

# Dressing Up Software Interface Protection: The Application of Two Pesos to Look and Feel

Steven Schortgen

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### Recommended Citation

Steven Schortgen, *Dressing Up Software Interface Protection: The Application of Two Pesos to Look and Feel*, 80 Cornell L. Rev. 158 (1994)

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**“DRESSING” UP SOFTWARE INTERFACE  
PROTECTION: THE APPLICATION OF TWO  
PESOS TO “LOOK AND FEEL”**

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Contemporary computer software strives to maintain a balance between the functional aspects embodied in a program’s underlying algorithms and the user’s end experience when operating that program. In today’s highly competitive software market, a commercially viable program must not only possess a strong algorithmic engine, it must also be “user friendly.” Consequently, the “look and feel” of a program is critical to the program’s success, since efficient and powerful algorithms which possess unwieldy user interfaces are of limited

commercial value. "Look and feel" describes what the end-user ultimately experiences when manipulating the program. It may entail, among other elements, unique screen displays, the structure and menu hierarchy of the application, or creative user interfaces for manipulating data and program flow.

The last five years have witnessed an explosion in intuitive and graphical interfaces.<sup>1</sup> Moreover, as computers have become more powerful,<sup>2</sup> the calculations necessary to maintain robust graphical environments have become more affordable and practical.<sup>3</sup> This rapid increase in "mainstream technology" has allowed graphical user interfaces (GUIs) to penetrate the software market quickly. Furthermore, since commercial viability and profit generation are integrally linked to a program's interface, courts must strive to determine what sorts of protection to offer software publishers as an incentive to develop creative interfaces, while simultaneously encouraging healthy competition.

Whether one may invoke the Copyright Act<sup>4</sup> to protect the non-literal aspects of computer software is far from settled law.<sup>5</sup> Litigants asserting that copyright law protects the "look and feel" of software have obtained mixed legal results.<sup>6</sup> Although copyright claims will continue to be a major device employed to protect the "look and feel" of software, several jurisdictions disfavor this method of protection.

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<sup>1</sup> The market penetration of Microsoft Windows, Windows NT, and similar applications in business and home environments evidences consumer thirst for expressive and easy to use interfaces.

<sup>2</sup> The latest Intel processing chip, the Pentium, possesses approximately twice the processing power of the previous generation. The practical upshot is that graphical interfaces that were computationally infeasible five years ago are now, or at least will shortly become, quite manageable and affordable on virtually all home computers.

<sup>3</sup> Interfaces that are primarily graphical, such as the Microsoft Windows environment and Apple's system 7.0, are known as GUIs (pronounced "gooeys"), or graphical user interfaces. A GUI is defined as "a design for the part of the program that interacts with the user and takes full advantage of the bit-mapped graphics displays of personal computers." BRYAN PFAFFENBERGER, *QUE'S COMPUTER USER'S DICTIONARY* 241 (2d ed. 1991). A GUI usually employs pull-down menus and requires on-screen graphics in the display of icons (graphical representations of algorithmic activities and computer functions) as well as in the display of typefaces. In short, a GUI is the total combination of graphical and visual components of a program as manipulated through menus and icons via an input device (typically a mouse or keyboard).

<sup>4</sup> Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. §§ 101-1010 (1988)).

<sup>5</sup> For a recent analysis of the state of copyright protection as applied to the "look and feel" of software, see Jack Ruzzo & Jamie Nafziger, *Software "Look And Feel" Protection in the 1990s*, 15 HASTINGS COMM. & ENT. L.J. 571 (1993); John Hornick, *Computer Program Copyrights: Look and Feel No Evil*, 5 SOFTWARE L.J. 355 (1992).

<sup>6</sup> See *Lotus Dev. Corp. v. Paperback Software Int'l*, 740 F. Supp. 37 (D. Mass. 1990) (holding that a program's menu hierarchy, alternatively referred to as the menu tree, is protected by federal copyright law); cf. *Data East USA, Inc. v. Epyx, Inc.*, 862 F.2d 204 (9th Cir. 1988) (holding that "look and feel" of competing video games was not substantially similar for copyright infringement purposes).

Accordingly, an alternative protective method warrants consideration—namely, a cause of action under the rubric of trade dress.<sup>7</sup>

Compared with copyright law, trade dress is a superior mechanism for the protection of GUIs for three separate reasons. First, a successful trade dress claim requires legal and factual elements distinct from those required of copyright claims—elements better suited for the protection of software. Second, the legal history and animating forces defining trade dress and copyright law differ in substantial and not unimportant ways. Finally, a recent United States Supreme Court decision, *Two Pesos, Inc. v. Taco Cabana, Inc.*,<sup>8</sup> provides the creative computer lawyer with the conceptual tools necessary to argue that trade dress protection applies to the non-literal aspects of computer software, and in particular, to a program's "look and feel." In *Two Pesos* the Supreme Court resolved a conflict among the circuits regarding the application of section 43(a) of the Lanham Trademark Protection Act.<sup>9</sup> Specifically, the Court developed a new standard with respect to the common-law doctrine of trade dress that proves particularly interesting to computer lawyers.

The constructive thesis of this Note is divided into four Parts. Part I offers a brief introduction to trademark law and outlines the legislative history of the Lanham Act. Part II outlines the basic elements of a trade dress claim: secondary meaning, inherently distinct features, likelihood of consumer confusion, and the affirmative defense of functionality. Part II also applies these basic elements to

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<sup>7</sup> The financial stakes at risk are quite large. In recent years, the information technology industry has grown to represent approximately five percent of gross national product, with sales of over \$234 billion in 1991 alone. Victoria Slind-Flor, *'Trade Dress' Seen to Protect Trademarks: Computer Software Producers Seek Additional Safeguards*, NAT'L L.J., May 17, 1993, at 1.

<sup>8</sup> 112 S. Ct. 2753, *reh'g denied*, 113 S. Ct. 20 (1992).

<sup>9</sup> Section 43(a) of the Lanham Act, 15 U.S.C. §1125(a), provides:

Any person who, on or in connection with any goods or services, or any container for goods, uses in commerce any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which—

(1) is likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person, or

(2) in commercial advertising or promotion, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities,

shall be liable in a civil action by any person who believes that he or she is or is likely to be damaged by such act.

Note, however, that because Taco Cabana initially brought suit in 1987, the Supreme Court rendered its decision under a now superseded version of § 43(a). See *Two Pesos*, 112 S. Ct. at 2756 n.2; *infra* part III. The amendment does not substantively alter the analysis or rationale of *Two Pesos*. Consequently, this Note provides only the current version of the statute.

graphical user interfaces. Part III presents the Supreme Court's *Two Pesos* decision and discusses that decision's implications for intellectual property lawyers. Finally, Part IV provides closing comments on asserting trade dress protection for GUIs, and includes a model application based loosely upon the litigation between Apple, Inc. and Microsoft, Inc. Ultimately, this Note argues that GUIs—as well as future creative interfaces—deserve protection under trade dress doctrine provided that the protected elements (i) are distinctive in nature, either inherently so or as acquired through secondary meaning, (ii) are de jure nonfunctional, and (iii) would create a substantial likelihood of consumer confusion if duplicated by a competitor.

## I

### TRADEMARK LAW, THE LANHAM ACT AND ITS LEGISLATIVE HISTORY

#### A. A Brief Introduction to Trademark Law

Trademark law traverses a wide and varied course. It protects not only words and trade phrases, but drawings, logos, and distinctive features of a product's packaging. For example, a manufacturer of a soft-drink will generally have trademark interests in the name of the product, the artwork on the bottle, the advertising slogan used to promote the product, and the shape of the bottle, if that shape is distinctive. If a competing softdrink producer markets a drink with a substantially similar name ("Koke" in competition with "Coke," for instance), then the initial trademark owner may obtain a court order requiring the second producer to cease the infringement. Additionally, the mark owner may seek recovery for any damages caused by the unfair competition and tarnishment of its reputation. Trademarks, therefore, are socially and economically important tools because they permit consumers to identify the source of a product's origin, and, depending upon their experience with this manufacturer, to seek out or avoid buying these goods again.

"Trade dress," a subset of general trademark law, denotes the form in which a producer presents its product to the market. Trade dress involves a product's total image and may include features such as size, shape, color or color combinations, texture, or graphics.<sup>10</sup> As stated by the Seventh Circuit, "a label, a package, even the cover of a book might be trade dress."<sup>11</sup> The Eleventh Circuit concluded, for example, that the "adoption procedure" and paperwork employed in the sale of "The Little People" toy dolls qualified as protectible trade

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<sup>10</sup> See *Stormy Clime Ltd. v. Progroup, Inc.*, 809 F.2d 971, 974 (2d Cir. 1987); *John H. Harland Co. v. Clarke Checks, Inc.*, 711 F.2d 966, 980 (11th Cir. 1983).

<sup>11</sup> *Blau Plumbing, Inc. v. S.O.S. Fix-It, Inc.*, 781 F.2d 604, 608 (7th Cir. 1986).

dress.<sup>12</sup> Furthermore, although trade dress traditionally refers to the packaging or labeling of a product, most circuits recognize that the overall design of a product may function as trade dress, thereby entitling the manufacturer to protection under the Lanham Act.<sup>13</sup>

Trade dress protection stems from section 43(a) of the Lanham Act.<sup>14</sup> Section 43(a) is not limited to trademark and trade dress infringement, but rather addresses all forms of unfair competition. Because both trade dress and trademark protection find their origin in the same common-law torts,<sup>15</sup> and because the Lanham Act concerns unfair competition generally, few legally substantive distinctions exist between the law of trademark and the law of trade dress.<sup>16</sup> Accordingly, the Supreme Court has recognized that the Lanham Act neither requires nor supports divergent treatment of trademarks and trade dress.<sup>17</sup>

Because of its roots in the tort of "passing off,"<sup>18</sup> trade dress is ultimately concerned with consumer confusion and therefore focuses upon the total appearance and image of a product as it is recognized by buyers in the relevant market. Thus, an inquiry into protectable trade dress does not look to individual elements, which of themselves may lack substantial significance,<sup>19</sup> but rather focuses on the totality of effect that the product's functional and non-functional features create.<sup>20</sup> The trade dress of a product, therefore, "is essentially its total image and overall appearance."<sup>21</sup> In *Fuddruckers, Inc. v. Doc's B.R.*

<sup>12</sup> Original Appalachian Artworks, Inc. v. Toy Loft, Inc., 684 F.2d 821, 831 (11th Cir. 1982).

<sup>13</sup> See, e.g., *Stormy Clime*, 809 F.2d at 971; *Warner Bros. Inc. v. Gay Toys, Inc.*, 658 F.2d 76 (2d Cir. 1981); *Harlequin Enters. Ltd. v. Gulf & Western Corp.*, 644 F.2d 946, 949 (2d Cir. 1981). See also *supra* notes 10-12; *infra* note 23.

<sup>14</sup> See *supra* note 9 for the text of § 43(a).

<sup>15</sup> In part I.B this Note reviews the common-law foundation of trademark law and examines the legislative history of the Lanham Act.

<sup>16</sup> See, e.g., *Blau Plumbing, Inc. v. S.O.S. Fix-It, Inc.*, 781 F.2d 604, 608 (7th Cir. 1986).

<sup>17</sup> The Supreme Court stated in *Two Pesos*:

[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. . . .

It would be a different matter if there were textual basis in § 43(a) for treating inherently distinctive verbal or symbolic trademarks differently from inherently distinctive trade dress. But there is none.

*Two Pesos*, 112 S. Ct. at 2760.

<sup>18</sup> See *infra* part I.B for a more detailed explanation of the common-law foundation of trade dress.

<sup>19</sup> See, e.g., *Bristol-Myers Squibb Co. v. McNeil-P.P.C., Inc.*, 973 F.2d 1033, 1042 (2d Cir. 1992) ("Individual aspects of a trade dress may be eligible for trademark protection in their own right, but in an action for trade dress infringement each aspect should be viewed in relation to the entire trade dress.")

<sup>20</sup> See *Fuddruckers, Inc. v. Doc's B.R. Others, Inc.*, 826 F.2d 837, 842 (9th Cir. 1987) ("[F]unctional elements that are separately unprotectable can be protected together as part of a trade dress." (citation omitted)).

<sup>21</sup> *Blue Bell Bio-Medical v. Cin-Bad, Inc.*, 864 F.2d 1253, 1256 (5th Cir. 1989).

*Others, Inc.*, the Ninth Circuit articulated the test for trade dress infringement as whether “there is a likelihood of confusion resulting from the total effect of the defendant’s package on the eye and mind of the ordinary purchaser.”<sup>22</sup>

In accordance with this emphasis on totality of effect, courts have found protectable trade dress in a variety of situations. For example, courts have held that a product’s overall design,<sup>23</sup> its packaging or casing,<sup>24</sup> a china pattern,<sup>25</sup> a television commercial’s theme,<sup>26</sup> the total “look and feel” of a restaurant’s interior,<sup>27</sup> and even a rock group’s musical performance style<sup>28</sup> each constitute protectable trade dress. Thus, since trade dress concerns itself with the overall, or gestalt, impression created by a product, both software interfaces and the “look and feel” of an application readily fall within the ambit of the Lanham Act as interpreted through the common-law tradition.<sup>29</sup>

In the typical case in which a manufacturer seeks to prevent others from copying the appearance, or trade dress, of its product, protection under section 43(a) of the Lanham Act involves a two phase inquiry. Phase one consists of the plaintiff’s factual proof while phase two provides the defendant an opportunity to raise a potent affirmative defense. In the first phase, the plaintiff must prove both (i) that the trade dress has either acquired secondary meaning or is inherently distinctive, and (ii) that the design of the competitor’s product is confusingly similar to that of the plaintiff’s product.<sup>30</sup> Trade dress acquires secondary meaning when the primary purpose of the dress is to identify the product’s source of origin.<sup>31</sup> Alternatively,

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<sup>22</sup> 826 F.2d at 841 (quoting *Fabrica, Inc. v. El Dorado Corp.*, 697 F.2d 890, 894 (9th Cir. 1983)).

<sup>23</sup> See, e.g., *L.A. Gear, Inc. v. Thom McAn Shoe Co.*, 988 F.2d 1117, 1129 (Fed. Cir.) (“Trade dress protection is not limited to the exterior packaging of a product, for ‘the design of a product itself may function as its packaging, serving to distinguish it from other products, and hence be protectable trade dress under § 43(a)’” (quoting *Wallace International Silversmiths, Inc. v. Godinger Silver Art Co.*, 916 F.2d 76, 78-79 (2d Cir. 1990))), *cert. denied*, 114 S. Ct. 291 (1993); *Veryfine Prods., Inc. v. Colon Bros., Inc.*, 799 F. Supp. 240 (D. P.R. 1992).

<sup>24</sup> See, e.g., *Bristol-Myers Squibb Co. v. McNeil-P.P.C., Inc.*, 973 F.2d 1033, 1033 (2d Cir. 1992) (applying trade dress to the colored casing of a prescription drug).

<sup>25</sup> See, e.g., *Villeroy & Boch Keramische Werke K.G. v. THC Systems, Inc.*, 999 F.2d 619 (2d Cir. 1993).

<sup>26</sup> See *Chuck Blore & Don Richman Inc. v. 20/20 Advertising, Inc.*, 674 F. Supp. 671, 680-82 (D. Minn. 1987) (ruling that an issue of material fact existed that could give rise to a finding of protectable trade dress).

<sup>27</sup> See, e.g., *Two Pesos*, 112 S. Ct. 2753; *Fuddruckers*, 826 F.2d 837.

<sup>28</sup> *Cesare v. Work*, 520 N.E.2d 586, 593 (Ohio Ct. App. 1987) (“The trade dress of the band Revolver was the performance. . . . The ensemble of the instruments, the stage setting, outfits, song list, delivery, character interpretation, and choreography of the audience participation . . .”).

<sup>29</sup> See *infra* part II.

<sup>30</sup> See *infra* part II.C for a detailed discussion of confusing similarity.

<sup>31</sup> See *infra* part II.A for a detailed discussion of secondary meaning.

trade dress is inherently distinctive if it is either fanciful or arbitrary in design.<sup>32</sup> In the second phase, even if the initial manufacturer succeeds in both of the prior factual showings, the competitor may nevertheless prevail if it can prove that the copied elements were functionally dictated. This affirmative defense is based upon the intellectual property doctrine of "merger through functionality."<sup>33</sup>

## B. The History of the Lanham Act

The Lanham Act's purpose is to promote public identification and distinguishability among competing goods to the benefit of both consumers and producers.<sup>34</sup> Section 43(a) of the Lanham Act<sup>35</sup> does not concern the registration or maintenance of trademarks per se. Instead, section 43(a) is rooted in the common-law tort of passing off or palming off, which derives from the torts of fraud and deceit.<sup>36</sup> "Palming off" or "passing off" is an attempt by a manufacturer to deceive the public into believing that it is trading or dealing with one company when in fact it is dealing with another.<sup>37</sup> Drawing on this common-law tradition, section 43(a) protects unregistered trademarks and explicitly proscribes both "false designation of origin" and "false or misleading description" of goods.<sup>38</sup>

<sup>32</sup> See *infra* part II.B for a detailed discussion of inherent distinctiveness.

<sup>33</sup> Merger through functionality provides that the elements sought to be protected merge into unprotectable form when they are functionally mandated. This doctrine presents the greatest obstacle in the application of trade dress protection to GUIs. See *infra* part II.D for a full treatment of merger through functionality.

<sup>34</sup> S. REP. NO. 1333, 79th Cong., 2d Sess. 4 (1946), *reprinted in* 79 U.S. CODE CONG. SERVICE 1274-75. A primary purpose of the Lanham Act articulated in both the House and Senate reports was to "make possible a choice between competing articles by enabling the buyer to distinguish one from the other." *Id.* at 1274. Furthermore, the Lanham Act has as its object "the protection of trade-marks, securing to the owner the good will of his business and protecting the public against spurious and falsely marked goods." *Id.*; see also *Franchised Stores, Inc. v. Winter*, 394 F.2d 664, 668 (2d Cir. 1968) (citing 79 U.S. CODE CONG. SERVICE 1274).

<sup>35</sup> Codified as amended at 15 U.S.C. § 1125(a) (1992). See *supra* note 8.

<sup>36</sup> As the Second Circuit concluded in *Franchised Stores*, 394 F.2d at 668, "the evil sought to be remedied in the trademark infringement action is that of 'passing off'—the 'sale of another's goods as those of the trade-mark owner by use of the owner's mark.'" (citation omitted). For historical treatment of the tort of passing or palming off, see J. THOMAS MCCARTHY, TRADEMARKS AND UNFAIR COMPETITION, § 5.2, at 133-35 (2d ed. 1984 & Supp. 1991).

<sup>37</sup> See, e.g., *Kazmaier v. Wooten*, 761 F.2d 46, 52 (1st Cir. 1985) (" 'Palming off' is defined as 'an attempt by one person to induce customers to believe that his products are actually those of another.'" (quoting *Remco Indus. v. Toyomenka, Inc.*, 286 F. Supp. 948, 954 (S.D.N.Y.), *aff'd*, 397 F.2d 977 (2d Cir. 1968)); *Laser Indus. Ltd. v. Eder Instrument Co., Inc.*, 573 F. Supp. 987, 991-992 (N.D. Ill. 1983) ("Passing off or palming off refers to the conduct of selling goods as the goods of another or doing business as the business of another such that the public is misled by the conduct and believes it is purchasing the goods of another or doing business with someone other than the actual seller."); *Datacomm Interface, Inc. v. Computerworld, Inc.*, 489 N.E.2d 185 (Mass. 1986).

<sup>38</sup> 15 U.S.C. § 1125(a); see *supra* note 9 for text.



In contrast, the Copyright Act of 1976 does not share this common-law tort tradition. Copyright is a positive right created by federal statute and finds its justificatory source in the Constitution.<sup>39</sup> Federal copyright is thus purely statutory in origin, and federal copyright common-law rights are nonexistent.<sup>40</sup> Copyright, like trademark law, creates an artificial monopoly, but a copyright, unlike a trademark, does not identify the source of goods.

This difference in the origin of trademark and copyright law is significant. The common-law foundation of trade dress supports broad protection for software interfaces, including screen displays,<sup>41</sup> that courts may be hesitant to award under copyright law. In short, interfaces that are both highly stylized and individualized to specific publishers tend to indicate a program's source of origin, and accordingly deserve trademark protection as defined by the common-law tradition that animates the Lanham Act.

Judicial interpretation of the Lanham Act began in a cautious manner. Initially, the Act's proscription of "false designation of origin" was limited to cases involving false designations of geographic origin.<sup>42</sup> Likewise, courts limited "false description" of goods to those cases involving materially false advertising—representations that goods or services possessed characteristics that they did not actually have.<sup>43</sup>

Contemporary courts, however, recognize that the primary purpose of the Lanham Act is to protect both the consumer and the producer in identifying the source of a product. Thus, these courts have expanded the scope of the Act and no longer focus on the alleged infringer's intent to deceive, as the tort of palming off required. Today, confusion is the litmus test.<sup>44</sup> "Although some have criticized the

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<sup>39</sup> The Constitution empowers Congress "to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." U.S. CONST. art I, § 8, cl. 8.

<sup>40</sup> In other words, the Copyright Act alone determines what rights and remedies authors possess. Moreover, the Supreme Court has repeatedly recognized that substantive alternations to these rights and remedies must come from Congressional action and not judicial activism. *See, e.g.*, *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417 (1984); *Mazer v. Stein*, 347 U.S. 201 (1954); *Caliga v. Inter Ocean Newspaper Co.*, 215 U.S. 182 (1909).

<sup>41</sup> Some decisions indicate that the individual screen displays of a program may be copyrighted as audio-visual works, although the law is far from settled. *See, e.g.*, *Digital Comm. Assoc., Inc. v. Softklone Dist. Corp.*, 659 F. Supp. 449 (N.D. Ga. 1987); *Broderbund Software, Inc. v. Unison World, Inc.*, 648 F. Supp. 1127 (N.D. Cal. 1986).

<sup>42</sup> *See, e.g.*, *Scotch Whiskey Assoc. v. Barton Distilling Co.*, 338 F. Supp. 595, 598-99 (N.D. Ill. 1971) (holding that use of the phrase "House of Stuart Blended Scotch Whiskey" constituted false designation of origin where the spirit was not produced in Scotland).

<sup>43</sup> *See Two Pesos*, 112 S. Ct. at 2762 (Stevens J., concurring).

<sup>44</sup> *See, e.g.*, *Two Pesos*, 112 S. Ct. at 2763 (Stevens, J., concurring) ("[T]he test for liability is likelihood of confusion: '[U]nder the Lanham Act [§ 43(a)], the ultimate test is whether the public is likely to be deceived or confused by the similarity of the marks. . . .

expansion as unwise, it is now 'a firmly embedded reality.'<sup>45</sup> As the United States Trademark Association Trademark Review Commission noted:

Section 43(a) is an enigma, but a very popular one. Narrowly drawn and intended to reach false designations or representations as to the geographical origin of products, the section has been widely interpreted to create, in essence, a federal law of unfair competition. . . . It has definitely eliminated a gap in unfair competition law, and its vitality is showing no signs of age.<sup>46</sup>

Moreover, Congress impliedly supported this expansive interpretation of the Act when it enacted the 1988 amendment.<sup>47</sup> Even when expansively read, however, it is not clear from the language of the Act or its 1988 amendment whether Congress intended to require proof of secondary meaning as a prerequisite for protection of trade dress—an issue the Supreme Court only recently resolved in *Two Pesos*. Additionally, because section 43(a) does not employ the phrases "trade dress," "trademark," or "secondary meaning," the interpretative issue is severely occluded. In other words, where trade dress is concerned, the Lanham Act's language is helpful, but neither dispositive nor conclusive. One must look to the Act's purpose and legislative history to divine its intended scope. Therefore, comprehending the Act's teleological basis is a crucial step in the successful application of section 43(a).

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Whether we call the violation infringement, unfair competition or false designation of origin, the test is identical—is there a 'likelihood of confusion?' " (quoting *New West Corp. v. NYM Co.*, 595 F.2d 1194, 1201 (9th Cir. 1979)).

<sup>45</sup> *Id.* (footnotes omitted).

<sup>46</sup> *The United States Trademark Association Trademark Review Commission Report and Recommendations to USTA President and Board of Directors*, 77 TRADEMARK REP. 375, 426 (1987) (footnote omitted).

<sup>47</sup> See S. REP. NO. 515, 100th Cong., 2d Sess. 40 (1988), reprinted in 1988 U.S.C.C.A.N. 5577, 5603. The report concludes that:

Section 35 revises Section 43(a) of the Act (15 U.S.C. 1125(a)) to codify the interpretation it has been given by the courts. Because Section 43(a) of the Act fills an important gap in federal unfair competition law, the committee expects the courts to continue to interpret the section.

As written, Section 43(a) appears to deal only with false descriptions or representations and false designations of geographic origin. Since its enactment in 1946, however, it has been widely interpreted as creating, in essence, a federal law of unfair competition. For example, it has been applied to cases involving the infringement of unregistered marks, violations of trade dress and certain nonfunctional configurations of goods and actionable false advertising claims.

## II

THE ELEMENTS OF A TRADE DRESS CLAIM AS APPLIED TO  
GRAPHICAL USER INTERFACES (GUIs)

To successfully protect the “look and feel” of software under section 43(a) of the Lanham Act, a computer lawyer must establish three primary elements.<sup>48</sup> First, the interface or display must either be inherently distinctive or possess secondary meaning in the relevant market segment. Second, the infringing product must be likely to cause consumer confusion, such that the common-law principles for passing off or palming off are met. Finally, as in other intellectual property disciplines, the doctrine of merger through functionality lurks in the shadows, ready to defeat claims of protection that create a de facto monopoly in functionally required characteristics. Therefore, a successful plaintiff must prove that the trade dress elements seeking protection are de jure nonfunctional.

## A. Secondary Meaning Defined

“The secondary meaning inquiry is the same for trade dress as it is for a trademark.”<sup>49</sup> Simply stated, to establish secondary meaning, “a manufacturer must show that, in the minds of the public, the primary significance of a product feature or term [or trade dress] is to identify the source of the product rather than the product itself.”<sup>50</sup> Further, there is some authority for the proposition that the secondary meaning must attach *before* the putative infringement begins.<sup>51</sup>

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<sup>48</sup> The third element—that the dress is nonfunctional—is not technically part of the plaintiff’s prima facie case. Because functionality provides an insurmountable defense, however, virtually every defendant will seek its protections, thereby requiring plaintiffs to rebut claims of functionality. For this reason, evidence of nonfunctionality is generally assumed to be part of the plaintiff’s initial proof. See *infra* note 111 and accompanying text.

<sup>49</sup> See *Bristol-Myers Squibb Co. v. McNeil-P.P.C., Inc.*, 973 F.2d 1033, 1042 (2d Cir. 1992).

<sup>50</sup> *Inwood Labs. v. Ives Labs.*, 456 U.S. 844, 851 n.11 (1982). See also *Kellogg Co. v. National Biscuit Co.*, 305 U.S. 111, 118 (1938) (To establish secondary meaning the producer “must show that the primary significance of the term in the minds of the consuming public is not the product but the producer.”); *Shoppers Fair, Inc. v. Sanders Co.*, 328 F.2d 496, 499 (8th Cir. 1964) (“[A] name, mark, or symbol by long and exclusive use and advertising by one person in the sale of his goods . . . may become so associated in the public mind with such goods . . . that it serves to identify them and distinguish them from the goods . . . of others. When such an association exists, the name, mark, or symbol is said to have acquired a ‘secondary meaning,’ in which the original user has a property right which equity will protect against unfair appropriation by a competitor.” (quoting *Liberty Mut. Ins. Co. v. Liberty Ins. Co.*, 185 F. Supp. 895, 903 (E.D. Ark. 1960))).

<sup>51</sup> See, e.g., *Braun Inc. v. Dynamics Corp. of America*, 975 F.2d 815 (Fed. Cir. 1992) (“A claim of trade dress infringement fails if secondary meaning did not exist before the infringement began.”); *Saratoga Vichy Spring Co., Inc. v. Lehman*, 625 F.2d 1037, 1043 (2d Cir. 1980) (Priority requires a showing through preponderance of evidence that the infringed mark possessed secondary meaning “at the time the defendant commenced his

Additionally, the question of whether a dress has acquired secondary meaning is a factual one, in which market samples and statistical data prove efficacious.

Factors that guide the secondary meaning inquiry include: (i) whether actual purchasers of the product associate that product's dress with the producer, (ii) the degree and manner of advertising of the claimed dress, (iii) the duration and manner of dress use, and (iv) whether use of the dress has been exclusive.<sup>52</sup> Thus, software manufacturers would do well to establish industry recognition of a creative interface early in the product's lifetime, optimally *before* the product reaches retail shelves.<sup>53</sup>

Additionally, in some jurisdictions, evidence of deliberate copying is relevant to the determination of secondary meaning.<sup>54</sup> In the Ninth Circuit, for example, "deliberate copying may suffice to support an inference of secondary meaning."<sup>55</sup> Intentional copying allows some courts to give a permissive instruction that infers secondary meaning in the senior trade dress, although even the Ninth Circuit has declined to hold that evidence of intentional copying necessarily shifts the burden of proof on this issue.<sup>56</sup> In other words, courts reason that competitors have no viable reason to completely mimic another's established trade dress unless the junior user were seeking to

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use of the mark.' " (quoting *Scott Paper Co. v. Scott's Liquid Gold, Inc.*, 589 F.2d 1225, 1231 (3d Cir. 1978))).

<sup>52</sup> See, e.g., *Transgo, Inc. v. Ajac Transmission Parts Corp.*, 768 F.2d 1001, 1015 (9th Cir. 1985).

<sup>53</sup> One can easily imagine a marketing blitz before the introduction of an interface or display that associates the user-friendly "look and feel" of the forthcoming product with the particular producer. Advertisements in computer literature stating "If you thought using Windows was easy, watch for product X to be introduced January 1. More intuitive. More sophisticated. More enjoyable.", or something to this effect, with an accompanying screen shot or description of the product's interface. Of course, this preemptive strategy would not be helpful for those producers who discover an infringer only after their product has been on the market for some time. Nevertheless, even in that scenario, advance advertising and publication in mass periodicals would be helpful prima facie proof of consumer identification of product with producer.

<sup>54</sup> See, e.g., *M. Kramer Mfg. Co. v. Andrews*, 783 F.2d 421, 448 (4th Cir. 1986) ("We hold that evidence of intentional, direct copying establishes a prima facie case of secondary meaning . . ."); *Ideal Toy Corp. v. Plawner Toy Mfg. Corp.*, 685 F.2d 78, 82 (3d Cir. 1982) ("copying is itself persuasive evidence of secondary meaning").

<sup>55</sup> *Fuddrucker, Inc. v. Doc's B.R. Others, Inc.*, 826 F.2d 837, 844 (9th Cir. 1987). See also *Transgo*, 768 F.2d at 1016 (stating that "[p]roof of exact copying, without any opposing proof, can be sufficient to establish a secondary meaning. 'There is no logical reason for the precise copying save an attempt to realize upon a secondary meaning that is in existence.'" (citation omitted) (quoting *Audio Fidelity, Inc. v. High Fidelity Recordings, Inc.*, 283 F.2d 551, 558 (9th Cir. 1960))).

<sup>56</sup> See *Fuddrucker*, 826 F.2d at 844.

take advantage of the senior's established good will or product identification.<sup>57</sup>

Determination of a product's putative secondary meaning requires a threshold inquiry, however, into the relevant market segment. Who must identify the senior user's product as belonging to that manufacturer—namely, for whom must secondary meaning obtain? Unfortunately, the software market presents unique difficulties when gauging the appropriate primary market. Is the final end-user the relevant consumer, or is it the MIS<sup>58</sup> department who purchases and maintains the software's integrity? One could argue that the relevant market shifts depending upon the nature of the application being considered. A home check balancing program, for example, would target the general software consuming populace. On the other hand, a program with a strictly business orientation may find its relevant market substantially narrower, consisting, for example, of MIS departments that purchase the application, train in-house personnel, and maintain system software integrity.<sup>59</sup> Ultimately this is a question for the fact-finder.

Contradictory and anomalous results could develop, however, in this bifurcated inquiry. One interface could find protection denied because the fact-finder determined the relevant market to be a narrowly-construed business environment. Such an environment might include professional MIS employees who are unlikely to misperceive a product's origin and who can identify the manufacturer of an application even where the program's "objective" secondary meaning may be lacking.<sup>60</sup> The same interface could then later find protection in the home software market where greater market penetration creates an increased likelihood of secondary meaning and its attendant confusion.

Difficulties in defining the relevant market aside, trademark caselaw provides a general exception to the doctrine of secondary meaning. A line of cases permits the use of similar trade dress or

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<sup>57</sup> *Beer Nuts, Inc. v. Clover Club Foods Co.*, 711 F.2d 934, 941 (10th Cir. 1983). Of course, where the imitated dress is functionally necessitated, then conclusions of secondary meaning fail to obtain. See *infra* part II.D.

<sup>58</sup> A MIS "Management Information Services" department is typically responsible for software purchases and the maintenance of software within a corporate environment.

<sup>59</sup> Certainly some business applications will still possess a relevant audience consisting of end-users rather than MIS personnel. The main point is that determining for whom secondary meaning must obtain is by nature an ad hoc procedure that is likely to yield contradictory results when applied across a spectrum of cases and jurisdictions.

<sup>60</sup> Prior to matriculation into law school, the author worked for some time in the network support area of a MIS division. It is my experience that MIS staff members pride themselves in their ability to identify obscure programs and their producers. On more than one occasion I was reminded of a mutated version of the game show "Name That Tune"—I can name that software in one screen!

marks where two geographically remote users adopt similar marks in good faith and without knowledge of each other's use.<sup>61</sup> This permissive use is known as the "good faith territorial use" exception.

In computer applications, however, this defense seems of little use. Nearly all commercially viable software targets a national market. This is especially so when one considers that many businesses possess communication "backbones" which allow rapid data transfer and manipulation between geographically remote sites. For example, a file server<sup>62</sup> which is located in California may drive the applications of a user whose node, or terminal connection, is physically in New York City. In this manner, most computer software falls under the ambulatory exception to territorial expansion.

Where the relevant consumers "are ambulatory and on the move back and forth across the nation," then the good faith territorial use exception to secondary meaning will not apply.<sup>63</sup> Software consumers are ambulatory in two distinct manners: first, through their physical movement across the country, and second, through their "virtual" movement across the country through computerized means. Additionally, the proliferation of personal computers and the establishment of both software franchise stores and computer "superstores" create a national audience for most applications as they are released. It is inconceivable that a successful computer program sold on the west coast would fail to penetrate markets throughout the rest of the country, as may be the case with locally produced cookies, or clothing.<sup>64</sup> Thus, trademark's common-law defense of geographically remote use offers little help to a putative software infringer.

## B. Inherently Distinct Defined

Software which fails to possess secondary meaning, perhaps because it is new to the marketplace or has failed to obtain substantial market penetration, may still enjoy protection if that software is inherently distinctive. Although the Supreme Court noted in *Two Pesos* that

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<sup>61</sup> See, e.g., *United Drug Co. v. Rectanus Co.*, 248 U.S. 90, 98 (1918); *Hanover Star Milling Co. v. Metcalf*, 240 U.S. 403, 416 (1916).

<sup>62</sup> A file server is a large, central, communal computer that stores information for all users on the network. Multiple users can "access" a file server at one time, while the file server acts as a sort of "bank" in which users deposit and withdraw data for both personal and community use. Because communication with the file server occurs over network wiring, one may access the server from any location that can receive and send telephonic electric impulses (i.e., a phone line).

<sup>63</sup> *Fuddrucker's, Inc. v. Doc's B.R. Others, Inc.*, 826 F.2d 837, 844 (9th Cir. 1987) (quoting J. THOMAS MCCARTHY, *TRADEMARKS AND UNFAIR COMPETITION* § 26.6, at 296 (1984)).

<sup>64</sup> Consider how many computer users employ telecommunication devices. Users logging onto CompuServe or America-On-Line, for example, will find literally hundreds of software reviews at their fingertips.

protection accrues in inherently distinct trade dress, the Court's explanation of this category is only slightly helpful. The Court appears to employ traditional trademark categories when it analyzes the inherent distinctiveness of trade dress.<sup>65</sup>

Consequently, trade dress, like trademark, is classified in categories of increasing distinctiveness—namely, (i) generic, (ii) descriptive, (iii) suggestive, (iv) arbitrary, and (v) fanciful. According to *Two Pesos*, “[t]he latter three categories of marks, because their intrinsic nature serves to identify a particular source of a product, are deemed inherently distinctive and are entitled to protection.”<sup>66</sup> Note, however, that in some jurisdictions a finding of suggestiveness does not imply that the dress is a strong one.<sup>67</sup> Thus, although trade dress which falls within the three categories determined to be inherently distinctive (i.e., suggestive, arbitrary, and fanciful) merits protection without a showing of secondary meaning, courts may nevertheless find that the dress is not particularly strong and accordingly limit the amount of protection afforded that dress.

Conversely, generic marks never obtain protection, even in light of an established secondary meaning.<sup>68</sup> On the other hand, descriptive marks, although not inherently distinct, may acquire distinctiveness if they obtain an established secondary meaning in the relevant market.<sup>69</sup> A descriptive trade dress, to invoke an oft-cited example, would include a lemon-shaped bottle employed to sell lemon juice, and would require an established secondary meaning associating the product with a particular source of origin in order to garner protection.<sup>70</sup>

One commentator has suggested that “if the ‘total image’ of a trade dress creates an unexpected visual image of the particular product it represents, then the trade dress is inherently distinctive and protectable.”<sup>71</sup> Although the choice of the word “unexpected” seems inappropriate, the point is fundamentally correct. In light of the expansive definition associated with trade dress in *Two Pesos*, a com-

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<sup>65</sup> See *Two Pesos*, 112 S. Ct. at 2757. The Court favorably cites Judge Friendly's Second Circuit decision *Abercrombie & Fitch Co. v. Hunting World Inc.*, 537 F.2d 4, 9 (2d Cir. 1976).

<sup>66</sup> 112 S. Ct. at 2757.

<sup>67</sup> See, e.g., *Lang v. Retirement Living Pub. Co.*, 949 F.2d 576, 581 (2d Cir. 1991) (stating that “[a]lthough a suggestive mark is entitled to registration without evidence of secondary meaning, suggestiveness is not necessarily dispositive of the issue of the strength of the mark” (citations omitted)).

<sup>68</sup> *Id.*

<sup>69</sup> *Id.*

<sup>70</sup> See *Sicilia Di R. Biebow & Co. v. Cox*, 732 F.2d 417, 426 (5th Cir. 1984).

<sup>71</sup> Carl Caslowitz, *Trade Dress and Section 43(a) of the Lanham Act: Protection for “Total Image” of the Visual Displays of Software Applications*, 33 IDEA J.L. & TECH. 187 (1993).

puter's display and interface fall potentially within the parameters of inherent distinctiveness.

### C. Likelihood of Confusion

Once an interface is shown either to be inherently distinct or to possess secondary meaning, a Lanham Act section 43(a) cause of action requires that there exist a likelihood of consumer confusion between the established product's trade dress and the interloping interface. There are at least four possible types of consumer confusion: (i) simple product confusion, (ii) confusion as to source of sponsorship, (iii) subliminal trademark association, and (iv) reverse association.<sup>72</sup> An explanation of these scenarios is helpful before discussing the variables weighed in the confusion calculus.

Simple product confusion occurs when purchasers of a product believe it to be another product entirely. For example, if one confuses Microsoft Word with Lotus' Ami Pro because of some interface similarity, then simple product confusion has occurred.<sup>73</sup> Confusion as to source of sponsorship, the second sort of consumer confusion, is perhaps the most plausible scenario in the computer context. This type of confusion takes place when the consumer mistakenly believes that the owner of the trade dress has authored or approved the infringing product. For example, if a software company develops a unique interface that gains market popularity and a competitor copies the design, consumers who purchase the infringing program may wrongly conclude that the design comes from the first company. This is particularly true in today's software market where *de facto* standards substantially decrease the learning curve required of new software. Manipulation of windows within Microsoft brand programs, for example, is consistent across applications. A competing producer who copies this configuration may cause consumers to conclude either that Microsoft developed this interface as well, or, at a very minimum, that Microsoft licensed its rights in the interface to the infringing producer. In either case, confusion as to the source of the product occurs.<sup>74</sup> The third type of consumer confusion occurs when the

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<sup>72</sup> See, e.g., *Playboy Enters. v. Chuckleberry Publishing, Inc.*, 486 F. Supp. 414, 428 (S.D.N.Y. 1980), *aff'd*, 687 F.2d 563 (2d Cir. 1982). See also *infra* notes 73-74 and accompanying text.

<sup>73</sup> Although this sounds improbable, consider the case where a naive computer user reads an advertisement or a product review in industry literature. The user may find the described interface particularly intuitive and novel and wish to acquire the software. The user then enters a software store and examines application packages only unwittingly to purchase the product that infringes on the original producer's trade dress.

<sup>74</sup> This analysis is by no means limited to Microsoft brand applications. To take a different example, Apple gathered much of its initial market share through this phenomenon. Apple's systems' code (i.e., the base level algorithms that provide the computer with its fundamental processes, or instruction mix) controls application "calls" from the



infringer gains a foothold in an existing market “by exploiting subliminal or conscious association with [a] protected name, mark, or trade dress.”<sup>75</sup> Finally, reverse association occurs when the consumer believes that the infringer is responsible for the original product.<sup>76</sup>

Although courts recognize at least four distinct types of consumer confusion, each type involves a similar test. When faced with an allegation of likely consumer confusion, courts have generally followed the eight factor test developed by the Second Circuit in *Polaroid Corp. v. Polarad Electronics Corp.*<sup>77</sup> The *Polaroid* criteria require courts to examine: (i) the strength of the trade dress, (ii) the similarity of the trade dress, (iii) the competitive proximity of the products, (iv) whether the original dress owner will bridge the competitive gap existing between the products, (v) whether actual confusion is occurring, (vi) good faith defenses, (vii) the quality of the infringer’s product, and (viii) the sophistication of the buyers.<sup>78</sup> In this manner, courts address each question of confusion ad hoc, weighing each factor to determine if, on balance, a likelihood of confusion exists.<sup>79</sup> Unfortunately, this test suffers from an acute problem of “open texture” because none of the criteria weighed in the determination are individ-

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software. At the lowest level of the computer’s “thinking” hierarchy are the instructions (or code) that inform the computer how to perform such functions as drawing windows, layering windows, and controlling mouse input, to name a few. These commands are hard coded into the computer. In other words, this instruction mix or systems’ code is always present in the computer. In this manner, any software which wishes to create several layered windows “calls” what is in effect a sub-routine permanently stored in the computer’s ROM (Read Only Memory). Because this fundamental sub-routine is stored at the systems level (and hence is static for all applications), many programs from dissimilar producers *appear* to the end-user to function identically because they all necessarily share the fundamental algorithms that drive the computer’s basic functions and calculations (layering windows, for example).

<sup>75</sup> *Veryfine Prods. Inc. v. Colon Bros., Inc.*, 799 F. Supp. 240, 251 (D. P.R. 1992).

<sup>76</sup> *See, e.g., Fuddruckers, Inc. v. Doc’s B.R. Others, Inc.*, 826 F.2d 837, 845 (9th Cir. 1987) (stating that “if consumers believe that Doc’s [the infringer] runs Fuddruckers [the owner of the trade dress], and they are disappointed with the quality of Doc’s food or service, they may be deterred from patronizing Fuddruckers”).

<sup>77</sup> 287 F.2d 492, 495 (2d Cir. 1961).

<sup>78</sup> These eight criteria—the so-called “*Polaroid* factors”—have been well received and are employed by several circuits. *See e.g., International Kennel Club v. Mighty Star, Inc.*, 846 F.2d 1079, 1087 (7th Cir. 1988); *Interpace Corp. v. Lapp, Inc.*, 721 F.2d 460, 463 (3d Cir. 1983); *Beer Nuts, Inc. v. Clover Club Foods Co.*, 711 F.2d 934, 940 (10th Cir. 1983); *McGregor-Doniger, Inc. v. Drizzle, Inc.*, 599 F.2d 1126, 1130 (2d Cir. 1979). Although the *Polaroid* factors are not intended to be exhaustive, courts seem reluctant to involve outside variables in their calculus. Some circuits purport to develop their own criteria, but these factors typically differ in no substantial manner from those in *Polaroid*. The First Circuit, for example, articulated eight factors to consider when determining whether confusion is likely to occur. Although the nomenclature differs slightly, the substantive impact is identical. *See Boston Athletic Ass’n v. Sullivan*, 867 F.2d 22, 29 (1st Cir. 1989).

<sup>79</sup> *See, e.g., W.W.W. Pharmaceutical Co. v. Gillette Co.*, 984 F.2d 567, 572 (2d Cir. 1993).

ually dispositive.<sup>80</sup> Therefore, much room remains for judicial activism under the guise of the *Polaroid* test.

### 1. *Strength of the Mark or Trade Dress*

The focus under this factor is on the "distinctiveness of the mark, or more precisely, its tendency to identify the goods sold under the mark as emanating from a particular, although possibly anonymous source."<sup>81</sup> Furthermore, two additional criteria guide courts in assessing the strength of a dress: (i) the degree to which the mark is inherently distinctive, and (ii) the degree to which it has acquired secondary meaning by becoming distinctive in the marketplace.<sup>82</sup> It is important to note, however, that courts may measure the strength of trade dress in two different manners. First, trade dress consisting entirely of arbitrary elements is inherently "stronger" and thus merits more protection than dress involving less arbitrary elements. Second, courts deem trade dress that possesses greater market penetration as stronger and worthy of greater protection since consumers rely upon the distinctive dress to identify the source of the product's origin.

### 2. *Similarity of the Marks*

In conducting this inquiry courts consider the general impression that the dress creates, "keeping in mind all factors which the buying public will likely perceive and remember."<sup>83</sup> For computer software the inquiry may focus on the placement of the command predicates,<sup>84</sup> the placement and configuration of the menu hierarchy or menu bar, the use of unique or nonobvious identifiers to invoke command predicates, and the overall "look and feel" of the interface. In many respects, however, this gestalt inquiry begs the ultimate question that this Note analyzes—whether the "look and feel" of a software interface is protectable under the Lanham Act.

### 3. *Competitive Proximity of the Products*

Under this *Polaroid* factor, courts determine whether the goods generally compete in the same product market, because, "[t]o the ex-

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<sup>80</sup> *Id.* See also *Plus Prods. v. Plus Discount Foods, Inc.*, 722 F.2d 999, 1004 (2d Cir. 1983) (in determining likelihood of confusion the appropriate analysis is to consider and balance all of the *Polaroid* factors).

<sup>81</sup> *McGregor-Doniger, Inc. v. Drizzle Inc.*, 599 F.2d 1126, 1131 (2d Cir. 1979). See also *W.W.W. Pharmaceutical*, 984 F.2d at 572 (citing *McGregor-Doniger* with approval).

<sup>82</sup> See *W.W.W. Pharmaceutical*, 984 F.2d at 572.

<sup>83</sup> *Id.*

<sup>84</sup> "Command predicate" denotes a programming call which invokes some function of the program. For example, a call that activates a portion of the interface to load or save a program is a "command predicate." Thus, the unique placement or designation of an icon or menu hierarchy that invokes some particular program feature warrants examination in determining the similarity of the dress.

tent goods ([or trade dress]) serve the same purpose, fall within the same general class, or are used together, the use of similar designations is more likely to cause confusion.”<sup>85</sup> Courts may consider whether the products differ in content, geographic distribution, market position, and audience appeal.<sup>86</sup> Hence, a spreadsheet interface that proves particularly unique or acquires strong secondary meaning in its market may not be protectable if another producer employs similar “look and feel” in communications software or in a structural design program since both of these latter programs purportedly appeal to a different audience—specifically, consumers of telecommunications or structural design applications. Unfortunately, because software markets seem to possess the unique feature of *collapsed consumerism*, this inquiry may prove moot from its inception.

“Collapsed consumerism” refers to the fact that identical software consumers occupy diverse positions across the market spectrum. In other words, it is highly unlikely that one uses a computer *solely* for the task of spreadsheeting or telecommunicating. Individual users, or alternatively a single class of users, purchase programs that perform a variety of computational functions. For this reason, the market isolation or independence that may arise for other goods collapses when one discusses software. In short, attempts at subdividing the computer software market into smaller submarkets fundamentally misconstrue the systemically unique nature of the market.<sup>87</sup>

#### 4. *Whether the Dress Owner Will Bridge the Gap*

The relevant question under this inquiry is whether the senior dress owner will enter the market occupied by the dress infringer. Like the analysis under the previous factor, the unique nature of the software industry largely renders this inquiry moot as well. Both collapsed consumerism and the superfluidity of information transfer<sup>88</sup> make it extremely likely a priori that a senior user will either bridge the gap or, at a minimum, suffer harm through unauthorized use of

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<sup>85</sup> Lang v. Retirement Living Publishing Co., 949 F.2d 576, 582 (2d Cir. 1991). Obviously, if confusion is more likely to occur then the senior user's dress warrants protection.

<sup>86</sup> C.L.A.S.S. Promotions, Inc. v. D.S. Magazines, Inc., 753 F.2d 14, 18 (2d Cir. 1985).

<sup>87</sup> One may, of course, to some extent differentiate software markets in terms of their computational platform. However, to divide the DOS market, for instance, into a DOS telecommunications market and a DOS spreadsheet market denies the reality of collapsed consumerism. To put it differently, the very nature of the market for software requires a broader definition.

<sup>88</sup> The computer industry tends to exhibit super-fluidity because information and programming techniques typically disseminate quickly throughout the entire market. If one manufacturer produces an especially sleek or efficient application, competing producers will likely discover this innovation virtually as soon as it is revealed to the public. Mass telecommunication systems such as America-on-Line, CompuServe and the Internet all provide ample and speedy forums for this information interchange.

its dress. In other words, unlike most product markets, the relative ease of program translation and the existence of consumer unity create significant economic incentives for producers to bridge platform gaps in virtually all cases of software success.<sup>89</sup>

### 5. *Actual Confusion*

Evidence of individual instances of actual consumer confusion supports the claim that there exists a likelihood of confusion for the entire consuming class. Unfortunately, this evidentiary question is generally quite difficult to assess.<sup>90</sup> Moreover, although in most jurisdictions the plaintiff need not prove actual confusion in order to prevail, at least one circuit has held that "it is certainly proper for the trial judge to infer from the absence of actual confusion that there was also no likelihood of confusion."<sup>91</sup> Further, in at least two circuits, whether one must prove actual confusion or a likelihood of confusion differs depending upon whether injunctive or monetary relief is being sought.<sup>92</sup>

### 6. *Defendant's Good Faith Defense*

Because protection of trade dress is grounded in the tort of palming off, an infringer can often escape liability if the infringer adopted the dress without the intention of capitalizing on the owner's good will.<sup>93</sup> Good faith may exculpate an infringement, for example, if the

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<sup>89</sup> A casual observation reveals that publishers produce most successful programs across a spectrum of computational platforms.

<sup>90</sup> See, e.g., *Mushroom Makers, Inc. v. R.G. Barry Corp.*, 580 F.2d 44, 48 (2d Cir. 1978), cert. denied, 439 U.S. 1116 (1979) (citing cases where this difficulty was addressed).

<sup>91</sup> *Affiliated Hosp. Prod., Inc. v. Merdel Game Mfg. Co.*, 513 F.2d 1183, 1188 (2d Cir. 1975); *McGregor-Doniger Inc. v. Drizzle, Inc.*, 599 F.2d 1126, 1136 (2d Cir. 1979).

<sup>92</sup> See, e.g., *Conopco, Inc. v. May Department Stores Co.*, No. 92-1412, 1994 WL 511280, at \*5 (Fed. Cir. Sept. 21, 1994) ("To establish entitlement to monetary relief, a plaintiff must show actual confusion, while to establish entitlement to injunctive relief, it is sufficient if the plaintiff establishes likelihood of confusion."); *Woodsmith Publishing Co. v. Meredith Corp.*, 904 F.2d 1244, 1247 n.5 (8th Cir. 1990) ("Proof of actual confusion is necessary for an award of damages. In order to obtain injunctive relief, proof of likelihood of confusion is required."); *Co-Recht Products, Inc. v. Marvy! Advertising Photo Inc.*, 780 F.2d 1324, 1329-30 (8th Cir. 1985) (owner of mark entitled to injunctive relief if use causes likelihood of confusion, but if use causes actual confusion then owner is entitled to damages); *Warner Bros. Inc. v. Gay Toys, Inc.*, 658 F.2d 76, 79 (2d Cir. 1981) ("Although it is necessary to prove that the buying public was actually deceived in order to recover damages under § 43(A) of the Lanham Act, only a likelihood of confusion or deception need be shown in order to obtain equitable relief." (citations omitted)).

<sup>93</sup> See, e.g., *Bristol-Myers Squibb Co. v. McNeil-P.P.C., Inc.*, 973 F.2d 1033 (2d Cir. 1992). Furthermore, the Second Circuit has held that "a plaintiff must prove that an infringer acted with willful deception before the infringer's profits are recoverable by way of an accounting." *Banff, Ltd. v. Colberts, Inc.*, 996 F.2d 33, 35 (2d Cir.) (quoting *George Basch Co. v. Blue Coral, Inc.*, 968 F.2d 1532, 1540 (2d Cir.), cert. denied, 113 S. Ct. 510 (1992)), cert. denied, 114 S. Ct. 599 (1993). But see *Sands, Taylor & Wood Co. v. Quaker Oats Co.*, 978 F.2d 947, 961 (7th Cir. 1992) ("Other than general equitable considerations,

infringer adopted the “look and feel” either because it best expresses the characteristics of the interface (thus qualifying as “descriptive” of the product), or because the infringer did not know after reasonable inquiry that the senior user possessed a similar dress.<sup>94</sup>

Unfortunately, the good faith defense, although well suited to the realm of trademarks, seems a tenuous and illogical fit when applied to software. First, although theoretically possible, it is difficult to conceptualize an interface that qualifies as truly descriptive of the product.<sup>95</sup> Second, software development is a much more dynamic process than the development present in other industries. Specifically, little economic cost accrues to software firms that wish to investigate and copy the “latest” interface or “look and feel.”<sup>96</sup> Therefore, as a practical matter, a manufacturer’s cry of serendipitous and independent development generally stinks in its mouth.

On the other hand, what makes little sense when wielded as a shield makes a great deal of sense when used as a sword. Although the *defense* of “good faith” seems illogical in the realm of computer software, some plaintiffs may use a *lack* of good faith to overcome other evidential burdens in the *Polaroid* test. The Second Circuit held, for example, that “evidence of intentional copying [which is the opposite side of the ‘good faith’ coin] raises a presumption that the second comer intended to create a confusing similarity.”<sup>97</sup>

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there is no express requirement that the parties be in direct competition or that the infringer willfully infringe the trade dress to justify an award of profits.”), *cert. denied*, 113 S. Ct. 1879 (1993); *Dorr-Oliver Inc. v. Fluid-Quip, Inc.*, 834 F. Supp. 1008, 1013 (N.D. Ill. 1993) (stating that the plaintiff may recover damages under the Lanham Act “even if defendants acted in good faith.”).

<sup>94</sup> Registration on the Lanham Act’s primary register, however, removes the good faith defense. In those instances where the first dress user registers the dress, this registration places all junior users on constructive notice.

<sup>95</sup> An obvious exception involves the implementation of virtual reality interfaces. Even in this forward looking application, however, purely descriptive interfaces are difficult to conceptualize. Contrast this result with other types of products for which this conclusion is not so tenuous. The lemon-shaped container that holds lemon juice is an example.

<sup>96</sup> One could object that copying a complex and truly unique interface would require a large expenditure of time and money. Consider, for example, one who wishes to mimic the Microsoft Windows interface. We must carefully distinguish, however, an effort to copy Windows *qua* Windows, from an effort to mimic the “look and feel” of the software. Invoking a menu bar at the top of a screen, with rectangular, overlapping boxes containing picto-graphic icons certainly presents no great programming feat. In short, distinguishing the effort of copying the software itself from an effort to copy the “look and feel” of the software is crucial.

<sup>97</sup> *Charles of the Ritz Group Ltd. v. Quality King Distributors, Inc.*, 832 F.2d 1317, 1322 (2d Cir. 1987) (citing *Mobil Oil Corp. v. Pegasus Petroleum Corp.*, 818 F.2d 254, 258 (2d Cir. 1987)).

### 7. *Quality of the Infringer's Product*

If the infringing product is inferior in quality when compared with the senior product then the senior user has a right to protect "the good reputation associated with his mark from the possibility of being tarnished by inferior merchandise of the junior user."<sup>98</sup> This scenario is easy to imagine, and indeed borders on commonplace in the software industry. Because individual style and expertise in writing program code directly influences the elegance, speed, and sophistication of the interface, a sloppy effort by the programmer at the planning or coding stages of software development can render a potentially useful interface quite clumsy. Damage to the original designer's reputation could occur if consumers are likely to believe that the designer either wrote this clumsy interface or somehow approved of its use by the infringer. Note, however, that this factor also begs the question as to whether consumer confusion is likely to occur because it assumes confusion at the beginning of the inquiry. In other words, although potential injury to the owner's reputation is useful in determining the relevant equities, this injury does not facilitate the primary inquiry: whether confusion is likely to take place.

### 8. *Sophistication of Buyers*

The final *Polaroid* factor examines the sophistication of the relevant purchasers. Courts should properly consider "[t]he general impression of the ordinary purchaser, buying under the normally prevalent conditions of the market and giving the attention such purchasers usually give in buying that class of goods."<sup>99</sup> This final inquiry is problematic for reasons this Note articulates in Part II.A.<sup>100</sup> In short, software purchasers vary greatly in their level of purchasing sophistication and cannot be assumed to be a homogeneous group with respect to their sophistication and purchasing knowledge.<sup>101</sup> For this reason, buyer sophistication is generally unhelpful when analyzing software industries, unless courts render a finding of fact concerning

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<sup>98</sup> *Scarves by Vera, Inc. v. Todo Imports Ltd.*, 544 F.2d 1167, 1172 (2d Cir. 1976).

<sup>99</sup> *W.W.W. Pharmaceutical Co. v. Gillette Co.*, 984 F.2d 567, 575 (2d Cir. 1993) (quoting 3 RUDOLF CALLMAN, *THE LAW OF UNFAIR COMPETITION, TRADEMARKS, AND MONOPOLIES* § 81.2, at 577 (3d ed. 1969)).

<sup>100</sup> Specifically, a precise determination of the composition of the relevant market is difficult to ascertain. The reader is directed to the discussion comparing MIS organizations with end-user consumers. See *supra* part II.A. When viewing these two groups as aggregates, the former class is surely more sophisticated than the latter.

<sup>101</sup> The potential for differences in sophistication and levels of understanding for any given group of users becomes more acute with the development of the information superhighway. In this medium, users of every level of sophistication mutually interact.

the sophistication of the relevant market—an inquiry itself fraught with peril.<sup>102</sup>

### 9. *Additional Remarks*

The Second Circuit developed the *Polaroid* criteria to test the likelihood of consumer confusion with respect to *trademarks*. Trade dress protection proceeds under the common law developed for bland trademark applications—trade dress' city cousin. Indeed, the *Two Pesos* decision implies that similar analysis is appropriate for both trade dress and trademark claims.<sup>103</sup> However, in the "look and feel" realm of software, the parallel development and like substantive features of trademarks with respect to trade dress do not possess the degree of similarity sufficient to justify identical treatment. Courts must articulate other criteria to govern the likelihood of confusion in the software context. The *Polaroid* factors must expand and grow as technology expands and alters the trade dress landscape.

New criteria for determining the likelihood of confusion could stem from existing factors. The similarity of computing platforms, for example, parallels competitive proximity of products.<sup>104</sup> However, trade dress appearing in one computing platform may not warrant protection when imitated on a competing platform. A GUI which appears in UNIX for mainframe use, for example, would likely fall outside the scope of trade dress protection when applied to the MS-DOS environment because the platforms are so substantially dissimilar.<sup>105</sup> On the other hand, the same GUI appearing in O/S 2 proba-

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<sup>102</sup> See, e.g., *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 785 F. Supp. 576, 580, 584 (E.D. La. 1991) ("Given the relatively insular and sophisticated nature of the offshore engineering community (the apparent main users of SACS and StruCAD) they are not prone to confuse the two software products."; "Even if the origin and trade dress of SACS is recognizable by some engineers [the relevant market for the CAD program], the market itself is sufficiently sophisticated that such confusion is questionable.").

<sup>103</sup> This is so because both causes of action find their genesis in similar portions of the Lanham Act and, moreover, share in the common-law tradition of the tort of "palming" or "passing" off. See *supra* part I.B.

<sup>104</sup> A "computing platform" describes the overall style and "common denominator" of a given system. For example, MS-DOS is one platform, while Apple's System 7.0 is another. Typically, an application that runs on one platform will not perform when *directly* invoked in another platform. Introduction of the new line of "Power PC" products will necessarily occlude this analysis. These computers will accept programs from both the Apple Macintosh and MS-DOS environments. Just as this Note argues that *collapsed consumerism* is a peculiar feature of the computer market, so too will *collapsed computing platforms* provide peculiar twists to the traditional trade dress analysis.

<sup>105</sup> This conclusion of law was reached in *Engineering Dynamics*, 785 F. Supp. at 584. In *Engineering Dynamics* the court held that "StruCAD's initial compatibility with personal computers, which SACS [originally directed solely towards the mainframe market] achieved some time later, also militates to some extent against the likelihood of confusion between StruCAD and SACS. Accordingly, protectable trade dress does not reside in the . . . look and feel of SACS." *Id.*

bly deserves protection in the MS-DOS environment because these operating systems are direct competitors. Accordingly, courts must remain both technologically-informed and open-minded as computational platforms increasingly become the source of litigation. Although *Polaroid* continues to serve valid doctrinal purposes, it must not be allowed to stifle new arguments developed in light of advancing technology.

#### D. Functionality as a Defense to Infringement

A plaintiff makes out a prima facie case of trade dress infringement under section 43(a) of the Lanham Act if the plaintiff is able to show that the trade dress is distinctive, either inherently so or through acquired secondary meaning, and that a likelihood of consumer confusion exists. In spite of this factual showing, an infringer may avoid liability by proving that the allegedly infringing trade dress feature is functional or mandated by functional concerns.<sup>106</sup> It is important to note that courts, and not Congress, have required that protected trade dress elements be limited to "nonfunctional" features.<sup>107</sup> Courts have embraced the functionality argument because the purpose of the functionality defense is "to protect advances in functional design from being monopolized [so as] . . . to encourage competition and the broadest dissemination of useful design features."<sup>108</sup>

In *Inwood Laboratories Inc. v. Ives Laboratories, Inc.* the United States Supreme Court stated that "[i]n general terms, a product feature is functional if it is essential to the use or purpose of the article or if it affects the cost or quality of the article."<sup>109</sup> The Court concluded that

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Some readers will no doubt immediately note that even where computational platforms are substantially dissimilar, protection should nevertheless accrue because of the threat of reverse association. While this argument may no doubt be raised without embarrassment, confusion is a multi-variant calculus in which platform similarity is a single variable. This Note merely suggests that *Polaroid*, while insightful and helpful, is nevertheless limited when applied to a growing and yet emerging technology. Growing pains and misfit criteria are to be expected.

<sup>106</sup> See *Two Pesos*, 112 S. Ct. at 2758 ("It is also clear that eligibility for protection under § 43(a) depends on nonfunctionality."); *Inwood Labs. v. Ives Labs.*, 456 U.S. 844, 850 n.10 (1981); *Villerooy & Boch Keramische Werke K.G. v. THC Sys., Inc.*, 999 F.2d 619 (2d Cir. 1993).

<sup>107</sup> See *Two Pesos*, 112 S. Ct. at 2760. See also *In re Morton-Norwich Prods.*, 671 F.2d 1332, 1336 (C.C.P.A. 1982) (holding that only nonfunctional features warrant protection); *Inwood Labs.*, 456 U.S. at 857-58 n.20 (arguing in *dicta* that only nonfunctional elements merit protection).

<sup>108</sup> *Warner Bros., Inc. v. Gay Toys, Inc.*, 724 F.2d 327, 331 (2d Cir. 1983).

<sup>109</sup> 456 U.S. at 850 n.10. See also *Kellogg Co. v. National Biscuit Co.*, 305 U.S. 111, 122 (1938) ("The evidence is persuasive that this form [of the trade dress in question] is functional—that the cost of the biscuit would be increased and its high quality lessened if some other form were substituted for the pillow-shape."). The statement in *Kellogg*, however, is *dicta* and the Court does not precisely indicate what effect a finding of functionality has. Additionally, *Two Pesos* takes for granted that the Lanham Act requires a finding of



a prescribed medication's blue and white capsules were functional to patients as well as to doctors and hospitals for various reasons: elderly patients often commingle medications in one container and rely on color to differentiate one medication from another, and patients associate therapeutic effect with the medication's color.<sup>110</sup> Although the discussion of functionality in *Inwood Laboratories* is clearly dicta, all jurisdictions allow infringers to defend themselves on grounds of functionality.<sup>111</sup> This is entirely logical because to hold otherwise would establish a de facto monopoly in a trade dress necessary both to the product itself and to the product's class, and would therefore contravene the social and economic policies animating the Lanham Act. Because the objectives of the Lanham Act differ markedly from that of the Patent Act, for example,<sup>112</sup> protecting functionally dictated trade dress would defeat the purposes of the Lanham Act.<sup>113</sup>

Although the courts of appeals differ in the precise terms they use to define "functional" trade dress,<sup>114</sup> a common thread emerges. Namely, a functional trade dress is one which other producers would need to mimic in order to compete effectively.<sup>115</sup> Additionally, if few

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nonfunctionality before the Act's protection accrues. This statement, however, is also dictum. 112 S. Ct. at 2760. The Courts of Appeals have concluded that trade dress functionality, as with functional findings in copyright, will serve as a defense to putative infringement.

<sup>110</sup> *Inwood Labs*, 456 U.S. at 853.

<sup>111</sup> See *Two Pesos*, 112 S. Ct. at 2758 ("It is also clear that eligibility for protection under § 43(a) depends on nonfunctionality."). The High Court's statement makes it unclear on whom the burden of proving functionality initially rests. Some circuits conclude that it is part of the plaintiff's prima facie case, while others allow the defendant to raise the claim as an affirmative defense. See, e.g., *Rachel v. Banana Republic, Inc.*, 831 F.2d 1503 (9th Cir. 1987) (the leading minority view that the plaintiff possesses the burden of proof once the defendant raises the issue). Cf. *LeSportsac, Inc. v. K Mart Corp.*, 754 F.2d 71 (2d Cir. 1985) (functionality is a defense and the burden is on the defendant to prove functionality); *Vaughan Mfg. Co., v. Brikam International Inc.*, 814 F.2d 346, 349 (7th Cir. 1987) ("Functionality is a defense to a suit brought under Section 43(a) of the Lanham Act.") (citing *W.T. Rogers Co. & Keene*, 778 F.2d 334, 338 (7th Cir. 1985)); *Brunswick Corp. v. Spinit Reel Co.*, 832 F.2d 513, 520 (10th Cir. 1987) ("We agree with the Second Circuit that the question of functionality should be characterized as a defense."). Because of the nature of the defense, however, regardless of on whom the burden first rests, one of the parties involved will almost surely raise the issue, requiring a response from the opposing party.

<sup>112</sup> The Lanham Act serves to foster clarity and identification in the marketing of goods and services, whereas the Patent Act promotes short-run monopolistic gains.

<sup>113</sup> See *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1336 (C.C.P.A. 1982) (stating that "[t]his requirement of 'nonfunctionality' is not mandated by statute, but 'is deduced entirely from court decisions.' It has as its genesis the judicial theory that there exists a fundamental right to compete through imitation of a competitor's product, which right can only be temporarily denied by the patent or copyright laws." (citations omitted)).

<sup>114</sup> When examining the decisions of the courts of appeals, the Supreme Court, and the 1990 Restatement of Unfair Competition, one discovers at least eleven different definitions for "functionality." See J. THOMAS MCCARTHY, 1 MCCARTHY ON TRADEMARKS AND UNFAIR COMPETITION § 7.26(3)(a) (1993).

<sup>115</sup> Defining "effective competition" is no simple task, and the circuits differ in their approaches. Some view effective competition as a question of product utility (de facto

available alternative designs exist, or if the alternative designs are available only at increased cost resulting in disproportionate economic inefficiency, then trade dress is functionally required and will not be protected.<sup>116</sup> Furthermore, trade dress inquiry focuses on "whether the whole collection of elements taken together are functional. . . . [F]unctional elements that are separately unprotectable can be protected together as part of a trade dress."<sup>117</sup> Thus, at least two circuits have held that one may have a protectable trade dress interest in a combination of product features that includes one or more functional features, so long as the totality of features is nonfunctional.<sup>118</sup>

Computer lawyers must be careful, however, to distinguish trade dress that is de facto functional from that which is de jure functional. The Court of Customs and Patent Appeals noted that the term "func-

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functionality), while the preferred view, in this author's opinion, focuses upon economic competition (or de jure functionality). A detailed analysis of these competing views follows.

<sup>116</sup> At least five circuits express these notions in similar form. *See, e.g.*, L.A. Gear Inc. v. Thom McAn Shoe Co., 988 F.2d 1117, 1129 (Fed. Cir.) (holding that "[i]f products having the same utility can not be made without duplicating the design, the product design is deemed essential to the function and is not protectable as a matter of trade dress"), *cert. denied*, 114 S. Ct. 291 (1993); *Computer Care v. Service Sys. Enters.*, 982 F.2d 1063, 1071 (7th Cir. 1992) (stating that "[p]ut another way, a functional feature is one that 'would be found in most or all brands of the product even if no producer had any desire to have his brand mistaken for that of another producer.' It is a feature, such as the oval shape of a football, 'that competitors would find necessary to incorporate into their product in order to be able to compete effectively' " (quoting *Vaughan Mfg. v. Brikam Intl. Inc.*, 814 F.2d, 346, 349 (7th Cir. 1987)); *Brunswick Corp. v. Spinit Reel Co.*, 832 F.2d 513, 519 (10th Cir. 1987) ("Similarly, we adopt a test whose focus is the effect on competition."); *Fuddruckers, Inc. v. Doc's B.R. Others, Inc.*, 826 F.2d 837, 842 (9th Cir. 1987) ("A product feature is functional if it is essential to the product's use or if it affects the cost or quality of the article." (citation omitted)); *Sicilia Di. R. Biebow & Co. v. Cox*, 732 F.2d 417, 429 (5th Cir. 1984) (A functional "design . . . is only one of a limited number of equally efficient options and free competition would be unduly hindered by according that design trademark protection."). *See also Shakespeare Co. v. Silstar Corp. of America*, 802 F. Supp. 1386, 1398 (D.S.C. 1992) (stating that "[t]he availability of alternative designs is a key factor in determining functionality. . . . A design is functional 'if it is one of only a limited number of efficient options available to competitors.'" Furthermore, "[f]unctionality is not limited to product features which are essential to the operation of the product. Thus, the color of a product may be functional." (citations omitted)), *rev'd*, 9 F.3d 1091 (4th Cir. 1993) (holding that grounds for cancellation of registration of a trademark which is more than five years old are limited to grounds explicitly set forth in cancellation statute and do not include functionality), *cert. denied*, 114 S. Ct. 2134 (1994).

<sup>117</sup> *Fuddruckers*, 826 F.2d at 842.

<sup>118</sup> *See Stormy Clime Ltd. v. ProGroup, Inc.*, 809 F.2d 971, 975 (2d Cir. 1987) ("If, seen as a whole, the design or trade dress 'primarily serves a legitimate trademark purpose—identifying the source of the product—. . . [it is] eligible for protection' even though it might also serve functional purposes." (quoting *LeSportsac, Inc. v. K Mart Corp.*, 754 F.2d 71, 78 (2d Cir. 1985)); *American Greetings Corp. v. Dan-Dee Imports, Inc.*, 807 F.2d 1136 (3d Cir. 1986); *Isaly Co. v. Kraft, Inc.*, 619 F. Supp. 983 (M.D. Fla. 1985), *rev'd in part sub nom. AmBrit, Inc. v. Kraft, Inc.*, 805 F.2d 974 (11th Cir.), *superseded*, 812 F.2d 1531 (11th Cir. 1986), *cert. denied*, 481 U.S. 1041 (1987).

tional” has two distinct connotations, which courts often confuse in their decisions.<sup>119</sup> De facto functionality connotes “functionality” in the lay sense, “indicating that although the design of a product, a container, or a feature of either is directed to the performance of a function, it *may* be legally recognized as an indication of source.”<sup>120</sup> A product feature that is de facto functional may be afforded protection. The legally relevant inquiry centers on de jure functionality.

De jure functionality, on the other hand, identifies a purely legal conclusion, irrespective of whether the feature concerned is directed to the performance of a function. Thus, the pertinent question is what elements precede this conclusion. The Court of Customs and Patent Appeals reasoned that the definition of de jure functionality follows from a two step syllogism. First, “functional” means “utilitarian.” Second, “‘utilitarian’ means ‘superior in function (*de facto*) or economy of manufacture,’ which ‘superiority’ is determined in light of competitive necessity to copy.”<sup>121</sup> Therefore, in determining whether a product element is de jure functional, courts ask whether protection of the element from imitation will unreasonably interfere with a competitor.<sup>122</sup> De jure functionality, in other words, balances the Lanham Act’s goals of proscribing unfair competition and false designation of origin against economic efficiency.

In what manner, therefore, do courts determine what trade dress is functional or superior in utility or economy of manufacture? At least three factors are available for the legal calculus of functionality and superiority of design. First, the existence of an expired utility patent that discloses the utilitarian advantage of the design seeking trade dress protection may be evidence that the dress is functional.<sup>123</sup> However, because software interfaces generally fall outside the scope of patents,<sup>124</sup> this factor is not helpful. Second, if the originator touts

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<sup>119</sup> See *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1337 (C.C.P.A. 1982).

<sup>120</sup> *Id.*

<sup>121</sup> *Id.* at 1339.

<sup>122</sup> See, e.g., *Stormy Climate*, 809 F.2d at 977 (“[A] critical aspect in considering hindrance to competition is whether bestowing trade dress protection on a product design prevents potential competitors from entering a market that is not foreclosed by a valid patent.”); *Sicilia Di. Ri. Biebow & Co. v. Cox*, 732 F.2d 417, 429 (5th Cir. 1984) (stating that “[t]he ultimate inquiry concerning functionality . . . is whether characterizing the feature or configuration as protected ‘will hinder competition or impinge upon the rights of others to compete effectively in the sale of goods’ ” (quoting *Morton-Norwich*, 671 F.2d at 1342)); *Trnck Equip. Serv. Co. v. Fruehauf Corp.*, 536 F.2d 1210, 1218 (8th Cir. 1976) (stating that “[t]he question in each case is whether protection against imitation will hinder the competitor in competition”); *Isaly*, 619 F. Supp. at 991 (“In determining whether trade dress is primarily non-functional, the test is whether upholding an exclusive right to use the trade dress as a whole would hinder effective competition by others.”).

<sup>123</sup> See, e.g., *Best Lock Corp. v. Schlage Lock Co.*, 413 F.2d 1195, 1199 (C.C.P.A. 1969); *Mine Safety Appliances Co. v. Storage Battery Co.*, 405 F.2d 901, 902 (C.C.P.A. 1961).

<sup>124</sup> The Patent and Trademark Office (the “PTO”) regularly grants patents to software manufacturers. Encryption algorithms, for example, have obtained patents from the PTO.

the utilitarian advantages and features of the design in its advertising, courts may infer a claim of functionality.<sup>125</sup> This Note argues in Part II.A that software manufacturers are well advised to advertise in advance of distribution of software to establish the secondary meaning of their trade dress before the possibility of infringement arises. However, if advertisements emphasize the utilitarian features of the interface too much, they may actually cripple the originator's later claim of infringement. Finally, when determining whether trade dress is functional or superior in utility, the existence of no other cost-effective and efficient design alternative is significant.<sup>126</sup> This final criterion provides the most trouble for publishers seeking to avoid claims that their GUIs are functional, and must be explored more fully.

One can foresee at least two distinct claims with respect to the cost-efficiency of a software's "look and feel." First, the infringing developer could argue that the interface is functional because it represents the cheapest design available to achieve the desired end. Thus, the infringer might assert that flow-charting, data manipulation, and program code constraints (or, alternatively, inherent program language efficiencies) require this particular "look and feel." This is the *argument from developmental efficiency*.<sup>127</sup> A second, unrelated argument applies mostly to programs that require substantial computational resources to achieve the program's desired result.<sup>128</sup> In this scenario, the infringer could argue that a need for computational speed and efficiency dictates the interface or the program's "look and feel." In other words, although other interfaces exist that could be developed with little pecuniary harm to the manufacturer, thus undermining the argument from developmental efficiency, computational resources require this specific design. This is the *argument from computational effi-*

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However, patents are frequently issued that fail when challenged in court. The PTO's strategy appears to be one in which patents are issued upon minimal proof of fulfilling statutory criteria, and competitors are then expected to challenge such patent grants. More importantly, the United States Supreme Court has explicitly rejected the proposition that computer algorithms, without more, present patentable subject matter. *See, e.g., Parker v. Flook*, 437 U.S. 584, 595 n.18 (1978). Furthermore, although software may warrant patent protection as part of a process or method claim, the interface *qua* interface will almost surely fall outside the language of the patent claim.

<sup>125</sup> *See, e.g., In re Shenango Ceramics, Inc.*, 362 F.2d 287 (C.C.P.A. 1966); *In re Deister Concentrator Co.*, 289 F.2d 496 (C.C.P.A. 1961).

<sup>126</sup> *See, e.g., Brandir Int'l, Inc. v. Cascade Pac. Lumber Co.*, 834 F.2d 1142, 1148 (2d Cir. 1987) ("[T]he fact that a design feature performs a function does not make it essential to the performance of that function; it is instead the absence of alternative constructions performing the same function that renders the feature functional."); *In re Morton-Norwich Prods., Inc.*, 671 F.2d 1332, 1341 (C.C.P.A. 1982).

<sup>127</sup> The author's self-styled monikers for the *argument from developmental efficiency* and the *argument from computational efficiency* represent descriptions of obvious pragmatic constraints.

<sup>128</sup> An example is an application that must be run on a mainframe system.

ciency. Under either argument putatively nonfunctional trade dress would not be protectable because of de jure functionality.

Gregory Wrenn has argued that because the functionality argument focuses upon what is in effect economic impact, in those instances where competitors may fairly compete without copying the original manufacturer's trade dress, "protection should be extended to such trade dress *without regard* to metaphysical distinctions between de facto functional and de facto nonfunctional features."<sup>129</sup> This conclusion is entirely correct. As suggested in *In re Morton-Norwich Products, Inc.*,<sup>130</sup> this shifts the focus away from inquiries into bland product utility and necessary functional causation and towards an inquiry into product identification and inequitable monopolistic results.

Wrenn suggests a bifurcated approach to GUI trade dress applicability,<sup>131</sup> upon which this Note expands, under which the state of the computer market dictates the viability of the trade dress claim. Certain software markets possess established standard interface configurations or GUIs. The Apple Systems software, for example, controls the graphical displays observed by users from the systems or instruction mix level. Although readers should not concern themselves with the technological aspects involved, the practical implication is quite important—namely, third party software publishers all invoke the same base level algorithms, or "system calls," thereby creating applications that all possess a substantially similar GUI from the user's point of view.<sup>132</sup> Thus, for example, the use of folders, the drawing of windows, the movement of windows, and the placement and look of dialogue boxes appear similar throughout virtually all Apple applications.

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<sup>129</sup> Gregory J. Wrenn, *Federal Intellectual Property Protection for Computer Software Audiovisual Look and Feel: The Lanham, Copyright, and Patent Acts*, in 39 COPYRIGHT LAW SYMPOSIUM 1, 13 (1992). Note, however, that Wrenn invokes the locution about which *Morton-Norwich* warned. Specifically, he applies a blanket definition of "functional" involving notions of de facto functionality. A perusal of Wrenn, however, indicates that a more precise explanation of his argument may be found in terms of de jure and de facto functionality without reference to obscure metaphysics.

Additionally, the U.S. Supreme Court tacitly adopts the de jure functionality analysis advocated by Wrenn, *Morton-Norwich*, and this Note. In *Two Pesos*, the Court approved of the Fifth Circuit's functionality evaluation:

Only nonfunctional, distinctive trade dress is protected under § 43(a). The Fifth Circuit holds that a design is legally functional, and thus unprotectable, if it is one of a limited number of equally efficient options available to competitors and free competition would be unduly hindered by according the design trademark protection.

112 S. Ct. at 2760 (citing *Sicilia Di R. Biebow & Co. v. Cox*, 732 F.2d 417, 426 (5th Cir. 1984)). Thus, even the High Court bears down on competitive possibility when analyzing claims of functionality.

<sup>130</sup> See *supra* note 119.

<sup>131</sup> Wrenn, *supra* note 129, at 10-14.

<sup>132</sup> See *supra* note 74.

In software markets with such established standard interfaces, consumers expect and demand that new applications adhere to these standards.<sup>133</sup> Broad trade dress protection in these markets would prevent effective competition among similarly situated products and should be avoided. Therefore, in markets with an established "standard interface," both the *argument from computational efficiency* and the *argument from developmental efficiency* mitigate against granting trade dress protection for GUIs.<sup>134</sup> To return to the example of Apple's system, protection of the basic "look and feel" of the Apple GUI would force other Apple-oriented publishers to develop an alternative operating system. This is both computationally and developmentally inefficient, and thus requires a finding of *de jure* functionality. In other words, the next best alternative GUI is economically prohibitive by virtue of both development and implementation costs.

On the other hand, in markets lacking a standard interface the case for *de jure* nonfunctionality gains force. The existence of alternative interfaces strongly implies that competitive efficiency is not drastically affected by the existence of any particular interface. After all, why would a competitor use its own interface when a "functionally" dictated alternative is so clearly superior that its elements must be rendered public domain to insure product competition? Consequently, protection of one particular interface does not diminish the competitive possibilities for other producers, since reasonable market alternatives have already been established. The exception to this analysis, however, occurs when a shift in technology renders an older interface *de jure* inferior. In this scenario the existence of market alternatives possesses no probative force because market maturation renders the old market equilibrium inapplicable. A new market equilibrium must be established with both the new technology and its attendant development, computation, and competition costs firmly in mind. Nevertheless, exceptional cases aside, both the common-law tradition and legislative history of the Lanham Act favor protection of distinguishing trade dress where consumers recognize the source of a product's origin through a GUI and secondary manufacturers seek to capture market share through imitation of the successful GUI.<sup>135</sup>

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<sup>133</sup> Foremost among the reasons for this consumer expectation is the fact that users seek flat learning curves when acquiring new software. Indeed, economic efficiency is best maintained where learning curves are kept relatively flat and short. This, of course, assumes that the gains incurred in the relatively flatter learning curve are not offset when weighed against any inefficiencies created by adherence to the "standard" interface when compared to the next best interface.

<sup>134</sup> The threshold question remains, however, when does a GUI become "standard?" Surely no rigid definition suffices here. Rather, common sense and findings of fact serve as our guides.

<sup>135</sup> Of course, protection will fail if the GUI's features are necessitated by the strict terms of economic competition outlined above.

As Professor Callmann recognizes, however, “[f]unctionality is often a matter of degree, rather than a binary yes-or-no matter.”<sup>136</sup> At one polar end of the functionality spectrum rests perfectly standard interfaces. Apple’s System software GUI, for example, represents this extreme position in the spectrum where trade dress protection should not occur. At the other end of the continuum rests perfectly substitutable competing interfaces where protection of any individual variation should accrue. In effect, because substitute interface configurations exist, in these instances society suffers no economic harm through the grant of protection. However, since cases that fall on the polar extremes are rare, Callman’s admonition rings true. Indeed, the Second Circuit was on the mark when it concluded that “[i]n between, the case for protection weakens the more clearly the arrangement of allegedly distinctive features serves the purpose of the product (including maintenance of low cost), especially where the competitor copying such features has taken some significant steps to differentiate its product.”<sup>137</sup>

Ultimately, determination of functionality represents a mixed question of law and fact in which evidence of consumer confusion as to source of product origin must both weigh against and be consonant with prevention of substantial competitive inefficiency. The defense of functionality represents the most severe threat to publishers seeking trade dress protection for their unique GUIs. Indeed one commentator asserts that interfaces are by definition functional and therefore outside the scope of trade dress protection *in toto*.<sup>138</sup> This conclusion is clearly incorrect, but nevertheless alludes to the threat functionality poses to publishers seeking the Lanham Act’s protection.

With the three elements of a trade dress claim firmly in mind, *Two Pesos* becomes highly relevant. The High Court’s decision not only alters the application of these three elements, but also, more importantly, tacitly supports the argument that trade dress protection extends to software interfaces under certain conditions.

### III

#### *TWO PESOS V. TACO CABANA*

*Two Pesos* teaches intellectual property lawyers two fundamental lessons. First, the decision settles a conflict among the circuits concerning whether inherently distinctive trade dress merits Lanham Act protection without a necessary showing of secondary meaning. Sec-

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<sup>136</sup> RUDOLF CALLMANN, 3 THE LAW OF UNFAIR COMPETITION, TRADEMARKS AND MONOPOLIES § 19.33, at 32 (1983).

<sup>137</sup> *Stormy Clime Ltd. v. ProGroup, Inc.*, 809 F.2d 971, 977 (2d Cir. 1987).

<sup>138</sup> See Ken Liebman et al., *The Shape of Things to Come: Trademark Protection for Computers*, 12 PRENTICE HALL LAW AND BUSINESS: COMPUTER LAW 1 (1992).

ond, the majority's expansive interpretation of both trade dress and "look and feel" provides ample justification for the argument that GUIs meeting the three substantive criteria outlined above fall within the Lanham Act's ambit of protection.

#### A. Factual Basis Giving Rise to the Dispute

Respondent Taco Cabana operated a chain of fast food restaurants, which were located in Texas. By 1985 respondent owned five restaurants in the San Antonio area.<sup>139</sup> Taco Cabana employed an unusual trade dress which created a festive Mexican dining experience. Respondent described its dress as follows:

[a] festive eating atmosphere having interior dining and patio areas decorated with artifacts, bright colors, paintings and murals. The patio includes interior and exterior areas with the interior patio capable of being sealed off from the outside patio by overhead garage doors. The stepped exterior of the building is a festive and vivid color scheme using top border paint and neon stripes. Bright awnings and umbrellas continue the theme.<sup>140</sup>

Petitioner Two Pesos opened a restaurant in Houston which employed a motif very similar to that present in respondent's locations.<sup>141</sup> Subsequently, Taco Cabana expanded into the Houston market, where Two Pesos was doing business, and brought suit in the Southern District of Texas for trade dress infringement pursuant to section 43(a) of the Lanham Act. The trial court instructed the jury that Taco Cabana's trade dress was protected if it either was inherently distinctive or had acquired secondary meaning. The Fifth Circuit affirmed the trial court's statement of the law in this regard, following precedent from that circuit.<sup>142</sup> In stark contrast, the Second Circuit in *Vibrant Sales, Inc. v. New Body Boutique*<sup>143</sup> held that trade dress which fails to possess secondary meaning, even if it is inherently distinctive, will not be protected by the Lanham Act. The Supreme Court, therefore, granted certiorari "to resolve the conflict among the Courts of Appeals on the question whether trade dress which is inherently dis-

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<sup>139</sup> *Two Pesos*, 112 S. Ct. at 2755.

<sup>140</sup> *Id.* (quoting *Taco Cabana Int'l, Inc. v. Two Pesos, Inc.*, 932 F.2d 1113, 1117 (5th Cir. 1991)).

<sup>141</sup> The Fifth Circuit found that "[t]he weight of the evidence persuades us, as it did Judge Singleton, that Two Pesos brazenly copied Taco Cabana's successful trade dress, and proceeded to expand in a manner that foreclosed several lucrative markets within Taco Cabana's natural zone of expansion." *Taco Cabana*, 932 F.2d at 1127 n.20.

<sup>142</sup> *Id.* See *Chevron Chemical Co. v. Voluntary Purchasing Groups, Inc.*, 659 F.2d 695, 702 (5th Cir. 1981) (holding that trade dress warrants protection if it is inherently distinctive or if it may be proven to have acquired secondary meaning), *cert. denied*, 457 U.S. 1126 (1982).

<sup>143</sup> 652 F.2d 299 (1981), *cert. denied*, 455 U.S. 909 (1982).



tinctive is protectable under § 43(a) without a showing that it has acquired secondary meaning.”<sup>144</sup>

### B. The Court’s Decision and Rationale

Justice White’s majority opinion focuses on the text of section 43(a) and concludes that no statutory reason exists for treating inherently distinctive verbal or symbolic trademarks differently from inherently distinctive trade dress.<sup>145</sup> In an effort to comport parallel analysis into the Lanham Act, the majority notes that there is “no basis for requiring secondary meaning for inherently distinctive trade dress protection under § 43(a) but not for other distinctive words, symbols, or devices capable of identifying a producer’s product.”<sup>146</sup> Moreover, requiring secondary meaning to manifest itself in trade dress which is inherently distinctive would defeat the purposes of the Lanham Act. “By making more difficult the identification of a producer with its product, a secondary meaning requirement for a nondescriptive trade dress would hinder improving or maintaining the producer’s competitive position.”<sup>147</sup> In other words, because inherently distinctive trade dress is capable of identifying the source of the product’s origin, protection under section 43(a) of the Lanham Act accrues without further proof that the dress has acquired secondary meaning. Therefore, relying upon both statutory construction and the statute’s animating purposes, the Supreme Court established protection for inherently distinctive trade dress even where the market has yet to identify any one particular producer with the product.<sup>148</sup>

### C. *Two Pesos*’ Implications for Intellectual Property

In *Two Pesos* the Supreme Court examined two similar restaurants and held that although their overall appearance derived from furnishings, paint, awnings, signs, and a garage door, the “look” of the restaurant was inherently distinctive. Since the Court found the “look” of a restaurant inherently distinctive, computer lawyers will by analogy quickly assert that screen displays or any other element of the software which the public can observe, if distinct, will merit Lanham Act pro-

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<sup>144</sup> *Two Pesos*, 112 S. Ct. at 2757.

<sup>145</sup> *Id.* at 2760.

<sup>146</sup> *Id.*

<sup>147</sup> *Id.*

<sup>148</sup> This point is particularly crucial in the computer software market where successful interfaces may find imitators hard at work before software consumers have the opportunity to locate and identify the producer with any consistency. Because computer markets tend to exhibit superfluidity in terms of product introduction and, similarly, product failure, requiring secondary meaning to vest before protection may accrue seems particularly onerous. *See, e.g., id.* at 2760-61.

tection. Importantly, Lanham Act protection will accrue even where these same elements would fail to qualify for copyright protection.

Unfortunately, the *Two Pesos* decision fails explicitly to delineate standards for determining when inherent distinctiveness for the "overall impression" of a good obtains. The Court adopted with approval Judge Friendly's categories of distinctiveness, thus his rubric apparently represents the Court's view as well.<sup>149</sup> If so, the Court failed to observe a critical distinction between trademark and trade dress. Specifically, although determining whether a word or phrase is fanciful, arbitrary, or suggestive may be a relatively simple task, determining whether a trade dress, such as a restaurant's decor or a GUI's impression, meets this test is quite another task. This latter finding is subjective rather than empirical and suffers from acute difficulties associated with intuitive or impressionistic reasoning.<sup>150</sup>

Definitional difficulties aside, however, *Two Pesos* offers hope to software producers because of the "Gestalt"<sup>151</sup> view adopted by the High Court. Trade dress traditionally involved a product's packaging. The Courts of Appeals subsequently expanded this common-law application to encompass virtually any nonfunctional element that may be observed by the public and used to identify a product's source of origin. The Supreme Court, however, had not affirmed such an expansive interpretation of trade dress and had focused on more "traditional" dress categories.<sup>152</sup> Therefore, *Two Pesos* implicitly stands for the proposition that an expansive interpretation of trade dress is consistent with Supreme Court views. In light of *Two Pesos*, therefore, if a GUI meets the other substantive criteria established through common-law tradition, then trade dress protection should accrue.

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<sup>149</sup> This Note fully explores Friendly's categories in part II.B *supra*. Briefly, they are, in decreasing order of distinctiveness: fanciful, arbitrary, suggestive, descriptive, and generic.

<sup>150</sup> One commentator suggests:

To say that the overall design of a useful article is 'inherently distinctive' of a particular source just by examining it and perhaps dissecting it, seems to me an impermissible exercise of intuitive judging. It substitutes an impression that the design is outstanding, or eccentric, or clever, or something, for the proofs of association with a source, gained in the marketplace, that add up to a showing of secondary meaning.

Ralph Brown, *Design Protection: An Overview*, 34 UCLA L. REV. 1341, 1380 (1987). See also Jenny Johnson, *Two Pesos v. Taco Cabana, Inc.: The Supreme Court's Expansion of Trade Dress Protection Under Section 43(a) of The Lanham Act*, 24 LOY. U. CHI. L.J. 285 (1993) (analyzing the legal and economic implications of the Supreme Court's decision in *Two Pesos*).

<sup>151</sup> The Court's view is characterized as "Gestalt" in form because it looks at the entirety of the restaurant's interior before determining whether protection will accrue. In other words, according to the Court, trade dress when examined as a whole may possess attributes which its individual elements fail to possess singularly.

<sup>152</sup> The encasing of prescribed medication in *Inwood Laboratories*, for example. See *supra* notes 109-11 and accompanying text.

## IV

## FINAL COMMENTS ON TRADE DRESS AS APPLIED TO GUIs

## A. The Requirement of Distinctiveness

A GUI acquires distinctiveness either because (i) it is inherently so, or (ii) it has acquired secondary meaning. GUI protection stems most easily from those instances in which the interface is inherently distinctive. In the rapidly changing computer landscape, the length of time required to establish secondary meaning could be quite long relative to significant changes in technology—especially in those jurisdictions where the product must acquire secondary meaning *before* the putative infringement begins.<sup>153</sup> Moreover, the lapse of time before secondary meaning attaches could render the particular interface configuration *de jure* functional as other manufacturers adopt similar interface desigus. With this in mind, GUIs which qualify as inherently distinct stand on terra firma when compared with their secondary-meaning brethren.

In *Computer Care v. Service Systems Enterprises, Inc.*,<sup>154</sup> the Seventh Circuit commented that inherently distinctive trade dress must be either arbitrary<sup>155</sup> or “sufficiently distinctive to allow consumers to identify the product from the trade dress.”<sup>156</sup> Additionally, the Seventh Circuit held that “uniqueness [with respect to other competitors in the relevant market] supports a finding that a trade dress is inherently distinctive.”<sup>157</sup> *Computer Care’s* broad definition supports this Note’s conclusion that *de jure* nonfunctional GUIs qualify for protection in those instances where consumers identify producers through their GUIs.

Furthermore, because uniqueness and the ability to identify source of origin define the scope of inherently distinctive GUIs, trade dress protection accrues for the *entire* GUI rather than for individual elements of the interface. The use of a mouse pointing device or of layered windows, for example, would fail to be either unique or identifying. Such interface devices have long since become standard fare and as such are not protected either individually or as part of a total interface.

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<sup>153</sup> See *supra* note 51.

<sup>154</sup> 982 F.2d 1063 (7th Cir. 1992) (although this case relates to computer services, the underlying trade dress claim concerns a printed form and is therefore a more traditional trade dress analysis).

<sup>155</sup> Some Circuits equate “arbitrary” with the Fifth Circuit’s locution of “fanciful.” The difference is entirely semantic, and does not substantively affect one’s trade dress claim.

<sup>156</sup> *Computer Care*, 982 F.2d at 1069 (quoting *Ambrit Inc. v. Kraft Inc.*, 812 F.2d 1531, 1536 (11th Cir. 1986)).

<sup>157</sup> *Id.*

This is not to say, however, that all GUIs are now public domain. Certainly the concept of a GUI<sup>158</sup> is public domain. Protection of any interface which employs icono-graphic features, window elements, window layering, and a pointing device fails because of de jure functionality—protection would unfairly and unnecessarily constrain competition. However, *specific* configurations or combinations of GUIs certainly fall within the ambit of both inherent distinctiveness and nonfunctionality. Thus, although Apple surely lost its claim of *general* protection for all GUI configurations, a narrower claim of protection for a specific interface could still survive on the merits if a competing interface is likely to cause consumer confusion.<sup>159</sup>

Alternatively, a publisher could assert that its particular GUI possesses secondary meaning. As this Note argues in Part II.A, a sound strategy for such publishers necessarily involves substantial advertisement. Additionally, secondary meaning proves most efficacious in those instances where one publisher produces a multitude of products that each employ similarly designed interfaces. Microsoft, for example, separately markets applications which perform spreadsheeting, word processing, telecommunicating, and data retrieval functions, among others. Through the use of Microsoft's Windows program, each of these distinct applications is able both to share and crosslink data.<sup>160</sup> Programs belonging to a family of applications, therefore, are better placed to assert secondary meaning. First, if secondary meaning occurs with respect to any individual program, the publisher possesses a strong claim that it attaches for all similarly situated GUIs from that family of applications. Second, the publisher may argue that secondary meaning is best measured through examination of the entire family of applications. In both of these instances, the likelihood that the finder of fact will ultimately determine that a product feature possesses secondary meaning expands dramatically.<sup>161</sup>

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<sup>158</sup> As broadly defined earlier in note 3 *supra*. This refers to the concept of a graphical interface *qua* graphical interfaces. For example, Apple no longer has a claim to interfaces which are primarily graphical *in toto*. However, particular instances of GUIs are well within the realm of protectable subject matter, provided they are nonfunctional.

<sup>159</sup> See *infra* part IV.D.

<sup>160</sup> Programs which possess a DDL (dynamic data link) are capable of not only sharing data, but actually create cross files that integrate seemingly disparate applications. One who creates a table in spreadsheet format via Excel, for example, may integrate that data into a word processing document. The DDL feature automatically updates the word processing document anytime the user invokes Excel to make changes to the spreadsheet recreating the changes in the word processing document. In other words, altering data in one application instantaneously updates all related files in which that data appears.

<sup>161</sup> Moreover, companies which market a family of programs invoking the same interface lower the "cost" of developing the GUI as the initial expenditure may be amortized against the product line. Thus, interfaces which initially appear cost prohibitive may be quite affordable in the long run.

Finally, in jurisdictions following the authority of the Ninth Circuit, directly copying an existing interface creates the inference that the GUI possessed secondary meaning.<sup>162</sup> Absent the affirmative defense of functionality, this presumption is a powerful tool for those seeking protection of their proprietary interfaces. Moreover, because “inherently distinct” does not translate well into the realm of computer software (at least when compared to the more traditional analysis of a bottle, or book cover), circumvention of the inherently distinct inquiry by means of this presumption is quite advantageous.

#### B. Likelihood of Consumer Confusion

*Polaroid's* eight criteria outline the relevant inquiry courts invoke to determine whether consumer confusion is likely to occur.<sup>163</sup> Technological advances have largely altered the inquiry into consumer confusion in software markets. Hardware manufacturers increasingly announce inter-platform compatibility.<sup>164</sup> In addition, the introduction of “Windows 4.0”<sup>165</sup> further narrows the gap between Windows-type interfaces and competing interfaces, like Apple's.<sup>166</sup> For these reasons, in addition to *Polaroid's* factors, this Note concludes that courts must develop content specific criteria which address the problems peculiar to the software industry. Computational platform differences, advances in the relevant technology, and collapsed computer consumerism, although arguably subsets of *Polaroid's* existing criteria, become quite important (perhaps even controlling) in the context of software markets and, therefore, deserve explicit articulation.

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<sup>162</sup> See *supra* part II.A.

<sup>163</sup> This Note fully examines each criteria as applied to computer software markets in *supra* part II.C.

<sup>164</sup> A single computer that is able to run software developed for various, disjunct computing platforms qualifies in this respect. Consider, for example, the newly announced “PowerPC.” If pre-release advertisements are accurate, this machine will be able to run both MS-DOS and Apple (i.e., Macintosh) programs on a single computer.

<sup>165</sup> Also referred to as “Windows Chicago” in pre-release literature.

<sup>166</sup> Since Windows 4.0 is an actual 32-bit operating system, the program controls all of the fundamental or base level “calls” issued by any given program to the system level. In this manner, all programs which make these system “calls,” regardless of their source of origin or original producer will appear quite similar to the end-user. In other words, all applications, regardless of their manufacturer, will invoke the same programming sub-routines when performing certain base level functions. Thus, although each manufacturer will develop its own software, all programs “speak” the same language with respect to those feature driving the interface and the user's perception of that GUI. Windows 4.0 creates a barrier to broad trade dress protection in a manner similar to that created by Apple's systems software. See also *supra* note 74.

### C. Functionality As an Affirmative Defense

The defense of functionality creates the greatest burden for publishers seeking to protect their GUIs under the Lanham Act. Indeed, one commentator concludes that this defense, without more, renders trade dress inapplicable in the realm of computer software.<sup>167</sup> Another group of authors argues that user interfaces are by their very nature functional.<sup>168</sup> In other words, the interface represents the method through which the user communicates with both the program and the underlying central processing unit. Additionally, the interface is the means through which the user obtains utility from the program. Liebman, Frischling and Brunel conclude that "[w]hile specific visual elements of the interface arguably might be protectable, most elements of the user interface are intended to communicate or enable a specific feature or operation, and thus would seem to be as functional as the labels 'on' and 'off' on the computer's power switch."<sup>169</sup>

Failure to recognize the important distinction between *de facto* and *de jure* functionality undoubtedly fosters opinions such as the above. The legally relevant question focuses not on pure utility, but rather on alternative competitive possibilities. This Note has argued that in markets with an established standard, trade dress protection for GUIs diminishes substantially, thereby alleviating the concerns articulated by Liebman, Frischling and Brunel. Conversely, in markets without any established standard interface, broader protection is consonant with both the legislative history of the Lanham Act and the common-law tradition of the various circuits.

### D. An Application

Drawing from the legal headlines, an application involving Apple, Inc. and Microsoft, Inc. seems to be both practical and useful. At the core of this litigation rested Apple's contention that Microsoft in some manner appropriated Apple's putatively proprietary design and implementation of the "window" concept for personal computer interfaces.<sup>170</sup> Apple, in a suit based primarily upon copyright law, sought \$5.5 billion in damages for alleged infringement of its systems inter-

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<sup>167</sup> See *supra* note 7.

<sup>168</sup> See Liebman et al., *supra* note 138.

<sup>169</sup> *Id.*

<sup>170</sup> Apple Computer, Inc. v. Microsoft Corp., 799 F. Supp. 1006 (N.D. Cal. 1992), *aff'd in part*, 35 F.3d 1435 (9th Cir. 1994). See also Victoria Slind-Flor, *Computer War Comes Down to Mere Pixels*, NAT'L L.J., May 24, 1993, at 8; Paul Andrews, *Microsoft Wins Key Ruling in Apple Suit*, CHICAGO TRIBUNE, April 16, 1992, at B6. The stakes are quite large. In 1992 Microsoft sold 12 million copies of Windows worth \$406 million. Additionally, Microsoft sold \$1.3 billion worth of other programs that use the same interface. James Coates, *Microsoft Tries to Close a Window to Competitors*, CHICAGO TRIBUNE, Mar. 1, 1993, at B3.

face by Microsoft's wildly successful interface "Microsoft Windows."<sup>171</sup> Microsoft was largely successful in defending against the copyright infringement alleged by Apple, and one naturally wonders why Apple did not assert a trade dress claim together with its copyright infringement suit. Indeed, at least one commentator suggests that Apple's attorneys may have "goofed" by failing to assert a Lanham Act cause of action.<sup>172</sup> Apple's lead counsel, Jack Bain of Brown & Bain, asserts, however, that the decision not to raise a trade dress claim was quite intentional.<sup>173</sup> Following the analysis developed in this Note, Mr. Bain's comment is not only candid, but accurate as well. In short, although Apple arguably once possessed a trade dress cause of action, its delay in bringing that action by some four or five years proves fatal.<sup>174</sup>

As a threshold matter, Apple's interface system must either possess secondary meaning in the relevant market segment or be inherently distinct. Considering the present state of the computer market, Apple fails on both accounts. First, although Apple's System interface no doubt possessed great secondary meaning several years ago, the proliferation of similar interfaces largely robs the Apple interface of this meaning. When the GUI was first introduced, before the successful release of the Windows program, Apple's interface was surely a sign of company good will and consumer identification. Computer users intentionally purchased Apple products because of their ease of use and user-friendly interface. Not too many years ago, Apple advertised that their machine was for "the rest of us" who did not wish to master the arcane commands and functions of MS-DOS. For Apple, its early interface was entirely unique, nonfunctional and, most importantly, connoted both source of origin and consumer good will. No other manufacturer had developed or marketed a GUI for the general computing population.<sup>175</sup> Consequently, the Apple interface indicated the source of origin of the product when observed by most independent users of moderate computing sophistication.

In the last four years, however, much has changed in the computing landscape. The MS-DOS platform came to dominate the business market and corporate managers demanded a more intuitive interface

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<sup>171</sup> Andrews, *supra* note 170.

<sup>172</sup> See Slind-Flor, *supra* note 7.

<sup>173</sup> *Id.*

<sup>174</sup> Prior to the Supreme Court's decision in *Two Pesos*, however, the future of trade dress protection for GUIs was uncertain. No doubt this explains both Apple's reluctance to bring a trade dress cause of action and the importance of *Two Pesos* to intellectual property lawyers.

<sup>175</sup> Some dispute exists concerning whether Apple appropriated its GUI concept from the mainframe environment. Even if this is true, however, Apple was the first to market a GUI for the mainstream personal computer user.

for use in this environment. Microsoft's Windows stepped in to fill the platform void. The initial versions of this program were cumbersome, slow and bulky.<sup>176</sup> With advances in processing power, however, the Windows interface attained true workhorse status. Because Apple delayed its initial legal response until well after the crystallization of Microsoft's market placement, much of Apple's good will and secondary meaning had dissipated. Indeed, by 1991 when the litigation began, GUIs had become a generic descriptor of a type or style of interface, and the use of a mouse, layered windows, a menu bar, and the like were common.

Judge Friendly's categories of distinctiveness prove enlightening here. A trade dress that at one time possessed a certain degree of market power and distinctiveness had been rendered effectively *generic* over time through a combination of both direct competition and a failure to preserve the trade dress. Apple's own inaction in the face of potential encroachment rendered its interface, like the lost trademark "thermos," indeterminate.

What, then, of Apple's claim that its interface is inherently distinct? If Apple were successfully to prove its GUI distinct, then secondary meaning need not obtain before Lanham Act protection could be invoked. For Apple's interface to qualify as inherently distinct, it must be deemed either suggestive, arbitrary or fanciful—an inquiry fraught with potential peril. This Note's earlier criticism becomes significant at this point. Surely judges can observe that a word like "Kodak" is arbitrary when applied to photographic merchandise. Likewise the trademark "Windex" is suggestive when applied to a glass cleaner.<sup>177</sup> On the other hand, how is one to determine whether an interface, when considered in its entirety, qualifies as suggestive, arbitrary or fanciful? Clearly this is an ad hoc determination in which both the common law and the language of the Lanham Act offer little guidance. Arguably there is nothing distinctive in Apple's interface that creates an "unexpected visual image." Although it was clearly

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<sup>176</sup> Windows version 2.0 was very slow, prone to locking up and generally difficult to use in this author's opinion. Conversely, the Apple interface available in the same time period was quite a bit easier to use and enjoy. This was due, in no small part, to the increased computational power of the Motorola processing chip, which was present in the Apple line of products, when compared to the early Intel chips (the 8086, 8088, and even the 286). In other words, years ago Apple had little to fear. Microsoft's competing platform lacked the raw computational power necessary to carry out the complex calculations and data manipulations required seamlessly to invoke primarily graphical interfaces. Only recently have Intel style chips packed enough punch to completely handle sleek and comparable graphical interfaces. Perhaps this explains Apple's sluggish legal response to the Microsoft threat.

<sup>177</sup> Some may even argue that "Windex" is fanciful. However, the inclusion of "Win" in the first part of the phrase suggests that the product is used on windows, which are typically made of glass.



quite creative when it was developed, inherent distinctiveness is another matter entirely. Nevertheless, one could argue without embarrassment that if this nation's highest court found Taco Cabana's decor to be distinctive then surely the interface qualifies as well. At any rate, this determination is largely one for the fact finder and would rely heavily upon that fact finder's subjective conclusions.

In summary, as to the first criterion required for a trade dress cause of action, Apple likely lost its claim of secondary meaning by failing to act soon enough. Additionally, whether the interface is inherently distinct is largely a question of fact, although the author concludes that the Apple GUI is not distinct in the sense developed by the common law and codified in the Lanham Act and its congressional comments.

Assuming, however, that Apple's GUI satisfies one of the aforementioned tests, it is still necessary to determine whether the competitor's product causes a likelihood of confusion. Mr. Bain, Apple's counsel, noted that this issue makes the affirmative cause of action stumble.<sup>178</sup> The thrust of Mr. Bain's point is that few consumers sitting at an IBM compatible computer are likely to wonder if Apple created the interface when Microsoft's trade name is clearly used throughout the product and when the computing platforms are so dissimilar. On this point, Mr. Bain is largely correct. However, reverse association could provide Apple with its necessary source of confusion. Some users, although quite aware that Windows is produced by Microsoft and Apple's System Interface by Apple, may nevertheless conclude that a licensing agreement exists between the two companies, or that Microsoft is responsible for Apple's product. Those users who are well informed, however, are unlikely to reach this conclusion. Thus, on a purely intuitive level, Apple's ability to prove likelihood of confusion seems coerced at best. Indeed, intuition aside, the *Polaroid* factors lead to the identical conclusion—namely, that Apple cannot sufficiently prove likelihood of consumer confusion.

Examination of each of the eight *Polaroid* factors leads to the conclusion that Mr. Bain was well advised to avoid asserting a trade dress cause of action. First, Apple's trade dress is not particularly strong at this point in time when compared with programming conventions employed by competing software manufacturers. In fact, the use of rectangular windows, mouse input, a menu bar, radio boxes, click boxes, and window minimization borders on the generic.<sup>179</sup> On the other

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<sup>178</sup> Slind-Flor, *supra* note 7, at 1 (Mr. Bain is reported to have said "After all, Microsoft is spending millions of dollars to advertise their products as their products, . . . so where is the confusion as to source?").

<sup>179</sup> Although not all readers will immediately correlate actual program features with their computer jargon titles (the "radio box," for example), the real point is that the inter-

hand, the similarity of the two interfaces, *Polaroid's* second criterion, mitigates slightly in Apple's favor. However, each system requires unique command predicates for a user to invoke program functions. Additionally, the windows themselves are aesthetically quite different.<sup>180</sup> Thus, although Apple wins this variable in the *Polaroid* calculus, the overall impact is nugatory. Third, Apple and Microsoft use different computing platforms. Thus, their competitive proximity<sup>181</sup> is somewhat distant. The products are not intended to be used together, nor do they possess the same audience appeal as would be the case if Microsoft developed an interface specifically for the Apple brand of computers.<sup>182</sup> Fourth, Apple was, until quite recently, unprepared to bridge the gap between the product lines. IBM and Apple Computer revealed a long-term alliance in which both companies will jointly produce a reduced instruction set computing (RISC) chip purportedly to compete with Intel's X86 line of micro-processors. This union will result in a computing environment which unifies the Apple market with traditional IBM style machines.<sup>183</sup> However, this information post-dates the instant litigation. Moreover, at the time when Microsoft began production and distribution of its software, the likelihood of Apple bridging this gap was extremely low. Fifth, there is little evidence that *actual* confusion has occurred to date. Surely Apple can locate some individuals who were actually confused by the Windows product, but their numbers when compared to the computer population at large are no doubt insignificant. The defendant's good faith defense, *Polaroid's* sixth factor, is largely irrelevant in the instant action as Microsoft was quite aware of Apple's interface when developing the "Windows" program. Furthermore, the good faith inquiry is arguably inappropriate to the entire realm of GUI interfaces.<sup>184</sup> The quality of Microsoft's product, the seventh criterion, cannot be questioned at this point. Although very early versions of the software possessed their difficulties, these problems were not atypical of much software available in the infant industry at that time. Additionally, Microsoft's more recent versions perform quite well and

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face involves fairly standardized features which are consistently used to invoke particular program commands.

<sup>180</sup> *Polaroid's* second criterion is largely unhelpful in the determination of whether GUIs warrant protection. Determining similarity between the interfaces largely begs the question whether the interfaces deserve protection.

<sup>181</sup> Competitive proximity is used here in a *Polaroid* sense and not as gauged by general notions of business competition.

<sup>182</sup> Clearly both the "PowerPC" and rumors about Apple's MS-DOS compatible interface alter the landscape here, but these developments are *ex post* this litigation and, therefore, are inappropriate for consideration in the instant analysis.

<sup>183</sup> See Mark Halper, *Apple Pushes Lad in PowerPC Area*, COMPUTERWORLD, Nov. 7, 1994; Rosemary Hamilton, *IBM, Apple Outline RISC Chip Production Schedule*, COMPUTERWORLD, Nov. 4, 1991.

<sup>184</sup> See *supra* part II.C.6.

are largely accepted by the computing populace. Finally, the sophistication of the buyers, *Polaroid's* eighth criterion, is largely a question of fact. Even assuming *arguendo* that this factor militates in Apple's favor, the entire *Polaroid* calculus clearly weighs in Microsoft's favor. No single factor is dispositive, and when all eight factors are considered together, the weight of the calculus clearly branches away from Apple.

Finally, the affirmative defense of *de jure* functionality imposes the greatest barrier to Apple's claim of trade dress protection. Microsoft may mimic those interface features which are necessary for economic competition and which are essential to the utilitarian nature of the product. The *argument from computational efficiency* carries great weight in this regard.<sup>185</sup> Microsoft could argue that concerns of computational resource allocation dictate much of the GUI's overall "look and feel." Computing the value of a rectangle, for example, requires fewer computational resources than computing an irregular polygon or a circle. Thus, the concept of a "window" is best achieved through rectangular geometry. Likewise, layering windows makes a great deal of sense because "covering" one window with a foreground window allows the computer to cease calculations required to maintain the "background" window. A creative individual may undoubtedly discover other interface features that are dictated by computational efficiency and are thus functional.

A second functionality argument arises from the concept of standardization. Because GUIs have become commonplace across many computational platforms,<sup>186</sup> consumers expect and demand that new applications adhere to these standards. Since the basic notion of a "windows"-style interface is dictated by utilitarian concerns, computational efficiency concerns, and the *argument from developmental efficiency*,<sup>187</sup> broad protection for the Apple interface contradicts the Lanham Act's purpose and goals. In other words, Apple's case loses force when balancing the Lanham Act's goals—proscribing unfair competition and false designation of origin, and insuring economic efficiency through the limitation of monopolistic impact occasioned by the grant of trade dress protection.

In sum, Apple's contention that its interface represents a protectable computer GUI fails on all three elements of a Lanham Act cause of action. The Apple GUI fails either to possess secondary meaning as understood at common law or to be inherently distinctive, although

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<sup>185</sup> See *supra* note 127 and accompanying text for a discussion of the *argument from computational efficiency*.

<sup>186</sup> GUIs are present not only on Apple and MS-DOS systems, but may also be found for the Amiga, UNIX, OS/2, and XEROX platforms, to name but a few.

<sup>187</sup> See *supra* note 127 and accompanying text for a discussion of the *argument from developmental efficiency*.

the former element likely existed at some earlier point in time. Second, even assuming that Apple meets either prong of the above test, the likelihood of consumer confusion approaches zero. On both an intuitive level and when considered under the rubric of the *Polaroid* factors, the Microsoft GUI is likely to cause only *de minimis* consumer confusion. Finally, because GUIs have become an accepted standard in computer applications, primary elements of Apple's interface are *de jure* functional and therefore fall outside the scope of Lanham Act protection. The industry has accepted GUIs as a *de facto* standard across many computational platforms and software products. The practical upshot is that *de jure* functionality serves as an affirmative defense for Microsoft and any other purported infringers who choose to produce a GUI similar in overall concept to Apple's "window"-based interface.

Although trade dress will serve as an important mechanism in the protection of future unique interfaces, Mr. Bain's decision not to pursue a Lanham Act cause of action in the Microsoft litigation was far from a "goof." Mr. Bain realized that the facts underlying Apple's case flatly did not support a trade dress claim.

### E. Concluding Remarks

American economic inquiry increasingly focuses on highly technological goods and services. In our "global village," where the microchip reigns supreme and machines both drive and are driven by the human condition, courts must recognize the symbiotic relationship existing between people and computers. This relationship requires thoughtful "tweaking" to insure maximum benefit with a corresponding minimal societal cost.

To some legal commentators, perhaps those for whom computers are merely novel rather than necessary tools of productivity, software interfaces seem intuitively outside the scope of federal legislative protection. Starting from this conclusion, these authors proceed to find premises which support such a pre-determination. Such a logical fallacy displays the worst excesses of legal realism. Articulating a logical syllogism from its premises downward, on the other hand, begins with an examination of the Lanham Act, its legislative purpose, and its historical affinity with the torts of passing and palming off. This primary inquiry deciphers the societal and legal considerations animating the Act. The secondary inquiry examines the medium—specifically, graphical user interfaces—and determines whether the medium's features fall within such societal and legal considerations. This Note contends that GUIs fall neatly within the language, scope and common-law interpretation of the Lanham Act thereby meriting protection where they meet the criteria outlined above. Finally, on a purely eco-

conomic level, in those instances where protection does not create unhealthy monopolies or impose disproportional externalities on competing producers, society ultimately benefits when software producers receive incentive to research, produce, and market software interfaces that indicate their origin and facilitate consumer identification.

*Steven Schortgen*





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(Required by 39 U.S.C. 3685)

1. Publication Title <u>Cornell Law Review</u>	2. Publication No.	3. Filing Date <u>11/1/94</u>
4. Issue Frequency <u>6 times a year</u>	5. No. of Issues Published Annually <u>6</u>	6. Annual Subscription Price <u>\$35.00</u>

7. Complete Mailing Address of Known Office of Publication (Street, City, County, State, and ZIP+4) (Do Not Leave Blank)  
Myron Taylor Hall Ithaca NY 14853

8. Complete Mailing Address of Headquarters or General Business Office of Publisher (Do Not Leave Blank)  
Same

9. Full Names and Complete Mailing Addresses of Publisher, Editor, and Managing Editor (Do Not Leave Blank)

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