Protecting Content Online: The Interface of Copyright and Design for Websites, Apps, and GUIs

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I. Introduction

Intellectual property law continues to be challenged by new technologies. Although patent law recently went through a substantial revision with the America Invents Act, a number of questions remain about how to apply existing copyright law to digital works in all kinds of formats, including text, databases, audio, video, websites, graphical user interfaces (GUIs) and applications (apps), to name but a few. Moreover, the intent of developers of these materials is to make them available on smaller devices, such as tablets, mobile phones and even wearables. Of course, one aspect of copyright law for this material focuses on how to protect the content itself, such as the text, images, video, audio and databases delivered through a website. One of the important considerations is that this is different than in a print world, with the content of websites not being static but rather dynamic. In fact, a company or non-profit organization that wants to remain high in the consciousness of its constituents and to appear at the top of the list of web searches will need to update its content on a regular basis, perhaps including a blog, which provides an advantage in search engine optimization. Because the content of a website may be continually changing, how do we protect it under traditional copyright law or are there other options that are more appropriate?

On the other hand, a website has other attributes which transcend the actual content, including style, layout, color scheme, font and flow. These may be considered as the “look and feel” of the website and are worth protecting as part of an entity’s branding. Does copyright law protect the overall design of a website rather than merely the individual elements? What about aspects of the design that may be functional in nature or that are standardized elements akin to “scenes a faire” because the design is required by the devices themselves, is considered convention by website designers or is necessary to streamline the user experience. If copyright law is not the best avenue for protecting the design or the “look and feel” of a website, could trademark law, particularly trade dress be an option? Finally, it has been proposed by commentators that we are in an era where design is at the forefront of what consumers want and thus it is worthwhile to see whether and to what extent design patent law can protect at least some elements of websites, GUIs and apps. An overarching question is to what extent is design merely functional and thus can or cannot be protected under any of these doctrines.

The author has been creating websites since 1995. Back then, she developed websites via HTML coding and she experienced infringement of two of her websites as well as unwanted alteration of the design and the copyright management information, predating the Digital Millennium Copyright Act’s remedies. In 2004, she learned to use Dreamweaver software, although knowing HTML code continues to be helpful in troubleshooting. Currently, she is working with her Research Assistant, Ms. Shilpa Pachhapurkar, to completely redesign the website for Right Sharing of World Resources, which is a non-profit organization that is her partner for a series of microfinance/women’s empowerment projects in Sierra Leone. Ms. Pachhapurkar is a graduate student in Human-Computer Interaction with expertise in web development, interaction design and typography.
This paper will review some of the characteristics of a website that makes it more difficult to protect via copyright law in the way that traditional paper-based publications would be. It will then discuss the various provisions within copyright law that could be applied to a website, noting especially the limitations, especially with the overall design elements of the website and its overall “look and feel”. The paper will then contemplate whether trade dress can address any gaps that are left once the opportunities under copyright law have been exhausted. The paper will also briefly consider these same issues with respect to GUIs and apps.

II. What Is a Website and Why Is It Different?

One of the most essential aspects of websites is that its content is dynamic rather than static, as opposed to what would be the case with traditional publication venues. Moreover, a website can contain a multiplicity of different types of formats, including text, audio and video, and it can provide access to databases, ordering systems, games, blogs and user-provided content. Indeed, most entities with websites prefer that their content change on a regular basis to make the websites most attractive to users, as a branding opportunity and to be sure that the website is well-positioned through search engine optimization. Even a small non-profit organization which does not devote much time to revising its website may be surprised to see how often its content has been changed. This can be visualized through looking at the website’s URL in the Internet Archive’s Wayback Machine. The grid at the top shows the number of times that this website was saved.

When someone registers a paper-based work with the U.S. Copyright Office, or any work that is fixed in some physical format, the work that is registered is that version of the work. However, care is needed when registering a website to make sure that the version that is registered matches the dates and other information indicated. Moreover, the real challenge is what to do with all of the different iterations of the website – not only the changes to the content, but also to the design of the website.
In order to consider what pieces and parts – or the whole – of a website might be eligible for copyright protection, here is a simple website created by the author several years ago. Note the links, the color scheme, the layout, the content and the use of the author’s logo. This is what we might call the “look” of the website, which is accomplished through the graphical user interface or GUI.

And here is the HTML code for the website.

Another question with protecting websites through copyright is where the line should be drawn between functionality and creativity. Note the similarities and differences in the approaches taken in these collages from various websites, prepared by Ms. Pachhapurkar, for
several non-profit organizations. What pieces and parts could and should be protected by copyright law? What are the “conventions” that are similar across organizations that involve a minimal amount of creativity and that are more functional or standardized in nature? Moreover, given how often the content on the websites changes, is it worth trying to register each iteration of the website as a derivative work, which is what the copyright requirements suggest is necessary?
If the graphical user interface provides the “look” of a website, the information architecture provides the “feel” – the flow of the website as a user navigates from one section to another. For example, here is Ms. Pachhapurkar’s plan for the information architecture of a proposed redesign of the website for Right Sharing of World Resources:

### RSWR Information Architecture

- **Who we are**
  - History
  - Board of trustees
  - Description page
  - Finances

- **What we do**
  - projects

- **Donate**
  - One time donation
  - Monthly
  - By check
  - Other ways

- **Ways to help**
  - Grant seekers
  - Support a cause
  - Volunteer

- **Resources**
  - Blog
  - Press release
  - Archives
  - Educational Resources

### III. Protecting Websites Via Copyright Registration

Fortunately, the U.S. Copyright Office provides a wealth of resources that provide guidance on how to handle the registration of websites, including websites and files and documents that are transmitted or downloaded via a network. For example, *Circular 66* covers copyright registration for online works.³

For all online works other than computer programs and databases, the registration will extend only to the copyrightable content *as received in the Copyright Office and identified as the subject of the claim*. The application for registration should exclude any
material that has been previously published or that is in the public domain. For published works, the registration should be limited to the content of the work asserted to be published on the date given on the application.\(^4\)

The Circular provides additional clarification in a note:

For a claim in a computer program that establishes the format of text and graphics on the computer screen when a website is viewed (such as a program written in html), registration will extend to the entire copyrightable content of the computer program code. It will not, however, extend to any website content generated by the program that is not present in the identifying material received and that is not described on the application. On the other hand, for all other computer programs that are transmitted or accessed online, as well as for online automated databases, the registration extends to the entire copyrightable content of the work owned by the claimant, even though the entire content is not required in the identifying material deposited.\(^5\)

However, one of the major issues with websites is that the content is dynamic and the overall design may be revised on a regular basis as well. Thus, the question becomes whether to register each revision to the website or to consider an alternate way to offer at least some measure of protection. Another option is to design the website so that as much of it as possible will change only infrequently, minimizing the need to keep registering multiple pages for what are very minor changes. In terms of website design and branding, Ms. Pachhapurkar is endeavoring to develop the new website for Right Sharing of World Resources so that its overall “look and feel,” including graphical elements and information architecture, will last for at least five years with updated content being the only difference. The Circular clearly explains how to handle revisions and updates:

Many works transmitted online, such as websites, are revised or updated frequently. Generally, copyrightable revisions to online works that are published on separate days must each be registered individually, with a separate application and filing fee (unless it meets the requirements in the following two sections). Registration of a revised version covers only the new or revised material added. The version of the work that is deposited should be the same version described on the application; thus, the title and dates on the application should correspond with those on the deposit copy.\(^6\)

Databases are another typical kind of content that might be accessible through a website. According to Circular 66, “[i]n some cases, a frequently updated online work may constitute an automated database. A group of updates, published or unpublished, to a database, covering up to a three-month period within the same calendar year, may be combined in a single registration.”\(^7\)

Section 1002.6 of the Compendium of U.S. Copyright Office Practices provides additional guidance about when a database is eligible for copyright protection.\(^8\) However, as clearly indicated, “[w]ebsites are not considered databases for the purpose of copyright registration.”\(^9\) In Section 1006.1(B) on databases, the Compendium asserts that a website is not considered a database and that there currently is no group registration for website revisions made over a period of time:

As discussed in Section 1002.6, a website is not considered a database for the purpose of copyright registration. The mere fact that a website is searchable does not transform the
website into databases. For these reasons, the group registration for database updates cannot be used to register websites or webpages, and at present there is no group registration option for website revisions that have been made over a period of time. If a website contains a database as part of its website content, the database may be registered as a literary work if it contains a sufficient amount of original authorship.\(^{10}\)

Another possible option for handling the dynamic content of websites, particularly websites that have regular or intermittent blog postings, podcasts or videos, is whether they can be considered a serial or newsletter. According to Circular 66:

Group registration (a single registration covering multiple issues published on different dates) is available for series (published weekly or less often) and daily newsletters (published more often than weekly), including those published online. The requirements vary, depending on the type of work.\(^{11}\)

Note that there are very specific rules for what qualifies for each of these types of materials. For example, Circular 62A makes it clear that this type of group registration is limited to only newspapers that are published daily. In terms of a daily newsletter (blog postings, podcasts, videos?), publication must occur at least two days a week and the newsletter must contain news or information of interest chiefly to a special group.\(^{12}\) A note in Circular 66 indicates that “[g]roup registration for serials is available only if the claim is in a ‘collective work.’ Thus, group registration is not available for electronic journals published one article at a time because such works are not collective works.”\(^{13}\)

One additional consideration for registering a website is determining whether the work is published or unpublished. As indicated in Circular 66, “[t]he definition of ‘publication’ in the U.S. Copyright law does not specifically address online transmissions.”\(^{14}\) There are also specific rules about the procedure when the same work is published both online and by the distribution of printed copies.\(^{15}\)

Another aspect of choosing how to register a website concerns infringement, specifically the amount of statutory damages that can be awarded, with Section 1008.7 of the Compendium providing helpful information.

In determining whether to register the content of a website separately or together the applicant should consider the potential impact on the copyright owner’s ability to seek damages in the event that a third party infringes that content.

It is possible to register vast amounts of material that appear together on a website with one application if the content qualifies as a compilation, a collective work, or contribution to a collective work. It also may be possible to register an updated version of a website that contains vast amounts of new or revised content if it qualifies as a derivative version of the original website. However, derivative works, compilations, and collective works are considered one work for purposes of calculating statutory damages.

Consequently, registering a number of self-contained works that appear on a website together as a compilation, collective work, or derivative work may have significant consequences in a copyright infringement action. For example, when a website consisting predominantly of photographs is registered as a compilation, a court may issue
only one award of statutory damages for all the photographs covered by that registration.16

Section 1009.1 of the *Compendium* notes that “[m]any websites contain multiple forms of authorship, including text, images, artwork, musical works, sound recordings, videogames, computer programs, audiovisual works, among other types of works.”17 Detailed information is provided on each type of work as well as what to do if an item is a mixture of more than one type of work, such as a blog that is mostly text but that also contains some images.

- Literary works, including articles, blog postings or computer programs, databases compilations of information, or other works that are expressed in numbers or other verbal or numerical symbols or indicia.18 Interestingly, per 1006.1(A), “[t]he Office will not register HTML code as a computer program, because HTML does not constitute source code. HTML code is a markup language that merely formats the text and files on a webpage in much the same way that the codes in a word processing program format the characters and spaces in a document.”19
- Works of the visual arts.20
- Works of the performing arts.21
- Sound recordings.22
- Motion picture/audiovisual material.23
- Single serial issue.24

The *Compendium* includes considerable detail on exactly how to register website content, including that the material being deposited must match the material claimed in the application (1010.5), deposit requirements for the initial and subsequent versions of a website as well as revised website content (1010.6(A), (B) and (C)), compilations (1010.6(D)), HTML Code (1010.6(E)), computer programs contained or embedded in a website (1010.6(F)), databases contained or embedded in a website (1010.6(G)) and electronic serials (1010.6(H)).25 The requirement to provide a “best edition” of a work when registering may cause concern. However, per Section 1010.3, “[i]n most cases, the applicant does not need to satisfy the best edition requirements in order to register a website or to register a work that has been published solely online.”26 Rather, the applicant may submit an electronic copy of the work, provided that the deposit is in one of the acceptable file formats that are posted on the Copyright Office’s website.27 The *Compendium* also has an entire Chapter on post-registration procedures, but note that the focus of many of the provisions is on correcting errors from the original registration. Counsel should review this material carefully to see whether any of it provides an avenue for covering very slight changes in website content under the original registration process.28

Unfortunately, the *Compendium* makes it clear that there are some types of material that are not eligible for registration in Section 1007.

A registration for a claim in website content does not extend to any uncopyrightable material contained within a website. In particular, the U.S. Copyright Office will refuse to register website content that does not constitute copyrightable subject matter or content that lacks a sufficient amount of original authorship. Examples of uncopyrightable material include, but are not limited to, the following:

- Ideas, such as plans for future websites.
- Functional design elements.
- Domain names and hypertext links.
- The layout, format, or “look and feel” of a website. (Italics mine.)
- Common, unoriginal material, such as names, icons, or familiar symbols.29

IV. Protecting Websites Under Copyright Law Without Registration

In an intriguing article about copyright and website design, Yezril discusses the clear tension between true creativity as expressed by website developers and the need for standardization, not only to enhance usability but also because of the challenge to deliver sufficient content on smaller and smaller devices.30 She first provides an excellent discussion on the background of web designs.31 She then discusses the competing incentives to standardize versus differentiate website design.32 In Part III, she carefully discerns the issues with trying to apply existing copyright law to website design through a number of recent cases, especially cases that attempt to distinguish between the content of a website and the “look and feel” of a website, which is often what designers and website owners are most interested in protecting.33 Among the challenges faced when trying to protect website design under copyright law are originality, functionality and substantial similarity as well as merger and scenes a faire. In addition, the reality of the design world where designers take inspiration from collections of other websites.34

Yezril notes that even with looking at other websites for inspiration and with common trends in the industry, “there has evolved an implicit code of ethics, in which copying of elements is permissible, but only in moderation.”35 She goes on to observe that “the internal and external motivations for making creative web designs are present even when a designer does not have the reward of the power to exclude others from copying their designs. However, even in the absence of a legal ownership (such as when a work is made for hire), designers still feel ownership in their work.”36 In Part IV of her article, the author addresses a number of different scenarios of copyright infringement of websites, including clients who do not pay, copying by a client’s competitors, copying in bad faith and “pure” design copying.37 In her conclusion, she states that “[d]esigners have relatively little interest beyond client payment and the reputational attraction of future clients.” She goes on to observe that “[t]here are other legal avenues to protect a website design, such as laws on topics of contract or unfair competition, so perhaps the question should be whether it is worth bothering with intellectual property protection for web design at all.”38 In her final paragraph, she offers a simple solution:

Perhaps the optimal solution, which balances the freedom to take inspiration and the desire to protect creative website design, lies in the (C) symbol itself, which derives significance not in legal strength, but rather in the cultural expectations of the web design community. In the absence of viable legal alternatives, the (C) works in a notice and deterrent role. The insignificance of the legal function of the (C) at the bottom websites is demonstrated by its failure to channel more parties to court when conflicts occur. This notice is a signal that self-respecting designers taking inspiration from a given site should not copy directly. For direct competitors, it is likely that a company established to sell counterfeit goods will have to hire a web designer to create their online presence, and the notice served by the legitimate website, combined with the difficulty in synchronizing the competitor's preexisting content to a newly duplicated website, may deter designers from
copying or make it more expensive for the counterfeiter to hire such a designer. Ultimately, the notice function served by marking a page as copyrighted shows an investment in the website that could deter potential copiers more effectively than an invisible trade dress protection could, despite the potentially greater legal strength of trade dress compared to copyright protection.40

Indeed, this is something that the author has advocated for her students for many years. The author is a faculty member at a school where students develop – and are preparing for careers in making – websites, documentary films, 3D animations, videogames and all types of creative work. Although she advocates copyright registration as the most protective way to ensure rights to the work, a second option that is easy to do and costs nothing is to place a copyright notice on everything. This has several advantages. First, it reminds the honest person (or the person who believes that everything on the web is “public domain” and free of copyright concerns) that copyright law not only exists, but that the creator is claiming rights under copyright law. Second, an email address and other contact information gives the honest person the opportunity to “do the right thing” and at least ask for permission to use or incorporate someone else’s work. Third, a copyright notice eliminates the “innocent infringer” defense, meaning that the court can award higher statutory damages. Fourth, the copyright notice can be placed on every iteration of a website, again at no cost. In fact, the notice can be embedded into the HTML code as part of a banner, “header” or “footer” of every page, so that the notice appears automatically.

Yezril makes a compelling distinction between the interests of website designers and the eventual owners of these websites (the companies and non-profit organizations that depend on websites for e-commerce as well as brand recognition). In discussing these issues with another one of her graduate students, the author was reminded again that no matter what web content is provided, the creators are generally most interested in the integrity of the work and that the work be attributed to them (rather than presented as the work of someone else), even though they understand that their work may be retransmitted and repurposed in a number of different ways.41 In some ways, this mirrors the integrity and attribution rights provided under the Visual Artists Rights Act (VARA), leading to a discussion of whether this legislation could be a model for how to handle website design issues that reflect a designer’s creative talents and that impact his/her reputation and future career opportunities.42

It is worthwhile to remember that copyright protection attaches the moment when three criteria are met: an original work of authorship, fixed in a tangible medium and with a minimum amount of creativity. Thus, registration is not necessary unless and until a party wants to sue for copyright infringement. There may be interim measures that can be taken, such as communicating with a party who may be infringing on someone’s copyright, short of bringing litigation. Another option may be to see what recourse is available through the Digital Millennium Copyright Act, either working with the ISP that is hosting the infringing content to arrange to have the site or its content taken down or to pursue a remedy for the destruction or alteration of copyright management information (CMI).43 This legislation goes to the heart of how easy it is to cut and paste content from the web. On the other hand, with how quickly
website content – and even website design – changes, it may not even be worth going to great lengths to try to enforce copyright rights at all. All of these considerations should be weighed when thinking about how and whether to protect websites under copyright law.

One other aspect of protecting websites and other digital content is education. There are many myths and misconceptions about copyright law in general among the public. The author finds that the concept of “fair use” is often relied upon for all types of behavior when it really is an exception to the rights of the copyright owner and where liability for copyright infringement is determined using a four-factor test. On the other hand, it is important to remember that fair use was intended to provide an opportunity to use someone else’s material without permission for news reporting, commentary, criticism, scholarship, research and parody, presenting an interesting intersection with rights under the First Amendment. Because her school offers programs in informatics and media arts, the essence of which are creating all types of creative work, the author developed a course called N480 Technology and the Law, which covers patent, trademark, trade secret and copyright law as well as contracts, licensing and rights of publicity, so that the next generation of web designers will know how to protect their own work as well as avoid infringing on the rights of others. Moreover, AIPLA has taken the lead on providing programs to even younger students as part of World Intellectual Property Day. In this era of rampant piracy of all types of products as well as nearly unchecked cutting, pasting, redistribution and aggregation of all forms of creative work, it is not surprising that people are confused about what might be permissible versus prohibited under intellectual property law and why.

V. Protecting Websites Using Trade Dress Law

Another option for protecting websites is using trademark law, specifically trade dress. As indicated by Jones, Rafaty and Ginzburg, “[c]ourts have found that the Lanham Act may protect the highly distinctive trade dress of a website.” As they caution:

Trade dress must be described in terms of its specific elements, which in turn must be nonfunctional and distinctive in order to be protected under the Lanham Act. In this regard, establishing secondary meaning and acquired distinctiveness may be particularly difficult when a website is changed or updated frequently, and the analysis may well hinge on the aspects or elements of the website that remain constant over time.

They go on to note observe that:

The “look and feel” of a website – for example, its user interface, design layout, graphic elements – may be protectable as trade dress, but the “overall impression” of the website must be closely tied to particular identifiable/articulable elements that form the basis for the trade dress claim. These elements include static elements (for example, images, graphics, photos, colors, frame), as well as interactive elements and the website’s overall “mood,” style or impression.

The authors advise that website trade dress infringement claims should identify and describe as many of these elements as possible and as specifically as possible, especially any intangibles that
contribute to the overall “look and feel” of the website, such as the user interface, design style and specific features.\textsuperscript{47} They note that at least three courts have held that the look and feel of a website may be the basis for a trade dress claim that is distinct from copyright claims.\textsuperscript{48} Among the cases that the authors use to illustrate the application of trade dress to websites are:

- \textit{Blue Nile, Inc. v. Inc.com, Inc.}, 478 F. Supp. 2d 1240 (W.D. Wash. 2007).\textsuperscript{49}
- \textit{Faegre & Benson LLP v. Purdy}, 447 F. Supp. 2d 1008 (D. Minn. 2006); \textit{Faegre & Benson LLP v. Purdy}, 129 Fed. App’x 323, 324 (8th Cir. 2005).\textsuperscript{50}
- \textit{Conference Archives, Inc. v. Sound Images, Inc.}, 2010 U.S. Dist. LEXIS 46955 (W.D. Pa. Mar. 31, 2010).\textsuperscript{51} As the authors describe:

The court explained that a website is “conceptually different” from tradition “static presentation” of the print medium. A website’s user interface is not such a static presentation, but rather should be conceived as a “series of overlapping layers aimed at accomplishing specific tasks.” On the surface is the visual or design element, which represents the graphic treatment and includes the components of the interface itself as presented to the user – in other words, the “look” in the “look and feel.” Beneath this visual/design layer is the “interface design,” which facilitates the user’s understanding of, and interaction with, the functionality of the website. This second layer represents the “feel” in the “look and feel.” The court explained: “The ‘feel’ corresponds to certain dynamic navigational elements, including buttons, boxes, menus, and hyperlinks,” intangible and interactive elements which contribute to the “feel.” The court continued: “The feel can also consist of the ‘information design’ of a website, including the … location of common elements such as navigation elements.” Under this model, therefore, the two layers critical to a definition of the “look and feel” of a website are its “visual design” and its “interface design.”\textsuperscript{52}


In their update to their chapter on unique online trademark issues, Hogan and Feingold noted several more recent cases related to trade dress protection of websites, including Parker \textit{Waichman LLP v. Gilman Law LLP}, wherein the court concluded that the plaintiff had “fail[ed] to adequately define the ‘look and feel’ of the Web site at “YOURLAWYER.COM.”\textsuperscript{54} They also note that in affirming the lower court’s dismissal of a trade dress claim, the Third Circuit explained that the plaintiffs failed to “enumerate what specific elements of its Web site comprise a distinctive trade dress or that its site has any distinctive ornamental features.”\textsuperscript{55} Moreover, the court also noted that even if the plaintiff had adequately stated its claims, its alleged trade dress is clearly functional.\textsuperscript{56}

In her article, Brown alerts readers to the real damage being done to companies and the economic impact on legitimate commerce when websites, particularly the look and feel of websites, are not protected adequately by either copyright or trade dress law.\textsuperscript{57} She discusses the ambiguous nature of protection for the look and feel of websites, noting especially the \textit{Conference Archives} and \textit{Blue Nile} cases.\textsuperscript{58} She then illuminates the limitations of trying to protect the look and feel of a website via copyright law, describing a number of cases as well as
the language in *Circular 66* from the U.S. Copyright Office. She highlights the difficulties with protecting a website’s look and feel under trade dress law, including the need to prove that the trade dress is distinctive, that it has acquired secondary meaning, that it is non-functional, the likelihood of consumer confusion and that copyright law would preempt any attempt to use trade dress. In describing why new technology requires a new framework, Brown provides a number of insights:

Why has this issue been so difficult to resolve? One possible explanation is that websites represent a relatively new hybrid of product, text, service and marketing functions. They integrate decorative elements and functional ones in a way that is fundamentally novel and that has never required protection before. The appearance of a product used to be relatively straightforward and limited to two or three dimensions. Whether it was a can of soda or a motorcycle, each item looked more or less the same to everyone. Websites, however, are mutable. They often have multiple levels, and their specific appearance depends on the user’s interaction.

Complicating this further is the fact that websites may look different depending on where and how they are viewed. Two consumers may see even the same page of a website differently if, for example, one of them is viewing the website on an iPad and the other is viewing it on an iPhone. The shape of the screen and its orientation (vertical or horizontal) will vary across devices. On tablets and phones, the view may change depending on how the device is held. The characteristic look and feel of a site may not be defined by a static screen, but by something that can be generalized across different devices.

As a solution to this dilemma, she proposes two options. One option is that the Lanham Act be amended to specifically address the trade dress infringement of websites. The other option is that a multi-factor text be adopted for infringement of a website’s look and feel that would also guard against restricting fair competition and that would consider overall similarity, including features such as fonts, color scheme, layout and user experience design, the proximity of products or services in relevant markets, whether there was intentional copying and the likelihood of consumer confusion.

Melus is a strong advocate for applying trade dress to protect website design. He first discusses why trying to apply copyright law to web design is akin to trying to “fit a commercial peg into an artistic hole,” especially when the issue is the protection of a website’s look and feel. He then asserts why trademark law, especially trade dress, is a commercially sound approach to protecting website design. He explains why a trade dress analysis provides broader protection to website design than copyright law, including:

- The policy objectives of trademark law more closely align with the use of websites than the objectives of copyright law, including that trademark law is better suited to protecting the functional user interface of websites.
- The trade dress analysis for infringement more effectively protects the value of a website because trade dress focuses on the interaction of the consumer with the website, including that protecting websites under trade dress better balances the incentives to create innovative website design with the promotion of competition.
As he concludes, “[c]opyright does not effectively assign a property right to exclude competitors from appropriating the design and interface, the “look and feel” of websites, which form the basis of a website’s intrinsic value.” He goes on to state that “[t]rade dress, which protects the efforts of businesses to establish positive relationships with its consumers by creating intuitive user interfaces is much more apt to protect web design” and advocates that courts should follow the example of the decision in Conference Archives and apply a trade dress analysis to web design.

VI. Graphical User Interfaces (GUIs) and Apps

Although the focus of this paper is on the application of intellectual property law to websites, two other popular online technologies are relevant to thinking about how to provide protection for digital assets that are the result of innovation and that have the potential to generate revenue for those that develop them: graphical user interfaces (GUIs) and apps (short for applications). Both GUIs and apps have become increasingly popular and important with the introduction of smaller and more powerful mobile devices. Moreover, many of the students in the author’s courses indicate that they want to have a career or found a new company that is based on creating apps. [N.B.: Most students balk at the thought of paying $35.00 to register their work through the U.S. Copyright Office, although this is miniscule compared with the costs of applying for a trademark or patent.] As stated by Clark and Davis:

Assessing proprietary subject matter and determining the most appropriate type of IP regime to apply can be anything but straightforward, particularly when the item to be protected presents elements that are protectable simultaneously by a trademark, copyright, or patent. This issue is particularly acute when a product has ornamental features that may be protected by either copyright or a design patent.

The authors observe that “[d]esigners have claimed that features embodied in items as diverse as cookware and graphical users interfaces (or screenshots) of software programs are ornamental and worthy of design patent protection,” referring to the case of Apple v. Samsung, where both trade dress infringement and design patent infringement were asserted against Samsung. However, note that the Supreme Court has agreed to review the Apple v. Samsung case, but that the order granting the review is limited only to the second question in the petition: “Where a design patent is applied to only a component of a product, should an award of infringer’s profits be limited to those profits attributable to the component?”

Two substantial law review articles have recently been published on the difficulties of protecting GUIs through intellectual property law. The first of these articles is a magnificent treatise by Risch on functionality and design patents for GUI. It is important to note that GUIs are not new and date to the early 1970s. What is new is the extent to which they have become an integral part of many digital products and content, particularly for smaller and smaller mobile devices, as well as a visual display for interacting with software that serves as a vehicle for e-commerce and branding opportunities. Stigler observes that in spite of fierce competition in the marketplace, GUIs remain inadequately protected under current intellectual property law in the U.S.:
Copyright law offers little protection for GUIs, protecting only exact knock-offs of the design. Trade dress, which protects against confusingly similar designs, takes time to establish, requiring a GUI design to reach near-famous status before reaping any protection benefits. Design patents provide a larger scope of protection than that provided by copyright and trade dress, protecting GUIs as a whole from substantially similar copies. However, design patents are expensive to obtain and last too long, upsetting the delicate balance between a designer's rights and those of society. Despite the availability of these overlapping legal theories, the current regime is ill-suited for GUI designs, and a gap in protection remains.

After providing a history of GUIs, Stigler discusses why GUIs should be protected and whether this protection should be narrow or broad, including the economic incentive to create, the need for efficiency and technological compatibility and the needs of society and end users. She then discusses the application of copyright law to GUIs, noting that although GUIs logically fit within the scope of copyright law, given their graphical nature, copyright protection is thin and cases are relatively rare. In her discussion of copyright protection for GUIs, she considers compilations, the merger doctrine and the line of copyright “look and feel” cases, concluding this section of her article with a brief observation about the advantages and disadvantages of copyright law for GUIs.

Stigler next provides a short commentary on trade dress protection, including the advantages and disadvantages of using this type of intellectual property law to protect GUIs. As she concludes:

In sum, while trade dress rights may protect the GUI as a whole better than copyright, the rights are slow to attach and leave room for early infringers to take advantage. Further, similar to copyright, the boundaries of trade dress protection are uncertain, so trade dress, alone or in tandem with copyright, is not enough to securely protect a GUI from imitation by competitors.

Finally, she considers the question of whether design patents are a better approach to securing protection for GUIs, noting that GUI design patents have been gaining momentum in the aftermath of the Apple v. Samsung case. After an overview of design patents and their more recent popularity, she considers the advantages and disadvantages of design patents for GUIs. The final section of her article is devoted to a proposal for a GUI hybrid, a GUI sui generis that would be “specifically tailored for GUIs” and that would “draw upon the best-suited features of design patent, trade dress and copyright law.”

It is not novel that different types of intellectual property call for different degrees and types of protection. Trade dress, copyright and design patents all incorporate varying concentrations of "exclusive rights" and "limitations." Similarly, GUIs--which uniquely exist at the intersection of computer software (patents/copyright), artistic expression (copyright), and commercial identity (trade dress)--require legal protection that similarly exists where patents, copyright, and trade dress intersect. In its current state, GUI protection under these legal theories--although overlapping--is filled with gaps and fails to balance policy concerns with the constitutional goal to spur innovation. Instead, a
hybrid solution—one specifically tailored to GUI design and drawn from current GUI legal theories—should be implemented. She explains the details of this new hybrid model for protection of GUIs, including the attachment of rights, the scope, standard for infringement and duration of protection. In conclusion, she states that:

GUIs will continue to be instrumental in the technology marketplace, and providing the proper balance of intellectual property protection will be necessary to adequately spur further GUI innovation. A hybrid system that draws from current copyright, trade dress and design patent regimes; balances the potency of infringement protection with a short, renewable term; and more clearly establishes the scope of protection; is better tailored to the needs of GUI design than the current overlapping and inadequate legal regimes. A clearly defined legal theory would support innovation while balancing creators' rights and would allow companies to more confidently invest in design development. If designers know how closely they can design, risk will be reduced, and chilling effects will be minimized. In turn, the industry's attention will be diverted from its obsession of recreating existing successful designs, towards innovation, which, after all, is the ultimate purpose and the constitutional goal upon which intellectual property protection is based.

Likewise, protection for apps under intellectual property law, especially copyright law, is problematic. As indicated above, it is the dream of many students to create apps that will be the basis for a career or new company and many people think nothing of taking and “modifying” someone else’s app, perhaps believing that this behavior is permitted under fair use. Another aspect of this is that people often confuse plagiarism with copyright, as evidenced from this article in Plagiarism Today, wherein the disclaimer is given that “I am not a lawyer. I am just a legally-minded Webmaster/Writer frustrated with the plague of plagiarism online and doing something about it.” However, as the author notes “[t]he issue is that, as the barriers to producing mobile apps have lowered and the amount of revenue flowing into them has increased, the checks and balances against copyright infringement have not increased either.” He goes on to observe that:

The frightening part is that this problem is only going to grow. As ad blockers are introduced to mobile browsers and the barriers to releasing an app keep dropping, more and more content creators are going to turn to apps to supplement their income. With them will come a small but growing number of plagiarists and infringers.

Advocating more action by the app stores to discourage the submission of copyright infringing apps, the author makes the following suggestions:

1. **Ban Copyright Infringers:** This one sounds simple, but the company in Raud’s case submitted 11 infringing apps that were removed and then were allowed to submit 20 more. Even if Raud never filed a DMCA, clearly this company was a repeat infringer and needed to have their access to submitting apps cut.

2. **Look for Warning Signs:** According to Apple, copyright infringement is not a common reason for apps to be rejected. However, app stores have numbers and statistics on the apps that are and can likely find warning signs that an app needs extra review for possible infringement.
3. **No Ill Gotten Gains:** When an app is confirmed to be copyright infringing, through whatever process the store has, there needs to be an assurance that the infringer will not be able to keep their ill-gotten gains. This can be difficult since app stores pay developers on a regular basis, but finding ways to ensure infringers can’t profit from their misdeeds is the biggest step one can take to limiting the number who submit infringing apps.91

In terms of those who want to create apps for the iPhone, Bowerman makes some helpful recommendations:

User content is a tricky component of app design copyright concerns. While your app may not duplicate existing content, if the app allows users to upload content, you could find yourself in copyright trouble when users share copyrighted content. If your app provides a mechanism through which users can upload content, it is your responsibility to remove copyrighted content and inform users that copyrighted content should not be shared.

The best way to avoid a copyright problem with your app is to design it yourself, focus on the user experience and avoid borrowing elements from existing apps. It's OK to be inspired by something you see, but copying and pasting graphics or making your app look like another can cause you big problems. Creating your own app with your own content will ensure you never find yourself on the receiving end of a copyright infringement lawsuit.92

VII. Conclusions

One popular expression comes to mind when the author contemplates the application of intellectual property law to websites, GUIs and apps. This expression, whose origin is disputed, is the pronunciation “[m]ay you live in interesting times.”93 It aptly captures the current state of affairs as lawyers try to assist their clients in protecting ever more valuable and expansive activities delivered through web and mobile technologies. The challenges have increased in terms of how each new technology that is introduced requires the law, the lawyers who practice it and the clients who depend on it to apply traditional principles that do not necessarily fit well and these challenges will continue to evolve in the future. The author encourages her students to consider the four areas of intellectual property law as part of an overall toolbox for protecting their work, along with contact law and licensing. As indicated by this paper, there may be gaps and overlaps in the extent of the protection provided and thus it is essential to work with an experienced lawyer to choose the most optimal course of action. All of which means that lawyers who practice intellectual property law will indeed live in interesting times.

4. *Id.* at 1.
5. *Id.*
work must incorporate some or all of a preexisting ‘work’ and add new original copyrightable authorship to that work” and the revision of a website is given as an example of a type of derivative work. There is also language clarifying when something is a compilation that is or is not protectable under copyright law, with a website that contains text, photos and graphics offered as an example of a compilation that might be copyrightable.

7. Id.
9. Id.
10. Id. at 1000:13.
14. Id. at 3.
15. Id. See also Compendium at 1000:26-27 for additional information on how to handle published and unpublished website content.
17. Id. at 1000:28.
18. Id. at 1000:28-29. See also Section 1006.4 on compilation authorship at 1000:14.
19. Id. at 1000:12.
20. Id. at 1000:29.
21. Id.
22. Id.
23. Id.
24. Id.
25. Id. at 1000:45-48.
26. Id. at 1000:43, although note that there is a limited exception to this rule for electronic serials.
27. Id.
28. See Compendium at Chapter 1800.
29. Id. at 1000:14-15. See also Sections 1007.1-1007.4.
31. Id. at 3-7.
32. Id. at 10.
33. Id. at 10-21.
34. See the comparison of various websites compiled by Ms. Pachhapurkar in Part II of this paper. Also, tools such as WordPress allow anyone to create a website, albeit with a fairly generic design and information architecture, which is one of the first things that Right Sharing of World Resources mentioned in its initial conference call with Ms. Pachhapurkar.
35. Id. at 18.
36. Id. at 19.
37. Id. at 21-28.
38. Id. at 28.
39. Id. at 28-29.
40. Id. at 29.
41. Comments of Ms. Cori Faklaris, March 23, 2016. Ms. Faklaris also noted that watermarks can be used to protect the integrity of creative work. However, in many cases, such as with images, this disrupts the content. Likewise, the author, a deltiologist, has studied postcards as a reflection of trends in society, but finds that images of many antique postcards offered for sale on the web are spoiled by watermarks.
45. Id. at 544-545.
46. Id. at 545.
47. Id.
48. Id.
50. Id. at 546.
52. Id. at 551-552, Conference Archives, Inc. v. Sound Images, Inc. at *46, citing Web Site Look & Feel; Overview, Massachusetts Institute of Technology Administrative Computing Developers Resources, available at http://web.mit.edu/ist/org/admincomputing/dev/ws_webstand.shtml – note that this link is no longer operational.
53. Id. at 554-555.
55. Id., citing Fair Wind Sailing, Inc. v. Dempster, 764 F.3d 303, 310 (3d Cir. 2014).
56. Id.
58. Id. at 320-322.
59. Id. at 323-331.
60. Id. at 331-342.
61. Id. at 342.
62. Id. at 343.
63. Id. at 344-351.
64. Gregory Melus, Trade Dress 2.0: Trademark Protects in Web Design What Copyright Does Not, 42 AIPLA Q. J. 351 (Summer 2014).
65. Id. at 358-367.
66. Id. at 367-372.
67. Id. at 372-377.
68. Id. at 377-391.
69. Id. at 391.
70. Id. at 391-392.
73. AIPLA Direct, March 21, 2016.
76. Id. at 216.
77. Id. at 220-227.
78. Id. at 227, citing Risch, supra note 74, at 57.
79. Id. at 227-235.
80. Id. at 235-238.
81. Id. at 238.
82. Id.
83. Id. at 238-246.
84. Id. at 247.
85. Id. at 246.
86. Id. at 246-250.
87. Id. at 250-251.
89. Id.
90. Id.
91. Id.