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Apple v. Microsoft: Virtual Identity in the GUI Wars

by Joseph Myers

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{1} The company that controls the interface of the next major operating system will have the ability to set the standards for application software.[1] It was not surprising that Apple Corporation began its fight to stop Windows from being that major operating system[2] after Microsoft Corporation introduced the various versions of its Windows software[3] and announced plans for this program to replace the already widely selling DOS operating system. Unfortunately, Apple chose to conduct this war on the complex and often confusing battleground of copyright law, which ultimately proved to be its downfall.[4]

I. Copyright Laws and Computers

{2} The basic purpose of copyright law is "[t]o 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."[5] The idea is to benefit the public by encouraging individual effort through the enhancement of personal gain.[6] Typically, copyright protection is awarded to literary work, and Congress has included the code that makes up a computer program in this category.[7] Additionally, some non-literal expression is protected. For example, not only are the actual words in an author's copyrighted novel protected, but the structure and plot may be protected as well.[8] The debate[9] in the area of computer science is whether, by analogy, this means that the result, output, organization or display (the "look and feel") of a computer program might be protected as well, even if the source code is different.[10] This is to be distinguished from the idea underlying the program, which is not subject to copyright protection.[11]

{3} To establish copyright infringement, the plaintiff must prove ownership of a valid and existing copyright and copying by the defendant.[12] This copying can be inferred from circumstantial evidence.[13] Usually the plaintiff must prove that the defendant had access to the plaintiff's copyrighted work and that there is a "substantial similarity" between the two works.[14] If the plaintiff is arguing for the protection of the "total concept and feel" of the product, but the discrete elements that make up the whole are not individually copyrightable or protectable, then only virtually identical copying is barred.[15]

{4} As will be shown below, Apple advocated a substantial similarity standard to protect its interface.
However, because the interface was composed of elements not protected by copyright law, this position would prove to be Apple’s downfall.

A. The Substantial Similarity Standard

{5} The substantial similarity standard is the most common test applied in copyright infringement actions. This standard states that there must be substantial similarity not only of the general ideas of a work, but in the expression of those ideas as well.[16] This test is usually applied in a two-step process. The first part is sometimes called the extrinsic test, and is a comparison of specific criteria which can be listed and analyzed. [17] This requires analytic dissection and may often be decided as a matter of law.[18] The second part of the test is sometimes called the intrinsic test. This is a comparison based on the "response of the ordinary reasonable person" to the similarity between the two works.[19]

{6} Broken into these two branches, the standard of substantial similarity is still subject to varied interpretation and judicial discretion. As Judge Learned Hand said, "[N]o principle can be stated as to when an imitator has gone beyond copying the 'idea,' and has borrowed its 'expression.' Decisions must therefore inevitably be ad hoc."[20] Despite the ambiguous nature of this test, it is obvious that it does not require anything close to exact copying in order to find copyright infringement.

B. The Virtual Identity Standard

{7} This standard is defined less clearly than the substantial similarity standard. The Ninth Circuit has stated that "even similarity in expression is noninfringing when the nature of the creation makes similarity necessary."[21] When an idea can only be expressed in a limited number of ways, or the expression of the idea is so intermingled with the idea itself as to become merged, to grant protection of the resulting expression to one party would be to confer a monopoly on that idea.[22] Since copyright protection is supposed to extend only to the expression of ideas and not to the idea itself, courts try to avoid this result. Therefore, only virtually identical copies would be considered violations.[23]

{8} What is meant by virtually identical is not entirely clear. The courts have also used the word identical alone.[24] Since the standard is most often expressed with the modifier "virtually," we can assume that the two works need not be exactly alike in every respect. Finally, for purposes of understanding this case, we must recognize that the virtual identity standard is much more stringent than the substantial similarity standard.[25]

II. The Case

A. Background

{9} The Xerox Corporation first developed a graphical user interface ("GUI") during the 1970s.[26] Xerox decided not to market the product but did demonstrate it for representatives of Apple in 1979.[27] Apple, which was building computers based on a faster, more powerful processor chip, developed the new interface for their Lisa and Macintosh personal computer lines to make the computers more user-friendly.[28] When
Intel Corporation, the manufacturer of the processor on which the DOS-based systems were running, developed new chips also capable of running a GUI.[29] Microsoft announced plans to develop Windows. [30] The announcement came in late 1983, but Windows version 1.0 was not shipped until 1985. [31] This early version was slow, but when version 2.0 was released in 1987, Windows began to seriously challenge Apple in this area. [32]

1. The Facts

{10} In 1985, Apple and Microsoft entered into a secret agreement. [33] This agreement granted Microsoft a license to use the windows and icons in the development of version 1.0. [34] In exchange, Microsoft agreed to develop software for the Macintosh platform. [35]

{11} The agreement held until Microsoft released Windows version 2.03, which was described by Apple as being more "Mac-like." [36] Apple filed this law suit against Microsoft and its sub-licensee Hewlett-Packard claiming that their products infringed on Apple's copyrights in the presentation and control of on-screen information. [37]

{12} An extensive series of motions and refilings followed. By the time the case reached the Ninth Circuit, the lower courts had found for Microsoft on the central issue of copyright infringement. The basis of this decision was that the appropriate standard to apply was virtual identity. Apple did not argue that the two works were virtually identical. Rather, they argued that the appropriate standard to protect "look and feel" works is substantial similarity. [38]

2. "Look and Feel" Protection

{13} Although this expression has become common due to high profile litigation in this area, [39] the protection of the "look and feel" of software is a relatively new area of the law. [40] There are, however, a few sources of authority that show the development of this doctrine. At the end of the spectrum offering the most protection for the plaintiff's work there is Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc. [41] The two computer programs in this case were written in different programming languages. [42] so there was no copying of code. The similarities were found exclusively in structure, function and output. [43] The Third Circuit applied common law principles and determined that with access and substantial similarity there was copyright infringement, notwithstanding the fact that there was more than one way to express the idea involved. [44] This reasoning is consistent with Apple's argument, as it looks for substantial similarity in the work as a whole, rather than dissecting it into its component parts first. Unfortunately for Apple, this area of law continued to evolve.

{14} At the other end of the spectrum is Computer Assocs. Int'l, Inc. v. Altai, Inc. [45] decided six years later. In this case, an employee of Computer Associates took code with him when he left to begin work at Altai. [46] After this was discovered, Altai began reprogramming the product in question using engineers completely unfamiliar with the copied code. [47] This left only the non-literal program structure to be protected. [48] The Altai court rejected the Whelan approach, [49] designing instead a three-part test. This test called for the abstraction of the various layers of program structure, filtration of unprotectable elements, and a comparison of the remaining protected elements with those of the infringing product. [50] The court held that this dissection process (popularly known as the "abstraction-filtration-comparison" test) was necessary to preserve "certain fundamentals of copyright doctrine." [51] It is this approach that Apple fought against. It is
B. The Decision

1. The Contract Claim

{15} The Court of Appeals first held that the license agreement covered Microsoft's right to use display elements and was not, as Apple argued, a license for only the version 1.0 interface. [52] In the agreement, Microsoft acknowledged that the "visual displays" used in Windows 1.0 were "derivative works of the visual displays generated by Apple's Lisa and Macintosh graphic user interface programs." [53] The agreement licensed the use of "these derivative works" [54] to Microsoft. As such, the agreement was written to license the visual displays as derivative works for use in the interface and not to license the interface itself. [55]

{16} In an earlier draft of the agreement, Apple attempted to limit the license to version 1.0 as a whole. Microsoft removed this provision from the agreement, and Apple agreed to the final draft which omitted this language. [56] As a result, the parties agreed to license only the individual elements. Since the agreement contained an integration clause which precluded contradiction of its terms by collateral understandings, all further arguments concerning extrinsic evidence were ineffective. [57]

{17} For these reasons, the court held that the licensing agreement prevented Apple from maintaining a copyright infringement action for those specific elements covered by the license. Accordingly, the court identified which elements of the screen displays were licensed and which were not. [58] The court then dissected the remaining elements to determine which fit into limiting categories in order to distinguish expression from ideas. [59] The goal was to prohibit broad copyright protection for those elements which flowed naturally from basic ideas, those which were expressed in one of only a few possible ways (given the constraints of the computer environment), or those which lacked originality.

2. Merger

{18} The doctrine of merger is based on the difficulty that sometimes exists in separating the idea from its expression. [60] Recall that only the expression and not the idea itself is subject to copyright protection. [61] In cases where this distinction between idea and expression is difficult, if not impossible, to make, the expression will only be protected from virtually identical copying. This limited protection prevents granting to the copyright holder a virtual monopoly over the underlying idea. [62] "For example, in this case, the idea of an icon in a desktop metaphor representing a document stored in a computer program can only be expressed in so many ways. An iconic image shaped like a page is an obvious choice." [63]

3. Scenes à Faire

{19} Due to the functional purpose of a GUI, the constraints of the hardware and the limited number of ways to express certain ideas, the scenes à faire doctrine further limits copyright protection. [64] When features of a program are "indispensable, or at least standard, in the treatment of a given [idea]," they are treated as if they were in fact ideas. [65] Furthermore, the expression of these ideas is only protected from virtually identical copying. [66] In the case of a GUI, a programmer designing a windowing system like the ones in dispute has
only two options for displaying multiple windows at the same time: either tile them or have them overlap. Due to this constraint and the fact that overlapping windows have been the preferred choice of users in these interfaces, the court determined that the use of overlapping windows would not be subject to substantial similarity analysis.[67]

4. The *Feist* Originality Doctrine

{20} In *Feist Publications, Inc. v. Rural Tele. Serv.*,[68] the Supreme Court held that the Constitution extends copyright protection only to those elements of a compilation that are original to the author.[69] Rural Telephone claimed a copyright in their telephone book. When *Feist* Publications appropriated portions of Rural's listings, Rural sued *Feist* for copyright infringement.[70] The Supreme Court agreed with *Feist* by holding that Rural's book was not the subject matter of copyright.[71] The fact that one company took the time to compile and alphabetize telephone lists did not automatically entitle them to copyright protection for the work. Rather, there must be some creativity or originality involved, such as a novel or unusual categorization or selection.[72] Since alphabetical listing is not novel, it is not protectable.[73]

{21} The *Apple* court extended this doctrine to apply to any dissectable whole, rather than mere fact compilations and databases.[74] The court rejected *Apple*'s contention that, in looking for originality, the court should look to the work as a whole.[75] Relying on *Feist*, the court looked only for elements of the work original to the author.[76] Considering that *Apple* admitted to borrowing heavily from Xerox Star and a research report from IBM Pictureworld, the court did not find the originality that *Feist* requires.[77]

5. The Result

{22} The court held that virtually all the elements identified as similar by *Apple* fell into one of the limiting categories, and therefore was either not subject to broad protection or not copyrightable at all.[78] The only other basis for protection left to *Apple* was to compare the compilation and arrangement of these elements. [79] As stated above, when comparing the over-all "look and feel" of a product, if the discrete elements making up that product are not protectable or copyrightable, the appropriate standard is virtual identity, rather than the substantial similarity standard for which *Apple* argued. *Apple* did not oppose Microsoft's summary judgment motion, as *Apple*'s only remaining argument was that the environments were virtually identical. Since this was not a sound argument, *Apple* chose not to make it. Therefore, when the Court of Appeals applied the same standard, *Apple* necessarily lost.[80]

III. Analysis - Choice of Standards

{23} At first glance, it may appear that the court in *Apple* chose between two standards. The court itself refers to placing the case on the continuum that was created from the earlier decisions.[81] However, a careful reading reveals no such choice.

{24} *Apple* had licensed certain elements of its program to Microsoft. These elements were therefore not subject to copyright protection. For this reason it was proper, even necessary, for the court to dissect the program to determine which elements were protectable and which were not. This left the court without any real options in choosing a standard. Since the discrete elements making up the whole were not subject to protection, the whole could only be protected from virtually identical copying. To hold otherwise would
extend protection beyond what copyright was designed to protect.

Apple argued that the court should have compared the "look and feel" of the products before dividing the program into discrete elements.[82] If the case had proceeded more quickly, it is possible that Apple might have prevailed. However, by the time this case was decided, copyright law had evolved to work against Apple.[83] Accordingly, the court applied the correct standard - virtual identity.

IV. Conclusion

To put this case into perspective, it might be useful to look at the computer and software industries to understand what was truly at issue. Some authorities state that it has become clear "that some type of Windows-like desktop metaphor will dominate the present and next generation of personal computers and work stations."[84] Microsoft has taken away a large part of Apple's edge, and Apple would like it back.[85] It is important to recognize that this litigation had far-reaching affects on both companies' plans for the future. The winner was destined to gain more influence in setting the standards for future developments.[86]

There is also the matter of product identification. For example,

[a]n employee on the way back to his office [who] glances at the illuminated screen of a nearby computer . . . sees a small trash can in the lower right corner; graphics of labeled file folders, documents and applications in the center, and a strip of words across the top of the screen . . . [would] immediately assume that the computer is an Apple Macintosh.[88]

It is this kind of recognition that the developers are trying to protect. As this case demonstrated, copyright protection does not effectively achieve this goal.[89]

It is not difficult or unreasonable to conclude that Microsoft borrowed ideas from Apple to design its program. The similarities are present for individual judgment. But it is not enough to show that Microsoft copied Apple. It must also be shown that Apple had a right to the exclusive use of those elements. As this case demonstrates, this is not an easy standard to meet. With the addition of the stringent virtual identity standard, it is unlikely that the courts and copyright law will provide much protection for future "look and feel" plaintiffs.

Footnotes
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[10] See, e.g., Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222 (3d Cir. 1986), cert. denied, 479 U.S. 1031 (1987). For example, identical display screens could be created using two different computer languages. As such, neither "author" would have used any of the same potentially copyrighted code as the other, and yet their products are indistinguishable. Id.


[14] Id.


[16] Sid & Marty Krofft Television Prod., Inc. v. McDonald's Corp., 562 F.2d 1157, 1164 (9th Cir. 1977).

[17] Id.

[18] Id.

[19] Id. See also International Luggage Registry v. Avery Prods. Corp., 541 F.2d 830, 831 (9th Cir. 1976).


[22] Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).


[24] E.g., Rachel, 831 F.2d at 1507 ("[S]ince the works at issue here are not identical, we agree that 'no reasonable jury could conclude that the indispensable expression of these similar ideas is virtually identical.'").

[25] See, e.g., Apple Computer, Inc. v. Microsoft, Corp., 35 F.3d 1435 (9th Cir.), cert. denied, 63 U.S.L.W. 3518 (U.S. Feb. 21, 1995) (No. 94-1121). In fact, the Apple Court refers to this as "'thin' protection." Id. at 1438.

[26] Terry, supra note 1, at 98.


[28] Terry, supra note 1, at 99.


[31] Terry, supra note 1, at 100. The delay in shipping was apparently due to bugs in the final stages of development. Id.

[32] Andrew Pollack, Microsoft Tries Again to Set a Standard, N.Y. TIMES, May. 7, 1990, at D1. DOS-based systems already had the bulk of the personal computer market. Id. However, Apple had made progress
when their graphical system was combined with a laser printer that could use the Adobe System PostScript printer language. They were able to set the standard for Desktop Publishing. It was this area that the new products threatened and that Apple was seeking to protect. Terry, supra note 1, at 100-01.


[40] Terry, supra note 1, at 139. However, it is related to the more commonly known and older area of copyright law known as the "total concept and feel" approach. Id. at n. 213.

[41] 797 F.2d 1222 (3d Cir. 1986).

[42] Daniels, supra note 8, at 621. The original program was written in Event Driven Language (EDL), while the "offending" program was written in BASIC. Id.

[43] Id. at 622.

[44] Id.


[46] Daniels, supra note 8, at 622-23.

[47] Id. at 623.

[48] Computer Assocs. Int'l., Inc. v. Altai, Inc. 775 F. Supp. 544, 561-62 (E.D.N.Y. 1991). The district court found that the only similarities were the result of the shared functions and operating systems, and therefore were not protectable. Id.

[49] Altai, 982 F.2d at 702, 705-06.

[50] Id. at 706.
[51] Id. at 712.


[53] Id. at 1440 (quoting the 1985 license agreement between Apple and Microsoft).

[54] Id. (quoting the 1985 license agreement between Apple and Microsoft).

[55] Id.

[56] Id. at 1440-41.

[57] Id. at 1441.

[58] Id. at 1442-47.

[59] Id. at 1444-45.

[60] Id. at 1444. See also Gerald Sobel & David Einhorn, Software Protection and Licensing, in TECHNOLOGY LICENSING 1989, at 369 (PLI Patents, Copyrights, Trademarks, and Literary Property Course Handbook Series No. 265, 1989).

[61] See supra note 11 and accompanying text.

[62] See, e.g., Sid & Marty Krofft Television Prod. Inc. v. MacDonald's Corp., 562 F.2d 1157, 1167-68 (9th Cir. 1977); Herbert Rosenthal Jewelry Corp. v. Kalpakian, 446 F.2d 738, 742 (9th Cir. 1971).

[63] Apple, 35 F.3d at 1444.

[64] Id. at 1444-45.


[66] Id.

[67] Apple, 35 F.3d at 1444.


[70] Feist, 499 U.S. at 343.

[71] Id. at 362.

[72] Id. at 349.

[73] Id. at 363.

[74] See Apple Computer, Inc. v. Microsoft Corp., 35 F.3d 1435, 1445 (9th Cir. 1994).
Terry, supra note 1, at 156-58. Of course, it is worth repeating that the choice of standard ended the inquiry because Apple chose to argue that the works were virtually identical, having focused instead solely on arguing which standard on apply. Arguably, Apple might have gone about this a more effective way.

See Terry, supra note 1, at 106-07. For example, Microsoft has announced plans for more advanced versions of Windows and both companies are working on future network interfaces based on the environment. "Any legally induced pause in the development of the Windows line of OS products would seriously damage and possibly destroy Microsoft's strategy." Id.

Kellner, supra note 85, at 1011.

The difficulties that were presented to Apple by this case makes one wonder why the attorneys for Apple chose to pursue their claim under copyright law. For an argument that Trade Dress law might have been better able to achieve Apple's goals, see generally Kellner, supra note 85.