**FRAMING AND COPYRIGHT LIABILITY ON THE WORLD WIDE WEB —
A SUGGESTED SAFE HARBOR AND PROPOSED RULE**

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FRAMING AND COPYRIGHT LIABILITY ON THE WORLD WIDE WEB — A SUGGESTED SAFE HARBOR AND PROPOSED RULE

INTRODUCTION

The year is 2002, and recent advances in the internet have created problems that were unimaginable just a few years ago. Now, more than ever, it is possible to surreptitiously reproduce and create false designations of origin in copyrighted works. An internet browser technique known as "framing" easily allows web page designers to control access and viewing of secondary sources without notice and without the permission of copyright owners. While United States law grants copyright owners certain exclusive rights in their works, these rights are subject to the exception of fair use.[1] Delineating the metes and bounds of fair use on the World Wide Web is far from clear. Moreover, the recent Ninth Circuit case of *Kelly v. Arriba Soft*[2] has blurred concepts of "windowing" and "framing," and has failed to clarify the fair use exception.

This article first provides a detailed technical description of framing in the windows environment and on the world wide web. Next, this article explores the right of copyright owners to control their works within frames of another's web page, and suggests a safe harbor and proposed rule for acceptable use.

HISTORICAL PRECEDENT FOR FRAMING

The general concept of framing, *i.e.* presenting multiple documents for viewing on a single page, is at least as old as the printing press itself. As early as 1520, the grievances of the Augustinian friar of Wittenberg, Martin Luther, were publicized in a framing format.[3] Early forms of propaganda by Martin Luther were embodied on a single broadsheet and printed with the newly invented Gutenberg printing press. Each broadsheet included a graphic image, usually in the form of a disparaging cartoon, buttressed by accompanying Latin text and a German translation.[4] The Lutheran message was thereby accessible by

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[1] 17 U.S.C. §§ 106-107 (2000).

[2] Kelly v. Arriba Soft Corp., 280 F.3d 934 (9th Cir. 2002).

[3] *See* James Burke, *The Day the Universe Changed* 117 (Little, Brown and Co. 1995) (1985).

[4] *Id. See also* C. Scott Dixon, *Case-study 2: the Engraven Reformation*, *at* http://www.albany.edu/jmmh/vol3/creating_cdroms/engraven.htm (last visited Nov. 22, 2004).

learned scholars via the Latin text, the German literate via the translation, and the illiterate via the cartoon.

Upon introduction of the printing press, a number of Jewish texts were also presented in a framed format.[5] For example in 1520, the *Talmud* was published with a central Hebrew text surrounded by explanatory material.[6] Today, the general concept of framing is evident in almost every conceivable form of print media — from books and newspapers to calendars and greeting cards. There is little wonder why this form of communication has become so widely accepted on the World Wide Web.

In an effort to avoid term confusion and to more fully understand the inherent functions of framing, a brief background of the Windows[7] computer operating system as well as the industry accepted internet browsing protocol HypterText Markup Language (HTML)[8] is first provided. A functional understanding of the Windows operating system and internet browsers should facilitate the creation and adoption of a proposed rule for determining copyright infringement in the context of framing that is easy to understand and easy to implement.

THE WINDOWS ENVIRONMENT

The Windows computer operating system traces its commercial origin to version 3.0, introduced to the public in 1990.[9] This version has spawned an entire family of Windows operating systems, *hereinafter* "Windows," each having a variety of common and familiar features. Windows presents a standard graphical user interface (GUI) that may be controlled,

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[5]*See* University of Pa. Center for Judaic Studies, *From Written to Printed Text: The Transmission of Jewish Tradition, at* http://www.cjs.upenn.edu/Archive/1/Law&Lore.htm (last visited Apr. 16, 2002).

[6]Daniel Bomberg, *Talmud Bavli `im Perush Rashi, Tosafot u-Piske Tosafot. Tractate Avodah Zarah* (1520), *at* http://www.cjs.upenn.edu/Archive/1/Law&Lore.htm (last visited Apr. 16, 2002).

[7]"Windows" is a registered trademark of Microsoft Corp., Redmond, Wash.

[8]Standards for HTML are promulgated by the World Wide Web Consortium. World Wide Web Consortium, *Hyptertext Markup Language Home Page*, *at* http://www.w3.org/MarkUp (last visited Apr. 16, 2002).

[9]ComputerHope, *COMPUTER SOFTWARE: Information about Windows 3.x, at* http://www.computerhope.com/win3x.htm (last visited Apr. 16, 2002).

inter alia, by way of a pointing device such as a "mouse."[10] When a computer running Windows is first turned on, a graphical background display known as a "desktop"[11] fills the entire screen. As the mouse is moved by the user, a corresponding "pointer" (often in the form of a diagonally pointing arrow or a hand with a pointed finger) moves across the desktop.[12] The mouse may be clicked to control the computer according to the location and/or movement of the pointer.

Nearly all Windows-based programs run within graphical objects known as "windows."[13] Files and programs are represented graphically by icons that are displayed on the desktop[14] or within an open window. Each window includes common features of an outer border, a title bar, a control-menu icon, and a close button.[15] Graphical output of the computer program is generally displayed inside the outer border of the corresponding window. The displayed size of each window on the computer screen may be manipulated by moving the mouse to thereby place the pointer over the window border, clicking the mouse button, and dragging the mouse.[16] According to the protocol of each individual program, the graphical content within each window may or may not move as the window is resized. The outside border of each window may optionally include scroll bars to manipulate the displayed content within each window.

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[10]The "mouse" was publicly unveiled by Douglas Engelbart at the 1968 Fall Joint Computer Conference, was commercially exploited by Xerox Palo Alto Research Center (PARC) in 1979 as a computer add-on, and was sold together with a computer operating system by Apple in 1981. Alex Soojung & Kim Pang, *The Making of the Mouse,* 17 Am. Heritage of Invention & Tech. 48 (2002), *available at* http://www.inventionandtechnology.com/2002/03/mouse.shtml (last visited Nov. 22, 2004).

[11]Craig Stinson, *Running Microsoft Windows 98*, at 4 (Saul Candib ed., 1998).

[12]The shape of the mouse pointer may be set the user. *Id*. at 261 (changing mouse pointer shapes).

[13]The capitalized "Windows" therefore denotes the computer operating system while a lowercase "window" denotes an individual rectangular graphical object.

[14]The Windows desktop is in actuality a window in the form of a folder with special parameters. Stinson, *supra* note 11, at 65.

[15]*Id.* at 14-15.

[16]*Id*. at 17 (sizing and moving windows).

Multiple windows may be simultaneously or sequentially displayed on the desktop through operation of the mouse. It is therefore an inherent feature of all Windows operating systems that multiple windows may be *simultaneously* displayed and that the relative sizes of the windows may be controlled by the user. By layering windows within windows, a hierarchical file structure may also be produced. However, Windows is much more powerful and includes a number of features that may not be obvious or even noticed by the casual user.

Windows allows users to create shell links[17] between different objects in the workspace. One popular example of a Windows shell link is a "shortcut." A shortcut is a tiny file that is linked to a program, document, or folder and is represented by an icon.[18] In other words, the shortcut is a pointer to an object and is *not* the object itself. Shortcuts are represented by graphical icons just like programs and files, and may also be manipulated about the workspace by way of the mouse and pointer. The shortcut allows the user to retain the location of often used files and programs within a hierarchical file structure while facilitating access from a central location. By way of example, a shortcut to an often used file may be placed on the desktop,[19] while the physical file maintains its hierarchical location — such as "c:\work\clientnumber\filenumber\motions\motion-0X.wpd."

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[17]*See generally* Microsoft Product Support Services, *HOWTO: Create Shortcuts (Shell Links) within Windows (Q155303)* (hereinafter Microsoft Services), *at* http://support.microsoft.com/default.aspx?scid=kb;EN-US;q155303 (last modified Jan. 26, 2001).

[18]*Id.*

[19]The "desktop" is the visual representation normally seen by Windows users when the system is initially booted. In reality, the desktop is a specialized borderless window buried within the Windows file hierarchy. *See* Stinson, *supra* note 11, at 226-55.

Most programs in the Windows operating system display their content within a single, non-split window. Examples include the default view in WordPad,[20] Paint,[21] and Calculator,[22] as well as the default view in the popular commercial word processing programs Word[23] and WordPerfect.[24] However, some programs within the Windows operating system use windows that are split vertically, horizontally, or even both.[25] Each resulting window division is referred to as a "pane."[26] Panes are separated within a window by way of a "pane divider,"[27] and each pane may optionally include borders and scroll bars. The content displayed within each window pane is intended to be different and may be linked to different physical locations on the computer hard drive.

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[20]This stand alone program was created by Microsoft Corp. and is automatically installed onto computers equipped with the Windows operating system. This program should be visible to the user under, for example, the Windows 2000 Start menu at Start > Programs > Accessories, unless moved or modified by the user. *See generally* Microsoft Corp., *Using WordPad*, *at* http://www.microsoft.com/windows2000/en/advanced/help/app_wordpad.htm (last accessed Nov. 22, 2004).

[21]*See generally* Microsoft Corp., *Using Paint*, *at* http://www.microsoft.com/windows2000/en/advanced/help/app_paintbrush.htm (last accessed Nov. 22, 2004).

[22]*See generally* Microsoft Corp., *Using Calculator*, *at* http://www.microsoft.com/windowsxp/home/using/productdoc/en/app_calculator.asp?frame=true (last accessed Nov. 22, 2004).

[23]"Word" is a registered trademark of Microsoft Corp., Redmond, Wash. "Word" is only available on your computer if separately purchased and installed.

[24]"WordPerfect" is a registered trademark of Corel Corp., Ottawa, ON, Can. "WordPerfect" is only available on your computer if separately purchased and installed.

[25]Stinson, *supra* note 11, at 19.

[26]*Id*.

[27]*Id*.

A popular example of a multiple pane program is *Windows Explorer*.[28] The Explorer program is automatically installed onto a computer along with the Windows operating system. By default, the Explorer left pane displays a hierarchical folder tree, while the right pane displays a selected folder's contents. Explorer permits the user to move files between folders in different panes by clicking and dragging across the vertical divider to another folder, and then dropping via the mouse. Another popular example of a multiple pane program is *Spell Check* in WordPerfect. Upon initiation of the WordPerfect Spell Check,[29] a horizontal divider is displayed such that the original text is displayed in an upper pane while Spell Check control parameters are displayed in a lower pane.[30] The Word Spell Check uses a separate dialog box and is therefore not an example of window panes.[31]

Windows operating systems, beginning with version 3.x, support a protocol for dynamic data exchange (DDE).[32] The DDE was important for the creation of compound documents, *i.e.* documents including multiple formats such as text and graphics. Prior to the introduction of DDE, text and graphics were created separately, printed separately, and then placed together with scissors and glue.[33] The basic DDE functions of "cut" and "paste" use a "clipboard" to temporarily store the data during the cut and paste operations.[34]

Recognizing the need for a more versatile protocol, in 1991 Microsoft introduced a development standard for Object Linking and Embedding (OLE).[35] The OLE protocol allows

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[28]"Explorer" is a registered trademark of Microsoft Corp., Redmond, Wash. The Windows Explorer program is originally installed onto computers running the Windows operating system in the following directories: Windows 95, c:\windows\explorer.exe; Windows 98, c:\windows\explorer.exe; Windows 2000, c:\WINNT\explorer.exe.

[29]Corel WordPerfect Suite 8, *WordPerfect v8.0* (1997) (*Spell Check...* is selectable from the *Tools* item on the top menu bar of WordPerfect v8.0).

[30]*See* Corel Corp., *WordPerfect Suite 8 User's Guide*, at 595-98 (n.d.).

[31]Stinson, *supra* note 11, at 25-32.

[32]Kraig Brockschmidt, *What OLE Is Really About*, *at* http://msdn.microsoft.com/library/en-us/dnolegen/html/msdn_aboutole.asp?frame=true (July 1996).

[33]*Id*.

[34]*Id*.

[35]*See* Stinson, *supra* note 11, at 225-44.

users to exchange data between first and second objects. Each object may be the same type, such as two word processing documents, or may be different, such as a word processing document[36] and a graphics document.[37] The Windows transfer agent[38] for OLE is a revised version of the clipboard[39] and is set by default as invisible to the user.

There are three common forms of data exchange in the Windows operating system: static, embedding, and linking.[40] A static transfer is a one-time, one-way, permanent transfer of data between objects. By way of example, numbers originally entered into a spreadsheet program and then statically transferred into a word processing program may be edited by the word processing program.[41] An embedded transfer occurs when data from one object is embedded into a second object. When the data is permanently transferred, Windows remembers the original object that produced the data and the original location within the object. Thus, if spreadsheet numbers are embedded into a word processing document, the data is physically retained within the word processing document. However, any attempt to edit the embedded numbers will cause Windows to open the spreadsheet program and allow the user to work in the spreadsheet environment. A linked transfer occurs when data from one object is linked to a second object. In this case, the data is physically retained in the original document. Thus, if spreadsheet numbers are linked into a word processing document, the data is physically retained within the spreadsheet document. The numbers may not be edited within the word processing document, and modification to the numbers within the spreadsheet document will appear upon opening of the word processing document.

The Windows operating system allows programmers to control many graphical display parameters including the display parameters of the windows themselves.[42] For

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[36]An example of a word processing document may be created with Microsoft WordPad. Stinson, *supra* note 11, at 65.

[37]An example of a graphics document may be created with Microsoft Paint. *Id.*

[38]A transfer agent is a separate program that works with the Windows operating system to store data between a "cut" operation and a "paste" operation.

[39]*See* Brockschmidt, *supra* note 32.

[40]*See* Stinson, *supra* note 11, at 226-55.

[41]*Id.*

[42]*See* Paul Kuliniewicz, *Windows API Reference*, *at* http://www.mangovision.com/vbapi/ref/index.html (last updated Jan. 21, 2001).

example, a window may be configured to have vertical or horizontal scroll bars, to be transparent, to have a thin-line pane divider, or to have a thin-line outer border.[43] In fact, each window or window pane may also be configured to have no border at all.[44] Common examples of windows without any visible borders include the Windows desktop[45] and the visual display of a Windows screen saver.[46] While unusual, the Windows environment does in fact provide for the possibility of seamless window panes to be adjacently displayed.

THE BASIC INTERNET BROWSER ENVIRONMENT

Since its inception in late 1990,[47] the World Wide Web (WWW) has grown to include literally millions and millions[48] of web pages. As originally developed, the WWW is a merger of computer networking techniques and hyper-linking into a global information system.[49] Hyper-links may take the form of hypertext that sits on a web page and is responsive to a mouse click. The accessed information may be physically located anywhere

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[43]Paul Kuliniewicz, *Base Window Styles*, *at* http://www.mangovision.com/vbapi/ref/other/classes/basestyles.html (last modified Oct. 29, 2000).

[44]*Id*. at Constant Definitions (setting Const WS_BORDER = 0000 0000 provides a window pane with no border).

[45]*See* Stinson, *supra* note 11, at 226-55.

[46]A screen saver displays a changing graphical image on the computer screen after the computer has been idle for a set period of time.

[47]The World Wide Web was invented in late 1990 by Tim Berners-Lee, a computer scientist scientist working at CERN - the European Organization for Nuclear Research. *See* CERN -- European Organization for Nuclear Research, *A CERN invention you are familiar with: the World Wide Web*, *at* http://public.web.cern.ch/Public/ACHIEVEMENTS/web.html (last modified on Mar. 30, 1998).

[48]Greg R. Notess, *Search Engine Statistics: Database Total Size Estimates*, *at* http://www.searchengineshowdown.com/stats/sizeest.shtml (presenting data from Mar. 4-6, 2002) (last visited Apr. 16, 2002).

[49]CERN - the European Organization for Nuclear Research, *What is the World-Wide Web?*, *at* http://public.web.cern.ch/Public/ACHIEVEMENTS/WEB/whatis.html (last modified Dec. 3, 1997).

in the world. A hyper-link is therefore analogous to a simplified cross-references in a dictionary. Hyper-links may also take the form of, *inter alia*, a graphical image, a picture, or animated icon.

The WWW is intended to be dynamic such that a user interacts with the environment as one vast hypertext document.[50] The user does not need to know the location of information storage, details of its format, or details of its organization.[51] The WWW follows a client-server protocol in that web documents of various formats are stored on server computers while the user navigates across the interconnected servers by way of a client browser on the user's computer. There are many browsers available to the computer user, however the two most popular internet browsers are Microsoft Internet Explorer[52] and Netscape Navigator.[53] Web pages are directly accessed from within an internet browser by typing a Universal Resource Locator (URL) into the browser address field or indirectly by clicking on a hyper-link with the computer mouse. The displayed hyper-link may take the form of text, a graphical image, or an icon.

Internet browsers read and interpret web pages using Hypertext Markup Language (HTML).[54] In short, HTML is a simple language for publishing hypertext on the WWW that may be read by different types of computers running different operating systems. HTML uses a plurality of tags to structure text and graphics into headings, paragraphs, lists and links.[55] The HTML code of each web page is always available for viewing through use of an internet browser. For example, Microsoft Internet Explorer will display the underlying HTML code from a currently displayed web page by simply right clicking anywhere on the page and selecting "View Source" from the pop-up menu.

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[50]*Id.*

[51]*Id.*

[52]*See* Microsoft Corp., *Internet Explorer Home* (providing background information, technical data and browser download), *at* http://www.microsoft.com/windows/ie/default.asp (last updated April 1, 2002).

[53]*See* Netscape Corp., *Browser Central* (providing background information, technical data and browser download), *at* http://browsers.netscape.com/browsers/main.tmpl (last visited April 16, 2002).

[54]*See* World Wide Web Consortium, *supra* note 8.

[55]*Id.*

HTML is a subset of the Standard Generalized Markup Language (SGML), which is part of international standard (ISO 8879) published in 1986.[56] While SGML prescribes a standard format for embedding descriptive markup within a document, the subset language of HTML is defined by the World Wide Web Consortium (W3C).[57] Browser manufacturers are free to deviate from the published HTML standards, however most browsing protocols — including frames, are interpreted by the popular internet browsers set forth above.

THE INTERNET BROWSER FRAMING ENVIRONMENT

The W3C established a protocol for frames by promulgating HTML 4.01[58] as a presentation format for documents in multiple views.[59] When a web page is presented as frames, the page itself is divided into multiple sections, with each section displaying corresponding content. Just as each "pane" of a "window" in the Windows operating system may present its own content, each "frame" of a "web page" may display its own content. However, each frame may also display an entire web page. Moreover, because each frame may be linked separately, a single web page can easily display content from multiple separate locations. However, because the HTML 4.01 code directs the internet browser to retrieve content from another source, the primary web page does not technically make a *copy* of a framed site's content.

HTML 4.01 defines a FRAMESET tag for displaying frames within an internet browser.[60] The web page designer may define parameters of the displayed frames including size and position of each frame.[61] In particular, the "frameborder" attribute within the FRAMESET tag provides the internet browser with information about the frame border. The frameborder attribute is, by default, set to a value of "1" to draw a separator between the

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[56]*See* International Organization for Standardization, *Information processing -- Text and office systems -- Standard Generalized Markup Language (SGML)* (1986), *at* http://www.iso.ch/iso/en/CatalogueDetailPage.CatalogueDetail?CSNUMBER=16387 (last visited Apr. 17, 2002).

[57]*See* World Wide Web Consortium, *supra* note 8.

[58]World Wide Web Consortium, *HTML 4.01 Specification, at* http://www.w3.org/TR/html401/ (W3C Recommendation 24 Dec. 1999).

[59]*See* World Wide Web Consortium, *Frames* (hereinafter *Frames*), *at* http://www.w3.org/TR/REC-html40/present/frames.html (last visited Apr. 17, 2002).

[60]*Id.* at 1. The Frameset element.

[61]*Id.*

present frame and adjoining frame(s).[62] In other words, if the web page designer fails to set this attribute during design of the web page, a separator will be automatically drawn between frames by default. The presence of the separator makes the web page appear similar to the appearance of Windows Explorer. However, the frameborder attribute can also be set by the web page designer to "0" such that the a separator will not be drawn between frames.[63] It is important to note that each adjoining frame has its own FRAMESET with corresponding attributes. Therefore, a separator will still automatically appear between adjacent frames unless all adjacent frameborder attributes are set to "0".

Seamless frames can appear on web pages that have been programmed to turn all default separator off.[64] To appear seamless, each frame must also be programmed to display an identical background color. The body background color for each frame may be set to a predetermined value using the "body bgcolor" command.[65] By way of example, the following command sets the body background color of a frame or web page to white: <body bgcolor="#FFffff">.[66]

Inline frames, also known as "I-frames" are a type of frame that appear within the text of a web page.[67] At first glance, an I-frame appears as a simple box placed at a location in a web page. However, by analogy to the individual window in the Windows environment above, the I-frame content may be that of a separate location or another web page altogether.[68] As with window borders and window pane borders, the default I-frame border can also be removed by the web page designer.[69] Thus, if the background color of the web page being displayed within the I-frame element is the same as the background color of the primary web page, the display appears to the user as a single, continuous web page.

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[62]*Id*. at Attribute definitions.

[63]*Id.*

[64]Joe Burns, *So You Want Seamless Frames, Huh?*, HTML Goodies *at* http://www.htmlgoodies.com/tutors/seamless_frames.html (last visited Apr. 17, 2002).

[65]*Id.*

[66]*Id.*

[67]*See Frames*, *supra* note 59, at Inline frames: the IFRAME element.

[68]*See* Burns, *supra* note 64.

[69]*Id.*

The use of framing and I-frames becomes more confusing to the user when integrated with the concepts of linking and deep linking. In general, a link is a connection from one Web resource to another.[70] The ability to connect two or more web pages by way of the link is one of the primary forces driving the success of the World Wide Web. However, the link may retrieve any resource available on the Web, not just home pages. Thus, a "deep link" simply refers to a resource, such as a web page address or image, buried deep within a web site hierarchy. Deep linking can serve as an expeditious means for retrieving data, especially well-indexed government data.[71]

There are some available code options to deter others from deep linking into a web site. Web sites can instruct their servers to check the "referrer" headers on incoming visitors and screen out certain domains entirely.[72] Alternatively, web sites can use flags, known as "cookies," to ensure that visitors first check into the site's home page, or they can build a "page wrapper" into their site design to reroute spurious traffic.[73] There are also some active code options to deter others from viewing your website within a frame. By using an active programming code, such as JavaScript, incoming browsers can be directed to automatically re-display your web page without framing.[74]

However, given appropriate incentive, ingenious web page designers will eventually design code based solutions to defeat code based entry barriers. By way of example, in

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[70]World Wide Web Consortium, *Introduction to links and anchors*, Links, *at* http://www.w3.org/TR/REC-html40/struct/links.html (last visited Apr. 16, 2002).

[71]Phillip A. McAfee, Esq., *Confessions of a Deep Linker: Advanced Techniques for Linking to Government Documents & Databases*, LLRX.com Interactive Briefs Court CD, *at* http://www.llrx.com/features/confessions.htm (posted June 15, 1998; archived July 15, 1998).

[72]*See* Scott Rosenberg, *More on "deep links," journalists and IPOs*, *at* http://www.salon.com/tech/col/rose/1999/08/18/more_links/index.html (Aug. 18, 1999).

[73]*Id*.

[74]*See* Vancouver Webpages, *How can I stop people re-framing my pages?*, *at* http://vancouver-webpages.com/META/FAQ.html#target (last visited Apr. 15, 2002) (providing frame disabling code example: <script language="JavaScript"> if (top.frames.length >1) {top.location ="/file.html";} </script>).

Washington Post Co. v. Total News, Inc.,[75] the Defendant Total News, Inc. operated a website, "totalnews.com," that framed the website content of Plaintiff CNN. In response, CNN devised a technology to cause the Total News frame to dissolve. A counter measure was then employed by Total News in the form of a "pop-up window" that became superimposed over the CNN website content, thereby inviting users to return to totalnews.com.[76] While obvious and intended deception are undesirable by web page owners, some non-deceptive legitimate uses of linking and framing may actually serve the financial interests of the web page owner — as evidenced by the settlement in *Washington Post Co. v. Total News, Inc.*[77]

COPYRIGHT LAW AS APPLIED TO FRAMING

Framing in the World Wide Web necessarily involves linking. If text or graphics originating from a first web page are to be displayed within a frame on a second web page, a link is required. Although linking is very prevalent, and arguably fundamental to successful operation of the Web, there is very little authority involving issues of copyright infringement and linking. The author is at present unaware of any authority standing for the proposition that linking *per se* is a violation of any of the exclusive rights under 17 U.S.C. § 106 (2002).[78]

The Copyright Act of 1976 empowers copyright owners to prohibit others from reproducing, preparing derivative works of, distributing copies of, publicly performing, or publically displaying the copyrighted work in copies.[79] To infringe, the copies must be material objects in which a work is fixed and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.[80] A work is "fixed" in a tangible medium of expression when its embodiment in a

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[75]Washington Post Co. v. Total News, Inc., CV 97-1190 PKL (S.D.N.Y. filed Feb. 20, 1997).

[76]*Id*. at ¶ 37(a).

[77]Stipulation and order of settlement and dismissal, *Washington Post Co. v. Total News, Inc.*, CV 97-1190 PKL (S.D.N.Y. filed Feb. 20, 1997).

[78]*See infra* note 96 (regarding two cases that could not be researched in the interest of time).

[79]17 U.S.C. § 106 (2002).

[80]*Id.* at § 101.

copy is sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.[81]

As applied to computer readable media, the legislative history of the Copyright Act appears to indicate that copies of a work in computer RAM are not fixed. "The definition of 'fixation' would exclude from the concept purely evanescent or transient reproductions such as those... captured momentarily in the 'memory' of a computer."[82] However, in *MAI Systems Corp. v. Peak Computer, Inc.*,[83] the Ninth Circuit held that loading software into RAM from a permanent storage device, such as a hard disk, floppy disk or CD-ROM, is copying of the software. The court reasoned that the loaded data in RAM could be perceived, reproduced, or otherwise communicated, and was therefore a copy under the Copyright Act.[84]

Most commentators agree with *MAI* that downloading content from the World Wide Web into RAM creates a copy. However, most also agree that such use is considered fair under the Act,[85] or that the very existence of the web page creates an implied license to view web page content in the manner prescribed by the web page owner. Whether any use is considered fair under the Act must include an analysis of the purpose and character of the use, the nature of the copyrighted work, the amount and substantiality of the portion used in relation to the work as a whole, and the market effect upon the copyrighted work.[86] The Supreme Court in *Campbell v. Acuff-Rose*[87] has emphasized that the commercial character of the work does not end the inquiry — all §107 factors must be considered. Moreover, if the purpose and character of the work is transformative, *i.e.* if it adds something new — with a further purpose or character, use of the work may be considered fair despite its commercial nature.[88] However, it is well settled law that there is no infringement of a copyright holder's

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[81]*Id.*

[82]H.R. Rep. No. 94-1476, at 53 (1976).

[83]MAI Systems Corp. v. Peak Computer, Inc., 991 F.2d 511 (9th Cir. 1993), *cert. dismissed*, 510 U.S. 1033 (1994).

[84]*Id.* at 519 (*citing* 17 U.S.C. § 101 (1993)).

[85]17 U.S.C. § 107 (2002).

[86]*Id.*

[87]Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569 (1994).

[88]*Id.* at 579.

rights unless specifically enumerated by statute.[89] For example, no license is required by the Copyright Act for one to sing a copyrighted lyric in the shower.[90]

A hyperlink or "link" is merely a string of text that performs a function when read by an internet browser. While the text forming the link itself must be copied into a web page to initiate the link, the amount of text is small and forms an expression solely dictated by function. Accordingly, while a link may be the subject of independent creation,[91] a link itself lacks the requisite level of minimal creativity needed to form copyrightable expression.[92] Furthermore, a link is very similar in function to a telephone number in that both are defined by a hierarchical structure and are used to direct communication across telephone lines.[93] For example in *Tickets.com*, the court summarily reasoned that a URL is unprotectable because it contains functional and factual elements only and not original material.[94]

Although a few parties have attempted to impose copyright liability for deep linking into a website,[95] to date, no reported case has held that use of a link to redirect underlying content across the World Wide Web may form the basis of copyright infringement.[96] In

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[89]Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 155 (1975).

[90]*Id.*

[91]*See* Feist Pub., Inc. v. Rural Telephone Service, 499 U.S. 340 (1991) (holding that the requisite level of creativity needed for copyright is extremely low).

[92]*See* Magic Marketing, Inc. v. Mailing Services of Pittsburgh, Inc., 634 F. Supp. 769 (W.D. Pa. 1986).

[93]*See generally* Feist, *supra* note 90.

[94]Ticketmaster Corp. v. Tickets.com, Inc., 2000 U.S. Dist. Lexis 12987 *at* *13 (C.D. Cal. Aug. 11, 2000) (court indicating that decision is not intended for publication).

[95]Ticketmaster Corp. v. Microsoft Corp., CV 97-3055 DDP (C.D. Cal. filed Apr. 28, 1997), *available at* http://www.jmls.edu/cyber/cases/ticket1.html. *See also* "threatening correspondence," *at* http://www.movie-list.com/universal.html (threatening correspondence record between litigation counsel of Universal Studios and Movie-list.com providing accusations of infringement).

[96]*But cf.* Sam Pettus, *Emulation: Right or Wrong? aka "The EmuFAQ"* (1999), *at* http://www.void.jump.org/EmuFAQ2000/AppendixB.htm (last revised Sept. 28, 1999) (reporting issuance of permanent injunction on grounds of copyright infringement); *But cf.* Intellectual Reserve, Inc. v. Utah Lighthouse Ministry, Inc., Case No. 2:99-CV-808C

Ticketmaster Corp. v. Tickets.com, Inc.,[97] the court held that hyperlinking does not itself involve a violation of the Copyright Act since no copying is involved. In *eBay, Inc. v. Bidder's Edge, Inc.*,[98] although nine causes of action were presented against the defendant for allegations of deep linking, no claim for copyright infringement was addressed. In *Futuredontics, Inc. v. Applied Anagramics, Inc.*,[99] the court denied a motion to dismiss a claim of copyright infringement on the grounds that the law is unclear whether a linked frame constitutes a derivative work. No rule of law was given on the merits in view of settlement of the suit.[100] Although a complaint was filed alleging copyright violations for linking in *Ticketmaster Corp. v. Microsoft Corp.*,[101] once again, the case was settled without court opinion.

A number of commentators support the right to link without permission. In fact, the inventor of the hyperlink himself, Tim Burners-Lee has stated that "there is no reason to have to ask before making a link to another site."[102] Moreover, the American Bar Association's

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(C.D. Utah, Dec. 6, 1999), *at* http://eon.law.harvard.edu/property/library/mainlib.html#readings (last visited Apr. 16, 2002) (reporting defendant enjoined from providing links to copyrighted materials of plaintiff on theory of contributory infringement where defendant posted messages suggesting users access the copyrighted materials via their links).

[97]Ticketmaster Corp. v. Tickets.com, 54 U.S.P.Q.2D 1344, 2000 U.S. Dist. Lexis 4553 (Mar. 27, 2000) (not intended by court to be a published opinion).

[98]eBay, Inc. v. Bidder's Edge, Inc., 100 F. Supp. 2d 1058 (N.D. Cal. 2000).

[99]Futuredontics Inc. v. Applied Anagramics Inc., 45 U.S.P.Q.2d 2005 (C.D. Cal. decided Nov. 24, 1997 and Jan. 30, 1998) (denying Plaintiff's motion for preliminary injunction and Defendant's motion to dismiss).

[100]Pettus, *supra* note 96 (reporting parties agreeing to settle lawsuit) (although not referenced on Westlaw or Lexis, also reporting injunction based on grounds of copyright infringement).

[101]*See generally* Ticketmaster, *supra* note 95 (settled without judicial opinion, as reported under *Linking Cases*, GENERAL INFORMATION ON INTELLECTUAL PROPERTY LAW, *at* http://eon.law.harvard.edu/property/library/mainlib.html) (last visited April 16, 2002)).

[102]Kara Beal, *The Potential Liability of Linking on the Internet: An Examination of Possible Legal Solutions*, 1998 B.Y.U. L. Rev. 703, 709 (1998).

Commerce in Cyberspace Subcommittee states that requiring permission to establish a link is inconsistent with the nature of the Internet.[103]

Copyright holders have the exclusive right to reproduce and distribute copies of their works. However, apart from the link aspect of an HTML frame, the "copy" of the work physically being transferred is from the original web site to the user's internet browser. In other words, the HTML frame merely directs the internet browser to retrieve the copy from a different location. While this redirection may be transparent to the user,[104] the fact that the copying is executed by the browser and not the HTML frame itself weakens this right as a vehicle for copyright enforcement.

The preparation of derivative works is an entirely different matter. The exclusive right to prepare derivative works does not involve copies of the original work. A derivative work is a work based upon one or more preexisting works that has been recast, transformed or adapted.[105] A transformation, by way of logical analysis, must be carried out under the direction of some entity. The Copyright Act does not require a relationship or association between the director of the transformation and the copyrighted work. All that is required is that the transformation be executed. HTML code that is placed on a web page to redirect and modify the physical copyrighted imagery from another website easily fits with the transformation language of the statute.

Copyright holders have the exclusive right to publicly perform and publicly display the copyrighted work in copies. The public performance right and the public display right suffer from the tenuous physical problem of physical copy manipulation as do the reproduction and distribution rights. While some cases have stretched the public performance right and public display right to address new communication technologies,[106] those cases are inapplicable to the present circumstances because a copy of the copyrighted work simply fails to pass through the framing web page.

THE EVOLUTION OF FRAMING AND FAIR USE

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[103]Robert L. Tucker, *Information Superhighway Robbery: The Tortious Misuse of Links, Frames, Metatags, and Domain Names*, 4 Va. J.L. & Tech. 8 (1999).

[104]The user can, of course, directly view any underlying HTML code by way of a simple right mouse click while the pointer is present on the web page.

[105]17 U.S.C. § 101 (2002).

[106]*See* Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 155 (1975).

Regardless of which exclusive right in copyrighted works is eventually adopted in relation to framing on the internet, a fair use analysis will most certainly be required. In this regard, the first factor under §107 seems to be consistently addressed by the recent case law, namely the intent of the proprietor of the framing web page. The intent of the accused infringer was clearly addressed in *Connectix*, wherein the Ninth Circuit permitted disassembly of copyrighted material "where there is a legitimate reason for seeking such access."[107]

The ambiguities embodied in the *Arriba Soft* decision[108] underscore the need for a clearly defined safe harbor for framing on the World Wide Web. In this regard, the following summary of user expectations and default settings are presented as a predicate to the suggestion of a safe harbor to be used by web page designers.

USER EXPECTATIONS AND DEFAULT SETTINGS

As set forth above, framing is simply a change of view for information present on the World Wide Web. The framing protocol is not only accessible by web page designers, but is specifically authorized and adopted by the World Wide Web Consortium to increase efficiency in browsing. The popularity of framing underscores this proposition. In view of the wide scale adoption of framing, its incorporation into the HTML definitions, and comfort of the using public, framing is destined to remain on the Internet for a long while to come.

Framing has been historically used to convey information since the advent of the printing press and is analogous to the window pane protocol of the Windows operating system. Accordingly, the use of framing comports with common sense computer operation. Moreover, both the Windows environment and the HTML environment, through the use of default parameters, have inherently educated the public regarding redirected content.

When computer users view a thin-line border, albeit as part of a window pane border or a frame border, the user expects (if not consciously, then subconsciously as indicated by user reaction within the computer environment) that the information is derived from a secondary location. By way of example, when using Explorer, the user must "know" that data is being transferred from one physical location to another as a file is dragged and dropped across the window pane. However, once the border is removed, or becomes transparent, the user expects that all information is being transmitted from the same source. Once again, this comports with the user's common sense understanding of the Windows

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[107]Sony Computer Entertainment, Inc. v. Connectix Corp. 203 F.3d 596, 602 (9th Cir. 2000).

[108]Kelly v. Arriba Soft Corp., 280 F.3d 934 (9th Cir. 2002).

operating system. One would not drag and drop a file to the same location, because to do so would not effectuate a file transfer.

The Windows operating system and HTML both provide, by default, that a thin-line border be present to divide a window into panes or to divide a web page into frames. In fact, due to the use of a thin-line border as a default parameter in Windows and HTML, an affirmative action must be taken by the web page designer to remove the separator between frames. Consequently, the majority of programs incorporating window panes or frames include the thin-line border.

SUGGESTED SAFE HARBOR AND PROPOSED RULE
I.   Framing with notice is transformative
A suggested safe harbor for web page designers, comporting with traditional copyright theory, is that framing with notice is not copyright infringement. Framing with notice is transformative because it clearly adds something new to a previous work and also allows the casual web surfer to decide for themselves whether to view the web page in another's frame. Thin-line borders in a framed web page function to provide the user with notice in that the content may be derived from a secondary source — even though the URL of the framed content may not be readily displayed. Users of internet browsers for viewing the World Wide Web can be expected to understand that a simple right click on the mouse will provide the URL of the framed content.[109] However, as a further inducement for authorities to adopt this safe harbor, browser manufacturers are encouraged to adopt an additional right-click dialog box option, such as "URL Address," to be displayed when the mouse is right clicked over a portion of a web page or frame.

II.   Framing without notice is not transformative
Framing on the World Wide Web without notice fails to adequately inform the user of the source of the web page content, and directly relates to the purpose and character of the use. Therefore, framing without notice is not transformative because it does not appear to add something new to a previous work, and accordingly is not fair use. A *prima facie* case of deceptiveness is also established by framing other's content without borders and without notice. Framing without borders is an affirmative act that requires programming code by the web page designer. Likewise Applets and scripting that eliminate borders are also deceptive affirmative acts. Furthermore, framing without borders is an "intervening volitional act" on

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[109]This is present under the properties dialog box in Internet Explorer 5.x when the mouse is right clicked.

the part of the web page designer.[110] Accordingly, elimination of default borders by web page designers incurs a duty to present another form of notice.

CONCLUSION

        According to the above rule, web page designers are free to design at will, including the elimination of thin-line borders during framing. However, designers eliminating default thin-line borders during framing would then be under an obligation to ensure another form of proper notice to browser users or face the consequences of copyright infringement.

        Given the choice between an active user and a passive user, the active user is in a much greater position to address issues of notice to other users. A web page designer knows when framing is designed without a thin-line border because special code must be programmed to create such an environment. As a matter of policy, the active web page designer is in a much better position to bear the responsibility for effective copyright compliance. Furthermore, because the main problems associated with framing stem from a lack of notice, the web page designer is in a much better position to provide this notice.

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[110]C.f. Richard H. Stern, *Supplemental Material on Linking,* Computer Law 484*, at* http://www.law.gwu.edu./facweb/claw/Linking.htm (Last bugfix or update: Apr. 5, 2002) (Professor Wary's Web Page: inline linking requiring intervening volitional act).