A PRACTICAL APPROACH TO PROTECTION OF GRAPHICAL USER INTERFACES IN THE UNITED STATES OF AMERICA

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TABLE OF CONTENTS

SECTION I: ....DEFINING A GRAPHICAL USER INTERFACE

<u>What is a Graphical User Interface?</u>

A graphical user interface or GUI refers to a graphical interface facilitating human interaction with an electronic device.[1] One approach to categorizing GUIs starts by considering the graphical display as a whole and then focuses on each of its constituent elements. Accordingly, we define a framework with three high-level GUI categories: (1) the desktop, (2) the individual components contained within the desktop, and (3) the transitional and animated effects resulting from user interactions with the desktop and its components:[2]

<u>Category I: The Desktop</u>

The desktop refers to the entire area on a display, where a display refers to the user's entire workspace and is not necessarily confined to the bounds of a single monitor. Some examples of desktop GUIs include a desktop with depth perception,[3] a method to handle multiple monitor environments,[4] a method for displaying multiple concurrent desktops,[5] and a method for displaying a group of programs only when the "space" is active.[6]

<u>Category II: The Components</u>

A desktop usually includes many GUI components. These components typically represent physical objects found on a physical desktop.[7] The GUI components can refer to graphics that (1) the user controls to interact with the device or (2) the device displays in response to the user's actions or requests. The

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[1] Steven Levy, Graphical User Interface, Britannica (2008), http://www.britannica.com/EBchecked/topic/242033/graphical-user-interface.

[2] Another approach to categorizing GUIs, used by the USPTO, does not classify GUIs into the same high-level categories as used in this paper. The USPTO classifications related to GUI patents are contained primarily in classes 715 and D14. Class 715 is titled data processing: presentation processing of document, operator interface processing, and screen saver display processing. Class 715, http://www.uspto.gov/web/patents/ classification/uspc715/sched715.htm (last visited Jul. 21, 2008). The relevant subclasses are 700 through 867. *Id.* Class D14 is the class of design patents that includes designs for recording, communication, and information retrieval equipment. Class D14, http://www.uspto.gov/web/patents/classification/uspcd14/schedd14.htm (last visited Jul. 21, 2008). The relevant subclasses are 485 through 495. *Id.* The USPTO previously used Class 395 to classify many of the GUI patents, but the USPTO slowly eroded and completely abolished the class in early 2000. Classification Order 1746, Classification Archival Order Report, 1, 123, http://www.uspto.gov/web/offices/opc/documents/archiverpt.pdf (last visited Jul. 21, 2008). Some older patents are still classified under this extant class.

[3] *See* U.S. Patent No. 7,043,701 (filed Jan. 7, 2002).

[4] *See* U.S. Patent No. 6,573,913 (filed Jan. 10, 2000).

[5] *See* U.S. Patent No. 6,807,666 (filed May 17, 2000).

[6] *See* U.S. Patent App. No. 20080034317 (filed Feb. 7, 2008).

[7] Desktop, Merriam-Webster Online Dictionary (2008), http://www.merriam-webster.com/dictionary/desktop.

most common GUI components are pointers, icons, windows, and menus and are explained in detail below.[8]

A. Pointers

The pointer is a symbol that appears on the display screen that the user moves to select objects and commands.[9] Usually, a pointer appears as a small angled arrow.[10] Some text-processing applications, however, also use an I-beam pointer shaped like a capital I.[11]

While a pointer alone is not necessarily a functional GUI, the pointer acts as a means by which the user may select icons, move other GUI components, and perform other functions in order to interact with the device. A couple of the different kinds of pointers that currently exist include information pointers that provide visual information about objects to which the cursor points[12] and object-oriented global cursor tools that provide a cursor tool framework.[13]

B. Icons

An icon is "a graphic symbol on a computer display screen that usually suggests the type of object represented or the purpose of an available function."[14] Icons are usually small pictures that represent commands or files.[15] For example, by moving a pointer to an icon and pressing a mouse button, you can execute a command or convert the icon into a window. A user can also move the icons around the display screen as if they were physical objects on a desk.

Icons are typically two-dimensional or three-dimensional. A majority of the two-dimensional icons have unique designs that represent a specific file type or are unique to a particular operating system.[16] Even designs of symbols that are not functional can be considered icons. A three-dimensional icon can be characterized as one with multiple faces. One example of its use is rotating the

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[8] These components, which comprise the basic GUI components "popularized by the Macintosh in 1984 and later copied by Windows on the PC," are still in use today. They are more commonly known by the acronym WIMP (windows, icons, menus, and pointers). Andries van Dam, *Post-WIMP User Interfaces*, 40 COMMUNICATIONS OF THE ACM 63, 63 (1997).

[9] Pointer, Merriam-Webster Online Dictionary (2008), http://www.merriam-webster.com/dictionary/pointer.

[10] Jason I. Hong, Scott Lederer & Mark W. Newman, *Towards a United Interaction Framework for Unicomp User Interfaces* 1, 2 (University of California, Berkeley ed. 2002).

[11] *Id.*

[12] *See* U.S. Patent No. 6,606,101 (filed Jan. 21, 1999).

[13] *See* U.S. Patent No. 6,014,139 (filed Apr. 1, 1999).

[14] Icon, Merriam-Webster Online Dictionary (2008), http://www.merriam-webster.com/dictionary/icon.

[15] *Supra*, note 9.

[16] *See* U.S. Patent No. D497,367 (filed Jan. 8, 2001).

icon to display different views, where each view provides additional information about the object represented by the icon.[17]

Icons can also come in sets. Sets of characters[18] and musical symbols[19] are examples. When an icon set contains a unique character style for a known character set such as the alphabet, it is more commonly known as a font.[20]

C. Windows

A window is "any of various rectangular boxes appearing on a computer screen that display files or program output, that can usually be moved and resized, and that facilitate multitasking."[21] Windows often divide a screen or desktop into different regions. In each window, the user can run or control a different program or display a different file. The user can often move windows and change their shape and size.

The window can also be (1) divided into several components, such as the window frame or scroll bar, (2) modified so that the design of the window looks unique,[22] or (3) repositioned so that it optimizes the user experience. Examples include message displays that permit selectable balloon styles and icons to display a sender's emotion,[23] split-pane window interfaces,[24] and dialog box positioning.[25]

D. Menus

The menu is a GUI that lets users execute commands by selecting a choice from a list of options.[26] Menus allow users to choose between different functions they want to run in a particular application or operating system. Some existing menu types include a start menu for switching between users,[27] a radial menu,[28] a loop menu,[29] and a tear-off menu displayed in a floating window.[30]

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[17] *See* U.S. Patent No. 5,303,388 (filed Apr. 23, 1993).

[18] *See* U.S. Patent No. D471,227 (filed Oct. 10, 2001).

[19] *See* U.S. Patent No. D517,117 (filed Nov. 24, 2004).

[20] Font, Merriam-Webster Online Dictionary (2008), http://www.merriam-webster.com/dictionary/font.

[21] Window, Merriam-Webster Online Dictionary (2008), http://www.merriam-webster.com/dictionary/window.

[22] *See* U.S. Patent No. D500,765 (filed Jan. 13, 2003); *see also* U.S. Patent No. D528,553 (filed Sep. 29, 2003).

[23] *See* U.S. Patent No. 7,343,561 (filed Dec. 19, 2003).

[24] *See* U.S. Patent No. 5,714,971 (filed Nov. 30, 1994).

[25] *See* U.S. Patent No. 6,971,068 (filed Jul. 26, 2001).

[26] Menu, Merriam-Webster Online Dictionary (2008), http://www.merriam-webster.com/dictionary/menu.

[27] *See* U.S. Patent No. 7,334,193 (filed Jan. 14, 2005).

[28] *See* U.S. Patent No. 5,790,820 (filed Jun. 7, 1995).

[29] *See* U.S. Patent No. 7,093,201 (filed Sep. 6, 2001).

[30] *See* U.S. Patent No. 5,627,960 (filed Mar. 4, 1996).

E. Other Noteworthy Components

There are many other GUI components that do not fall into the above categories because they are not as common or are not as prevalent across all types of operating systems and devices. One such example is the dock on the Mac OS X that displays application icons for easy access. The user has the ability to personalize icons included on the dock. The dock, although not broad enough to be its own separate category, is certainly a noteworthy GUI component.[31]

Category III: Transitional and Animated Effects

GUIs can also refer to transitional and animated effects. These effects can result from interactions between (1) different GUI components or (2) a GUI component and the desktop, and can have utility or aesthetic ramifications or both. Some examples of transitional effects include translucent windows,[32] reflections, shadow effects, and nonlinear minimization or maximization of user interface objects (genie effect on the Max OS X).[33]

Other animated effects are dependent on the actions of the user such as those that mimic the motion of the user. For example, the cover flow view option on the Mac OS X, when a user is browsing in a user interface, such as an application or folder, moves the icons of the files and folders with the scrolling movement of the user.[34]

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[31] *See* U.S. Patent Pub. No. US 2008/0034318 (filed Aug. 4, 2006).
[32] *See* U.S. Patent No. 7,343,562 (filed Nov. 5, 2003).
[33] *See* U.S. Patent No. 7,362,331 (filed Jan. 5, 2001).
[34] *See* U.S. Patent Pub. No. US 2008/0034381 (filed Jun. 9, 2007).

SECTION II: UTILITY PATENT PROTECTION OF
                GRAPHICAL USER INTERFACES

Background

The graphical user interface represents a not uncommon challenge to those seeking to protect an innovative user interface by means of a utility patent. A utility patent is intended to protect the functional aspects of a new invention. Under US patent laws, a utility patent may protect "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[35] The challenge here is that a graphical user interface and the components that make up a graphical user interface are themselves not a part of the statutory classes of what can be patented, *i.e.*, a process, machine, manufacture, or composition of matter. Therefore, the utility patent may be used to indirectly protect the graphical user interface by protecting (1) the processes involved in the creation, display or interaction with the interface and (2) the computer equipment and memory devices (*i.e.* machines) that are loaded with software that control the creation, display or interaction with the interface.

Although many utility patents have been granted by the U.S. Patent and Trademark Office, no court decisions have directly addressed the validity of patent protection for the subject matter of a graphical user interface.[36] However, there are numerous court decisions addressing the validity of patent protection for various aspects of software and computer-related inventions.

In a sweeping statement, the Supreme Court in *Diamond v. Chakrabarty* announced that a patent could be obtained to protect "anything under the sun that is made by man."[37] As applied to computer-related inventions, on the other hand, the Supreme Court has not been so generous. In *Gottschalk v. Benson*, the Supreme Court held as not falling within the scope of patentable subject matter a patent claim directed to a computer implemented algorithm for converting binary coded decimal numerals directly into binary numerals for use with a general purpose computer.[38] The Court explained that the patent "claims were not limited to any particular art or technology, to any particular apparatus or machinery, or to any particular end use."[39] In *Parker v. Flook*, the Court similarly held that patent claims which involved a program implementing an abstract mathematical formula for updating alarms based on a calculation using data from a manufacturing process was not statutory subject matter for a patent.[40] The Court explained that the post-solution activity of updating an alarm did not transform an unpatentable principle in the form of a mathematical algorithm into a patentable process.

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[35] 35 U.S.C. § 101 (2000).

[36] *See, e.g.*, *Carrol Touch, Inc. v. Electro Mechanical Sys., Inc.*, 15 F.3d 1573 (Fed. Cir. 1993) (finding a joint inventor estopped from contesting validity of a patent on a touch screen user interface).

[37] *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) (discussing patent protection of genetically modified oil-eating bacteria).

[38] *Gottschalk v. Benson*, 409 U.S. 63 (1972).

[39] *Id.* at 64.

[40] *Parker v. Flook*, 437 U.S. 584 (1978).

In an about-turn, in *Diamond v. Diehr*, the Supreme Court ruled that a computer implemented mathematical algorithm could be deemed to be statutory subject matter for a patent.[41] The Court announced that there were three categories of subject matter that were not patentable: "laws of nature, natural phenomena, and abstract ideas."[42] The Court distinguished *Benson* and *Flook* by noting that those applications sought to patent abstract mathematical processes, whereas Diehr sought to patent a statutory manufacturing process for curing rubber that included a step involving a computer program for a mathematical algorithm.[43] As such, the Court stated that a "claim drawn to subject matter otherwise statutory does not become non-statutory simply because it uses a mathematical formula, computer program or digital computer."[44] In addition, the Court noted that Diehr's claimed process involved the transformation of raw uncured synthetic rubber into a different state or thing.[45]

One of the more important post-*Diehr* cases to address the patentability of computer-related inventions was decided by the Court of Appeals for the Federal Circuit, and tangentially relates to a computer display. In an *en banc* decision, *In re Alappat*, the Federal Circuit held as being directed to statutory subject matter a claim directed to a computer system that was programmed to implement a mathematical algorithm to create a smoother wave depiction in an oscilloscope display.[46] The Federal Circuit reasoned that the "claimed invention as a whole is directed to a combination of interrelated elements which combine to form a machine for converting discrete waveform data samples into anti-aliased pixel illumination intensity data to be displayed on a display means. This is not a disembodied mathematical concept which may be characterized as an 'abstract idea,' but rather a specific machine to produce a useful, concrete, and tangible result."[47] The Federal Circuit further elaborated that the claimed invention was patentable subject matter because "such programming creates a new machine, because a general purpose computer in effect becomes a special purpose computer once it is programmed to perform particular functions pursuant to instructions from program software."[48] This decision confirms that programs incorporating new algorithms directed to a computer display may be protectable with a utility patent when the patent claims are written to cover the computer system incorporating the new program, which falls into one of the four classes of statutory subject matter.

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[41] *Diamond v. Diehr*, 450 U.S. 175 (1981).

[42] *Id.* at 185.

[43] *Id.* at 187.

[44] *Id.* at 185.

[45] *Id.* at 184.

[46] *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994).

[47] *Id.* at 1544.

[48] *Id.* at 1545.

Other Federal Circuit decisions that have upheld computer-related inventions as statutory patentable subject matter include: *In re Iwahashi*,[49] *Arrythmia Research Tech., Inc. v. Corzonix Corp.*,[50] *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*,[51] *AT&T Corp. v. Excel Communications, Inc.*,[52] and *In re Bilski*,[53]

Recent Trends

More recently, the Federal Circuit has defined limits on the scope of patentable subject matter for computer related inventions. In *In re Nuijten*,[54] the Federal Circuit ruled that a signal embedding a watermark generated by a computer is not patentable subject matter. The Federal Circuit explained that a signal was transitory and existing only as a propagated non-physical wave which was not a physical thing in a statutory class, such as a composition of matter. Interestingly, Nuijten had received other patents on his digital watermark where the claims in those patents were directed to methods for making the watermark,

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[49] *In re Iwahashi*, 888 F.2d 1370 (Fed. Cir. 1989). The Federal Circuit upheld claims (machine claims) for an improvement in computer pattern recognition, and more specifically, the recognition of human speech. The output of the claimed invention was a series of autocorrelation coefficients. "The claim as a whole certainly defines apparatus in the form of a combination of interrelated means and we cannot discern any logical reason why it should not be deemed statutory subject matter as either a machine or a manufacture as specified in § 101. The fact that the apparatus operates according to an algorithm does not make it nonstatutory." *Id.* at 1375.

[50] *Arrythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053 (Fed. Cir. 1992). The Federal Circuit upheld claims for an invention for detecting which heart attack victims were most at risk for suffering later complications – the technique involved measuring and then processing electrocardiographic signals. The claims included a mathematical algorithm, but "the number obtained [from the algorithm] is not just an abstraction; it is a measure in microvolts of a specified heart activity." *Id.* at 1060.

[51] *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998). The Federal Circuit held claims directed to a machine programmed with data processing software for implementing an investment structure (Hub and Spoke) produced a useful, concrete, and tangible result, and thus, was statutory subject matter. "The question of whether a claim encompasses statutory subject matter should not focus on which of the four categories of subject matter a claim is directed to – process, machine, manufacture, or composition of matter – but rather on the essential characteristics of the subject matter, in particular, its practical utility." *Id.* at 1375. The Federal Circuit also abandoned the Freeman-Walter-Abele test used to extract and identify unpatentable mathematical algorithms in the aftermath of *Benson* and *Flook*.

[52] *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999). The Federal Circuit held process claims directed to a message record that included information about the receiver of long-distance telephone calls produced a useful, non-abstract result because the invention "facilitate[d] differential billing of long-distance calls." *Id.* at 1358. The Federal Circuit also confirmed *State Street* in this case. *Id.* at 1357 ("[W]e consider the scope of § 101 to be the same regardless of the form – machine or process – in which a particular claim is drafted."). "[T]he mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it nonstatutory subject matter, unless, of course, its operation does not produce a useful, concrete and tangible result." *Id.* at 1359.

[53] *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008).

[54] *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007).

memory devices storing programs for making the watermarks, and computer systems for making and using the watermarks.[55]

In a very recent development, the Federal Circuit is hearing the appeal of a patent infringement lawsuit involving patents directed to graphical user interfaces for the electronic trading of financial instruments. In *Trading Techs. Int'l, Inc. v. eSpeed, Inc*., the Federal Circuit is considering on appeal several issues relating to Trading Tech.'s U.S. Patent Nos. 6,766,304[56] and 6,772,132,[57] which are both entitled "Click based trading with intuitive grid display of market depth." Both patents are similarly directed at software used in electronic trading in the futures market.[58] In particular, the patents are directed to methods, computer readable memory devices storing programmed methods, and a computer system programmed to implement a user interface to execute an electronic trade. Notably absent from any issue on appeal is whether the patent claims are considered patentable subject matter. This may be testament to the fact that the law is well settled that graphical user interfaces may be protected by utility patents when the

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[55] *See, e.g.*, U.S. Patent Nos. 6,157,330 and 6,507,299.

[56] U.S. Patent No. 6,766,304 includes two independent claims covering a graphical user interface by protecting the method to create the user interface and memory storing the program to create the user interface. The preambles of these claims are as follows:

> 1. A method for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the method comprising:

> 27. A computer readable medium having program code recorded thereon for execution on a computer for displaying market information relating to and facilitating trading of a commodity being traded in an electronic exchange having an inside market with a highest bid price and a lowest ask price on a graphical user interface, the program code causing a machine to perform the following method steps:

[57] U.S. Patent No. 6,772,132 includes three independent claims covering electronic trading using a graphical user interface by protecting the trading method including a user interface, a memory storing the program to use the user to execute the trade, and a computer system including the display device with the user interface. The preambles of these claims are as follows:

> 1. A method of placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, using a graphical user interface and a user input device, said method comprising:

> 8. A computer readable medium having program code recorded thereon, for execution on a computer having a graphical user interface and a user input device, to place a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, comprising:

> 14. A client system for placing a trade order for a commodity on an electronic exchange having an inside market with a highest bid price and a lowest ask price, the system comprising:

[58] *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, No. 2008-1392 & 1393, 2009 WL 689883 (Fed. Cir. 2008).

patent claims are drawn to such recognized statutory subject matter as processes, articles of manufacture (*e.g.*, memory devices), and machines (*e.g.*, computer systems).

Recently, the scope of patentable subject matter for processes has been restricted by the Federal Circuit in a way that may limit the patent protection for graphical user interfaces. In an *en banc* decision, *In re Bilski*, the Federal Circuit withdrew their prior "useful, concrete and tangible result" test used in *State Street Bank* and *AT&T Corp.*, and adopted the Supreme Court's "machine or transformation" clue for patent eligibility.[59] The Federal Circuit ruled that a claimed process is only eligible for a patent under § 101 if:
> (1) it is tied to a particular machine or apparatus, or
> (2) it transforms a particular article into a different state or thing.

The Federal Circuit relied on this test as being the "only" test for patentability of method claims.[60]

From a practical standpoint, a graphical user interface does not usually involve the transformation of articles, and thus a process relating to a user interface would likely need to rely on the first prong of the test – being tied to a particular machine – for patent eligibility. The Federal Circuit implied that patent applicants could not easily step around this test by adding insignificant limitations to their patent claims by stating that "insignificant post-solution activity will not transform an unpatentable principle into a patentable process."[61] Displaying data might be considered insignificant activity. However, the Federal Circuit did reconcile this test with its predecessor's past decision in *In re Abele*, 684 F.2d 902 (C.C.P.A. 1982) to show some flexibility in the machine or transformation test. The Federal Circuit explained that the transformation of electronic data representing a physical article, such as bones and body tissues, into a visual depiction of that physical article could be sufficient to satisfy the "transformation" requirement for patent eligible subject matter. In other words, there need not be a real physical transformation of the underlying physical articles. The Federal Circuit also noted some types of claim limitations that would *not* qualify otherwise unpatentable subject matter as patent-eligible under the machine-or-transformation test, including a data-gathering step that does not specify "how" data is gathered and a field-of-use limitation, *e.g.*, limiting the use of a formula to a particular technological environment. Therefore, under *Bilski*, broad method claims to protect a graphical user interface may not be viable. Any such method claims would need to be narrowly tailored to recite computer hardware more specific than a general purpose computer.

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[59] See *Diamond v. Diehr*, 450 U.S. 175, 185 (1981) and *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

[60] *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008). It is noted that this decision is currently being appealed to the Supreme Court. The petitions for certiorari, which have been granted, point out that he Supreme Court had noted that the machine or transformation test was not the exclusive test for patent eligibility, but just a helpful clue in determining patentable subject matter.

[61] *Id.*, citing *Parker v. Flook*, 437 U.S. 574 (1978).

Obviously, the U.S. Patent and Trademark Office (USPTO) may not be operating in sync with the Federal Circuit's view of the scope of patentable subject matter. Recent decisions of the USPTO Board of Patent Appeals and Interferences (Board) indicate that the frequency of Section §101 rejections is increasing dramatically and will only continue to increase in the near future. As of March 1, 2009, the Board already has cited *Bilski* in at least twenty decisions, rejecting or remanding claims based on the machine-or-transformation test in all but one. The Board also has begun expanding the machine-or-transformation test beyond process claims to reject system claims.[62] Similarly, the Board recently rejected claims in an Intel patent application under the machine-or-transformation test even though the claims recited steps performed by a processor.[63] Accordingly, it is not difficult to predict that the USPTO is applying *Bilski* in a far-reaching manner that may make it very difficult to protect graphical user interfaces with a utility patent with claims in the form of a process or a system.

As a practical matter, the examination of the subject matter eligibility for patent application for computer-related inventions is supposed to be governed by the Manual of Patent Examining Procedure. Section 2106 sets forth guidelines for patentable subject matter and in particular for computer related inventions.[64] However, these guidelines are under revision in view of *Bilski* with no target date specified for when it will be issued.

As illustrated by the exemplary patents at the end of this section, utility patents are directed to protection of the functional aspects of GUI display elements. In contrast, as discussed in a following section, design patents may be used to protect the ornamental or aesthetic features. As such, the overall "look and feel" of a GUI cannot be protected with a utility patent. Given the restricted scope of patentable computer-related inventions post-*Bilski*, the protection of these GUI display elements may reside more in the interaction of these elements with real-world articles, such as user input devices and particular machines on which they are displayed, such as computers, cell phones and digital media players. The GUI elements may also be protected in the form of the particular machine on which they are embodied. The process for creating the display elements from abstract data and displaying the elements, no matter how innovative the algorithms to create these elements, without more interaction with tangible articles or the real world may no longer be protectable should the *Bilski* decision stand up.[65] Moreover, under *Bilski*, these interactions would require

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[62] *See*, *e.g.*, *Ex parte Atkin*, No. 2008-4352, slip op. at *6-7, 2009 WL 247868, (B.P.A.I. Jan. 30, 2009) (rejecting system claims 9-13 and 15 as patent ineligible subject matter under *Bilski*).
[63] *Ex parte Cornea-Hasegan*, No. 2008-4742, slip op. at *4, 2009 WL 86725 (B.P.A.I. Jan. 13, 2009).
[64] *See* PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 2106.01 (Rev. 6, Sept. 2007) [hereinafter MPEP].
[65] Consider the patentability of the following claims in view of *Bilski*. The first claim is directed not to apparatus, but to a "computer user interface." Which of the enumerated categories of statutory subject matters under 35 U.S.C. §101 does a computer user interface *per se* fall within?

more than insignificant "post-solution activity." Accordingly, GUI components that provide non-interactive indicia of the state of an application may be more difficult to protect than, for example, animated icons that move in response to user input devices and are claimed as such.

Conclusion

In conclusion, the Federal Circuit's decision in *In re Bilski* has been a dramatic change in the availability of method or process claims to cover graphical user interfaces. While that decision is being petitioned to the Supreme Court, the USPTO Board of Patent Appeals and Interferences is applying *Bilski* beyond just method claims. Until these issues are finally settled, a range of patent claim formats – system, apparatus, computer-readable medium, and process claims – should be included in new applications with sufficient recitations of particular apparatus and interaction with the real world to protect graphical user interfaces.

Practical Application: Examples of Utility Patents for Different GUI Components

As noted in the introduction, graphical user interfaces for computers may include various elements of the displayed interface – Desktops, Components (*e.g.* Pointers, Icons, Windows and Menus) and Animated Effects. Representative claims from utility patents directed to these different graphical user interface elements may illustrate the variety of claiming formats useful to protect these innovations. No comments are provided as to the viability of these exemplary patent claims in view of *Bilski*.

The second claim is a method not tied to a particular machine and does not transform an article to another state.

        A.   U.S. Patent No. 7,334,193, entitled "Start Menu User Tiles:"

        1. A user interface displayed on a computer screen for receiving user selection of logging off a system, said user interface comprising: a first region displaying a list of choices including logging off and shutting down a computer system; second region contained within said first region, said second region, upon activation, performing an action associated with logging off a user; and third region contained within said first region, said third region, upon activation, providing a list of menu choices relating to logging off of said computer system.

        and

        B.   U.S. Patent No. 7,362,331 entitled "Time-Based, Non-Constant Translation Of User Interface Objects Between States:"

        1. A method for moving an object in a graphical user interface, comprising the steps of: a) determining a path of movement for the object along at least one axis, and a period of time for the movement along said path; b) establishing a non-constant velocity function along said axis for said period of time; c) calculating an instantaneous position for the object along said path in accordance with said function and the relationship of a current time value to said period of time; d) displaying said object at said calculated position; and e) iteratively repeating steps (c) and (d) during said period of time.

Category I: The Desktop

An example of an innovative desktop display is found in U.S. Patent No. 7,043,701 entitled "Opacity Desktop With Depth Perception." The '701 patent is directed to a desktop workspace capable of displaying various three dimensional depths by altering the opacity of objects in the foreground. This may be evident from the below patent figure.
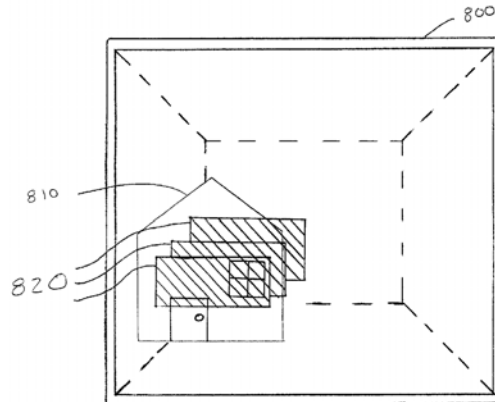
The '701 patent includes only method claims. A representative claim reads as follows:

> 1. A method of displaying information within a three-dimensional workspace on a computer display, said method comprising:
> partitioning the workspace into a plurality of layers, where each layer corresponds to a display depth relative to a user;
> displaying at least one substantially opaque container object at a first display depth, wherein the at least one container object is three dimensional and defines an interior three dimensional space within the at least one container object;
> providing to the user a pointer operative to select objects within the three-dimensional workspace at a plurality of display depths; and
> responsive to the user selecting a container object, reducing an opacity level of the selected container object in order to reveal at least one content object contained therein; and
> displaying the at least one content object contained within the selected container object at a deeper display depth relative to the first display depth.

Category II: The Components

    A. Pointers and Cursors

       Pointers and cursors are elements of a GUI that may be separately protected by a utility patent. It is the functional characteristics of the pointers and cursors that are protectable with a utility patent. An example of an innovative cursor is found in U.S. Patent No. 6,606,101 entitled "Information Pointer." The '101 patent is directed to a display cursor that displays information related to the object pointed to, as shown in the below patent figure.
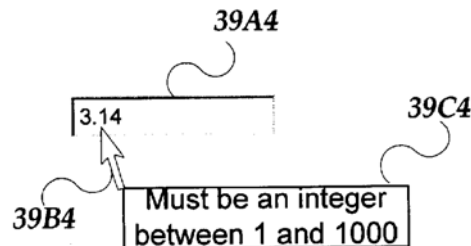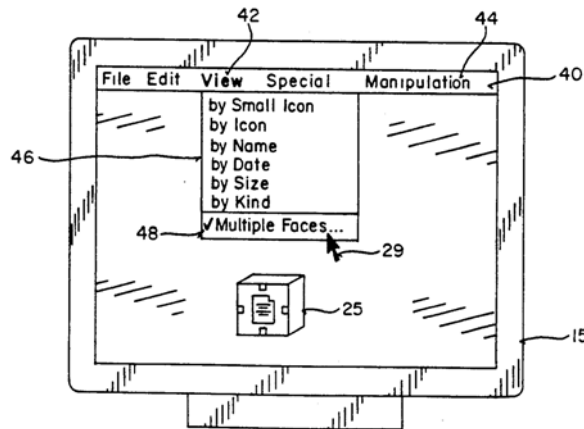

       The '101 patent includes two method claims. A representative claim reads as follows:

       1. In a data processing system having a video display, an output device, and an input device, a method for providing an information pointer, comprising:
       (a) displaying a cursor on the video display;
       (b) displaying one or more objects on the video display;
       (c) in response to a user using the input device, positioning at least a part of the cursor over at least a portion of a selected one of the objects that are displayed;
       (d) in response to at least a part of the cursor being positioned over at least a portion of the selected object, outputting dynamic information about a further action with the selected object over the output device;
       (e) allowing the user to select to turn off the outputting of the dynamic information; and
       (f) overriding the user's ability to turn off the displaying of critical information.

B. Icons

Icons are small images found on computer interfaces that are representative of a type of an object. An example of innovative icon is found in U.S. Patent No. 5,303,388 entitled "Method To Display And Rotate A Three-Dimensional Icon With Multiple Faces," which is directed to a rotatable three-dimensional icon with information on the various three-dimensional faces of the icon. An embodiment in the form of a cube-shaped icon on a desktop display is shown below.

The '388 patent includes several method claims. A representative claim reads as follows:

> 13. A method of manipulating a three-dimensional icon on a display screen of a computer system, wherein the three-dimensional icon includes a plurality of faces, each face containing at least one displayed item which is associated with an object stored in the computer system, the plurality of faces are joined together to form the three-dimensional icon, a first face containing a two-dimensional icon representing a folder or file stored in the computer system and other faces of the three-dimensional icon displaying attributes of said folder or said file, the method comprises the steps of:
> (A) marking a first button marker on the first face of the plurality of faces of the three-dimensional icon, wherein the first marker associated with a second face of the plurality of faces of the three-dimensional icon, when the first face is displayed front most on the display screen and the first button marker is activated, the three-dimensional icon is rotated such that the second face is displayed front most on the display screen;
> (B) rotating the three-dimensional icon by activating the first button marker to display the first face front most.

C. Windows

Windows are the framed-in portion of a desktop display that is activated for display or interaction with an individual application or information content. An example of an innovative use of a window in a graphical user interface is found in U.S. Patent No. 5,714,971, entitled "Split Bar And Input/Output Window Control Icons For Interactive User Interface." The '971 patent is directed to a plurality of connected windows on a desktop with active control and content display regions. An embodiment of the window is shown below.
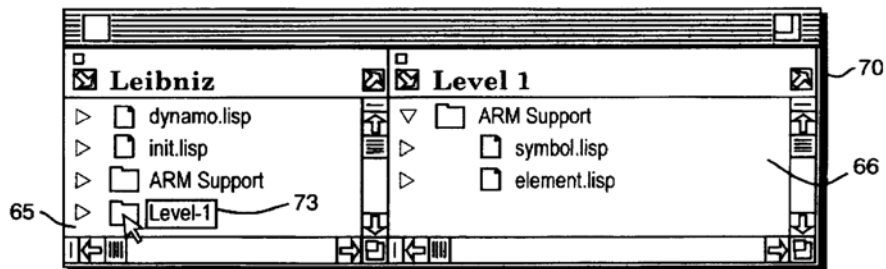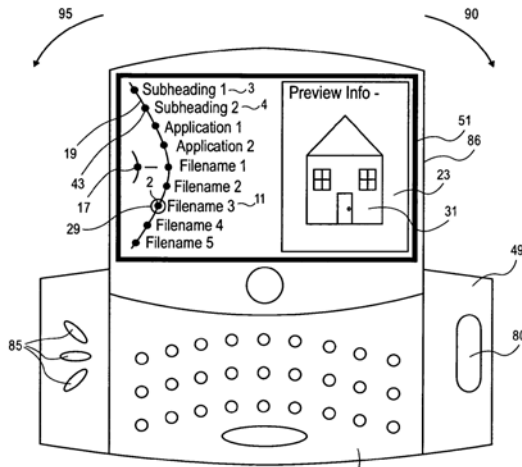

The '971 patent includes claims directed to a user interface, a method, display apparatus and computer readable medium. A representative apparatus claim reads as follows:

> 9. Apparatus for displaying objects of a computer, the apparatus comprising:
> a monitor coupled to the computer, the monitor having a window displayed on a screen thereof, the window configured for apportionment into a first pane having a first control region and a first content region, and a second pane having a second control region and a second content region;
> a processor operably connected to the monitor and programmed to generate control means contained within the control regions of the panes for linking a selected object of the first pane to the second pane to enable automatic viewing of said selected object on said second pane in response to dragging the selected object from the first content region of the first pane to one of the first and second control regions and dropping the selected object onto the control means; and
> a memory operably connected to the processor for storing the control means contained within the control regions of the panes.

D. Menus

Menus are a listing of command functions available for selection by a user. An innovative manner of displaying a menu is found in U.S. Patent No. 7,093,201, entitled "Loop Menu Navigation Apparatus And Method." The '201 patent is directed to a curved menu, where only a portion of the menu is viewable, and the full menu listing is rotated through the viewable area. One embodiment of the curved menu is shown in the below patent figure.

The '201 patent includes claims directed to a device, a method and machine readable medium. A representative device claim reads as follows:

> 1. A data processing device, comprising:
> a display having a screen;
> a machine-readable medium;
> a plurality of computer files in said machine-readable medium and accessible by said data processing device; and
> a graphical user interface displayed on said screen, comprising:
>> a plurality of identifiers and/or identifier pointers, each identifier and/or identifier pointer related to one or more of said plurality of computer files for use by said data processing device;
>> a selection indicator to select one or more of said identifiers and/or identifier pointers;
>> a curved listing of said plurality of identifiers and/or identifier pointers, wherein: only a portion of said curved listing is displayed on said screen at any given time; and the plane defined by said curved listing is slanted or parallel in relation to the plane defined by said display; wherein the selection indicator remains in a consistent

position on the display and wherein, responsive to user input, the curved listing is visually rotated through the selection indicator one icon at a time, thereby causing the identifiers and/or identifier pointers which visually coincide with the selection indicator to become capable of being selected in response to additional user input; and

a preview window to display information associated with a file related to an identifier and/or identifier pointer, said identifier and/or identifier pointer being selected by said selection indicator in said curved listing, said preview window displayed concurrently with said portion of said curved listing.

E. Animated Effects

In addition to the elements of a graphical user interface themselves, the movement, transitions or animated effects associated with a well-known GUI element may be protected with a utility patent. One such innovative transitional effect of an icon is found in U.S. Patent No. 7,362,331, entitled "Time-Based, Non-Constant Translation Of User Interface Objects Between States." The '331 patent is directed to an animated transitional effect of the movement of an icon from one position to another. One embodiment of this animated movement s shown below by the shrinking and translation of rectangle 210 into box 220 via intermediate object 200.
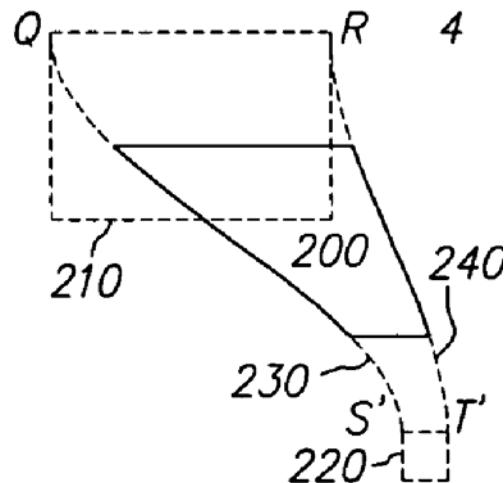
The '331 patent includes claims directed to a method, a user interface, computer readable medium and a computer apparatus. A representative claim reads as follows:

24. A computer having an operating system that includes a user interface which implements the following steps:

displaying an object at a first location within a display space;

selecting a second location to which said object is to be moved and a period of time during which the movement is to occur in response to a user action; and

moving said object from said first location to said second location at a non-linear rate of movement during said period of time.

SECTION III: DESIGN PATENT PROTECTION OF
                 GRAPHICAL USER INTERFACES

Introduction

Graphical user interfaces (GUIs) may be protectable as intellectual property by a variety of means, *e.g.*, utility patents, copyrights, trademarks, design patents, and combinations of these. Each method of protection affords its own benefits and drawbacks, which must be considered when deciding how best to protect GUIs.

Design patents, in particular, have been widely accepted as a key tool for protection of GUIs. The USPTO, in recognizing this, has devoted a section of MPEP to guidelines for computer-generated icons.[66] Typically, the requirements associated with design patents in general apply to protection of GUIs. However, there are some particular issues to consider when using design patents for GUI protection.

What is Protectable

The scope of what can be protected by design patents is defined by law as:

> *Whoever invents any new, original, and ornamental design for an article of manufacture may obtain a patent therefor, subject to the conditions and requirements of this title.[67]*

Graphical user interfaces *per se* are not eligible for design patent protection. The USPTO Board of Patent Appeals and Interferences clarified this in *Ex parte Strijland*,[68] a 1992 decision in which the patent applicants sought a claim for an "ornamental design for an icon for information or the like."[69] The Board held that an icon, by itself, is not patentable. Rather, the icon needs to be embodied in an article of manufacture, and the design must be shown applied to the asserted article.[70]

Examples of claims in design patents that meet the requirement of *Strijland* include "The ornamental design for a user interface for computer display, as shown and described,"[71] and "The ornamental design for a computer icon for a screen, as shown and described."[72] In each of these patents, the drawings depict a computer icon surrounded by a broken line box representing a computer screen. The icons are the subject matter of the claims; however, they are embodied in articles of manufacture.

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[66] MPEP, § 1504.01(a) *Computer-Generated Icons [R-5]*.
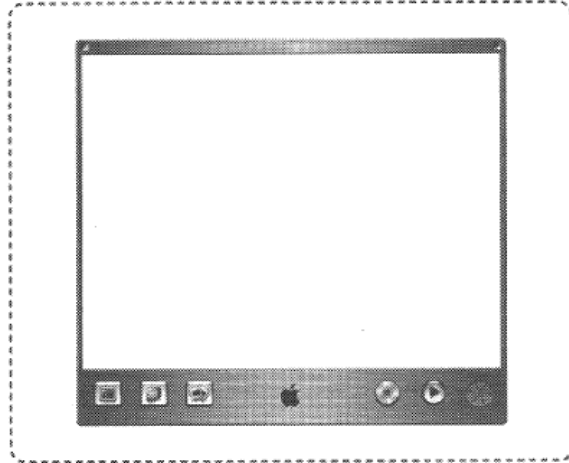[67] 35 U.S.C. § 171.
[68] *Ex parte Strijland*, 26 USPQ2d 1259 (B.P.A.I. 1992).
[69] *Id.* at 1263.
[70] *Id.* at 1262.
[71] U.S. Patent No. D497,367 (filed Jan. 8, 2001).
[72] U.S. Patent No. Des. 403,673 (filed Jul. 29, 1996).

The MPEP offers some guidance to ensure that GUI design patents meet the article of manufacture requirement.[73] A computer screen, monitor, display panel, or a portion thereof must be shown, either in solid or broken lines. The title must clearly describe the subject matter, *i.e.*, a design for an article of manufacture. If a characteristic feature statement is included in the specification, the statement must describe, for example, a computer icon embodied in a computer screen, or some similar language.

Care must be taken to draft the design application correctly during the initial filing. Attempts to correct discrepancies by way of amendment may be rejected for adding new matter. A decision must also be made whether to file the drawings in color, black and white, or both.

There is a view by some that computer-generated icons are not ornamental designs in that they are dictated purely by functional considerations, and thus are not eligible for design patent protection. The USPTO addresses this argument in their guidelines for examiners by stating "a distinction exists between the functionality of an article and the functionality of the design of the article that performs the function. Based on this distinction, the design of a computer-generated icon may not be dictated by the function associated with the computer-generated icon."[74]

Design patents may be used to protect computer generated icons which include images that change in appearance during viewing.[75] Multiple views can show the images as viewed sequentially, and a descriptive statement must be included in the specification that describes the images as being transitional.[76] It is

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[73] MPEP, § 1504.01(a)(I)(*B*) "*Procedures for Evaluating Whether Design Patent Applications Drawn to Computer-Generated Icons Comply With the "Article of Manufacture" Requirement*".
[74] 61 Fed. Reg. 11380, 11381 (Mar. 20, 1996).
[75] MPEP, § 1504.01(a)(IV) "CHANGEABLE COMPUTER GENERATED ICONS".
[76] *See e.g.*, U.S. Patent No. D544,492 (filed Jun. 30, 2006).

also possible to include an enlarged view of each step of the animation.[77] Icons may also be filed as a set, but the applicant must indicate that they are a set at the time of filing. Failure to indicate a set may result in a restriction requirement.

Other USPTO Issues

Although design patents for protection of graphical user interfaces have been used for well over a decade, and the USPTO has addressed many issues through appeal decisions and internal guidelines, there are still some issues that the USPTO hopes to resolve in the near future.

One area in which the examiners would like some guidance involves the treatment by applicants of icons as three-dimensional rather than two-dimensional images. Specific issues include the use of shading and transparency, and references to objects being visible "behind" or in the "back" of a GUI image, or layers of an image. Currently, examiners are taking a conservative approach, and hope that the issue will be addressed and clarified in a future appeal to the Board.

Examiners are also hopeful that a potential upcoming appeal will help clarify an issue regarding applicants amending an image to broaden it so that only part of the image is being claimed. The issue is whether new matter is being introduced by the amendment. The general view at the USPTO is that amendments of this type are not permissible without evidence that the amended design was in the possession of the inventor at the time the application was filed.

One last aspect of intellectual property as it might relate with design patents is worth mentioning briefly. Defensive publications may be published through the USPTO as Statutory Invention Registrations (SIRs). Design patent applications may be published as SIRs in the same manner as utility patent applications.[78]

Conclusion

Design patents are a key tool for the protection of GUIs. Because design patents may only be granted for ornamental designs, special care must be taken to avoid claiming a design dictated solely by the GUI's function. In addition, as a procedural matter, GUIs must be embodied in an article of manufacture such as a computer screen. The article of manufacture must also be referenced in the title of the application, specification, and in the drawings themselves.

Each category of GUI discussed in Section I (*i.e.*, the desktop, components [including pointers, icons, and windows], and animated or transitional effects)

[77] *See e.g.*, U.S. Patent No. D536,343 (filed Aug. 3, 2004).
[78] MPEP, § 1513 Miscellaneous "The Statutory Invention Registration (SIR) Program applies to utility, plant, and design applications. ". *See* MPEP Chapter 1100.

may be protectable through a design patent, provided the GUI or GUI component is non-functional and embodied in an article of manufacture.

Practical Application

Category I: The Desktop

      A general display of a background screen, toolbar, and windows may be protected with a design patent. For example, U.S. Patent number D442,185, issued May 15, 2001, to assignee Apple Computer, Inc, claims an "ornamental design for a composite desktop on a computer display screen."
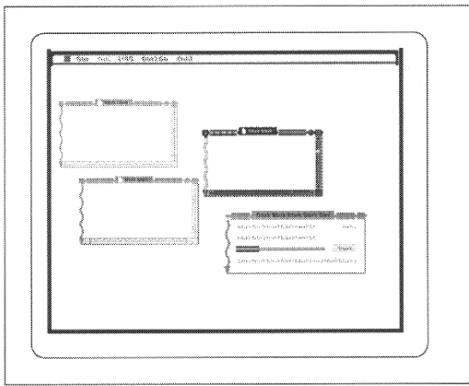
Category II: The Components

A. Pointers - Pointers may be protected with a design patent. For example, U.S. Patent number D492,695, issued July 6, 2004, claims an "ornamental design for a portion of a computer screen with an icon image."
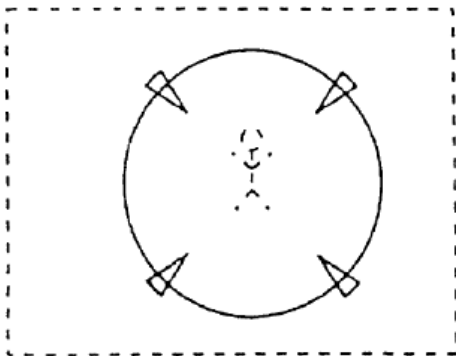
B. Icons - An icon may be protected with a design patent. For example, U.S. Patent number D404,727, issued January 26, 1999, to assignee Sun Microsystems, Inc, claims an "ornamental design for a computer icon for a computer monitor."
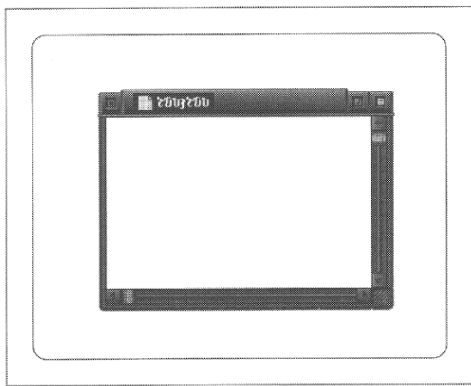

C. Windows - Windows may be protected with a design patent. For example, U.S. Patent number D426,525, issued June 13, 2000, to assignee Apple Computers, Inc, claims an "ornamental design for a window for a computer display screen."

Category III: Transitional and Animated Effects

Animated effects are also patentable. In order to obtain design protection on an animated design, a description of the transitional sequence must be included in the originally-filed application. For example, Microsoft has patented several animated designs, such as U.S. Patent number D544,492, issued June 12, 2007, claiming an "ornamental design for an animated graphical user interface for a display screen." The description includes the following language: "The appearance of the transitional image sequentially transitions between the images shown in FIGS. 1-9. The process or period in which one image transitions to another forms no part of the claimed design."
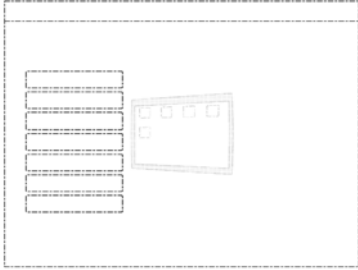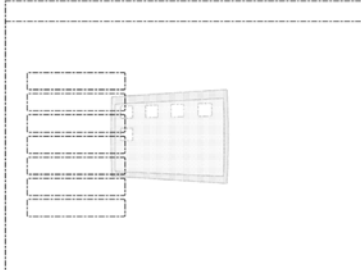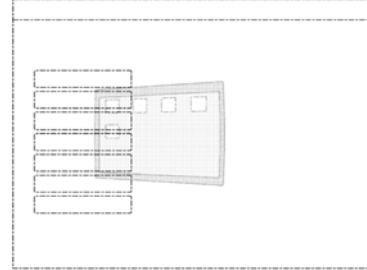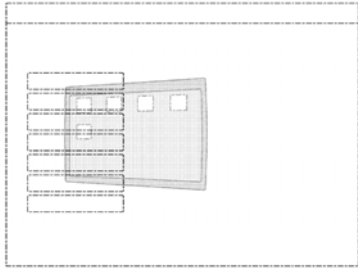
FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5
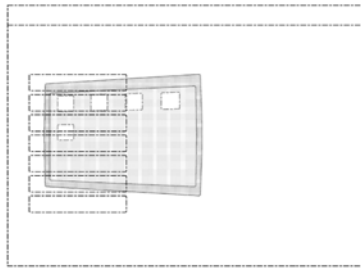
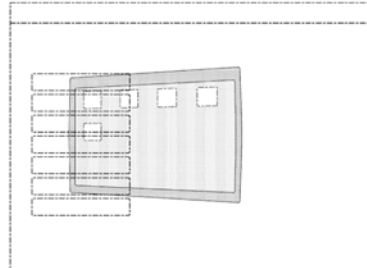
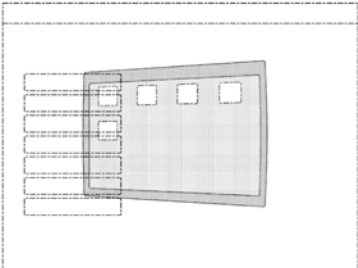FIG. 6

FIG. 7

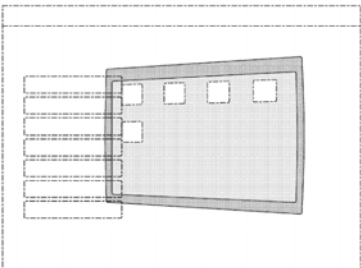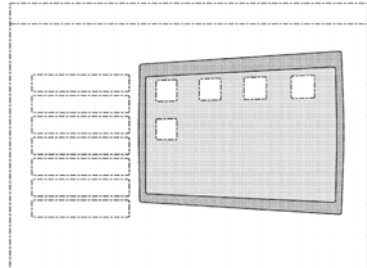FIG. 8

FIG. 9

SECTION IV: TRADEMARK & TRADE DRESS
                PROTECTION OF GRAPHICAL USER
                INTERFACES

Introduction

It may be possible to obtain intellectual property protection of GUIs by means of trademark or trade dress law. Lanham Act § 43[79] provides trademark protection to both traditional trademarks as well as trade dress.

Trade dress encompasses the appearance of the GUI, including the "look and feel." of the GUI. The GUI will only be protectable as trade dress if it is distinctive and nonfunctional. In most federal circuits, a trade dress claim requires a showing that: (i) the claimed trade dress is inherently distinctive or has acquired a secondary meaning; (ii) the claimed trade dress is nonfunctional; and (iii) customer confusion is likely to occur because of the similarity of the plaintiff's and the defendant's trade dress.

Recent Supreme Court tests of trade dress infringement may make it more difficult to establish that a product is "nonfunctional" or "distinctive."[80] Under these cases, GUIs can be difficult to protect under trade dress law because (i) interfaces might be perceived as functional,[81] and (ii) GUIs, even if inherently distinctive, may have to establish that they have acquired "secondary meaning."

Overview of Trade Dress

Trade dress has long been afforded intellectual property protection. The oldest and most traditional definition of trade dress was limited to the overall appearance of labels, wrappers, and containers used in packaging a product.[82] Over a period of years, the traditional definition gradually expanded beyond packages and containers to a second category which includes a combination of any elements in which a product or service is presented to the buyer. The combination of elements, called "trade dress" is capable of acquiring exclusive legal rights as a type of identifying symbol of origin.[83] The second definition was expanded in the early 1980s to encompass a third type of trade dress: the shape and design of the product itself.[84] Examples of trade dress include the cover of a book, magazine or catalog; a distinctive display of products in a retail store; and the distinctive decor, menu, and style of a restaurant.[85]

Today, many types of designations protectable as "trade dress" are also registrable as "trademarks." The Supreme Court made this clear in its 1992 *Two Pesos* decision where it held that trade dress that is inherently distinctive is

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[79] 15 U.S.C. § 1125.
[80] *See, e.g., TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23 (2001) (functionality); *Wal-Mart Stores, Inc. v. Samara Brothers, Inc.*, 529 U.S. 205 (2000) (distinctiveness).
[81] Functionality is also an issue for protection of a GUI with copyrights and design patents.
[82] *See* Restatement (Third) of Unfair Competition, §16, comment a (1995); *Bristol-Myers Squibb Co. v. McNeil-P.P.C., Inc.*, 973 F.2d 1033 (2d Cir. 1992).
[83] *See* McCarthy's on Trademark and Unfair Competition § 8.4.
[84] *Ideal Toy Corp. v. Plawner Toy Mfg. Corp.*, 685 F.2d 78, n.2 (3d Cir. 1982).
[85] *See, e.g., Two Pesos, Inc. v. Taco Cabana, Inc.*, 505 U.S. 763 (1992).

protectable under Lanham Act §43(a) without a showing that it has acquired secondary meaning.[86]

Secondary Meaning or Acquired Distinctiveness

Despite this broadening of types of protectable trade dress designations, the Supreme Court has also announced that protection of trade dress is subject to significant limitations. For example, certain categories of designs can never be "inherently distinctive" and thus require proof of secondary meaning to achieve the status of a protectable mark or trade dress: (1) a single color of a product;[87] and (2) the design of a product.[88]

After expanding protection in *Qualitex* and *Taco Cabana*, the Court subsequently retrenched and limited *Taco Cabana* to "product packaging." In its 2000 *Samara Brothers* decision, the Supreme Court held that product design trade dress can never be classified as "inherently distinctive."[89] A plaintiff asserting infringement of unregistered product design trade dress under § 43(a) must therefore always prove that the design has acquired secondary meaning in the marketplace.

The *Samara* Court, however, did not provide any guidance as to how courts are to distinguish between product-design and product-packaging trade dress.[90] Because a GUI is arguably a close case between product-design and product-packaging trade dress, courts may err on the side of caution and classify a GUI as product design, thereby requiring secondary meaning.

Trade Dress As Second Tier Protection For Designs

The *Samara* Court suggested that design patent and copyright protection may be available for a product design that is inherently distinctive but does not yet have secondary meaning.

> [T]he producer can ordinarily obtain protection for a design that is inherently source identifying (if any such exists), but that does not yet have secondary meaning, by securing a design patent or a copyright for the design — as, indeed, respondent did for certain elements of the designs in this case. The availability of these other protections greatly

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[86] *Two Pesos*, 505 U.S. at 773 ("[T]he protection of trademarks and trade dress under § 43(a) serves the same statutory purpose of preventing deception and unfair competition. There is no persuasive reason to apply different analysis to the two.").

[87] *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159 (1995).

[88] *Wal-Mart Stores, Inc. v. Samara Brothers, Inc.*, 529 U.S. 205 (2000).

[89] *Id.* at 216 (holding that "a product's design is distinctive, and therefore protectable, only upon a showing of secondary meaning").

[90] *Id.* at 215 ("To the extent there are close cases, we believe that courts should err on the side of caution and classify ambiguous trade dress as product design, thereby requiring secondary meaning.").

reduces any harm to the producer that might ensue from our conclusion that a product design cannot be protected under §43(a) without a showing of secondary meaning.[91]

Accordingly, a designer of a new GUI may consider first seeking copyright and/or design patent protection and then acquiring secondary meaning in the market during the terms of the copyright or patent. Once the GUI has acquired secondary meaning, the GUI may be protectable under Lanham Act § 43. In a quick search on the USPTO site, we have found many more design patents directed to GUIs than trademark registrations.

Functionality

The year after *Samara*, in the *TrafFix* case,[92] the Supreme Court made clear that trade dress protection that was not available for a product's functional features. Earlier, in *Qualitex*, the Supreme Court had emphasized the different policies behind patent protection and trademark or trade dress protection:

> It is the province of patent law, not trademark law, to encourage invention by granting inventors a monopoly over new product designs or functions for a limited time, 35 U.S.C. §§154, 173, after which competitors are free to use the innovation. If a product's functional features could be used as trademarks, however, a monopoly over such features could be obtained without regard to whether they qualify as patents and could be extended forever (because trademarks may be renewed in perpetuity).[93]

A trademark is functional if it protects a product feature that either is "essential to the use or purpose of the device" or "affects the cost or quality of the device."[94] Factors to be considered to determine whether a product design is functional include: (1) the existence of a utility patent disclosing the utilitarian advantages of the design; (2) advertising materials in which the originator of the design touts the design's utilitarian advantages; (3) the availability to competitors of functionally equivalent designs; and (4) facts indicating that the design results in a comparatively simple or cheap method of manufacturing the product.[95]

The functionality doctrine applies regardless whether the design is categorized as trade dress or a trademark.[96] In *Computer Access Tech. Corp.*, CATC alleged that the Catalyst's GUI infringed CATC's trademark, trade dress,

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[91] *Id.* at 214.

[92] *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23 (2001).

[93] *Qualitex*, 514 U.S. at 164-65.

[94] *TrafFix*, 532 U.S. at 33.

[95] *In re Morton-Norwich Products, Inc.*, 671 F.2d 1332, 1340-41 (C.C.P.A. 1982).

[96] *Computer Access Tech. Corp. v. Catalyst Enters., Inc.*, 273 F. Supp. 2d 1063 (N.D. Cal. 2003) (granting a new trial when the jury found that a GUI was functional trade dress but finding infringement of the identical trademark).

and copyright rights in its GUI (referred to as the "CATC design"). The jury found that CATC did not have valid trade dress or copyright rights which strongly implied that they found the CATC design was functional. Nevertheless the jury found trademark infringement.[97]

The court granted the defendant's motion for a new trial and held that "protection of a functional design under trademark law, when the exact same functional design, used in the exact same manner, is unprotectable under trade dress law would be a miscarriage of justice."[98] The court agreed with CATC "that the fact its trademark is derived from its data display does not necessarily prevent it from being protected as a trademark. However, it does not follow that CATC is entitled to trademark protection in this case."[99] "In sum, the Court finds that CATC cannot protect the CATC design as a trademark, when the same design used in the same manner is denied trade dress protection. Such a result is inconsistent with law in this Circuit, inequitable and a miscarriage of justice."[100]

Accordingly, GUI design owner cannot use trademark and trade dress rights to protect functional aspects of the design.

Utility Patents As Evidence of Functionality

In *TrafFix*, the Supreme Court held that "[a] utility patent is strong evidence that the features therein claimed are functional."[101] The Court repeated the term "strong evidence" four times in the opinion. One reason for this "strong evidence" barring trade dress protection is that there is a clear tension between protection of the subject matter of a utility patent and protection of the subject matter of trade dress. A product shape that is the subject of a functional patent goes into the "public domain" when the patent expires while a trademark can be owned as intellectual property for perpetuity. "For almost 100 years it has been well established that in the case of an expired patent, the federal patent laws do create a federal right to 'copy and use.'"[102] A rule that allowed trademark protection of a patented functional element would defeat this federal right to copy.

There was a split in the circuits over whether the inclusion of an element in a patent should be an absolute bar to later proof that that element is protectable trade dress, regardless of whether that element is functional or not.[103] In the

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[97] *Id.* at 1070.

[98] *Id.* at 1071.

[99] *Id.* at 1073.

[100] *Id.* at 1074.

[101] *TrafFix*, 532 U.S. at 24.

[102] *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 165 (1989).

[103] *Compare Sunbeam Products, Inc. v. West Bend Co.*, 123 F.3d 246 (5th Cir. 1997) (holding that trade dress protection is not foreclosed), *Thomas & Betts Corp. v. Panduit Corp.*, 138 F.3d 277, 288 (7th Cir. 1998) ("there is no *per se* prohibition against the features disclosed in a patent receiving trademark protection after the patent has expired"), and *Midwest Industries, Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356 (Fed. Cir. 1999) (same), with *Vornado Air Circulation*

Thomas & Betts case, the Seventh Circuit applied the traditional functionality rule, rather than a *per se* prohibition, to resolve the "'undeniable tension' between trademark protection of product configurations and patent law."[104] The Tenth Circuit in the *Vornado* case has said that even a configuration "non-functional" under the law of trade dress must be free for all to copy if such a configuration was "a significant inventive component" of an invention covered by a utility patent. Thus, the Tenth Circuit believed that a *per se* rule resolved the conflict.

In the background of this circuit split, the Supreme Court held that a utility patent was "strong evidence" of functionality, although it stopped short of applying a *per se* rule.[105] The Court appeared to agree with the typically pro-free market Seventh Circuit that the traditional functionality rule can resolve the conflict between patent law and trade dress law. "As explained in *Qualitex*, *supra*, and *Inwood*, *supra*, a feature is also functional when it is essential to the use or purpose of the device or when it affects the cost or quality of the device. The *Qualitex* decision did not purport to displace this traditional rule."[106] However, because the *TrafFix* Court repeatedly emphasized that a patent was "strong evidence" of functionality, a party may have a difficult time establishing the non-functionality of an element that was disclosed in a patent.

The *TrafFix* decision necessarily limits the protection available to intellectual property owners by establishing that protection under one type of intellectual property (utility patent) is strong evidence denying protection under another type of intellectual property (trade dress). A GUI designer may have to decide which type of intellectual property will afford the best protection for his or her innovation. However, a GUI may comprise functional as well as non-functional elements. A GUI owner should disclose only functional elements of the GUI in any utility patent application, thereby allowing protection for any non-functional elements. For example, we have found that Google has a utility patent (U.S. Pat. No. 7,146,358), design patent (U.S. Pat. No. D533,561), and trademark (Reg. No. 2,806,075) directed to searching the web and displaying search results. Each type of intellectual property serves to protect different aspects of Google's innovation.

Conclusion

The "look and feel" of a GUI may be protectable as trade dress, if the GUI is distinctive and nonfunctional. An owner of a GUI that has not yet acquired secondary meaning may want to first pursue a design patent or copyright. In addition, the owner should carefully parse out functional elements from non-

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Systems, Inc. v. Duracraft Corp., 58 F.3d 1498, 1500 (10th Cir. 1995) ("Where a product configuration is a significant inventive component of an invention covered by a utility patent . . . it cannot receive trade dress protection").

[104] *Thomas & Betts*, 138 F.3d at 285.

[105] *TrafFix*, 532 U.S. at 24.

[106] *Id.* at 33.

functional elements in its GUI design, especially if the owner pursues utility
patent protection.

Practical Application

Each category of GUI discussed in Section I (*i.e.*, the desktop, components
[including pointers, icons, and windows], and animated or transitional effects)
may be protectable as a trademark or trade dress provided the GUI or GUI
component is non-functional and serves as a trademark, *i.e.*, identifies the source
of the GUI. One aspect that may be particularly important for GUI's is that the
mark is used consistently. This will help establish secondary meaning and will
also make submitting a specimen to the USPTO more straightforward. For
example, the genie effect in Mac OS X occurs when a user opens any application
from the dock. A trademark should cover the genie effect alone without reference
to the particular application.

Category I: The Desktop

A general display of a background screen, folders, and a tool bar may be
too general to qualify as a trade dress.[107] On the other hand, a distinctive type of
display or interface may be protectable. For example, Reg. No. 3,495,193 for a
customer interface system was registered on September 8, 2008.

However, we were unable to find an example of an entire desktop GUI
that has been registered as a trademark with the USPTO.

Category II: The Components

A. Pointers. An arrow or cursor pointer may not be protectable, while a more
distinctive pointer may qualify for trademark protection. However, we have been
unable to find an example of a cursor or a pointer trademark on the USPTO site.

B. Icons. An icon may be protectable as a trademark. For example, the icons for
software applications displayed in a Windows desktop (*e.g.*, Microsoft Word,
Mozilla FireFox, Adobe Reader, etc.) may be non-functional and indicate the
source of the application). General icons, such as a folder or a trashcan, may not
be protectable.[108] However, combinations of arguably descriptive icons may be

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[107] It may also be too functional. *See* Section V, *infra*, and *Lotus Development Corp. v. Borland
Intern. Inc.*, 49 F.3d 807 (1st Cir. 1995) (holding that the menu structure was not protectable by
copyright).
[108] *Apple Computer, Inc. v. Microsoft Corp.*, 799 F.Supp. 1016, 1023 (N.D. Cal. 1992), *aff'd*, 35
F.3d 1435 (9th Cir. 1994) (holding these features were not protectable by copyright).

protectable. For example, Reg. No. 3,446,747 was listed on the Principal Register on June 8, 2008.

C. Windows. As with pointers, a familiar rectangular window may not be protectable, but a distinctive window may be. For example, Reg. No. 2,838,433, registered on May 4, 2004 is a window interface with the mark thereon.

Category III: Transitional and Animated Effects.

Animated effects may also be protectable. One interesting problem with these types of marks is how to show motion in the specimen submitted to the USPTO. For example, Reg. No. 2,490,649 (now cancelled) is a series of four freeze frames that show a pair of moving eyes.

In another example, in Ser. No. 77/419,076, the mark consists of a moving image mark, consisting of an animated sequence showing a series of rectangular video screens of varying sizes, with or without discernible images contained therein, that fly inward in whirlwind fashion, as if from the viewer's location, toward the center of the viewer's screen, where they coalesce to form a word. The drawing represents one (1) still (freeze frame) from the sequence.

Therefore, GUIs and GUI components may be protectable trade dress under an application of standard trademark principles. However, our experience with the USPTO is consistent with the recent caselaw on trade dress. It appears that GUIs must show acquired distinctiveness in order to be protectable as trade dress.

SECTION V: COPYRIGHT PROTECTION OF
                GRAPHICAL USER INTERFACES

<u>Introduction</u>

The graphical user interface represents a unique challenge to those seeking to protect their product by means of copyright. As a computer program, the user interface is certainly copyrightable subject matter. However, the overall look and feel, sequencing, and structure that compose the graphical interface and dictate the user experience may not receive copyright protection. Some argue that the user interface is merely functional or represents an idea and therefore not deserving of copyright protection. Others maintain that the user interface and icons represent the creativity of the author, which is exactly what copyright was designed to protect. The circuit courts are split in their opinions regarding what elements of a user interface constitute copyrightable subject matter and the methodology for analyzing the issue.

The Constitution of the United States of America affords authors of literary works limited protection of their writings in order to promote creativity.[109] Literary works subject to copyright protection include those expressed in words, numbers, or other symbols or indicia that are fixed in a tangible medium of expression, regardless of the medium in which they are embodied.[110] The Copyright Act of 1976 includes computer programs in the type of literary works deserving of copyright protection.[111] While the code associated with computer programs is protected as a literary work under copyright law, it is less clear the extent to which the law protects the graphical representation, user interface, or icons associated with a computer program.

Historically, courts construed copyright infringement of a computer program rather narrowly, which amounted to strict protection of the source and object codes without regard for protection of the workings of the software.[112] Over time, copyright owners sought greater protection of computer programs and specifically user interfaces. The means by which copyright protection has been sought for user interfaces include: (1) the overall "look and feel; (2) selection and arrangement; and (3) individual elements of the interface, including icons and images."[113] Courts have generally examined these cases by applying either (a) the idea-expression dichotomy, observing that "ideas" are not copyrightable, or (b) a utilitarian limitation which does not allow copyright protection of functional objects.[114] A growing number of courts apply a holistic approach whereby the non-copyrightable materials are eliminated from consideration, and the two interfaces are compared for similarity.

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[109] U.S. CONST. art. I, § 8, cl. 8.
[110] 17 U.S.C. § 101.
[111] *Id. See* H.R. Rep. No. 94-1476, at 54 (1976); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1247 (3d Cir. 1983).
[112] Andre R. Jaglom, *Corp Couns Gd to Distribution Counseling* § 10:29, WESTLAW (2008).
[113] Michael J. Schallop, *Protecting User Interfaces: Not as Easy as 1-2-3*, 45 EMORY L.J. 1533, 1553 (1996).
[114] *Id.*

Manufacturers (*e.g.*, software developers, graphic designers, etc.) desiring greater protection of a user interface sought to copyright the "look and feel" of the interface in addition to the code. In 1986, the Third Circuit in *Whelan v. Jaslow* held that the "structure, sequence and organization" of software is deserving of copyright protection.[115] In essence, the user's experience was copyrightable expression in the same way that plot elements of a book or play are protected literary expressions.[116] Similarly, other courts have considered the "total concept and feel" in analyzing whether the interface of a program has been infringed, and found that non-literal components of computer software, including its structure, sequence, organization and user interface, may be protected by copyright when they constitute expression rather than ideas.[117] This view espouses the notion that the creative process extends beyond the actual code and is embodied in the user interface and overall design of software.[118]

The *Whelan* approach was later rejected as being overbroad by the Second Circuit in *Computer Associates v. Altai,* which employed a three step approach to determine whether a computer program had been infringed.[119] The *Altai* analysis requires that the court (1) decide the level of abstraction at which the alleged infringement takes place; (2) filter out the unprotected material at that level; and (3) compare the allegedly infringing work with the original for copied expression.[120] The *Altai* "abstraction-filtration-comparison" approach removes from consideration all functional and otherwise unprotected expression before comparing the similarities shared by the works. While the *Altai* approach was originally only intended for application to infringement of program code, several circuit courts have applied a variation of the analysis in determining whether user interfaces infringe.[121]

The Fifth Circuit addressed whether copyright protection extends to the selection and arrangement of a user interface in *Engineering Dynamics v. Structural Software*.[122] The court applied both the idea-expression and utilitarian limitations in its analysis.[123] The Fifth Circuit held that the selection and arrangement of the input files was subject to copyright because their expressive purpose was not outweighed by their utilitarian function.[124] Further, a Massachusetts district court found that a menu command hierarchy associated

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[115] *Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222, 1248 (3d Cir. 1986).
[116] *Id.* at 1234.
[117] *See Rouse v. Walter & Associates, L.L.C.*, 513 F. Supp. 2d 1041 (S.D. Iowa 2007); *DSMC, Inc. v. Convera Corp.*, 479 F. Supp. 2d 68 (D.D.C. 2007); *Johnson Controls, Inc. v. Phoenix Control Systems, Inc.*, 886 F.2d 1173 (9th Cir. 1989); *Broderbund Software v. Unison World, Inc.*, 648 F. Supp. 1127, 1137 (N.D. Cal. 1986); *see also*, 17 U.S.C. §§ 101, 102(b).
[118] Andre R. Jaglom, *Corp Couns Gd to Distribution Counseling* § 10:29, WESTLAW (2008).
[119] *Computer Associates Intern., Inc. v. Altai, Inc.*, 982 F.2d 693, 706 (2d Cir. 1992).
[120] *Id.* at 706-11.
[121] *Gates Rubber Co. v. Bando Chemical Industries, Ltd.*, 9 F.3d 823, 832 (10th Cir. 1993); *Atari Games Corp. v. Nintendo of America Inc.*, 975 F.2d 832, 839 (Fed. Cir. 1992).
[122] *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335, 1346 (5th Cir. 1994).
[123] *Id.* at 1347.
[124] *Id.* at 1347-48.

with the Lotus 1-2-3 user interface was protected by copyright due to its selection and arrangement.[125] As these decisions demonstrate, protecting the selection and arrangement of a user interface by means of copyright is possible.

By contrast, attempts to protect independent elements and particularly icons used in a graphical user interface have been largely unsuccessful because of the functional nature of the icons. In *Apple Computer v. Microsoft*, the court found that virtual files, pages and trashcans, given their functionality, were analogous to buttons on a television or VCR.[126] Accordingly, the court held that the icons were functional and lacked sufficient originality to be eligible for copyright protection.[127]

The First Circuit took the utilitarian approach used in *Apple Computer* one step further in holding that the entire user interface could represent a functional element, calling into question whether user interfaces would receive copyright protection at all.[128] The district court in *Lotus* took a similar, albeit less rigorous, approach to that prescribed in *Altai*.[129] However, in overturning the district court decision, the First Circuit examined whether the Lotus 1-2-3 menu structure utilized by the computer interface represented an unprotected "method of operation."[130] The First Circuit defined "method of operation" as the "means by which a person operates something, whether it be a car, a food processor, or a computer."[131] Accordingly, the *Lotus* court held that the menu indeed was an unprotectable means of user control and operation analogous to buttons on a VCR.[132]

The Supreme Court granted Lotus' petition for certiorari, and affirmed the circuit court's holding in an anonymous tie vote, with Justice Stevens recusing himself.[133] As a result, the first case heard by the Court regarding copyright of software programs resulted in an equally divided affirmance. The Court's failure to clearly articulate the proper analysis and scope of copyright protection as it applies to a user interface has created uncertainty within the circuit courts. However, to date, most courts have not followed the *Lotus* utilitarian analysis which concentrates on the functionality of the user interface, preferring instead to utilize the "abstraction-filtration-comparison" method used in *Altai*.[134]

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[125] *Lotus Development Corp. v. Paperback Software International*, 740 F. Supp. 37, 68 (D. Mass. 1990).

[126] *Apple Computer, Inc. v. Microsoft Corp.*, 799 F. Supp. 1016, 1023 (N.D. Cal. 1992), *aff'd*, 35 F.3d 1435 (9th Cir. 1994).

[127] *Id.* at 1023.

[128] *Lotus Development Corp. v. Borland Intern. Inc.*, 49 F.3d 807 (1st Cir. 1995).

[129] *Lotus Development Corp. v. Borland Intern. Inc.*, 799 F. Supp. 203 (D. Mass. 1992).

[130] *See* 17 U.S.C. § 102(b); *Lotus Development Corp.*, 49 F.3d at 815 (1st Cir. 1995).

[131] *Lotus Development Corp.*, 49 F.3d at 815 (1st Cir. 1995).

[132] *Id.* at 817.

[133] *Lotus Development Corp. v. Borland Intern. Inc.*, 516 U.S. 233, 116 S. Ct. 804 (1996).

[134] *Computer Management Assistance Co. v. Robert F. DeCastro, Inc.*, 220 F.3d 396 (5th Cir. 2000); *Softel, Inc. v. Dragon Medical and Scientific Communications, Inc.*, 118 F.3d 955 (2d Cir. 1997); *MiTek Holdings, Inc. v. Arce Engineering Co., Inc.*, 89 F.3d 1548 (11th Cir. 1996);

In essence, the *Lotus* decision establishes that the implementation of a graphical user interface is afforded copyright protection. The viewable interface may also be subject to copyright to the extent that it contains expression (for example, the appearance of an icon). However, the set of available operations and the mechanics of how the viewable interface is activated are not afforded copyright protection.

To the extent copyright protection is afforded to the graphical user interface, the copyright owner has the exclusive right to copy or to authorize copying of the graphical user interface.[135] If a party makes unauthorized copies of a protected graphical user interface, the exclusive rights of the copyright owner are infringed and the copyright owner may take legal action (in both Federal and State courts) against the infringing party to enforce those exclusive rights.[136] Various remedies are possible against the infringing party, including, but not limited to injunctions, impounding and disposition of infringing articles, damages and profits, costs and attorney's fees, and criminal penalties (including jail).[137]

Copyright Protection Afforded GUIs at US Copyright Office

While a graphical user interface may be the subject matter of a copyright registration, in order to be registrable under copyright, it must be an original work of authorship, the design must not be de minimus, and the design must also ***not*** be a common geographic shape, a letter, or a number. An example of this would be an icon that has the appearance of an envelope or of a telephone. Without some artistic embellishment, those common symbols are not likely registrable as a copyright. On the other hand, an icon that has originality, such as the unique icon used to launch a software product, is more likely registrable. Another example is the layout of a webpage, for example, the results from a Google search. The layout of the page itself, without the content of the search results, is not registrable. Conversely, the actual search results page might be registrable as a compilation. However, that registration would include the text in the search results.

Conclusion

Although circuit courts are split regarding the extent of protection, it is generally understood that at least parts of a Graphical User Interface may be protected through copyright. At a minimum, the GUI must be an original work of authorship, not *de minimus*, and not a common geographic shape, letter, or

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Bateman v. Mnemonics, Inc., 79 F.3d 1532 (11th Cir. 1996); *Gates Rubber Co. v. Bando Chemical Industries, Ltd.*, 9 F.3d 823 (10th Cir. 1993); *Autoskill Inc. v. National Educational Support Systems, Inc.*, 994 F.2d 1476 (10th Cir. 1993).

[135] 17 U.S.C. § 106.
[136] 17 U.S.C. § 501.
[137] 17 U.S.C. §§ 502-506.

number. Those interested in copyrighting their works must be especially careful to avoid purely functional interfaces. Similarly, because copyright extends only to the expression of an idea and not the idea itself, those interested in enforcing their copyright should ensure that the allegedly infringing work has copied the actual expression of the interface and not merely the idea of it.

<u>Practical Application</u>

Category I: The Desktop

As mentioned above, those portions of a display of a background screen, toolbar, and windows that are expressions of an idea (not the mere idea) with some artistic embellishment may be protected with copyright protection.

Category II: The Components

A. Pointers – Without some artistic embellishment, common symbols such as a common pointers are not likely registrable as a copyright. On the other hand, a pointer that has originality, such as unique curl shaped pointer, is more likely registrable.

B. Icons – As described above, an icon may be protected with copyright protection but one must be careful. An icon that is a common symbol such as an appearance of an envelope or of a telephone is most likely not registrable without some artistic embellishment that is an original work.

C. Windows - Without some artistic embellishment, common windows are not likely registrable as a copyright. On the other hand, a window that has originality, such as unique curved shape or particular artistic design/color scheme, is more likely registrable.

Category III: Transitional and Animated Effects

Original animated effects with some artistic embellishment may be protected with copyright protection. Animations are most often expressions of ideas and often require some artistic embellishment.

SECTION VI: BEST PRACTICES FOR PROTECTION OF
GRAPHICAL USER INTERFACES—
INTERPLAY BETWEEN THE VARIOUS
FORMS OF PROTECTION

Using Design Patents With Other Forms of Intellectual Property

It has long been a common practice to combine utility and design patents for more complete intellectual property protection. Utility patents protect the inventive aspects while design patents offer protection for ornamental features. The differences in coverage between utility and design patents clearly distinguish their purposes.

Less clear is the choice between design patent, copyright, and trademark protection. They each afford their own advantages in protecting the ornamental, or expressive aspects of an idea. The MPEP provides some guidance as to how design patents relate to copyrights and to trademarks, and how the choice of multiple forms of IP may be permissible.[138]

Historically, design patents were not allowed for works that were registered for copyright protection, based on an "election of protection" doctrine. The courts and the USPTO held the view that the two forms of IP were distinct from each other based on the Constitution,[139] and that one or the other, but not both, could be elected. This restriction on the use of design patents and copyrights was eliminated in 1974 by the US Court of Customs and Patent Appeals in *Application of Yardley*.[140]

The Court in *Yardley* held that the election of protection doctrine was in direct conflict with the clear intent of Congress when they drafted both the copyright and patent statutes, 17 U.S.C. and 35 U.S.C. respectively, and that no election between the two forms of protection is required.[141] Since *Yardley*, the use of both design patent and copyright protection has been allowed.

There are certain conditions to follow, however, when filing a design patent application for an ornamental design that has been registered for copyright protection. MPEP § 1512 contains guidance for meeting these conditions, in particular with regard to the location, size, and content of copyright notices of the face of the design patent, and the required use of a copyright waiver.[142]

Design patents and trademarks may also be obtained on the same subject matter, provided certain criteria are followed.[143] The trademark language must not be arbitrary and must be distinguished from common descriptive terms by capitalization.[144] Trademarks are not allowed in the title of a design application.[145] When trademarks are used in drawings in design applications, the specification must include a statement preceding the claim identifying the

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[138] MPEP, § 1512 "Relationship Between Design Patent, Copyright, and Trademark [R-2]."
[139] U.S. CONST., art. I, § 8.
[140] *Application of Yardley*, 493 F.2d 1389 (C.C.P.A. 1974).
[141] *Id.* at 1394.
[142] MPEP, § 1512(II) "Inclusion of Copyright Notice."
[143] MPEP, § 1512(IV) "Inclusion of Trademarks in Design Patent Applications."
[144] MPEP, § 608.01(v) "Trademarks and Names Used in Trade [R-7]."
[145] MPEP, § 1512(IV)(*B*) "*Title.*"

trademark material forming part of the claimed design and the name of the owner of the registered trademark.[146]

The concurrent use of design patents and trademarks was clearly permitted by the U.S. Court of Customs and Patent Appeals in *Application of Mogen David Wine Corporation*.[147] The court agreed with the arguments made by the appellant that "the law recognizes that the protection accorded to a design under the patent laws and that accorded to what amounts to a trademark under the common law doctrine of secondary meaning are separate and distinct, and that the rights conferred by law in the one in no way exclude the rights conferred by law in the other."[148] The court also compared the purpose of both design patents and trademarks, *i.e.*, for protection of ornamental designs as opposed to functional use, in holding that both forms of intellectual property could be used for the same subject matter.[149]

Using Trademarks With Other Forms of Intellectual Property

As mentioned above, the *TrafFix* decision necessarily limits the protection available to intellectual property owners by establishing that protection under one type of intellectual property (utility patent) is strong evidence denying protection under another type of intellectual property (trade dress). As a practical matter, a GUI owner should disclose only functional elements of the GUI in any utility patent application, thereby allowing protection for any non-functional elements. Each type of intellectual property serves to protect different aspects of the GUI owner's innovation.

Using Copyrights With Other Forms of Intellectual Property

Copyright protected graphical user interfaces may co-exist with other forms of intellectual property protection, such as patents (both design and utility patents) and trademarks.[150] Specifically, "[t]he availability of protection or grant of protection under the law for a utility or design patent will not affect the [copyright] registrability of a claim in an original work of pictorial, graphic, or sculptural authorship."[151] Further, "[w]hile the Copyright Office will not investigate whether the matter has been or can be registered at the Patent and Trademark Office, it will register a properly filed copyright claim in a print or label that contains the requisite qualifications for copyright even though there is a trademark on it. However, registration of a claim to copyright does not give the claimant rights available by trademark registrations at the Patent and Trademark Office." [152]

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[146] MPEP, § 1512(IV)(*C*) *"Drawings."*
[147] *Application of Mogen David Wine Corporation*, 328 F.2d 925 (C.C.P.A. 1964).
[148] *Id.* at 930.
[149] *Id.* at 928-29.
[150] 37 C.F.R. § 202.10.
[151] 37 C.F.R. § 202.10(a).
[152] 37 C.F.R. § 202.10(b).

Matrix

GUI Types	Types of potential protection			
	Design patents	Utility patents*	TM	©
Desktop	Yes	Yes	Yes	Yes
Components	Yes	Yes	Yes	Maybe**
- Component 1- Pointers	Yes	Yes	Yes	Maybe**
- Component 2- Icons	Yes	Yes	Yes	Maybe**
- Component 3- Windows	Yes	Yes	Yes	Maybe**
Transitional & Animated Effects	Yes	Yes	Yes	Yes

*Yes for all GUI types to the extent that the GUI element is included as part of a particular device, or functionally interactive with other apparatus. The GUI element as an isolated visual element may not be amenable to protection with a Utility Patent.

** A component that is a common symbol such as an appearance of an envelope or of a telephone is most likely not registrable without some artistic embellishment that is an original work. On the other hand, a component with originality, such as unique curved shaped, is more likely registrable.

APPENDIX B
Corporate Survey on IP Protection of GUIs and Icons

1. Does your company create for display on electronic devices (such as computers, cell phones, media players, etc.) new Graphical User Interfaces (GUIs), which as used here includes the entire display, portions of the display, icons, animations, transitions, combination/compilations of displays, etc? If no, stop here.

   ○　　　Yes
   ○　　　No

2. What type of GUIs does your company create? Select all that apply.

   ○　　　A. display screens
   ○　　　B. display icons
   ○　　　C. displayed animations
   ○　　　D. displayed transitions
   ○　　　E. other

3. Does your company obtain IP protection for its GUIs? If no, go to Question 8.

   ○　　　Yes
   ○　　　No

4. What type of GUIs does your company protect? Select all that apply.

   ○　　　A. display screens
   ○　　　B. display icons
   ○　　　C. displayed animations
   ○　　　D. displayed transitions
   ○　　　E. combinations of the above
   ○　　　F. other

5. On what percent of its new GUIs does your company seek protection using:

	0%	1-10%	11-25%	26-50%	51-80%	>80%
Utility patents	○	○	○	○	○	○
Design patents	○	○	○	○	○	○
Trademark registrations	○	○	○	○	○	○
Copyright registrations	○	○	○	○	○	○

6. Please indicate how well you deem each form of IP protects GUIs. Rank by selecting one category for each form of protection listed below.

	Not Acceptable	Acceptable	Good	Better	Best
Copyright	○	○	○	○	○
Utility Patent	○	○	○	○	○
Design Patent	○	○	○	○	○
Trademark	○	○	○	○	○
Trade Secret	○	○	○	○	○

7. After reviewing this survey, which additional forms of intellectual property would you consider using to protect GUIs (select one or more)?

   ○ Copyright
   ○ Utility Patent
   ○ Design Patent
   ○ Trademark
   ○ Trade Secret
   ○ None

8. What is your company's size?

   ○ Very large (>$50B in revenue)
   ○ Large ($10-50B in revenue)
   ○ Medium ($1B-10B in revenue)
   ○ Small ($500M-1B in revenue)
   ○ Very Small (<$500M in revenue)

9. Other comments? Please provide comments in box found below. (For example, do you use a particular combination of IP to protect GUIs, do you find issues arise when using varying forms of IP used to protect GUIs, etc.)

   ┌──┐
   │   │
   │   │
   │   │
   └──┘

10. Optional: Please provide your name and your corporate organization. Also, please indicate whether you would like to participate on the Joint Sub-committee of Software and Design IP Rights investigating IP Protection of GUIs icons.

   ┌──┐
   │   │
   │   │
   │   │
   └──┘

Please complete and return the survey to:

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