

CITATION STANDARDS AND LINKING RULES:

A Slightly Wary Approach Having Regard to Intellectual Property Issues

Pearl Rozenberg*

Citation rules and procedures have developed, to date, based on efficiency of use of the standard.¹ Intellectual property issues have not played a part. In the one case located by the author, West Publishing Company argued that its citation system was subject to copyright and that cross referencing of its materials by rival publishers constituted copyright infringement.² Following the Feist case³, West has lost when challenging the open use of citation to its materials⁴ and “the theory of copyright in citations appears to be largely defunct under the current law”.⁵

This analysis of copyright in respect of citations related to the “paper world”. The internet and linking were not contemplated in the judgements. Will a different answer result if a copyright analysis is carried out in respect of citations and linking on the internet? The “newspaper linking cases”⁶ indicated that a headline could not be used in a link. Could the same be applied to titles of articles? Authority to link to pages has been denied in a number of cases.⁷

* *School of Business, Faculty of Economics and Business, University of Sydney.*
The author is grateful to Lyndal Taylor of UTS who read through drafts, correcting errors and making suggestions.

1 The preferences of the author of the standard may have contributed to the choice of form used in the standard.

2 *West Publishing Company v Mead Data Central* 799 F 2d 1219 (1986).

3 *Feist Publications, Inc v Rural Telephone & Telegraph Service Co* 499 US 340 (1991).

4 *Mathew Bender and Co v West Publishing Co* US Dist LEXIS 2710 (1997).

5 D. Burk., “Proprietary Rights in Hypertext Linkages”, (1998) 2 *The Journal of Information Law and Technology* <http://elj.warwick.ac.uk/intprop/98_2burk/> (5 Nov 2001).

6 *Shetland Times v Dr Jonathan Wills and Zetnews Ltd* [1996] (Edin Ct Sess)

SCLR160: <<http://www.cmcnyls.edu/public/Misc/Shtdttro.htm>> (5 Nov 2001).

The Washington Post Co v TotalNews Inc No 97-1190 (1997).

Should copyright owners wish, can they prevent references or links to their pages? In a yet to be adjudicated area, what is the effect of the new, and for now few, “fee for links” websites? What effect will these have on the ability to link to, cite and refer to these sources?⁸ The purpose of this paper is to investigate whether intellectual property issues affect internet citation, referencing and linking.

The standards or guides for citing internet references have been established in more than one form.⁹ When used for referencing in “paper” sources there is no doubt as to their validity.¹⁰ But when they are used on the internet does the different application of the intellectual property rules require an alteration of the standards?

A citation on a web page, when deconstructed, consists of

1. content—the physical text of the reference—and
2. a hyperlink, attached to some part of the content, which will take the reader to the document referenced, if such document is available.¹¹

The intellectual property and citation issues of each part of the internet reference will be discussed in turn.

Text or Content of the Citation

A citation to an internet resource typically consists of author information, the title of the piece, date of publication, location data generally consisting of a URL, or “uniform resource locator”, and sometimes a date of access. An example is set out below.¹²

7 Injunctions were granted stopping linking to sites. For full details of the cases, see the text above note 29.

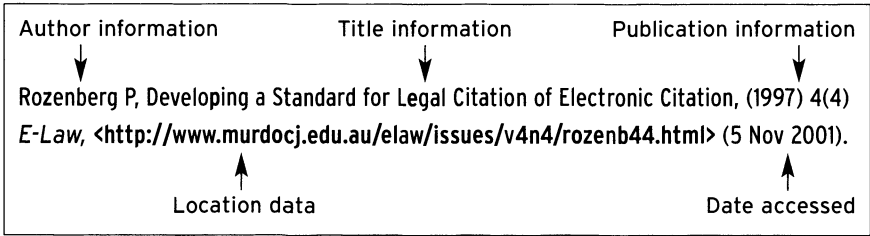
8 These questions emerge in “Free Links Only \$50 Apiece”, *Wired News*, 28 Dec 2000, <<http://www.wired.com/news/business/0,1367,40850,00.html>> (5 Nov 2001). Journals with agreements with iCopyright, a company that in return for a portion of the licensing fee handles collection and payment for articles, copies reprints etc., have found iCopyright has the ability to selectively grant or withhold html link permission. *The Albuquerque Journal* was reported as charging \$50 to link to each of its articles. Latino.com’s agreement permits one to five links without payment.

9 The many citation guides covering internet materials are listed in P. Rozenberg, “Referencing and Citation of Internet Resources: ‘The Truth is out There’”, (2000) 2 *UTS Law Review*, 198.

10 See text above notes 2 to 5.

11 The example in the next section illustrates this. The citation comprises text and a link, attached to the URL, that would take the reader’s browser to the source document.

12 This particular example is used because the author has ascertained that no one will be “fussed” by its use.



The author information, publication information and date of access are purely factual. It is unlikely that any intellectual property rights attach to these pieces of information. The status of location and title information is not so clear.

Are Location Data Subject to any Intellectual Property Rights?

The location data for items located on the world wide web consist of the URL. It is unlikely that any copyright attaches to URLs. In the United States, the Feist decision found telephone white pages—lists of names, addresses and phone numbers—to be unprotectable under copyright law. The case indicates that a URL—a location or identification number referencing a file somewhere on the internet—which essentially is an address would also not be the subject of copyright protection. “Because it is in essence an address, the reference is not the proper subject of copyright: it is simply an indicator of location, which is to say, a fact. If the reference is not copyrightable, then inclusion of it in a document cannot be infringement.”¹³

Under Australian law, the analysis will be different but the result of not being copyrightable will likely be the same. The Australian *Copyright Act*¹⁴ attaches protection to items if they are “works”. To be a work, the item must be original, that is created with the requisite amount of skill. The making of a URL is unlikely to involve the requisite skill. A URL is a collection of facts and words chosen by the domain naming authority and the web owner. Of the URL <http://www.pearl.com.au>, “http://”, “www”, “com” and “au” are automatically created by the DNS and various protocols. The only creative part is “pearl” which is chosen by the web owner. Even if considerable skill was expended in selecting the word, the de minimis principle will

¹³ D. Burk, note 5 above.

¹⁴ *Copyright Act 1968* (Cth).

preclude its acceptance as a literary work. Accordingly, names of fictional characters such as “Kojak” were not copyrightable.¹⁵ Even if the notion of originality is limited to effort only—the “sweat of the brow test”—is there enough effort to justify copyright? While the US cases¹⁶ would indicate there is insufficient effort, English cases have accepted such basic items as TV times listings¹⁷ and football coupons¹⁸ as copyrightable. In the unlikely event that the single creative part of the URL possesses sufficient originality to make the URL copyrightable, the defence of fair dealing for the purpose of research or study will allow use of the URL within a reference or citation.¹⁹

Trademark law may also have an effect on the location information of the reference. It is “now well understood that domain names and other resource locators can be trademarks if they serve to identify the source of an item, and not simply its logical address... Under the proper circumstances, even URL strings or IP addresses can be trademarks.”²⁰ References or citations that incorporate such identifiers may therefore be making use of a trademark. The scholarly origin of URLs typically used in references and citations will generally not involve any indication of source. They will merely serve as addresses and so no trademark liability will attach. However, it is not inconceivable that some scholarly URL may develop trademark characteristics. Perhaps far fetched, but could “austLII” or “LII” develop sufficient identification and differentiation of source for them, and any URL involving them, to serve as a trademark?

Even if a URL could serve as a trademark and it had been registered,²¹ the *Trade Marks Act* requires that the trademark has been used as a trademark.²² It needs to have been used to source or indicate the origin of goods. The URL used in a citation is not being used as a trademark. It is not indicating the origin of anything. It is merely being used as a location device.

15 *Tavener Routledge Ltd v Trexapalm Ltd* [1977] RPC 275, cited in J. Conolly and S. Cameron, “Fair Dealing in Webbed Links of Shetland Yarns”, (1998) 2 *The Journal of Information Law and Technology* <http://elj.warwick.ac.uk/copyright/98_2conn/> (5 Nov 2001).

16 *Feist*, note 3 above.

17 *Independent Television Publications v Time Out Ltd* [1984] FSR 64.

18 *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 WLR 273.

19 S. 40, *Copyright Act* 1968 (Cth).

20 D. Burk, note 5 above. S. 17 *Trade Marks Act* 1995 (Cth).

21 Only registered trade marks are protected.

22 S. 120, *Trade Marks Act* 1995 (Cth).

Is Title Information Subject to Intellectual Property Rights?

Can the title of a journal article attract intellectual property rights? It is clear that copyright attaches to the article—does it also extend to the title used alone? The newspaper headline cases found that a headline—the title of a newspaper article—could possess its own copyright. The cases, *Shetland Times v Dr Jonathan Wills and Zetnews Ltd.*²³ and *The Washington Post Co v TotalNews Inc.*²⁴ were both, however, only cases for preliminary injunctions granted on the basis of the balance of probabilities that there was copyright. Both cases were settled and so there was no full adjudication of the issues.

The title to an article may gain copyright protection in its own right if there is sufficient originality and skill for it to be a “work”. Certainly the amount of agony that can be expended on creating a title may be enough to found the skill requirement. However, a mere string of words is not likely to find protection. For instance, the title of the song “The Man who Broke the Bank at Monte Carlo” was found not to attract copyright protection.²⁵ A similar analysis would suggest that a journal title would also be unprotected.

The title can also be considered part of the larger piece. If the entire article has copyright then the title will also be covered. Where that is so, copying the title will be an infringement as long as it more than a mere tiny portion. The amount copied need not be the entire work to amount to an infringement, however it needs to be a portion.²⁶ On a percentage count copying the title while leaving the rest would amount to insignificance. However where the part copied is a key part, even small amounts may infringe. The copying of the signature part of a tune, even if only a few bars long, could well amount to an infringement given its key nature to the entire work. How central is the title?

If there could be an infringement in using the title, the exception for fair use for educational purposes would protect most uses of the title within citations and references.

It is less clear whether the exception would cover the use of the title alone, outside of a citation. In many instances, no citation is

23 [1996] (Edin Ct Sess) SCLR160:
<<http://www.cmcnyls.edu/public/Misc/Shtdttro.htm>> (5 Nov 2001).

24 [1997] No 97-1190.

25 *Francis Day & Hunter Ltd v Twentieth Century Fox Corporation Ltd* [1940] AC 112.

26 S. 14, *Copyright Act 1968* (Cth).

displayed. Rather all that is shown is the title hyperlinked which serves as a trigger to locate the source material. While the purpose may still be to reference something, the form is in no way educational. Indeed, the form of a title only link is identical to the form used in the newspaper headline cases which did create problems.

Overview

Under a very wary analysis, the text of a citation may contain elements that attract intellectual property rights but the use within a citation or reference will generally protect it. On a practical level:

- Where there is a choice, always use the full citation. Avoid title only links.
- Where the citation will also function as a hyperlink, locate the link around the text of the URL rather than the title.

Links within or part of citations

In addition to the text of the citation, a citation on a web page may also contain a hyperlink. Does the use of the link attract intellectual property rights?

The hyperlink gives rise to number of issues.

- a. Does the link itself raise any intellectual property rights?
- b. Is the location linked to relevant? Can the link be a “deep link” into secondary pages or should the link take the reader to the homepage?
- c. Is the form in which the information called up by the link is displayed relevant? For instance, can frames be employed? Should the practice of “inlining” be permitted?

Do Hyperlinks Raise any Intellectual Property Issues?

It seems fairly clear that the hyperlinks, in themselves, do not give rise to intellectual property issues. Articles such as D.L. Burk’s “Proprietary Rights in Hypertext Linkages”²⁷, E. Cavazos’s and C. Miles’s “Copyright on the WWW: Linking and Liability”²⁸ cover the area well. They indicate that linking alone will not attract copyright or other issues.

Two recent cases stopped sites from linking to other sites. In the

27 (1998) 2 *The Journal of Information Law and Technology*
<http://elj.warwick.ac.uk/intprop/98_2burk/> (5 Nov 2001).

28 (1997) 4 *Richmond Journal of Law and Technology*
<<http://www.urich.edu/~jolt/v4i2/cavazos.html>> (5 Nov 2001).

DVD cracking case, Eric Corley and 2600 Enterprises, the internet magazine *2600: The Hacker Quarterly* was stopped from publishing the means to circumvent the Content Scramble System built into DVDs. It was also stopped from linking to any website containing the computer code. Similarly, the Church of Jesus Christ and the Latter-Day Saints has obtained injunctions preventing the Utah Lighthouse Ministry, a site publishing “critical research” on the Mormon Church, linking to sites which tell where to locate copies of the *Church Handbook*.²⁹ In both cases, the defendants had previously been stopped from publishing the material on their own website. The injunctions were to stop them from avoiding the effect of the orders by instead linking to other sites that contained the material. Indeed in the DeCSS case the defendant had publicly stated it was doing so in an act of “civil disobedience”.

Can links be made to sites belonging to proprietors who expressly wish that links not be made? Under copyright law, where permission has been given or nothing has been said but the industry practice is to allow permission, then the copying of information will be permitted under an actual or implied licence. Linking to a site would in such cases be permissible. What of the situation where no permission has been given? Where orders have been granted preventing publication, then linking to such material published elsewhere will also be stopped, as in the cases above.

Do the owners of a website have the right to say you can only fetch pages from a server according to the rules they might set? For instance, linking only permitted on a fee per link basis? Intuitively, it feels that it could never be a violation of copyright to make a link to a page. That is what the web is all about. However, the website owner may well be able to set such restrictions. No one will question the fact that a publisher may demand payments for paper reprints. Why should not a web owner selectively grant or withhold link permission that allows browsers to access and copy pages? A person may have a book and a photocopier and so be able to copy, but if the author has not given permission you cannot copy. It is not an answer to say that they should use technological protections to stop access. The purpose of copyright law is to provide legal protection when technological

29 CNN.com, “Copyright ruling targets web links” Dec 14 1999, <<http://www.cnn.com/1999/TECH/computing/12/13/illegal.links.idg/>> (5 Nov 2001).

protection is hard or can be circumvented.³⁰

Linking – the making of a link – involves no copying. It is merely an instruction to locate other hypertext elements. When a reader uses a link, the reader's browser program interprets the HTML instruction associated with the link to locate, retrieve and display the link's target.³¹ The author of the link does not carry out any infringing activity, but by coding a link the author has created a virtual button that will make a copy that will be formed elsewhere. While not copying, the author has authorised the making of a copy. Authorising a copy is an infringement as much as copying directly is.³²

This analysis rests on linking against the express wishes of the copyright owner. Without such a notice, there is a fair argument that the authors of web pages welcome links to them and give implicit permission for this to happen. The law will eventually rule on that issue, and it will no doubt revolve around what a reasonable person would assume about the intentions of the website holder.

Is The Location Linked to Relevant?

Assuming the particular link is a permissible link, are there limits on where the link can point? Must the link go where the website owner wishes – for instance through the main ad rich page – or can the link be directed anywhere within the site thus avoiding the ads? For a less emotionally charged example, should we all link to AustLII's main page and so force readers to see the AustLII logo, conference and other announcements or do we just send our reader deep within to the data needed?³³

Avoiding the main page and linking deep within another website

30 Proprietors of sites can attempt to stop linking by periodically changing file names of the pages, by delivering the pages using cgi scripts, by using HTML code that checks the address of the site from which the user arrived and other methods. Most can be circumvented. These methods are also wasteful. They prevent caches from working effectively and make bookmarking by legitimate users impossible.

31 A short summary of the technicalities of linking is provided in Cavazos, note 28 above.

32 S. 36, *Copyright Act 1968* (Cth).

33 The policy issues underlying the conflict are divided. Linkers argue deep linking is simply in line with the free nature of the web. Anyone who creates a page without limits has permitted linking to anywhere within that site. Website owners, especially of commercial websites, do not agree. They believe they should be able to control how readers experience their sites. It is in their interest to move readers past ad rich pages on the way to interior pages.

has been termed “deep linking”. The practice of deep linking formed the basis of the *Ticketmaster v Microsoft* and *Ticketmaster v Tickets.com* cases.³⁴ In both cases Ticketmaster maintained a full and comprehensive website of live performances that it had the exclusive right to sell tickets for. In the *Microsoft case*, Microsoft had developed its “Sidewalk” web guides which listed upcoming events. It provided deep links to information on specific events to interior pages of Ticketmaster’s site. At the same time, Ticketmaster had signed an agreement to provide event information for a fee to a competing web service—CitySearch. CitySearch was paying for what Microsoft was taking for free. Ticketmaster sued and the case was settled before adjudication. Microsoft agreed not to deep link, agreeing to link to the home page instead.

Ticketmaster v Tickets.com did reach adjudication but only as a successful motion to dismiss a request for an injunction. On the facts, the case was dismissed since there was no copyright breach or unfair competition issue. Tickets.com created and maintained its own website of events listings. Unlike Ticketmaster which created its listings, Tickets.com collected information from other websites using spiders and web crawlers. The spiders located relevant information, copied it temporarily while software extracted the purely factual information and formatted it in the Tickets.com format on its own pages. The URL of the page was also copied so that readers wishing to buy tickets could be deep linked to the relevant page where they could buy the tickets through Ticketmaster. A reader of Tickets.com only saw Tickets.com pages which it had created. Nothing was copied beyond the URL. The source of all the facts was Ticketmaster’s pages.

No copyright infringement was found. Following *Feist*, purely factual information such as time, place etc is not subject to copyright. Since a new different page had been compiled, there had been no copying. There had been a transitory copy made during the spidering which was then destroyed. The reverse engineering exception allowed the copying since it was transitory, affected unprotected data and was used non-competitively—Tickets.com did not sell tickets but sent readers to Ticketmaster for their tickets. While the URL was copied

34 *Ticketmaster v Tickets.com* US District Court, Central Division of California, August 10, 2000. An unofficial copy of the judgement is located at Gigalaw, <<http://www.gigalaw.com/library/ticketmaster-tickets-2000-08-10-p1.html>> (5 Nov 2001). *Ticketmaster v Microsoft* was settled before any trial.

the court did not find that it was protected.³⁵

There were no anti-competitive issues either. Tickets.com did not pass itself off as Ticketmaster nor did it pretend to be Ticketmaster. It was always clear to readers which website they were viewing and it was clear that only Ticketmaster could sell tickets. There was nothing misleading.

Neither “deep link” case came to full adjudication. The issue will still need to be resolved through the courts or legislation of whether deep linking is permissible—particularly for sites that specifically do not permit it to occur.

Is the Form in which the Linked Text is Displayed on the Browser Relevant?

The author of the link codes the link with the data to locate the information and display it. That coding can include information as to how the information is displayed. As such it can appear as a separate window, or it may appear within a frame. Does the manner of display raise any intellectual property issues? Kubiszyn writes:

Framing was introduced in 1996 as a proprietary feature of the Netscape Navigator browser. Framing technology allows a website designer to embed independently scrollable windows within its own border, or “frame”. As the name implies, a “frame” is a bordered area of a web page that acts as an independent browser window that “frames” the content of a secondary, “target” web page or website. When a web page or site is framed within another website, its URL or domain name is not displayed. Instead, the URL and web page border from the originally accessed site is maintained, while the content of the target site appears within this border. Further, users are not able to bookmark the target site, as the bookmark will save the URL of the framer.³⁶

Under copyright law, a frame may be regarded as an adaptation—a derivative work based on copyright material.³⁷ It is a new version. The issue

35 The copyright analysis under Australian law could well have been different if the information was found to be protectable. This difference in the law is discussed in the text above notes 14 to 19. In essence, however, copyright is not the appropriate tool to be used here. Ticketmaster was seeking to protect its database and should have been using database protection legislation instead. Copyright does not protect ideas or knowledge. It only protects the form the ideas were expressed in.

36 Kubiszyn M., “Website Framing: Trademark and Copyright Issues” (Gigalaw, 2000) <<http://www.gigalaw.com/articles/kubiszyn-2000-04-p2.html>> (5 Nov 2001).

37 S. 10, *Copyright Act 1968* (Cth).

of whether frames constitute infringing activity has not yet been decided by the courts. While there have been cases regarding the use of framing, all have settled without adjudication.³⁸

From a policy analysis, if framing amounts to adaptation, then so too would someone outside computer interfaces who purchases a print or painting and then matts (mounts) the print or frames it inside a wooden frame. "This rather astonishing result has in fact been reached by at least one court, in a situation where a book of colour illustrations was lawfully purchased and the illustrations were removed from the book, matted, framed, and resold (*Greenwich Workshop, Inc. v Timber Creations, Inc.*). More sensible courts have rejected this result, holding that framing of a lawfully acquired copy is not an adaptation of the work (*Lee v A.R.T. Co.*). The latter result was reached in part so as not to create a new moral right of integrity that would give an author control over how a lawfully owned copy of a work was displayed."³⁹

A similar analysis would seem to be called for within computers. Burk states:

It is no more desirable to allow a copyright holder moral rights over a browser frame as over a wooden frame. In neither instance should the frame be considered an adaptation of the copyrighted work, because the frames in question are not permanent additions to the copyrighted work. Just as the frame and matte of a printed picture is fully separable from the framed material, so too is material that is "inlined" or otherwise framed on HTML displays. The code of the displayed file is not altered and the digital object represented is fully separable from the other objects displayed, including "frames". Courts considering claims of adaptation for computer software have suggested that permanence and inseparability are necessary for an adaptation to be found. For example, in a case where "add-on" software temporarily changed the output of a computer game cartridge, this was not considered to be an unauthorised adaptation because it did not incorporate the copyrighted

38 See *Washington Post v Total News* No 97-1190 (1997); *Futuredontics, Inc. v Applied Anagramics, Inc.*, 45 U.S.P.Q.2d (BNA) 2005 (1997); *Futuredontics, Inc. v Applied Anagramics, Inc.*, 45 U.S.P.Q.2d (BNA) 2005 (1998). "Other meta sites have been threatened with or have become defendants in lawsuits alleging violations of intellectual property rights through framing. In May 1998, the owners of the two Fort Wayne Indiana newspapers, *The Journal Gazette* and *The News Sentinel*, filed a lawsuit after the Ft-Wayne.com site refused to stop framing the paper's sites. As a result of the suit, the site no longer frames the two websites. Likewise, when Playboy sued Web21 for framing the Playboy site, alleging unfair competition and trademark infringement and dilution, Web21 settled the case and no longer frames the content." Kubiszyn, note 36 above.

39 D. Burk, see note 5 above.

material in a permanent form (*Lewis Galoob Toys, Inc. v Nintendo of America, Inc.*). Similarly, the temporary display change occasioned by framing of linked material should not constitute an adaptation.⁴⁰

As noted by Burk, moral rights were not considered in the US decision. The Digital Agenda amendments to the *Copyright Act* introduced moral rights into Australia. S.195AJ of the *Copyright Act* gives authors the right of integrity of ownership. This means that the work may not be subjected to derogatory treatment which includes anything that results in material distortion of, mutilation of, or material alteration to the work or any other treatment of the work that is prejudicial to the author's honour or reputation.⁴¹ Whether framing will amount to derogatory treatment is unclear. No mutilation or material alteration occurs in framing. In fact, apart from the added border nothing is changed. Should this added border be found to be a material alteration, that alteration still needs to be prejudicial to the author's honour or reputation. Framing is unlikely to have any effect on the honour or reputation of the author. The moral rights amendments also give the author a right of attribution or authorship. However, framing does not remove the indications of ownership. In fact, it takes with it all ownership indications. Some decisions will be needed to ascertain the effect of these amendments on framing.

Other intellectual property areas appear not to give rise to infringements for carefully crafted frames. Under trademark law, even if a trademark appears within the frame, it will not result in an infringement. The trademark is not being used to source the website or its identity. It is in fact being used to describe the source of the website.⁴² Consumer protection provisions such as the *Trade Practices Act*⁴³ and fair trading acts will not be triggered by carefully made frames. Where it is clear which part of the page is framed and which is not, no one will be misled. Where it is not clear whose material is whose, as in the practice on "inlining" there may be breaches of such legislation.

As a practical matter, the issues raised in this section can be avoided by only having the text or content of the citation on the web page. If the link behind it is not created there will be no infringement. A citation with a link is both an expression of facts—the reference—and

40 Ibid.

41 S. 195AJ, *Copyright Act* 1968 (Cth).

42 S. 122, *Trade Marks Act* 1995 (Cth).

43 *Trade Practices Act* 1974 (Cth).

an implementation device that permits a copy to be made elsewhere. Leave out the device, the link, and any associated frame, and there will be no infringement.

Conclusion

This paper has analysed the intellectual property rights raised by citation of and references to materials on websites. The analysis showed there may be infringements of intellectual property rights. These infringements can be avoided if the form of the citation is focused upon and particularly if no active linking occurs. The citation remains merely text providing information.

The avoidance of all possible infringements has, however, severely limited the citation. In particular, it is not operating as a link which would seem to take away the entire purpose of using the world wide web. If the reference can only operate as text then why would a reader use the internet? Providing the text only will still allow readers to copy and paste the URL into a browser and so take themselves to the information; but this is an inelegant solution. The advantage offered by the internet is the very interlinking allowed by hyperlinks.

This paper has certainly taken a bleak view. Rosier interpretations would allow that there is no issue at all to consider. And statistically, given that so few web publishers are exerting their rights, is there a problem?⁴⁴ Why discuss the area at all?

In essence, control of information identifiers-citations and references-ultimately means control of information on the internet. The internet works because it is interlinked with directions provided to locate information. The intellectual property rules are allowing the control of the use of information identifiers to move into the control of the information providers. When the issues discussed come before the courts I hope they are determined so as to forestall future monopolisation of information tagging systems.

44 Thomas Lipscomb of the Institute for the Digital Future notes that although most content on the web is free today that it is likely to change. As broadband expands, he predicts, the copyright battle will heat up. "Once the assorted Jurassic Park of conventional publishers starts to try to make money in this area, they're going to enforce their copyrights vigorously," Lipscomb said. "Until we're in broadband, the e-commerce in intellectual property of this kind will be very minor ... We are probably five years away from seeing a bloodbath." S. Lawson, "Copyright Ruling Targets Web Links", (CNN.com, 1999) <<http://www.cnn.com/1999/TECH/computing/12/13/illegal.links.idg/>> (5 Nov 2001).