

The Ups and Downs of Look and Feel

Just over a year ago, it seemed as if Apple might succeed with its look and feel claim against Microsoft and Hewlett-Packard. It also appeared that look and feel was not at issue in the *Lotus vs. Borland* case. Now Apple's claim appears to be out the window, and the "feel" part of look and feel has been added to the *Lotus vs. Borland* suit. Last September's "Legally Speaking" column provided an update on the major look and feel lawsuits. It was composed with the expectation that no significant developments would happen in these two cases until they reached the appellate courts, which seemed far off into the future. Unfortunately, by the time the column appeared in print some months after it was submitted, it was already out of date.

September's column was current to June 1992. In late July and early August of 1992, new opinions were issued in *Apple vs. Microsoft* and *Lotus vs. Borland*. In each case, litigants requested the judges presiding over their cases to reconsider rulings each had rendered in the spring of 1992.

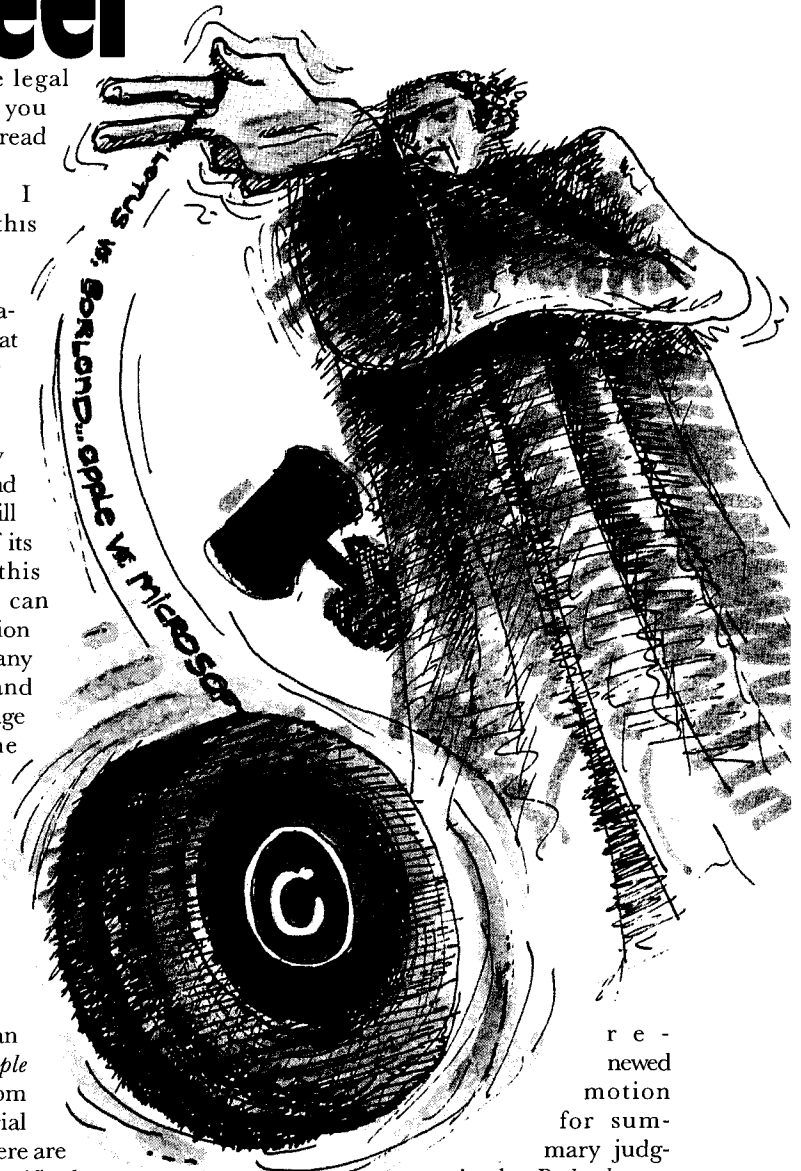
Apple probably hoped that Judge Walker would, upon reflection, come to regard his April ruling "from the bench" (that is, orally delivered in open court) as impulsive and wrong. One can imagine Apple's disappointment when Judge Walker's August opinion strongly confirmed his April ruling on look and feel and other user interface issues in favor of Microsoft and Hewlett-Packard. Furthermore, the judge did so in a well-reasoned opinion which admirably interweaves detailed analysis of the copyright issues with an understanding of the technology issues the case involves, and a balanced public policy discussion. This opinion seems to drive a stake through the heart of user interface look and feel claims, at least in the Ninth Circuit.

(Normally I consider it my job

to summarize legal opinions so you won't have to read them yourselves, but I recommend this opinion. It provides a truly helpful explanation about what aspects of user interfaces can or cannot be protected by copyright law and why. While I will review some of its contents in this column, you can find the opinion by going to any law library and turning to page 1,006, volume 799, of the Federal Supplement books, or by accessing the Lexis or Westlaw databases.)

Even though look and feel is no longer an issue, the *Apple* case is far from over at the trial court level. There are a number of specific element claims on which the judge has not yet made a ruling. And the August opinion permits Apple to proceed to trial on its copyright infringement case against Hewlett-Packard for a few specific user interface elements.

Lotus had better luck with its



renewed motion for summary judgment in the *Borland* case.

In March, Judge Keeton had denied both *Lotus's* and *Borland's* motions for summary judgment, thereby signaling the case would proceed on trial on all major issues. In June, an appellate court ruling from a neighboring jurisdiction criticized the *Paperback* decision and rejected its analytic approach to judging copyright infringement. This led *Borland* to hope that Judge Keeton would change his mind in *Borland's*



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The July opinion is similar to Judge Keeton's previous *Lotus* opinions by its use of his own distinctive framework for analyzing the issues presented by the case, rather than by a close analysis of prior case law, the statute, and copyright principles, as is standard in judicial opinions. The July opinion does, however, explain why the judge thinks his approach can be reconciled with that used in the appellate court opinion on which Borland was relying. The July opinion also speculates about the similarity in "feel" that would result if a second program accepted the same keystrokes as a first program. Lotus took up the court's invitation to add this issue to the case by amending its complaint against Borland to charge copyright infringement because new versions of Quattro Pro accept the same keystrokes as Lotus 1-2-3.

Both Apple and Borland would like very much to get the most important issue in their cases to an appellate court very soon. Normally, no appeal can be taken in a case until after all issues have been resolved at the trial court level. There is, however, a procedure by which a judge can "certify" a particular legal issue for early appellate review. Apple has tried to persuade Judge Walker to certify the look and feel issue for an early appeal, and Borland has sought certification of Judge Keeton's ruling on the command structure issue. Neither judge has granted these certification motions.

This is truly unfortunate. An appellate ruling on the major issues in these cases would probably lead to a prompt resolution of both litigations. It would probably also end the uncertainty felt by the software industry about whether look and feel and/or command structures can be protected by copyright law. (Theoretically, either case could go to the Supreme Court for a more definitive resolution, but in practice, cases almost never get farther than the appellate court level because the Supreme Court takes such a small percentage of the cases appealed to it.) Consequently, the *Apple* and *Lotus* cases will continue to slog their tortuously slow and expensive ways through the multiple stages of trial

court litigation, and the law on look and feel as well as on specific user interface elements, such as command structures, will remain uncertain for the foreseeable future.

Look and Feel Again Rejected in Apple

In the part of his August opinion discussing his rejection of Apple's look and feel claim, Judge Walker observed that "look and feel" as a concept had been soundly criticized by copyright commentators (citing two sources, one of which was my May 1989 *Communications* article "Why the Look and Feel of Software User Interfaces Should Not Be Protected by Copyright Law"). The opinion went on to explain why the judge disagreed with Apple's assertion that prior Ninth Circuit case law (which Judge Walker would be required to follow because he is in this circuit) supported protection for the look and feel of software. Nor did the judge think Apple had presented a persuasive factual basis for interpreting copyright law as extending protection to the look and feel of the Macintosh interface.

The principal reason the judge had given in April for his rejection of Apple's look and feel claim was that Apple had not identified what "look and feel" it was trying to protect apart from that which would naturally result from incorporation into one user interface of a number of specific interface elements the judge ruled were either unprotectable by copyright law or covered by the license Apple had granted to Microsoft some years ago. The August opinion concluded Apple's "gestalt-in-the-arrangement" claim was all that was left to argue in view of the fact so many elements of the interface were licensed, too functional to be protectable by copyright law, or not really original to Apple.

The judge also said Apple's arrangement of the principal elements of the Mac interface "serves a functional purpose in the same way the visual displays and user commands of the dashboard, steering wheel, gear shift, brakes, clutch and accelerator serve as the user interface of an automobile. Purely functional items

or an arrangement of them for functional purposes are wholly beyond the realm of copyright." This was not to say that nothing about the interface could be protected by copyright law, but because so much about the interface and its arrangement of elements was functional, it was necessary for the court to examine the interface very closely to determine what if any separable expression, artistic or otherwise, it might contain and to ensure similarities pertained to expressive elements before infringement was found. Judge Walker regarded this approach as consistent with the "successive filtering" method for separating unprotectable from expressive aspects of copyrighted computer programs recently endorsed by the Second Circuit Court of Appeals in an already much-cited *Computer Associates vs. Altai* decision.

The characterization of the Apple interface as functional was a big disappointment for Apple which had consistently asserted in the Microsoft's litigation its interface was artistic and aesthetically appealing. Apple's prospects for eventually persuading the appellate court to adopt its characterization of the interface as artistic were dimmed by two recent rulings by the Ninth Circuit Court of Appeals in software copyright cases wherein the court spoke of computer programs (including user interfaces in one of these cases) as functional works which get "thin" protection from copyright law, as well as by other copyright case law treating as functional works in which the artistic and functional aspects of a work are intertwined.

The only recent decision that may have brightened Apple's prospects for winning an appeal on its look and feel claim was issued by the Court of Appeals for the D.C. Circuit in the *Atari vs. Oman* case.

Atari vs. Oman

For the past several years, Atari has been trying to register its claim of copyright in the "Breakout" videogame. Although the Copyright Office generally issues registration certificates to copyright claimants

without much scrutiny about how much "originality" is displayed in the work, the office has twice denied Atari's application to register the Breakout game on the ground that Breakout lacks the minimum spark of original expression necessary to support a claim of copyright. Twice Atari has challenged the Register's denial by appealing it to the D.C. Circuit, and twice now Atari has gotten the appellate court to agree that the reasons given by the Register for the denial were not persuasive.

Atari wants to register Breakout as an "audiovisual work." Motion pictures are a classic example of this category of work; however, many videogames have also been registered with the Copyright Office as audiovisual works in the past decade. Copyright registration does not mean there will be any protection for the game or its constituent elements (which copyright law regards as the work's "ideas"), but the fanciful graphics often embellishing the games will be considered protectable "expression."

Oman (who is the Register of Copyrights) has argued Breakout consists merely of certain simple geometric shapes. That is, it depicts a brick wall which is sequentially demolished as a ball in motion strikes particular bricks and knocks them off. Neither in themselves nor as combined, do these shapes, in the Register's view, exhibit the kind of expressive creativity necessary to support a copyright registration.

The D.C. Circuit thinks the Register should have considered whether the "dynamic flow" of the work was expressive enough to be protectable by copyright law. Even if individual aspects of the game, such as its geometric shapes, cannot be protected by copyright, said the court, that doesn't mean there can't be expressiveness in the overall effect of a combination of those elements. The court also observed that the ball in the Breakout game does not behave in a "standard" way. That is, the arc of the ball in the videogame differs from that which would be produced by a ball operating in the physical world. And the wall in the videogame doesn't look or act like a wall in the physical world which the court

thought might make it fanciful enough to meet copyright law's "originality" standard. No reference was made to look and feel, but it doesn't take much imagination to frame Apple's look and feel claim in much the same way as was done in *Atari vs. Oman*.

The appellate court has not ordered the Register to issue a registration certificate to Atari, but only to reconsider the application in light of the issues raised in the court's opinion. The Register may decide to stop objecting to registration of this work, having had his registration decision overturned twice already. After all, it is the role of the courts to decide the law, and the role of the Copyright Office to administer the copyright system in accordance with what the courts say is the law.

However, the Register may also find another argument for denying registration in this case. In the Register's position, I would argue the "dynamic flow" to which the court referred was an inseparable part of its behavior as a game, which under the copyright statute, longstanding rules of copyright law, and the Second Circuit's recent ruling in the *Computer Associates vs. Altai* case is unprotectable by copyright law. Not only is the overall game unprotectable, but so too should be particular game elements, such as the virtual wall, the ball, and its arc, unless there is some pictorial fancifulness to their depiction to serve as expression.

Apple's chances for a successful appeal of its look and feel claim are unquestionably improved by the *Atari vs. Oman* decision, but even this case isn't over yet and the Ninth Circuit might well decide not to follow the D.C. Circuit's ruling or might find some basis for distinguishing the *Apple* case from the *Atari* decision.

Specific Element Claims In Apple

As significant as Judge Walker's rejection of look and feel is, the part of his August opinion that may have a more long-lasting effect in the copyright case law may well be that which addresses Apple's claim to protectability of specific elements of the Macintosh interface. In his April rul-

ing from the bench, the judge had given only a cursory explanation for his ruling on the specific element claims (e.g., A1 and A8 were rejected under copyright law's merger doctrine). The August opinion gives detailed explanations for each ruling on each specific claim. Because the individual element claims are many in number, it is infeasible to discuss all of them in detail here. The following is a discussion of some representative examples of the analysis employed to decide the specific element claims.

Overlapping windows was probably the most important of Apple's specific element claims against Microsoft. Apple argued that its design for overlapping windows was expressive rather than functional because of the availability of other windowing techniques which Microsoft could have used (one of which had been used in Windows 1.0). Microsoft argued that others had used overlapping windows before Apple did, and besides, overlapping windows had become a common or standard feature in the industry which under the *scenes a faire* (standard plot devices) doctrine made it unprotectable by copyright law. In addition, Microsoft argued that a number of functional considerations, such as the amount of processing power necessary to generate certain window configurations, substantially limited the efficient design of windows. The judge discussed in some detail the evolution of windowing techniques, concluding Microsoft's assertions about the unprotectability of this feature were sound.

A number of claims pertained to specific means by which users could open or close objects displayed on the screen, such as the use of double-clicking on an icon to bring about an animation. Judge Walker ruled these were unprotectable under section 102(b) of the copyright statute which excludes such things as procedures from protection by copyright. Still other claims, such as centering the title of an icon below the image of it, were rejected as standard or commonplace in the industry, and others, such as the associating a different iconic representation for each

different type of object, were too abstract to be protectable.

Apple fared somewhat better with some of its icon and animation claims. Hewlett-Packard's use of a trash can icon to represent file deletion and an animation displaying the icon as "bulging" when a user deletes a file, will go to trial for a determination as to whether there is substantial similarity between Hewlett-Packard's and Apple's representations of this symbol. Another ruling on an icon claim would seem to suggest that copying of icons may be dangerous conduct. One of the specific element claims against Hewlett-Packard was for the use of an image shaped like a file folder to denote directories. In April, this element had been ruled unprotectable because it was not original to Apple. Hewlett-Packard asked the judge to rule that it was also unprotectable under various limiting doctrines of copyright law, such as the merger doctrine. Because the judge perceived there to be a number of other pictorial representations that could be used to represent directories, he rejected Hewlett-Packard's argument and reaffirmed his ruling on the lack of originality grounds.

Judge Walker Almost Got *Lotus vs. Borland*

Some months after the Lotus lawsuit against Paperback Software was settled, Borland anticipated that Lotus was considering filing a lawsuit against it. Companies that have a reasonable apprehension a lawsuit is about to be filed against them can initiate a lawsuit seeking what is called a "declaratory judgment" about the issue in dispute. Borland filed such an action against Lotus seeking a declaration that the Quattro Pro emulation interface did not infringe Lotus's copyrights. This case was assigned to Judge Walker (yes, the very judge hearing *Apple vs. Microsoft*). Borland was not so much trying to get its case heard by Judge Walker (for at the time, this judge was quite new to *Apple vs. Microsoft*) as it was trying to avoid having the case heard in Massachusetts.

One reason Borland wanted any litigation between it and Lotus to

happen in California was that if it occurred in Massachusetts, the chances of the case being assigned to Judge Keeton were very high. (Courts often assign cases to judges when they have experience with cases of a particular sort. This is why both Judge Walker and Judge Keeton were likely to be assigned these kinds of cases.) And, sure enough, after Lotus persuaded Judge Walker to let the dispute between Lotus and Borland be litigated in Massachusetts, Judge Keeton was assigned to hear it.

The Test for Copyrightability Used in *Paperback*

In *Paperback*, Judge Keeton devised his own unique three-step test by which to judge the copyrightability of the Lotus interface. The first step of this test aimed at assessing where along the continuum from the most abstract representation of the idea in the work to its most elaborated expression was the allegedly infringing aspect to be found. The second step focused on whether there was only one, a very small number, or many ways for this aspect to be done. If many, it would be regarded as expressive. If limited to one or a very small number of ways, then "idea" and "expression" would be "merged" and it could not be protected by copyright law. The third step inquired if the aspect on which the infringement claim was to be based was a "substantial" part of the protected work. If it was, and it has been copied from the plaintiff's work, infringement would be found.

As applied to *Paperback*, the judge found all aspects of the Lotus interface to be particularized enough to be potentially expressive. Merger was found, however, as to the two-line moving cursor menu and inverted "L" of the spreadsheet design because of the limited number of ways they could be done. But the judge ruled other aspects of the 1-2-3 user interface could be done many different ways. Thus, the particular way in which Lotus had done these functions was unconstrained expression. Because Paperback had copied virtually the entire 1-2-3 interface, and this was unquestionably a substantial

part of the Lotus program, Paperback was found liable for copyright infringement.

Because Borland's chief defense in the copyright infringement suit subsequently brought against it by Lotus was that the command structure used in its 1-2-3 emulation interface was "uncopyrightable," application of the *Paperback* test seemed likely to lead to a similar finding of infringement. So Borland has tried very hard to persuade the judge to employ a different test in its case.

The Copyright Law Professor Amicus Brief

Borland was not alone in its criticism of the *Paperback* test. Out of concern that the continued use of the *Paperback* test would have adverse consequences on the development of copyright doctrine and on the software industry as well, I and 10 other copyright scholars—among them, leading thinkers in the field from law schools such as Yale, Harvard, Duke, Vanderbilt, and UC Berkeley—submitted a brief in the *Lotus vs. Borland* case as *amicus curiae* (friends of the court).

The brief did not take a position on the merits of the dispute between Lotus and Borland. It was addressed solely to the proper method of analyzing the copyright issues in a case of this sort. The brief stated the test used in *Paperback* was "inconsistent with the copyright statute, the copyright case law, and traditional principles of copyright law." Even when embodied in a copyrighted work, such things as processes, procedures, systems, and methods of operation are beyond the scope of copyright protection available to the work. This has long been the rule under the copyright case law typified by *Baker vs. Selden* in which the ordering and arrangement of headings and columns were held unprotectable by copyright law because they were constituent elements of a bookkeeping system. In 1978, Congress put the exclusion of processes, procedures, systems, and methods of operation into the copyright statute in part to ensure that copyright protection for computer programs would not be construed too broadly.

Although Judge Walker's ruling on look and feel is, in my view, correct as a matter of copyright law, it may be more accurate to conceive of look and feel claims as claims for the functional behavior of the programs that produce them.

The brief thus criticized the *Paperback* test because it failed to have a step for filtering out functional aspects of the work, such as systems and their constituent elements. The brief noted the *Paperback* opinion itself stated "the exact hierarchy—or structure, sequence, and organization—of the menu system is a fundamental part of the functionality of the macros." Aspects of copyrighted works that are constituent elements of systems and fundamental parts of the functionality of systems, the brief observed, did not seem to be protectable under the copyright statute and case law properly interpreting it. The brief suggested use of the "successive filtering method" test proposed in a law review article some years ago as an alternative.

Judge Keeton largely ignored the copyright law professor brief in the opinion he issued in March of 1992 (although his restatement of his test now contained some reference to the statutory exclusions). Judge Keeton's test has remained, however, an abstractions-oriented test. His March opinion indicated the "process" and "system" exclusions cannot be taken too literally because if they were, computer programs—because they are processes—would not be protected by copyright law. *Baker vs. Selden* had been supplanted, in his view, by the "abstractions" approach that his test adopted. He thus saw no reason to change his approach to the issues.

Computer Associates vs. Altai

Although the copyright law professor brief made little impression on Judge Keeton, it has been influential in other cases. Defense lawyers trying to fend off use of the *Paperback* test in their cases have sometimes included a copy of the law professor brief in

submissions they have made to the courts hearing their cases. Reliance on reasoning from the law professor brief is particularly evident in the Second Circuit Court of Appeals (which includes New York) opinion in *Computer Associates vs. Altai*.

Computer Associates argued to the appellate court that the trial judge's refusal to use an analytic approach to determining copyright infringement of the sort used in *Paperback* and *Whelan vs. Jaslow* was legal error, requiring repudiation of the trial court's ruling of noninfringement. Altai argued that the trial court had properly rejected the *Paperback* and *Whelan* approach, and appended the copyright law professor amicus brief in *Lotus vs. Borland* to its appeal brief as additional support for this position.

The appellate opinion in *Computer Associates* takes a very similar approach to analyzing copyright issues as the copyright law professor brief had done, including its endorsement of the "successive filtering method" of determining copyright infringement in software cases. The first step of this test involves creation of an abstractions hierarchy for the program, from the highest-level description of the program's general purpose or function to its lowest-level detail (the code). The second step filters out all unprotectable material the program contains: not only that in which idea and expression might be merged, but also that which was included in the program to achieve efficiency, compatibility, or other functional design goals as well as that which has become standard in the industry or is otherwise in the public domain. The third step involves a comparison of the "golden nuggets" of expression that are left after filtration with the program alleged to in-

fringe. Only if there is substantial similarity as to those expressive elements, will infringement be found.

The *Computer Associates* opinion, like the law professor brief, regards computer programs as functional works having a thin scope of protection from copyright. The opinion also speaks of *Baker vs. Selden* as an important precedent for determining the scope of copyright in software copyright cases. It criticizes *Paperback* for having been too receptive to arguments that certain elements of programs should be accorded copyright protection because otherwise there would be insufficient incentives to invest in software development. There may be a need for a supplementary form of protection for computer software besides that provided by copyright law, but this is no reason to stretch copyright law beyond its proper bounds.

Judge Keeton's Reaction to Computer Associates vs. Altai

Borland's renewed motion for summary judgment in the *Lotus* case relied heavily on the *Computer Associates* decision to argue that Judge Keeton had been using the wrong test to determine the protectability of the 1-2-3 command structure under copyright law. Although Judge Keeton has generally not discussed copyright precedents in his *Lotus* opinions, he did take notice of the *Computer Associates* decision. The July opinion states *Computer Associates* is consistent with the approach taken in the *Lotus* cases, even though the other opinion may have stated the issues somewhat differently than *Paperback* did.

Judge Keeton could still not bring himself to take *Baker vs. Selden* very seriously, however. He noted that the Second Circuit opinion in *Computer*

Associates had only said *Baker vs. Selden* should be the starting point for analysis of copyright issues in computer program cases. But *Computer Associates* does seem to have caused Judge Keeton to respond (finally) to Borland's system argument. The July opinion points out the command structure of Lotus 1-2-3 had been developed before the macro facility. This, the judge suggested, meant its original design had not been constrained by the macro facility. If the command structure was expressive before the macro facility was developed, why wouldn't it be expressive afterwards as well?

Command Structure Is Copyrightable

As in his prior *Lotus* opinions, Judge Keeton in the July opinion placed heavy emphasis on the hundreds or thousands of alternative possibilities, both for names of commands and arrangements of them, as a basis for ruling that the selections Lotus had made for its command names and their arrangement were expressive and not dictated by functionality. There was no reason, the judge observed, that "money" could not have been used instead of "currency" or "scope" could not have been used instead of "range."

There was also no reason the judge could see why "copy" could not be put after instead of before "move" in the ordering of commands. Some command terms did seem to him grouped according to function, but that did not mean the whole command structure was so ordered. The judge also rejected Borland's argument that the arrangement of commands was functional because it was done to accord with predicted frequency of use. This too did not mean the ordering was functionally dictated. The judge observed that "print" appeared before "quit" in the Lotus interface even though some users will use "quit" more often than they use "print."

The Reemergence of Look and Feel in the *Lotus* Cases

One other noteworthy aspect of the July opinion in *Lotus vs. Borland* was what it had to say about look and

feel. Lotus was the first software developer to make an explicit look and feel claim in a copyright litigation about user interfaces. Inspiration for this claim may have partly come from dicta in an earlier software copyright decision, *Whelan vs. Jaslow*, in which passing reference was made to a similarity in the "total concept and feel" of the two programs involved in that case (although the claim of infringement was based on internal structural similarities, such as in dataflow and file structures).

Although look and feel caught on as a shorthand term for copyright cases involving user interface similarities, at trial, Lotus later deemphasized its look and feel claim, and the *Paperback* opinion mentions it only to indicate it wasn't the basis for the infringement ruling. Thus, the first look and feel case turned out not to be a look and feel case at all. Nor, until quite recently, did *Lotus vs. Borland* appear to be a look and feel case. Rather, it seemed to be a case about the protectability of command structures.

In his July opinion, however, Judge Keeton reintroduced at least the "feel" part into the *Lotus* case. He did so by observing the currently marketed version of Quattro Pro now accepted the same keystrokes as 1-2-3, rather than presenting the commands through pulldown menus in the 1-2-3 emulation mode as it had when the lawsuit was first commenced. The judge went on to say this meant QP would have the same "feel" as the Lotus program even if not the same "look."

By expressing interest in whether keystroke similarities would be infringing, the judge seemed to signal a receptivity to an infringement claim on this basis. And, sure enough, Lotus responded to this hint by asking permission to amend its complaint to allege copyright infringement based on acceptance of the same keystrokes to achieve the same results. Unsurprisingly, the judge has granted this request.

It seems quite likely Judge Keeton will use the same analytic approach toward the new "feel" claim in *Lotus vs. Borland* as he has used to decide all the other issues in the case. Be-

cause copyright law has always judged infringement based on visual similarities, a copyright traditionalist judge would perceive there to be very significant differences between cases in which there were or were not visual similarities between two works. Judge Keeton, however, has decided screen display similarities are not the issue; only user interface similarities matter.

For him, the idea/expression distinction is only an abstractions/particularities distinction. Because he views keystrokes as specific details, not high-level abstractions, it would seem to be immaterial under his approach whether the commands appear on the screen or not. If significant non-literal similarities at a particularized level exist between the Lotus and Borland interfaces, they are likely to be ruled "expressive." Borland's only possible defense is to argue "merger" of idea and expression in which the number of ways something can be done is the critical factual question. Thus, unless the judge significantly changes the approach he uses to analyze the copyright issues—something which he has thus far strongly resisted—Borland seems likely to lose the "feel" claim, at least at the trial court level.

Is Borland Consistent with *Apple* and *Computer Associates*?

One cannot say with certainty how a judge who was really trying to apply copyright law and principles to the command structure or keystroke issues in *Lotus vs. Borland* would resolve the dispute. However, it is unquestionably true the analytic approach being used by Judge Keeton is not consistent with traditional copyright principles of copyright law whereas the approaches used in *Apple vs. Microsoft* and *Computer Associates vs. Altai* are.

Insofar as Judge Keeton has done any abstractions analysis in the *Lotus* dispute, it has been not of the Lotus program as a whole (which is what is claimed as the copyrighted work, and what *Computer Associates* would seem to require), but only of the user interface (which makes the commands appear to be particularities rather

than the abstractions that they are).

Judge Keeton's second step is overly restrictive in that it permits filtering out only that which is solely dictated by functionality. This reflects a far narrower view of what constitutes merger than has been taken in the other cases, and omits considerations of a variety of other factors and defenses that *Computer Associates* and *Apple vs. Microsoft* permit, such as efficiency, compatibility, industry standards, and other functional constraints, in judging whether particular aspects of computer programs are protectable by copyright law. These decisions also give more substantial content to the statutory provision excluding processes, systems, and the like from the scope of copyright for computer programs. They see, as Judge Keeton does not, that copyright protection for functional writings has always been thin in order not to give protection to the functional content embodied in such works.

Computer Associates and *Apple* also are more traditional copyright decisions in searching for truly expressive aspects of programs before engaging in a substantial similarity analysis (are the two works substantially similar as to their expressive aspects, and did the defendant copy those expressive aspects from the plaintiff?). The last step of the *Paperback* test inquires only whether the aspect copied was a "substantial" aspect of the work. Since no plaintiff would take the trouble of filing a lawsuit about an insubstantial portion of the work, this step is hardly a step at all.

Lotus brought its lawsuit against Borland under the copyright law, not on some general misappropriation theory. Because of this, Borland surely deserves an opportunity to have the issues in the case decided by a judge who is prepared to be attentive to copyright law and the long history of cases that have interpreted it. What a shame it is Judge Walker did not preside over *Lotus vs. Borland*, for then the software industry would have gotten a well-reasoned opinion applying copyright law and principles to the dispute in a manner that comports with the underlying poli-

cies of the law.

Conclusion

Look and feel continues to be bandied about as a shorthand term for lawsuits involving user interfaces, both in the copyright case law and in the popular press, notwithstanding the lack of any meaningful definition of it. Only Judge Walker in the *Apple* case has closely examined a look and feel claim, and he has found such a claim lacking. After previously saying look and feel was not a useful term, Judge Keeton in the *Lotus* case has now become intrigued with it and reintroduced the claim to the case.

Although Judge Walker's ruling on look and feel is, in my view, correct as a matter of copyright law, it may be more accurate to conceive of look and feel claims as claims for the functional behavior of the programs that produce them. Congress did decide to protect the texts of programs by copyright law, as is clear from the definition of computer program in the statute: "a set of statements or instructions to be used, directly or indirectly, in a computer to bring about a certain result." But neither the definition of computer program nor the legislative history of the computer program amendments gives any indication of an intent to provide copyright protection for the functional results generated when program instructions are executed, such as program behavior. The *Computer Associates vs. Altai* decision says that program behavior is unprotectable by copyright law under the provision of the copyright statute that excludes such things as processes and procedures from copyright protection. If this is so, there is yet another reason why the look and feel of computer programs should not be protected by copyright law. ■

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