAI Systems Corp.* (845 F. Supp. 356). This view has also been embraced by the U.S. government's NII White Paper and the U.S. National Information Infrastructure Copyright Protection Act of 1995. Draft Article 7 of the WIPO Treaty also supported it to a great extent, but it was finally dropped from the treaty due to the doubts and questions raised by it.

[36] Although 'fair dealing' is not defined strictly in legislation, it is well established through the practice of the courts. What is 'fair', is established with regard to all the circumstances, the nature of the material, and the intention of both the copyright owner and the person doing the reproducing act. See Jon Hollyoaks and Paul Torremans, *Intellectual Property Law* (1995), 206ff.; Hector MacQueen, 'Copyright and the Internet', 86-9, in: Lilian Edwards and Charlotte Waelde, *Law and the Internet - Regulating Cyberspace* (1997).

[37] Post, *loc.cit.*

[38] European Commission, *Copyright and Related Rights in the Information Society - Proposal for a Directive / Background* (Dec. 10, 1997)  
<<http://europa.eu.int/comm/dg15/en/intprop/intprop/1100.htm>>.

[39] European Commission, *Green Paper on 'Copyright and Related Rights in the Information Society'*, COM(95) 385 Final <<http://www.ispo.cec.be/infosoc/legreg/com382.html>>.

[40] A link is a connection between two different files (on the same or different server) or two different parts of same document. The reference is created by an HTML tag called <HREF>, which provides instructions (URL address) for the retrieval of the second document.

[41] The World Wide Web is broadly based on an idea for a 'memory extension' machine (called 'memex') by the American scientist Dr. Vannevar Bush. For a description of 'memex', see Bush's article 'As We May Think' (in: *Atlantic Monthly*, July 1945)  
<<http://www.theatlantic.com/atlantic/atlweb/flashbks/computer/bushf.htm>>.

[42] For some, the World Wide Web is an abstract space of knowledge rather than a tool, as opposed to the physical side of the global network (cables and computers) represented by the Internet.

[43] Links can allegedly infringe trademarks as well. Cf. U.S. case *Ticketmaster Corp. v Microsoft Corp.* [CV 97-3055 RAP (C.D.Cal., May 28, 1997)].

[44] Television New Zealand has been advising site owners not to link to pages within its web site, or to use its logos. For more details, see Russell McVeagh McKenzie Bartleet & Co., *Hypertext Links: Are they Legal?* (Dec. 1996) <<http://www.rmmb.co.nz/ipdec96.html>>.

[45] Cf. the 1991 U.S. Supreme Court decision *Feist Publications Inc. v Rural Telephone Services Co.* (111 S. Ct. 1282).

[46] A compilation of links, however, can be copyrighted as a compilation of facts (*i.e.*, a database). A compilation is a work created by collecting and arranging pre-existing data of materials in such a way that the resulting work as a whole is an original work of authorship.

[47] Brad Bolin, as mentioned in Daniel Tysver, *Internet Law: Linking* (1996) <<http://www.bitlaw.com/internet/linking.html>>.

[48] MacQueen, *loc.cit.* 89-90; Oppenheim, *loc.cit.*

[49] Web search engines would not be able to operate if linking was not allowed.

[50] Whether links have to be made to the homepage of a particular web site or they can bypass it, is still under dispute.

[51] What should have been worrying was that in the ruling, web publishing was considered falling under the category of 'cable programme', a fact which by itself shows an insufficient understanding of the technologies involved. The interim interdict (1997 SLT 669) is at <<http://www.shetland-news.co.uk/opinion.html>>, an opinion by Prof. Charles Oppenheim (*The Internet Copyright Case and its Implications for Users of the World Wide Web* - Dec. 6, 1996) at <<http://www.shetland-news.co.uk/editorial/profopp1.html>>, and the settlement agreement is at <<http://www.shetland-news.co.uk/headline/97nov/settled/settled.html>>. There is a simulation of the case (available by the Shetland Times) at <<http://www.shetland-times.co.uk/st/newsdemo/newsindex.htm>>. For extensive comments on the case, see Ian Lloyd, *Information Technology Law* (1997), 359-64; Charlotte Waelde, 'Intellectual Property and the Internet', 71-2, in: Hume Papers on Public Policy Vol.5 No.3 (*Innovation, Incentive and Reward*).

[52] Norderhaug and Oberdink, *loc.cit.*

[53] This is achieved by using an <IMG> tag, and not the <HREF> tag (see *supra*, note 31). <IMG> tags are normally used for the retrieval of images and other graphics and their subsequent incorporation in a document. The images involved belong to the owner of the web page. More on inlining can be found at the HTML Specification pages <<http://info.cern.ch/hypertext/www/markup/elements/img.html>>.

[54] More on inlining can be found at the HTML Specification pages <<http://info.cern.ch/hypertext/www/markup/elements/img.html>>.

[55] See <<http://www.cs.princeton.edu/~dwallach/dilbert/>>.

[56] Meeka Jun, 'Been 'Framed'?: Impostors Beware!', *N.Y. L.J.* (June 20, 1997) <<http://www.ljx.com/internet/0620frame.html>>.

[57] The URL remains that of the framing site even if the user follows a link from any page within the frame.

[58] Timothy Hughes, *Intellectual Property and Browsing the Web* (1997) <<http://www.gtlaw.com.au/gt/pubs/browsingweb.html>>.

[59] 97 Cv. 1990 (PKL) (S.D.N.Y.).

[60] The lawsuit is at <<http://www.ljx.com/internet/complain.html>>.

[61] David Johnson and David Post, Law and Borders - The Rise of Law in Cyberspace, 48 *Stanford L. Rev.* 1367 (1996) <[http://www.cli.org/X0025\\_LBFIN.html](http://www.cli.org/X0025_LBFIN.html)>; Joanna Zakalik, *International Jurisdiction and Conflict of Laws in Cyberspace* (1996) <<http://www.libraries.wayne.edu/~jlitman/pzakalik.html>>; Ewan Kirk, *International Copyright Issues for the Publisher on the World Wide Web* (1995) <<http://www.solent.ac.uk/law/soll/ollr/chapter1.htm>>.

[62] It was substantially revised at Berlin (1908), Rome (1928), Brussels (1948), and Paris (1971).

[63] An important difference between the Berne Convention and the UCC is that, under the latter, works whose term of protection has expired cannot acquire protection retrospectively should their country of origin ratify the UCC, whereas under the former that occurs.

[64] It stands for World Intellectual Property Organisation. WIPO was established at the Stockholm Convention of 1967.

[65] See <<http://local.gov/copyright/wipo.html>> and <<http://www.public-domain.org/wipo/dec96/dec96.html>> for the drafts, proposals, and agendas; <<http://www.wipo.org/eng/diplconf/distrib/treaty01.htm>> for the treaties.

[66] Cyberspace can be an extremely elusive concept, since its nature makes it inherently difficult to describe. The following definition by the Labyrinth Group is quite enlightening (mentioned in Andrew Krend, *Defining Cyberspace* <<http://andes.ip.ucsb.edu/~krend/cybdef.html>>):

'For the purposes of continuity in navigation, it is necessary to create a unified conceptualization of space spanning the entire Internet, a spatial equivalent of WWW. This has been called Cyberspace, in the sense that it has at least three dimensions, but exists only as a 'consensual hallucination' on the part of the hosts and users which participate within it .... Cyberspace is complete abstraction, divorced at every point from concrete representation.'

See also Anthony Rutkowski, 'The Internet: An Abstraction', 1-22, in: Institute for Information Studies, *op.cit.*

[67] Juliet M. Oberdink and Terje Norderhaug, 'A Separate Jurisdiction for Cyberspace?', 2 *JCMC* \_\_ (June 1996) <<http://jcmc.huji.ac.il/vol2/issue1/juris.html>>.

[68] Answering the question of jurisdiction can sometimes make an impact on who is liable, especially when the jurisdiction is based on the location of the server, then the system administrator ('sysop') may also be held responsible, as an intermediary facilitating the infringement as in the U.S. cases *Sega Enterprises v MAPHIA*, (857 F. Supp. 679, N.D. Cal., 24 Mar. 1994) or *Religious Technology Center (RTC) v Netcom On-Line Communications Services Inc.* (C95-20091-RMW, N.D. Cal. 1995). See also Amy E. Weaver, 'A Guide to Safe Sysop-ing: The Church of Scientology, Sysops and On-Line Service Providers', 2 *JCMC* \_\_ (Sept. 1996) <<http://jcmc.huji.ac.il/vol2/issue2/weaver.html>>.

[69] According to *Shevill v Presse Alliance* [1995] 2 WLR 499, place of delict can be either the source or the target of the harm.

[70] *NII White Paper*, *op.cit.*

[71] Johnson and Post, *loc.cit.*

[72] As it has done in the past with films, broadcasts, cable programmes, etc.

[73] Johnson and Post, *loc.cit.*

[74] Perritt, *op.cit.* 434.

[75] Otis Port, 'Copyright's New Digital Guardians', *Business Week* (April 24, 1996) <<http://www.businessweek.com/1996/19/b347474.htm>>; Schlachter, *op.cit.*

[76] European Commission Legal Advisory Board (L.A.B.), *Reply to the Green Paper on Copyright and Related Rights in the Information Society* (April 1997) <<http://www2.echo.lu/legal/en/ipr/reply/technical.html>>; *Workshop on Technical Mechanisms for IPR Management in the Information Society* (Brussels, June 10, 1996) <<http://www2.echo.lu/oii/en/ipr.html>>; European Copyright User Platform (ECUP), *Position on User Rights in Electronic Publications* (Sept. 25, 1996) <<http://www.kaapeli.fi/~eblida/ecup/position.html>>.

[77] Charles Oppenheim, 'Legal Issues associated with Electronic Copyright Management Systems', *Ariadne* 2 (Feb. 1996) <<http://www.ariadne.ac.uk/issue2/copyright/>>; Julie Cohen, 'A Right to Read Anonymously: A Closer Look at "Copyright Management" in Cyberspace', 28 *Conn. L. Rev.* 981 (1996).

[78] Theodor Holm Nelson, *Transcopyright: Pre-Permission for Virtual Republishing* (09/4/1995) <<http://www.xanadu.net/xanadu/transcopy.html>>.

[79] European Commission, *op.cit.*

[80] European Commission, *Follow-up to the Green Paper on Copyright and Related Rights in the Information Society*, COM(96) 586 Final <<http://www.ispo.cec.be/infosoc/legreg/docs/com96586.html>>.

[81] For example, Council Directive of 14 May 1991 on the legal protection of computer programs (91/250/EEC), Council Directive of 19 November 1992 on rental right and lending right and on certain rights related to copyright in the field of intellectual property (92/100/EEC), Council Directive of 27 September 1993 on the co-ordination of certain rules concerning copyright and rights related to copyright applicable to satellite broadcasting and cable transmission (93/83/EEC), Council Directive of 29 October 1993 harmonising the term of protection of copyright and certain related rights (93/98/EEC), Directive of the European Parliament and the Council of 11 March 1996 on the legal protection of databases (96/9/EC), etc.

[82] It was based on the so called 'Bangemann Report', *Europe and the Global Information Society - Recommendations of the High-Level Group on the Information Society to the Corfu European Council* (Brussels, May 26, 1994) <<http://www.ccg.uc.pt/wise/english/rd/prog/general/report.html>>.

[83] For more details, see the Virtual Magistrate Site <<http://vmag.vclp.org>>; David G. Post, *Dispute Resolution in Cyberspace: Engineering a Virtual Magistrate System* (1996) <<http://www.law.vill.edu/ncair/disres/DGP2.HTM>>.

[84] Concerning not only copyrighted material, but also pornography, hate speech, etc.

[85] Norderhaug and Oberdink, *Web of Intellectual Property*, *loc.cit.*

[86] European Commission Legal Advisory Board (L.A.B.), *op.cit.* <<http://www2.echo.lu/legal/en/ipr/reply/general.html>>, where the EC Green Paper is criticised for inadequate balancing of conflicting interests. See also ECUP, *op.cit.*