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## It Is Time to Put Look and Feel out to Pasture

Douglas K. Derwin

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# It Is Time to Put “Look and Feel” Out to Pasture

*by*  
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## Introduction

The time has come to put “look and feel” to rest. By its very nature, the term resists meaningful definition and contributes inevitably to fuzzy, over-generalized analysis. Wherever the term is found, it is likely that someone is pushing a vastly expanded notion of copyright protection under which infringement may be found because one work reminds viewers of a second work. While such an approach may be appropriate in an unfair competition analysis, it is inappropriate for copyright purposes.

This does not mean that copyright protection is or should be unavailable for all of the elements of a computer program’s “look and feel.” Quite the contrary. It is clear, however, that the term incorporates disparate elements, only some of which are protectable. Indeed, certain elements incorporated in “look and feel” constitute about as good a candidate for the unprotectable idea of a computer program as we are likely to find.

By its very nature, “look and feel” contributes to treating all of these disparate elements in an equivalent manner. The term is vague and over-broad, and it leads to an overly expansive analysis that is inconsistent with fundamental principles of copyright law. “Look and feel” should be eliminated, and replaced by a more focused analysis that recognizes the significant differences among various “look and feel” elements.

### I

#### The Origin of “Look and Feel”

The problems with “look and feel” are no accident. Both the concept and the term were deliberately designed to be amorphous and ill-defined, so as to contribute to greatly expanded copyright protection for elements of a computer program’s user interface, which would not otherwise appear subject to such protection. I know, because I was there when it happened.

“Look and feel” originated as a legal concept and term of art in the mind of Jack Russo, a Palo Alto, California, attorney specializing in computer law. The underlying concept was born when Apple Computer asked for help in protecting its Macintosh user interface against competitive products. Although existing case law made it clear that the elaborate screen displays of video games were subject to copyright protection, it had not yet been established that the less elaborate displays of more traditional applications programs would be protected. The display of a spreadsheet, for example, could conceivably be analogized to a “blank

form" and denied copyrightability under *Baker v. Selden*.<sup>1</sup> The denial of copyright protection to "input formats" in *Synercom Technology, Inc. v. University Computing Co.*<sup>2</sup> also created some doubt on this score, because relatively simple screen displays consist of little more than formats for the input and display of information.

"Graphical user interfaces," such as those utilized in the Macintosh, fell somewhere between video games and blank forms. Thus, a good argument could be made that even if a more traditional applications program user interface were not protectable, a graphical user interface would be.

It was Mr. Russo's idea, however, that copyright protection should extend beyond the visual expression created by a computer program to cover also what he perceived as the most valuable aspect of a mass-marketed computer program: the "relationship" between the program and the user. He believed that the user of a computer program develops a strong subjective impression of the program, to the point where the program develops its own "feel" to the user, separate and apart from the visual expression. One element of that "feel" includes the functions performed by the program; another includes such things as which keys perform which operations.

In essence, however, the "feel" of a computer program, at least as originally conceived, transcends the individual elements of the user interface and incorporates the overall impression made by the program on a user. As a matter of definition, even two computer programs that contain very different user interfaces can "look and feel" the same if the overall impression conveyed by the products is similar.

In 1985, Mr. Russo asked me to co-author an article on the subject of copyright protection for user interfaces of non-video game computer programs. It was during the course of discussions relating to that article that the first debates took place over the term "look and feel" and over the underlying concept. While comfortable with copyright protection over the visual elements of a user interface, I found it difficult to understand fully either the meaning of "look and feel" or the boundaries of the concept. Indeed, it appeared that the whole doctrine was an attempt to pull unfair competition principles into copyright protection for computer programs. Moreover, the amorphous nature of the terminology made it clear that it could be applied to virtually any aspect of a computer program, thereby rendering it useless as an analytical term except for purposes of confusing the issue in order to obtain broader protection.

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1. 101 U.S. 99 (1879).

2. 462 F. Supp. 1003 (N.D. Tex. 1978).

At the time, Mr. Russo and I disagreed over whether the article should concern copyright protection for a computer program's "look and feel" (his term) or a program's "user interface" (my term). I argued that "user interface" was a concrete term, defined as the visual and auditory elements by which a computer program communicates with a user, and that these elements could be subject to copyright protection, as opposed to the vague "gestalt" or "feel" of a program. Whenever I got my hands on the article, I simply replaced the term "look and feel" with "user interface." Mr. Russo changed it back when it was his turn to revise.

This debate was settled, and the term "look and feel" introduced to the wider legal community, when Mr. Russo submitted for publication the final version of the article. It ran in the February 1985 *Computer Lawyer* as "Copyright in the 'Look and Feel' of Computer Software."<sup>3</sup>

The ensuing years have done nothing to convince me that "look and feel" is of any use, either as a phrase or as a concept. Indeed, I believe the problems inherent in "look and feel" are directly attributable to its original conception as a generalized term, designed to cover a variety of very different elements of a computer program's user interface.

Given the broad nature of "look and feel," I do not believe that it can contribute to any meaningful analysis of what is copyrightable and noncopyrightable in a computer program. Instead, analysis should proceed by taking the various elements incorporated in "look and feel" individually and determining which may legitimately be subject to copyright protection. Those elements include the user-visible set of functions, the visual user interface, and non-visible user interface elements. Although interrelated, each of these concepts is conceptually separate and must be analyzed differently.

This approach, it should be noted, is directly (and deliberately) contrary to the original philosophy of "look and feel," which sought to treat all of the elements that contribute to a user's impression of a computer program as part of an overall "gestalt." "Look and feel" is a flawed concept precisely because it leads to treating distinct elements as if they were similar. It is only by rigorously dividing the concept and analyzing its elements separately that meaningful analysis is possible.

## II

### Separate Elements of Look and Feel

The "look and feel" of a computer program includes at least three conceptually different elements: the visual user interface, the set of user-

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3. Jack Russo & Douglas K. Derwin, *Copyright in the "Look and Feel" of Computer Software*, 2 *COMPUTER LAW*. 1 (Feb. 1985).

visible functions, and non-visible elements of the user interface. Each of these elements should be treated separately under copyright law, because they run the gamut from the clearly protectable to the clearly unprotectable.

#### A. Visual User Interface

The "visual user interface" of a computer program consists of the visual elements by which the program communicates to a user.<sup>4</sup> Thus, the term incorporates some, but not all, of the elements of a computer program's user interface as a whole. The correspondence between particular commands and keys on the keyboard, for example, is part of a program's user interface, but is not an element of the visual user interface.

It is difficult to dispute that copyright law protects screen displays. Indeed, it is somewhat difficult to understand how this proposition could ever have been subject to much debate. Virtually all modern user interfaces are conceptually indistinguishable from audiovisual works. Screen displays consist of a large number of stored images, which are called up in rapid progression to form what appears to be a single work.

There are two main distinctions between screen displays and traditional audiovisual works: (1) computer program screen displays normally are much less sophisticated visually than traditional audiovisual works; and (2) computer program screen displays are ordinarily subject to manipulation by the user.<sup>5</sup> Neither distinction should be sufficient to divest copyright protection.

Issues are presented when a visual user interface is simple and contains little graphic content. In such cases, the visual user interface may be uncopyrightable, either because it consists of nothing more than a blank form or simply because it contains insufficient expression to satisfy the requirements of copyrightability. Drawing the line between a copyrightable and uncopyrightable user interface, however, presents issues that are indistinguishable from those presented by very simple literary works. The existence of some works that are unprotectable obviously

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4. It should be noted that the visual and communicative elements of a computer program are not limited to the expression contained on a computer screen. In many programs, communication with the user is mainly carried out through printed forms. This is particularly true of older, batch programming products. Although limitations on the graphic elements that can be incorporated into a paper print-out ordinarily mean that these print-outs are not as visually sophisticated as the contents of most screen-driven interfaces, the fact that a user interface is presented on paper, rather than on a computer screen, is irrelevant to whether visual elements of the interface should be protectable.

5. These distinctions are becoming less meaningful as time goes by, and it is likely that they will disappear entirely within the foreseeable future. Technologies such as multimedia, virtual reality and digital-video interfaces are blurring the line between computer program user interfaces and audiovisual works, a trend that will certainly continue.

cannot mean that the category as a whole is not subject to copyright protection.<sup>6</sup>

Thus, copyright protection is clearly available to the visual user interface element of "look and feel." The relatively simple and constrained nature of many visual user interfaces may, of course, raise merger doctrine and scope of protection questions. As a generic matter, however, visual user interfaces indisputably fall within the categories of works that are subject to copyright protection.

#### B. User-Visible Function Set

The second element incorporated into "look and feel" consists of the set of functions made available to a user by a computer program. In analyzing this element, it is necessary to distinguish carefully the functions performed by the underlying computer program from the visual elements used to convey the functions to the user.

The set of functions made available to a user by a computer program consists of those operations that the program will allow the user to perform. A word processing program, for example, will ordinarily allow the user to: (1) add text to the end of a document; (2) insert text in the middle of a document; (3) delete text from the document; and (4) move text from one location to another. Those operations are part of the set of functions made available to the user.

Although these "user-visible" functions are carried out by the underlying computer program, the functionality of the program itself involves more detailed operations that are not visible to the user. For example, in order to add text to the end of a document, the computer program must decide where to store the information in its memory, and which internal symbols to use to describe elements such as paragraph indentations and the end of a line. Those functional attributes of the computer program may be protectable by copyright law, but they are distinct from the user-visible functions, because the user ordinarily has no knowledge of the underlying computer program's details. Thus, the user-visible function set consists of those operations that the user is allowed to perform, as distinguished from the functional aspects of the underlying program that carry out those operations.

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6. Whether the screen displays created by a computer program are treated as an element of the underlying program, or as a separate copyrightable work, is a matter of semantic quibbling. If the screen displays are treated as a separate copyrightable work, then copying the screen displays will constitute infringement if they contain sufficient expression to qualify for copyright protection. If the screen displays are treated merely as an element of the underlying program, then copying the screen displays will constitute infringement if they contain sufficient expression to qualify as a qualitatively significant portion of the computer program as a whole. In the real world, the results will be identical, regardless of which path is chosen.

The user-visible function set must also be distinguished from the methodology used to convey the functions and from the results of operations to the user. Using the examples of user-visible functions given above, a word processing program might include the following commands: "Add," "Insert," "Delete," and "Move." The command names are distinct from the underlying functions, because different names could be used to describe the same functions. This distinction may be important, because the fact that the set of command names may be copyrightable (subject, of course, to the merger doctrine) does not mean that the set of underlying functions is necessarily subject to copyright protection. Moreover, in a computer program, the commands might be listed in a menu bar at the top or bottom of the screen. This feature constitutes an element of the visible user interface, and, as such, may be protectable. Once again, however, the set of functions must be distinguished from the method used to convey those functions to the user. Copyright protection over one does not necessarily imply protection over the other.

In analyzing copyright protection over the set of user-visible functions, the concept must be treated separately from the underlying program functionality as well as from the user interface, by which the commands may be invoked. The fact that both the underlying program functionality and the command menu display may be copyrightable does not mean that the underlying set of functions either is or should be protected by copyright law.

In my opinion, the set of user-visible functions should not be subject to copyright protection. This element of a computer program seems the most suitable for definition as the "idea" of the program, because it consists of those operations that the program allows the user to accomplish. This is distinct from the programming that carries out those operations, as well as from the visual elements by which the program communicates to the user.

Treating the set of user-visible functions as the idea of the computer program<sup>7</sup> is consistent with recent opinions rejecting the Third Circuit's conclusion in *Whelan Associates, Inc. v. Jaslow Dental Laboratory, Inc.*<sup>8</sup> *Whelan* held that the idea of a computer program consists of the most general description of the program's function, with everything else consisting of protectable expression. The Ninth Circuit, in contrast, has recently held that exact copying of an extremely short routine contained in a computer program was allowable under the merger doctrine, because the programming contained in that routine was the only way to carry out

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7. This could also constitute the idea of the program's user interface, to the extent that the user interface is treated as a separate copyrightable work.

8. 797 F.2d 1222 (3d Cir. 1986).

the function of the routine.<sup>9</sup> Such an analysis would be impossible under the *Whelan* approach, because, under *Whelan*, the function performed by a portion of the program would necessarily constitute expression.<sup>10</sup>

The set of user-visible functions seems to be the best mechanism available for separating what a program does from how it does it. The "what versus how" question is well-suited for distinguishing the level of copying that promotes competition from the level that retards innovation: the level that promotes competition will be defined as the copying of "ideas"; the level of copying that retards it will be defined as the copying of "expression."

### C. Non-Visual User Interface Elements

Non-visual user interface elements are those characteristics of the program that are perceivable to the user, but that do not correspond either to visual or programming elements. For example, a popular word processing program for IBM-compatible computers, WordPerfect, uses the F1 function key as a means of immediately terminating most operations. Thus, if a user has blocked out certain text for deletion, and then decides not to proceed with the operation, the F1 key may be used to cancel the deletion. F1 can also be used to cancel a variety of other operations.

The F1 key is not part of the visual user interface, because it does not appear on the screen. Thus, this feature of the program cannot be protected as part of the screen output. Protection must come, if at all, as a result of protecting the underlying computer program, which necessarily contains programming related to the correspondence between F1 and cancellation.

If the set of user-visible functions is defined as the idea of a computer program, then the non-visual user interface elements of necessity would constitute protectable expression. Such elements, however, exist at a relatively high level of abstraction, because it will ordinarily be possible to create the same non-visual user interface elements through the use of very different computer programs. Thus, protection of non-visual user interface elements should be relatively narrow, requiring a very high degree of similarity, if not identical copying. In addition, care should be taken to avoid protection of standard or commonplace elements.

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9. *Sega Enters., Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1993) (Order Amending Opinion, filed January 6, 1993).

10. *See also* *Computer Assocs. Int'l v. Altai*, 982 F.2d 693 (2d Cir. 1992); *Plains Cotton Coop. Ass'n v. Goodpasture Computer Serv.*, 807 F.2d 1256 (5th Cir. 1987).

### III Conclusion

To the extent that "look and feel" has ever had any utility as a term or as an analytical concept, that utility no longer exists. The term resists meaningful definition, and its use contributes to overbroad generalizations that support theories of protection inconsistent with fundamental principles of copyright law.

Abandoning the term, however, does not mean abandoning protection over all "look and feel" elements. The visual user interface is clearly subject to copyright protection. The non-visual user interface may also be subject to protection as a part of the underlying computer program.

The set of user-visible functions, on the other hand, appears best suited as a definition of the unprotectable idea of the program. At the least, this concept may aid in defining the distinction between a program's function and the manner in which it carries out its function. This in turn may help to define the boundaries between idea and expression.

As a term and as a concept, "look and feel" does not help in analysis of this type, but instead retards it. The term should be abandoned.

