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Lotus v. Borland [3]

IN THE
Supreme Court of the United States

OCTOBER TERM, 1995

LOTUS DEVELOPMENT CORPORATION

Petitioner

HORLAND INTERNATIONAL, INC.

Respondent

ON WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE FIRST CIRCUIT

BRIEF FOR THE PETITIONER

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QUESTION PRESENTED

Whether a computer program's particular menu command hierarchy, which the district court found to contain expression separable from its underlying idea and the functionality it describes, may be protected by copyright in light of the explicit Congressional extension of copyright to computer programs under the same principles applicable to other literary works; or whether, as the First Circuit held, Section 102(b) of the Copyright Act bars protection for any such menu command hierarchy despite its expressive characteristics, because it assists users in communicating with a computer program in order to perform useful operations.

STATEMENT PURSUANT TO RULE 29.6

See pp. i-iv of Petitioner's Reply In Support of Petition for Writ of Certiorari.

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Lotus Development Corporation ("Lotus") respectfully seeks reversal of the judgment of the United States Court of Appeals for the First Circuit in this case.

OPINIONS BELOW

The opinion of the court of appeals (Pet. App. 1a-28a¹) is reported at 49 F.3d 807. The opinions of the District Court for the District of Massachusetts (Robert E. Keeton, J.) are reported at 788 F. Supp. 78 (Pet. App. 145a-82a); 799 F. Supp. 203 (Pet. App. 106a-44a); 831 F. Supp. 202 (Pet. App. 71a-105a); and 831 F. Supp. 223 (Pet. App. 29a-70a). The opinion of the district court in the related case of *Lotus Development Corp. v. Paperback Software International* (hereinafter "*Paperback*") is reported at 740 F. Supp. 37 (Pet. App. 183a-269a).

JURISDICTION

The court of appeals entered judgment on March 9, 1995. Pet. App. 1a. This Court granted a petition for certiorari on September 27, 1995. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254.

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

United States Constitution, art. I, § 8, cl. 8

The Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings. . . .

¹ "Pet. App." refers to the Appendix to Petition for a Writ of Certiorari filed on June 7, 1995, as distinguished from the "JA" or Joint Appendix filed herewith. Items appearing in braces, e.g., "{PX:x;y}," refer to the location in the record where an exhibit, e.g., "PX" for "Plaintiff's Exhibit," was offered ("x") and ruled on ("y") by the district court.

17 U.S.C. § 101, 17 U.S.C. § 102, 17 U.S.C. § 103, 17 U.S.C. § 107, 17 U.S.C. § 117. (The full text of the statutory provisions involved is set forth at Pet. App. 270a-80a and JA 985.)

STATEMENT OF THE CASE

Petitioner Lotus, in the early 1980's, created and began selling the "Lotus 1-2-3" computer program, providing an original expression of a menu command hierarchy for an electronic spreadsheet program to users. Lotus registered copyrights in each version of Lotus 1-2-3 that it published. JA 801-08 {PX 9-12: Dkt. No. 332, 2-52; *id.*}. Respondent Borland International, Inc. ("Borland") later wrote and marketed competing spreadsheet programs called Quattro and Quattro Pro. Borland's programs included what Borland itself called "1-2-3 emulation" menus, which Borland concedes were copied from Lotus 1-2-3.

A. Procedural History

On July 2, 1990, Lotus sued Borland, alleging that Borland infringed Lotus' copyrights by copying protected expression from the Lotus 1-2-3 menu command hierarchy.² Upon cross-motions for summary judgment, in July 1992 the district court granted Lotus' motion in part. The court held that the 1-2-3 menu command hierarchy contained expressive elements protected by Lotus' copyrights and that Borland had copied that expression, but reserved certain issues for trial concerning the precise extent of the 1-2-3 menu command hierarchy's copyrightability.³

² The suit was commenced four days after Lotus received a favorable ruling on a similar copyright claim in *Paperback*. The day after the *Paperback* decision, Borland filed a declaratory judgment action seeking a declaration of non-infringement in the Northern District of California, No. C-90-20386 VRW. JA 1. The California district court dismissed that action in favor of this one. *Id.* at 2.

³ Pet. App. 116a. The district court also granted Lotus' motion for summary judgment dismissing Borland's affirmative defense of waiver,

Following the summary judgment decision, Borland removed the visible "1-2-3 emulation" menus from its products and began to publicize the existence of a feature called the "Key Reader," which was derived from those menus. *Id.* at 54a-56a; JA 785, 919 {PX 43: Dkt. No. 404, 5-67; *id.*}. Lotus was granted leave to file a supplemental complaint alleging that the Key Reader also infringed its 1-2-3 copyrights. JA 6 (Dkt. No. 305).

The district court held two bench trials after Borland withdrew its jury demand. Pet. App. 75a-77a. The scope of the Phase I trial was defined by stipulation as "all issues not previously finally decided by way of summary judgment concerning Borland's alleged liability herein, and all its defenses thereto," excluding Key Reader issues. JA 40-45. The Phase II trial addressed all issues relating to the Key Reader. *Id.* at 48-50. The district court issued separate opinions concerning the two phases of trial.

In the Phase I opinion, the court held that the "1-2-3 emulation" menus copied a qualitatively substantial amount of protected expression from the 1-2-3 menu command hierarchy (which it called the "menu structure"). Pet. App. 83a-94a. The district court also dismissed Borland's estoppel and laches defenses to the original complaint, based upon extensive and detailed findings of fact.⁴ The Phase II opinion held that the

but held that trial was necessary concerning its defenses of estoppel and laches. *Id.* at 141a (waiver), 141a-42a (laches) & 142a-43a (estoppel).

⁴ *Id.* at 95a-105a. Having failed to plead the affirmative defense of fair use in its answer to the original complaint, Borland first asserted the defense in closing argument at the Phase I trial over Lotus' objection. JA 107-17. The district court granted Borland leave to amend its answer to the original complaint *after* trial. *Id.* at 56-63 (motion); Dkt. No. 353, dated March 30, 1993 (granting motion). The district court then granted judgment in Lotus' favor pursuant to Fed. R. Civ. P. 52(c), rejecting Borland's argument that its infringement had no actual or potential negative effect on the value of Lotus' copyrights. JA 187-92; Pet. App. 76a-77a. Borland's contentions were based entirely upon three Lotus statements indicating that, at various times, Lotus had held the same share of the DOS spreadsheet market. JA 183.

Key Reader also contained a “virtually identical” copy of “details of expression of the Lotus 1-2-3 program’s menu structure.” Pet. App. 46a-47a. The district court further rejected all of Borland’s affirmative defenses to the supplemental complaint.⁵ Concluding that Borland had infringed Lotus’ copyrights, the district court entered a permanent injunction (at Borland’s request) on August 19, 1993, prohibiting further sales of Borland’s products in a form that contained the infringing features. *Id.* at 69a-70a. Borland appealed to the First Circuit as of right pursuant to 28 U.S.C. § 1292(a)(1). JA 9 (Dkt. No. 408).

Oral argument was initially heard on April 6, 1994, and the case was reargued on October 6, 1994, in the wake of then Chief Judge (now Justice) Breyer’s recusal. JA 11. The court of appeals issued its opinion reversing the judgment of the district court on March 9, 1995 (*id.* at 12), four days before a damages trial was scheduled to commence. *See* Dkt. No. 668. The First Circuit held that the 1-2-3 menu command hierarchy was not entitled to copyright protection.⁶ Lotus filed a petition for a writ of certiorari on June 7, 1995, which was granted on September 27, 1995.

⁵ *Id.* at 48a-69a. Regarding fair use, the district court carefully considered the factors specified in 17 U.S.C. § 107, finding that each weighed in Lotus’ favor. *Id.* at 60a-68a. In particular, the district court found that “Borland’s limited evidence concerning market share is entirely insufficient to demonstrate that Lotus has not been harmed” by Borland’s use. *Id.* at 67a.

⁶ Pet. App. 22a. The First Circuit therefore did not address any of the affirmative defenses Borland raised on appeal. In addition to fair use, Borland argued in the First Circuit only the defenses of laches to the original complaint and waiver to the supplemental complaint. Brief of Defendant/Appellant Borland International, Inc., at 58-63 (1st Cir.) (No. 93-2214). Accordingly, its other affirmative defenses were abandoned. *Ryan v. Royal Ins. Co. of America*, 916 F.2d 731, 734 (1st Cir. 1990).

B. Factual Background

In the court of appeals, Borland conceded—and the court accepted—that Borland copied the Lotus 1-2-3 menu structure or menu command hierarchy, in its entirety, in the Borland Quattro and Quattro Pro programs.⁷ We focus, accordingly, on facts pertinent to determining the copyrightability of the 1-2-3 menu command hierarchy as a whole, in particular its nature, purpose, and original creation. We then turn to the facts surrounding Borland’s incorporation of the 1-2-3 menu command hierarchy in its products, and demonstrate that the factual premises upon which the First Circuit relied in reaching its decision are either contrary to, or unsupported in, the record below.

1. The nature and purpose of the Lotus 1-2-3 menu command hierarchy.

A proper understanding of the nature and purpose of the 1-2-3 menu command hierarchy is critical to an appropriate resolution of this case. As used by the First Circuit, the term refers to 469 words or “menu commands” arranged in more than 50 different “menus” and sequential sub-menus, which are displayed to the user on the computer monitor screen during use of the Lotus 1-2-3 computer program. Pet. App. 4a. The menus appear in variable series designed by the authors of 1-2-3 to respond to users’ choices from previous menus, branching out from the first or “main” menu in what often is

⁷ Pet. App. 10a. Lotus proffered direct proof of Borland’s copying in the district court (JA 549-55, 574-75, 707-08, 763-66, 778 & 794-96), and an examination of the products themselves reveals that no other conclusion is possible. *See id.* at 64-69 (Dkt. Nos. 359, 360) (the computer programs at issue, installed on a computer, are part of the record herein, together with the products’ user’s manuals and packaging) {PX 1-8, 20-27, 35, 50, DX 516, 518-521: Dkt. No. 332, 2-15, 2-16; Dkt. No. 333, 3-26:4-11}; *id.* at 317-19 (Dkt. No. 107, Ex. A) (books containing photographs of the menus at issue) (Dkt. No. 332, 2-35, 2-36; Dkt. No. 333, 3-26:4-11); Dkt. No. 118, Ex. thereto (videotape demonstrating the programs in operation) (Dkt. No. 332, 2-35, 2-36; Dkt. No. 333, 3-26:4-11).

called a "menu tree." *Id.* at 78a-84a; JA 326, 370 & 375. It is the copyrightability of the overall combination of words and menus in the 1-2-3 menu command hierarchy, viewed as a whole, and *not* any individual menu command such as "COPY" or "PRINT," viewed in isolation, that is at issue in this case.⁸

Despite the First Circuit's comparison of the menu commands to the buttons on a videocassette recorder ("VCR") machine (Pet. App. 18a), the words do not, in themselves, perform any mechanical function. They are simply words of text. These words describe—when read in sequence—an array of operations available to the user and, like the pages of an instruction manual or reference guide, provide information to assist users in selecting the appropriate instructions to cause the program to perform certain tasks. Pet. App. 78a-81a; JA 333-36, 377. They are, and were intended to be, a form of structured dialogue between 1-2-3's authors and users, in which the capabilities of the program are explained in plain English and users, in turn, can learn which instructions will cause the program to perform particular functions by making choices from successive menus.

Lotus 1-2-3 is an example of a type of computer program known as a "spreadsheet" application program.⁹ Typically, spreadsheet programs provide users with the ability to perform arithmetical and mathematical operations on numerical data

⁸ Similarly, Lotus' claim is based upon the content that Borland copied from 1-2-3's screens, including the words, their order, and overall arrangement, rather than the color, style, layout, or format in which the words or menus are displayed on the screens.

⁹ Pet. App. 186a; JA 375. Personal computer programs generally are divided into two categories: operating systems and application programs. Pet. App. 186a. The former control the basic functions of the computer, such as the internal allocation of computer memory. *Id.* The latter permit a user to perform a set of related operations directed towards particular tasks, such as word processing or database management. *Id.* Typically, application programs are designed to work with a particular operating system, for example, DOS or UNIX, and will not work with a computer directly.

entered by the user in an electronic representation of a spreadsheet grid, arranged in columns and rows; to reconfigure the style or layout of the spreadsheet to suit the user's particular needs; and to manipulate and present the data in the spreadsheet in a variety of different tables or graphs of the user's choice. Pet. App. 226a-27a.

The Lotus 1-2-3 menu command hierarchy is part of what is typically called the "user interface" of the program, because it is the program component with which the user directly communicates. *Id.* at 226a-29a; JA 324, 333, 360 & 375. The user interface is not free-standing, however. It is part of the program, and is generated by the statements contained in the program's "source code."¹⁰ As the district court explained in *Paperback*, computer programs typically are written in source code, using a form of programming language, such as BASIC or FORTRAN, that employs symbolic names and rules of syntax to express instructions for the computer to execute.¹¹ The user usually never sees or even is aware of the program code during operation of the program. However, the actual contents of the user interface—including the words appearing in the 1-2-3 (or Borland) menus—is spelled out, in text, in the program code. JA 64 {PX 13: Dkt. No. 332, 2-52, 2-53; Dkt. No. 333, 3-26-4:11}, 360, 548 & 756-58.

In order to learn or recall the appropriate instructions to give the program to perform functions that correspond to the

¹⁰ JA 330, 450. In the case law, user interfaces often have been referred to as "non-literal elements" of computer programs. Pet. App. 258a-60a.

¹¹ Pet. App. 188a-89a. The source code must be converted or "compiled," typically by a distinct "compiler" program, into a binary form that the digital computer can recognize, called a machine language, before the computer can execute the program. Pet. App. 189a. Compiled source code is called "object code." *Id.* Most commercial software is distributed only in the form of object code.

menu commands,¹² the user presses the “/” (slash) key on the computer keyboard. Pet. App. 123a, 227a. The program, in response, displays the main menu of ten words, beginning with “WORKSHEET,” “RANGE,” “COPY,” and “MOVE.”¹³ Most of these do not relate to a specific operation that the program will perform. Rather, they describe categories of commands, and serve to guide the user to another menu, or sub-menu, of increasingly specific command choices, and so on until all the instructions necessary to cause the program to perform a particular task have been described. *Id.* at 78a-84a; JA 334-35, 384-85 & 735.

At each menu level, the user indicates a selection from the menu by striking one of the cursor (arrow) keys to highlight the particular menu command and then striking the “Enter” key, or by striking a letter key corresponding to the first letter of the word, e.g., “W” for “WORKSHEET.”¹⁴ Only after an entire sequence of keystrokes is completed (and, usually, after some data is entered, such as an identification of the portion of the spreadsheet to be affected), does the program

¹² The menu commands are not the only commands available to users when working with 1-2-3, nor do they cause the program to perform arithmetical or mathematical operations. Such operations are invoked by typing “formulas” within the individual “cells” in the spreadsheet grid, using familiar arithmetical notation (e.g., “+” or “-”) or special commands called “@ functions” (because they are preceded by the “@” symbol) for more complex mathematical expressions. Pet. App. 232a. Only the menu commands are at issue in this case.

¹³ *Id.* at 227a-28a. The description in text is of the versions of Lotus 1-2-3 that Borland copied, all of which were published prior to November 1986. *Id.* at 81a, 96a & 113a.

¹⁴ Pet. App. 227a-28a; JA 376. This particular style of menu, called the “moving cursor menu,” was conceived by Lotus’ founder, Mitchell Kapor, and employed in two earlier programs he had written. Pet. App. 286a. Lotus has never contended that the idea of a moving cursor menu, in contrast to the words in the menus that give them meaning and content, is protected by Lotus’ copyrights. The district court so held in *Paperback* (*id.* at 230a, 254a), and it is not at issue here.

actually perform an operation involving the spreadsheet.¹⁵ The words appearing in the menus on the screen—what the user perceives—therefore can be distinguished from the physical tasks—the keystrokes—the user must undertake to send an instruction to the program, as well as from the operation that the program ultimately performs after the instruction is sent.

2. The creation and value of the Lotus 1-2-3 menu command hierarchy.

The 1-2-3 menu command hierarchy was created in the latter half of 1982 by Mr. Kapor and a team working under his direction. Pet. App. 231a. Kapor and his team previously had specified the selection of functional capabilities that the program would provide (such as allowing the user to replicate data or formulas entered in one portion of a spreadsheet in another), and had implemented those capabilities in the program’s code. *Id.* at 288a. The menu commands reflected Kapor’s subsequent attempt to express those capabilities to users, in full words “that would intelligently convey to the user the purpose of each command.” *Id.* at 291a. The arrangement of the menus in a hierarchical structure was intended to communicate “the product’s underlying functionality” to users in a clearly organized presentation. *Id.* Kapor and his team spent hundreds of hours over a period of many months considering (and discarding) dozens of organizations of the menu tree, and refining the choice of each word in the menus and the order of those words within each menu.¹⁶ The menu hierarchy Kapor ultimately selected “was based largely on my intuition and subjective judgment . . . trying as best I could to imagine myself in the

¹⁵ JA 334-35, 384-85. Thus, it is not true that the user can issue an instruction described by a single menu command, such as striking the key “P” for “PRINT,” and cause the program to perform a printing operation, as the First Circuit appeared to believe. Pet. App. 15a.

¹⁶ *Id.* at 290a-96a; JA 538-39. Kapor and his team were not only free to choose any existing word, but also could invent new words, as they did in at least one instance (*i.e.*, “Xtract”). Pet. App. 295a.

role of a typical user." *Id.* at 292a. He had no rule book, model, or data to guide him.¹⁷

It is undisputed that the 1-2-3 menu command hierarchy is original for copyright purposes, in that Lotus created it independently, without copying or derivation from prior works. *See Feist Publications, Inc. v. Rural Telephone Serv. Co.*, 499 U.S. 340, 345 (1991) ("Original, as the term is used in copyright, means only that the work was independently created by the author (as opposed to copied from other works), and that it possesses at least some minimal degree of creativity."). The district court in *Paperback* held that the 1-2-3 menu command hierarchy was "very different" from previous products. Pet. App. 234a. Borland never asked the district court to rule differently in this case.¹⁸ Even aside from originality in the narrow copyright sense, the creativity expressed in the 1-2-3 menu command hierarchy, by making the program's capabilities clear and comprehensible to users, formed a major part of the program's value.¹⁹

¹⁷ *Id.* 1-2-3 also was designed to allow the user to create "macros," or sequences of frequently-used keystrokes that can be executed automatically with a single keystroke. *Id.* at 290a. Macros may include commands other than menu commands, and keystrokes having nothing to do with commands at all. *Id.* at 228a-29a.

¹⁸ Although Borland did suggest that the 1-2-3 menus were not novel because some of their words had been used previously in other programs or in programming languages, that is not—and never has been—relevant under copyright law. Borland never contended, and could not prove, that the words used in Lotus 1-2-3's menu command hierarchy had appeared previously in a *single* program, arranged in the same hierarchical organization, to describe the same set of functional operations. JA 314-15.

¹⁹ *See* Peter Huber, "Madonna Ain't Software," *Forbes*, Sept. 3, 1990, at 104 ("unlike the alphabet, command structures are not a universal and ancient heritage of the spreadsheet business; they are what distinguish the good, the bad and the ugly Some, like the Lotus spreadsheet, are wonderfully transparent and intuitive.").

In a world in which graphical user interfaces for personal computer software have become commonplace, it may be difficult to appreciate the extent to which the Lotus 1-2-3 menu command hierarchy represented a major advance in user interface design when the product was introduced in January 1983. At the time, the user interfaces of popular programs were relatively crude. For example, VisiCalc—the leading spreadsheet program prior to 1-2-3—displayed a list of letters arranged in alphabetical order to represent its array of available commands. Pet. App. 233a, 267a. This cryptic notation forced users to memorize the commands, or to consult the product's manuals or other written documentation, in order to decipher the letters and take advantage of the program's capabilities. Despite significant established competition, Lotus 1-2-3 soon supplanted VisiCalc as the most popular DOS spreadsheet program.²⁰ Its user interface—including its menus—played "a substantial role" in that success, as the district court found. Pet. App. 135a; JA 474. Borland's own software developers admitted that menus convey information to users and assist them in learning the program. JA 563-64, 568-70, 580-81, 589-90, 767-68, 769 & 782-83. Both sides' experts further agreed that the 1-2-3 menus possessed "great commercial significance."²¹

3. The nature and purpose of Borland's copying.

Borland did not need to copy the Lotus 1-2-3 menu command hierarchy to create a spreadsheet product that would provide the same functional capabilities as 1-2-3. As the dis-

²⁰ Competitive products available in 1983 included VisiCalc as well as Microsoft MultiPlan, SuperCalc, Context MBA, and numerous others. Exhibit A to the Declaration of Jim P. Manzi, dated November 1, 1991 (Dkt. No. 111).

²¹ *Id.* at 333, 343-44, 454, 507 & 697-98. Although Borland contended that 1-2-3 would have succeeded just as well if it had used other, equally good, words or arrangements, the district court was not required to resolve that issue at any stage of the proceedings below, and it did not purport to do so.

district court found (and the First Circuit accepted), the 1-2-3 menu command hierarchy is only one of a very large number of possible ways to express a set of instructions a user can give to a spreadsheet program. Pet. App. 86a-88a, 131a-33a. The record before the district court contained numerous examples of contemporaneous programs that performed the same functions, but employed different menu hierarchies and menu commands. *Id.* at 88a; JA 64-70, 339. Indeed, the district court found that, even if a software developer voluntarily restricted itself to designing a program that provided *exactly* the same set of functional capabilities that 1-2-3 provided, using the same type of hierarchical menu structure, there still would be millions of possible permutations for an acceptable spreadsheet menu command hierarchy. Pet. App. 131a-32a; JA 338. Other words could be chosen to represent each menu command; the order of the words within each menu could be altered; and the placement of commands in particular menus—*i.e.*, the decisions as to which commands should depend upon other commands, at what depth in the hierarchical arrangement—could be varied. Pet. App. 86a, 131a-32a; JA 337-38, 378-79, 506, 699-702 & 719-22.

Borland copied the 1-2-3 menu command hierarchy, therefore, and included it in its products for commercial reasons, not as a technical necessity. Simply put, it sought to minimize its risk in entering the spreadsheet market by exploiting 1-2-3's prior success. Borland was not the first Lotus competitor to pursue this tack. Lotus' early success was followed rapidly by imitators such as Paperback Software, who sought to enter the spreadsheet market with self-described 1-2-3 "clones," or programs displaying menu command hierarchies deliberately copied from Lotus 1-2-3, which sold at substantially lower prices. Pet. App. 147a-48a, 236a-38a. Lotus commenced the *Paperback* case in January 1987. *Id.* at 96a. With full awareness of that pending case, Borland released the first version of its spreadsheet products, called "Quattro," in November 1987, and a second product, called "Quattro Pro,"

in November 1989. *Id.* at 96a, 100a. These products also were offered to 1-2-3 users at less than half the retail price of 1-2-3. JA 907-14 (PX 15, 18-19: Dkt. No. 332, 2-57, 2-58; Dkt. No. 333, 3-26:4-11).

Quattro and Quattro Pro differed from earlier "clones" chiefly by providing alternative menu command hierarchies that the user could select: a so-called "native" menu tree, which was developed independently by Borland and differed materially both in menu content and in hierarchical arrangement from 1-2-3 (JA 559-60, 770-72 & 779); and the "1-2-3 emulation" menu tree, which contained a virtually identical copy of the Lotus 1-2-3 menu command hierarchy. Pet. App. 82a. Both types of menu trees allowed users to invoke the same set of functional capabilities. *Id.* at 131a; JA 774-75. Contrary to the lower court's impression that it "takes some effort" to "access[] the Lotus menu in the Borland" products (Pet. App. 25a), Borland made it easy for users to find and select the "alternative" 1-2-3 menus.²² Once those menus were selected, they would appear automatically each subsequent time the program was run.²³

Although Borland's designers naturally believed their own menus were superior to 1-2-3's (JA 558-60, 579, 770-71 & 779), Borland nevertheless decided to include the 1-2-3 menu command hierarchy in its products to enhance its marketing

²² The user's manuals Borland sold with its products prominently described the specific commands required to select a menu tree. *See, e.g.*, JA 65-66 (*Getting Started with Quattro* at 4, ch. 4 at 23 ("Quattro for 1-2-3 Users"); *Getting Started with Quattro Pro* at 2, ch. 4 at 27 ("Quattro Pro for 1-2-3 Users")). The user needed merely to choose the so-called "123.RSC" or "123.MU" options from the Quattro and Quattro Pro menus, respectively, to cause the program to display the 1-2-3 menus whenever the "slash" key was struck. *Getting Started with Quattro* at 26; *Getting Started with Quattro Pro* at 38-39. *See also* JA 705 (Borland expert opining on the ease of switching menu trees).

²³ JA 65-66 (*Quattro User's Guide* at 152-53; *Quattro Pro User's Guide* at 196-97), 705.

efforts. Borland assumed that existing 1-2-3 users would be disinclined to “learn a new menu tree” and therefore might be reluctant to purchase its products. *Id.* at 739-40. The “1-2-3 emulation” menus were seen as a “migration tool,” which would allow Borland to overcome this resistance by promoting the presence of the “familiar and comfortable” 1-2-3 menu tree as an alternative to Borland’s own. *Id.* at 558, 568-70, 595, 652-54, 739 & 741-42. The experts on both sides agreed that this provided Borland with a significant marketing advantage (*id.* at 330-33, 354, 704-05 & 731-32), which Borland tried to exploit at every opportunity. Its promotional material stressed: “If you know how to use 1-2-3, you know how to use Quattro[.] You don’t have to learn a whole new program.”²⁴

Borland also promoted its products to 1-2-3 users by stressing that they could preserve and reuse the macros they had written for use with 1-2-3. Borland described this as “macro compatibility,” which it marketed along with “menu compatibility” as among its chief competitive advantages. JA 595-96 (“we promoted everything that we could think of that would make Quattro easier for Lotus users to adopt”). *See also id.* at 66 (product packaging for first version of Quattro Pro), 737-38 (promotional activities). Originally, Borland users could run 1-2-3 macros only by employing the “1-2-3 emulation” menus in Borland’s products. *Id.* at 568-71, 764-66 & 778. After this lawsuit commenced, Borland devised a new feature in order to continue to provide “macro compatibility” without the visible display of the 1-2-3 menus. *Id.* at 784-86. Called the Key Reader publicly—but described as the “phantom 1-2-3 menus” inside Borland—this consisted of a stripped-down version of the same program file Borland had used to display the “1-2-3 emulation” menus, which was now

²⁴ *Id.* at 908. *See also id.* at 909 (“*Exceptional compatibility with Lotus® 1-2-3®.* Use the same commands and macros as you would in 1-2-3.”) (emphasis in original).

hidden inside the program. Pet. App. 30a-33a; JA 787-94, 915 {PX 32: Dkt. No. 404, 5-67; *id.*}, 916 {PX 33: Dkt. No. 404, 5-67; *id.*} & 931-67 {DX 520 [sic]: Dkt. No. 403, 4-164; *id.* at 4-200}.

4. The competitive effect of Borland’s copying.

The court of appeals rested its decision on a number of factual premises and assumptions that were not tried or proven in the district court concerning competition in the spreadsheet market. For example, both the majority and concurring opinions appear to assume that, if Borland had not copied the 1-2-3 menu command hierarchy, spreadsheet users would have been “locked in” to Lotus because of their unwillingness to learn or invest in a new program. Pet. App. 20a, 26a. Yet, while Borland’s own executives uniformly testified at deposition that inclusion of the 1-2-3 menus was an “important” factor in such commercial success as Borland did achieve, they could not swear that it was *necessary* to allow Borland to offer a commercially viable product. JA 544-46, 590, 594, 653, 657-58 & 740-41. The effect of Borland’s copying on either its or Lotus’ sales was never litigated or adjudicated in the district court. Nor was it proven in the district court that Borland’s “success” was “due primarily to other features,” or to inherent product superiority, as both the majority and concurring opinions below assume.²⁵ What caused consumers to purchase Borland’s products, or even who those consumers were, was not before the court of appeals and could not properly form a basis for its decision.

²⁵ Pet. App. 4a, 26a-27a. The First Circuit’s views might be explained by the fact that the district court, in its infringement analysis, necessarily compared the versions of 1-2-3 that Borland copied—which were written in 1986 or before—to Borland’s newer 1987 and 1989 products, which contained the copied menus. The court of appeals apparently did not realize that there were newer versions of Lotus’ products as well, and that it was not able to compare Borland’s products to the contemporaneous versions of 1-2-3 with which they actually competed.

The First Circuit also appeared to assume that market conditions had not changed from 1987, when Borland first decided to copy the Lotus 1-2-3 menus. By 1993, however, both Lotus and Borland had fallen far behind another competitor, Microsoft (and its product Excel), as the personal computer software market shifted away from DOS products to the Microsoft Windows operating environment. Indeed, when Borland removed the "1-2-3 emulation" menus from its products following the district court's summary judgment decision in July 1992, it described the 1-2-3 menu command hierarchy as an "outdated user interface." JA 919. The court below simply ignored the dynamic nature of the market, assuming that Lotus in 1995 continued to hold "such sway" that it "represented the *de facto* standard for electronic spreadsheet commands." Pet. App. 26a. In the software industry, however, "standards" may change, as the histories of both VisiCalc and Lotus 1-2-3 have shown. The First Circuit's views concerning the market effects of its decision thus rested on an incomplete and deeply flawed understanding of the competitive terrain, derived from a nonexistent record.

INTRODUCTION AND SUMMARY OF ARGUMENT

The issue in this case is whether the copyright protection Congress granted computer programs protects the original, creative expression contained in their user interfaces against wholesale appropriation by those who determine to achieve commercial success through imitation rather than innovation. As we show below, Congress provided in the Copyright Act of 1976, and reaffirmed in the 1980 Software Amendments, that computer programs are to be protected under copyright as literary works, subject to the same principles applicable to other, more familiar works of authorship. Applying the traditional tools of copyright analysis to new forms of expression has not always been a simple or straightforward task, but the courts have successfully faced such challenges before.

Indeed, until the First Circuit ruled in this case, the various courts of appeals were well on their way toward reaching consensus concerning the new issues presented by copyright in computer programs. That the application of old doctrines to new technologies may not always be easy, however, is no excuse for courts to disregard a clear Congressional mandate.

In this case, the First Circuit denied all copyright protection to a new form of expression—the Lotus 1-2-3 menu command hierarchy—because it did not appreciate (or understand) the work and ultimately did not believe that it should be protected. This case is not about VCR buttons, automobile gearshifts, or any other type of machine part.²⁶ It is about a collection of hundreds of words that the authors of 1-2-3 carefully arranged in a complex structure to express to computer users an original way to communicate with a particular kind of computer program. Were these words fixed upon a series of printed pages, instead of appearing on a computer screen, there could hardly be a question that they would be protected by copyright. Even a shorter and simpler work could contain the minimal creative spark that copyright requires. *Feist*, 499 U.S. at 358-59.

Why, then, did the First Circuit reach a different outcome in this case? Its decision provides no sound answer. Beyond a facile and flawed analogy to VCR buttons,²⁷ the sum and

²⁶ As Judge Keeton wrote in *Paperback*, while "similes, metaphors, and other forms of allusion are appropriately a part of our efforts to communicate ideas," they are no substitute for "logically compelled inferences from authoritative declarations." Pet. App. 242a.

²⁷ The problem with the VCR button analogy is not simply the fact that a computer program is a copyrightable work, while a VCR is not, thus rendering a claim for copyright protection of the "user interface" of the latter inherently suspect. Although valid, this is not the most important distinction. Rather, on a more fundamental level, a purported "work of authorship" consisting of six buttons labeled "Stop," "Pause," "Play," "Fast Forward," "Rewind," and "Eject," would surely fail to qualify as copyrightable under one or more of the traditional copyright tests such

substance of the First Circuit's analysis is its determination to treat the words "method of operation" in Section 102(b) of the 1976 Copyright Act as disqualifying, *per se*, all elements of a work that can be defined as *part* of a "method of operation," including expressive elements. By means of this definitional short-cut, the First Circuit could dispense with the abstract and sometimes difficult job of separating the "idea" (or "method" or "process") in a work from any protected expression it may contain. The district court, in contrast, undertook this task and, after extensive fact-finding and analysis, concluded that the 1-2-3 menu command hierarchy did contain separable expression worthy of protection. Having chosen a more simplistic rule of decision, the First Circuit dismissed the district court's efforts as irrelevant.

Whether this approach was driven by a misguided search for a bright line test in an area of law that has never yielded any, or instead by the policy considerations articulated in both the majority and the concurring opinions below, it is clear that the First Circuit's analysis cannot be reconciled with Congress' manifest intention to grant copyright in computer programs. Congress stated that computer programs should receive protection as literary works, notwithstanding their utilitarian and functional nature, and despite its understanding that they are used to implement a process or method. If, as the First Circuit held, anything that can be defined as part of a method of operation is ineligible for copyright protection, then by the same logic virtually everything in a computer program—source code no less than textual menus on the screen—is unprotected. This result effectively negates Congress' intent. Moreover, Congress explicitly stated, and this Court has held, that Section 102(b) is a codification of

as merger, *scenes a faire* or originality. Lotus 1-2-3's menu command hierarchy, on the other hand, passed each of these tests—based upon a full trial record—as would a table of contents, or an abbreviated user's manual, containing 469 textual entries arranged in more than 50 hierarchically-linked pages.

the "idea/expression dichotomy." This compels exactly the kind of fact-based, line-drawing exercise that Judge Keeton faithfully undertook, but the First Circuit never attempted.

Ultimately, the First Circuit's decision rests not upon the statute, legislative history, or precedent—which it disregarded without more than a passing reference or attempt at distinction—but upon a cluster of subjective policy notions and a mistaken belief that it was free to decide what the law should be. Even if the record below provided an accurate and informed basis for making such policy determinations—and it does not—the First Circuit simply failed to heed this Court's repeated admonitions that, under the Constitution, such judgments are for Congress to make, not the courts. In this case, Congress did speak; the court below failed to listen.

ARGUMENT

I

THE COPYRIGHT ACT OF 1976 PROTECTS EXPRESSION IN COMPUTER PROGRAMS UNDER THE TRADITIONAL PRINCIPLES GOVERNING PROTECTION FOR ALL FORMS OF EXPRESSION

The outcome of this case depends upon the proper interpretation of Section 102 of the Copyright Act of 1976 (the "1976 Act"), 17 U.S.C. § 102, in light of Congress' decision to recognize meaningful copyright protection for original works of authorship expressed in computer programs. This case does *not* rest solely on an interpretation of Section 102(b), as the First Circuit appeared to believe. Pet. App. 17a. That subsection can be understood only in the context of the entirety of Section 102 and the remainder of the statute.

Congress' authority to confer copyright protection is found in the United States Constitution, art. I, § 8, cl. 8:

The Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings.

Congress exercised this power when it enacted Section 102 of the 1976 Act, which grants copyright protection in an extremely broad range of subject matter:

Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed, from which they can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device. (17 U.S.C. § 102(a).)

Copyright protection is a form of property awarded by Congress to achieve the objectives of the constitutional clause. The statute vests a bundle of distinct property rights in the author from the time of the work's creation²⁸—most notably in this case, the right to prevent others from copying or reproducing the work without permission.

A. In Section 102(a) of the 1976 Act, Congress Protected the Expression in Computer Programs under Copyright.

Congress deliberately employed expansive language in Section 102(a) of the 1976 Act in an attempt to avoid the misunderstanding that arose concerning the scope of copyrightable subject matter under the Copyright Act of 1909, 35 Stat. 1076 (the "1909 Act"), and to allow for the foreseeable emergence of new media of expression. Before 1909, Congress attempted to accommodate new forms of expression by specifically enumerating the categories of works entitled to copyright protection, gradually expanding the scope of coverage. *Mazer v.*

²⁸ *Stewart v. Abend*, 495 U.S. 207, 220 & n.3 (1990); *Harper & Row, Publishers, Inc. v. Nation Enter.*, 471 U.S. 539, 546-47 (1985). See 17 U.S.C. § 106 (listing various exclusive rights).

Stein, 347 U.S. 201, 208-10 (1954).²⁹ Congress rejected this approach in the 1909 Act.³⁰ Thus, Congress defined the "works for which copyright may be secured" in Section 4 of the 1909 Act as "all the writings of an author," with the intention of including "all forms of record in which the thought of an author may be recorded and from which it may be read or reproduced." *Id.* (internal quotation omitted). Despite this definition, however, the list of registration categories set forth in the succeeding Section 5 was, "as a practical matter . . . read to limit the general statement." Benjamin Kaplan, *An Unhurried View of Copyright* 39 (1967). See *Feist*, 499 U.S. at 352 (noting that some courts misread Section 5 of the 1909 Act). Confusion arose because the legislative history of the 1909 Act also suggested that Section 4 was "declaratory of existing law" only. *Mazer*, 347 U.S. at 210.

Acting in a context of increasingly rapid technological change, Congress enacted Section 102(a) of the 1976 Act to replace Section 4 of the 1909 Act. *Feist*, 499 U.S. at 355. Congress' embrace intent is clear in its language: any "original work[] of authorship" that is "fixed in any tangible medium of expression," which can be perceived or communicated directly or "with the aid of a machine or device," is copyrightable. By enacting protection for expression in all media "now known or later developed," Congress demonstrated its intention not to limit the works eligible for copyright to the forms then in existence or in popular use, but to protect new forms of expression that would become possible only through future technological advances.³¹

²⁹ By 1904, Congress had enacted "some twenty-five laws dealing with copyrights." *Id.* at 209 n.12.

³⁰ The legislative history of the 1909 Act reflects Congress' belief that the "existing statutes attempt specifications which are unfortunate because necessarily imperfect and requiring frequent additions to cover new forms or new processes." S. Rep. No. 6187, 59th Cong., 2d Sess., at 4.

³¹ See H.R. Rep. No. 1476, 94th Cong., 2d Sess., at 51 (the "House Report"), reprinted in 1976 U.S.C.C.A.N. 5659, 5664 ("The history of

Section 102(a) goes on to provide a list of eight categories of protected "works of authorship," which are intended to be "illustrative and not limitative." House Report at 53, *reprinted in* 1976 U.S.C.C.A.N. at 5666. The legislative history demonstrates that Congress did not intend these categories to

exhaust the scope of "original works of authorship" that the bill is intended to protect. Rather, the list sets out the general area of copyrightable subject matter, but with sufficient flexibility to free the courts from rigid or outmoded concepts of the scope of particular categories. *Id.*

One such protected category is "literary works," defined in Section 101 of the 1976 Act as works, "other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects . . . in which they are embodied." 17 U.S.C. § 101. Both a computer program's code and its textual menus are expressed in such "words, numbers, or other verbal or numerical symbols or indicia," fitting the literal terms of the definition. Both are fixed in a tangible medium of expression and can be "perceived, reproduced, or otherwise communicated," either directly or with the aid of a computer or other "machine or device." Both therefore comprise copyrightable subject matter under Section 102(a). Indeed, the legislative history of the 1976 Act confirms that Congress specifically intended that computer programs, as well as textual works (such as data bases) communicated through the medium of a computer, should be protected as "literary works":

copyright law has been one of gradual expansion in the types of works accorded protection Authors are continually finding new ways of expressing themselves, but it is impossible to foresee the forms that these new expressive methods will take. The bill does not intend either to freeze the scope of copyrightable subject matter at the present stage of communications technology or to allow unlimited expansion into areas completely outside the present congressional intent.").

The term "literary works" does not connote any criterion of literary merit or qualitative value: it includes catalogs, directories, and similar factual, reference, or instructional works and compilations of data. *It also includes computer data bases, and computer programs to the extent that they incorporate authorship in the programmer's expression of original ideas, as distinguished from the ideas themselves.* (House Report at 54, *reprinted in* 1976 U.S.C.C.A.N. at 5667 (emphasis supplied).)

Congress' enactment was well within its Constitutional power.³²

In 1980, Congress reaffirmed this intention when it adopted, without material modification, the recommendations of the National Commission on New Technological Uses of Copyrighted Works ("CONTU").³³ Congress had established CONTU in 1974 for the purpose, *inter alia*, of studying the relationship between computers and copyrights, and making recommendations concerning what, if any, changes in the law were appropriate to accommodate computer programs.³⁴ Following extensive study, public hearings, and debate, CONTU recommended that computer programs continue to receive protection under the 1976 Act as "literary works." *See* Final Report of the National Commission on New Technological

³² As Learned Hand wrote in *Reiss v. National Quotation Bureau, Inc.*, 276 F. 717, 719 (S.D.N.Y. 1921) (holding a cable and telegraph code book copyrightable), the Constitution "is not a strait-jacket, but a charter for a living people," and grants Congress the power to protect not only forms of expression known in 1789 but also "what the ingenuity of men should devise thereafter."

³³ Pub. L. No. 96-517, § 12, 94 Stat. 3015, 3028 (1980) (codified at 17 U.S.C. §§ 101, 117) (the "1980 Software Amendments"). *See* H.R. Rep. No. 1307, 96th Cong., 2d Sess. at 23, *reprinted in* 1980 U.S.C.C.A.N. 6460, 6482 (the pertinent section of the bill "embodies the recommendations of [CONTU] with respect to clarifying the law of copyright of computer software").

³⁴ Pub. L. No. 93-573, § 201(b)-(c), 88 Stat. 1873-74 (1974).

Uses of Copyrighted Works (1978), at 1-2 & 37-46 (hereinafter "CONTU Report").

In recognizing copyright protection for computer programs, Congress did not depart from traditional principles, as the court of appeals appeared to believe. Pet. App. 24a-25a. Congress was well aware that computer programs serve a useful—as well as an expressive—purpose. But that has never been a bar to copyrightability. Indeed, the Constitution itself declares that the goal of copyright is to "promote the Progress of Science and *useful Arts*." United States Constitution, art. I, § 8, cl. 8 (emphasis supplied). And the First Congress extended copyright protection to maps and charts, which may possess aesthetically pleasing attributes when considered as antiques or decorations, but are created for a utilitarian purpose.³⁵

Copyright traditionally has protected such useful types of "writing" as catalogs, dictionaries, and various forms of instructional or reference materials.³⁶ Moreover, long before 1976 it was well established that commercial cable and telegraph codes—consisting of arbitrary symbols and words intended only to serve the useful purpose of enabling eco-

³⁵ Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124 (repealed 1831). See *Blunt v. Patten*, 3 F. Cas. 763, 764 (C.C.S.D.N.Y. 1828) (accepting copyrightability of plaintiff's navigational charts under Act of 1790, but finding no infringement when defendant's charts were created from own surveys and public sources and were not copied from plaintiff's).

³⁶ See, e.g., *United Dictionary Co. v. G. & C. Merriam Co.*, 208 U.S. 260 (1908) (noting copyrightability of Webster's High School Dictionary); *College Entrance Book Co. v. Amsco Book Co.*, 119 F.2d 874 (2d Cir. 1941) (reversing dismissal of case for infringement of book containing lists of French words to be studied for the New York Board of Regents examination, based upon the "originality" in plaintiff's choice of words, articles, and translations); *Guthrie v. Curlett*, 36 F.2d 694, 696 (2d. Cir. 1929) (holding copyrights valid in consolidated freight tariff index because author "expressed" idea of consolidating relevant information "in the form and arrangement he chose to use" and "[t]he thought, arrangement and style was original," but finding no infringement when defendant had not copied the means of expression used by the author).

nomical and confidential business communications—were copyrightable, when embodied in the tangible medium of code books necessary to decipher their meaning.³⁷ As this Court stated in *Mazer v. Stein*, 347 U.S. at 218, with regard to the copyrightability of statuettes used as lamp bases: "We find nothing in the copyright statute [of 1909] to support the argument that the intended use or use in industry of an article eligible for copyright bars or invalidates its registration."

Nor can it be presumed—as the concurring opinion in the court below apparently does—that Congress failed to consider legislating under patent law, rather than copyright law, in exercising its power to protect the utilitarian expression in computer programs. Pet. App. 23a-25a. As the Court held in *Mazer*, the two bodies of law are *not* mutually exclusive.³⁸ Both are based upon the same Constitutional authority. *Sears, Roebuck & Co. v. Stiffel Co.*, 376 U.S. 225, 228-29 (1964). However, when Congress passed the 1980 Software Amendments,³⁹ this Court had twice held that computer programs,

³⁷ See *Hartfield v. Peterson*, 91 F.2d 998, 999, 1000 (2d Cir. 1937) (A. Hand, J.) (finding infringement when "phrases" in defendant's code book were copied from plaintiff's copyrighted code book); *American Code Co. v. Bensinger*, 282 F. 829, 832 (2d Cir. 1922) (sustaining copyright in a book of code words and symbols used "to enable telegraphic messages to be transmitted with simplicity, economy, and secrecy"); *Hartfield v. Herzfeld*, 60 F.2d 599, 599-600 (S.D.N.Y. 1932) (restraining infringement of artificial code words published in a book with parallel "Wall Street" expressions). See also David Kahn, *The Codebreakers: The Story of Secret Writing* 802-853 (1967) (describing historical development and usage of commercial cable and telegraph codes).

³⁸ 347 U.S. at 217. Congress was not only aware of *Mazer* when it passed the 1976 Act, it also acted affirmatively to incorporate its holding in the statute. House Report at 55, reprinted in 1976 U.S.C.C.A.N. at 5667-68.

³⁹ The 1980 Software Amendments were included as Section 10 of a bill entitled "To amend the patent and trademark laws," which also revised, in preceding sections, various provisions of patent law. See Pub. L. No. 96-517, 94 Stat. 3015 (1980).

standing alone, did not comprise patentable subject matter. *Gottschalk v. Benson*, 409 U.S. 63 (1972); *Parker v. Flook*, 437 U.S. 584 (1978). Congress chose not to disturb these rulings, opting instead to provide incentives to stimulate progress in this relatively new field of creative endeavor through the vehicle of copyright.⁴⁰ There is simply no basis in the statute or its legislative history to support the notion that Congress failed to understand the decision it made, or to make that decision after considering the alternatives.

B. In Section 102(b) of the 1976 Act, Congress Applied to Expression in Computer Programs the Same Copyright Principles That it Applied to Other Forms of Expression.

Contrary to the First Circuit's view that Section 102(b) enumerates categories of works "foreclosed" in their entirety from copyright protection (Pet. App. 21a), that provision merely serves to limit the extent to which copyright will protect a work that is copyrightable under Section 102(a) from unauthorized copying.⁴¹ Section 102(b) provides:

In no case does copyright protection for an original work of authorship *extend* to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described,

⁴⁰ See CONTU Report at 16-18 (comparing copyright and patent protection; noting uncertain state of law concerning patentability of computer programs and likely difficulties faced by applicants for program patents). See also *Miles v. Apex Marine Corp.*, 498 U.S. 19, 32 (1990) ("We assume that Congress is aware of existing law when it passes legislation."); *Goodyear Atomic Corp. v. Miller*, 486 U.S. 174, 184-85 (1988) (same).

⁴¹ See 1 Melville B. Nimmer & David Nimmer, *Nimmer on Copyright* (1995), § 2.03[D] at 2-34 (hereinafter *Nimmer*) (the distinction "constitutes not so much a limitation on the copyrightability of works, as it is a measure of the degree of similarity which must exist between a copyrightable work and an unauthorized copy, in order to constitute the latter an infringement").

explained, illustrated, or embodied in such work. (17 U.S.C. § 102(b) (emphasis supplied).)

The phrasing of Section 102(b) presupposes the existence of an "original work of authorship" entitled to "copyright protection," and simply makes it clear that the scope of that protection does not "extend" to any "idea, procedure, process, system, method of operation, concept, principle, or discovery" that the work reveals, regardless of how it is embodied in the work. Section 102(b) therefore explicitly distinguishes between an "idea" and the description or explanation of that idea. The "copyright protection" that "subsists in" a work by reason of Section 102(a) includes the particular expression of an "idea" in the work, but under Section 102(b) does not extend to the "idea" itself.⁴²

The legislative history confirms that this is what Congress intended. Section 102(b) replaced Section 3 of the 1909 Act, which stated that copyright in a work protected only "the copyrightable components of a work." *Feist*, 499 U.S. at 355-56. This provision was thought to be ambiguous. *Id.* at 351. Section 102(b) thus "identifies specifically those elements of a work for which copyright is not available," but does so in a way that was not intended to alter the distinction that courts previously had drawn between an unprotected "idea" and the copyrightable "expression" of that idea (*id.* at 356):

Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law. Its purpose is to restate, in the context of the new single Federal sys-

⁴² This interpretation of Section 102 comports with this Court's interpretation of Section 103 of the 1976 Act. Section 103—concerning "compilations," or selections and arrangements of preexisting facts or data (see 17 U.S.C. § 101 (definition of "compilation"))—contains a structure similar to Section 102. As this Court has explained, Section 103(a) affirmatively states that "the subject matter of copyright . . . includes compilations," while Section 103(b) makes it clear that copyright in such a work "protects only the author's original contributions—not the facts or information conveyed." *Feist*, 499 U.S. at 359.

tem of copyright, that the basic dichotomy between expression and idea remains unchanged. (House Report at 57, *reprinted in* 1976 U.S.C.C.A.N. at 5670.)

In *Feist*, this Court observed that the “idea/expression” or “fact/expression” distinction in Section 102(b) “applies to all works of authorship” (499 U.S. at 350)—a reading grounded in the words of the provision itself. 17 U.S.C. § 102(b) (“*In no case does copyright protection for an original work of authorship extend . . .*”) (emphasis supplied). And the legislative history confirms that Congress intended that Section 102(b) be interpreted so that the scope of copyright protection for computer programs is determined under the same principles that apply to other types of copyrightable works:

Some concern has been expressed lest copyright in computer programs should extend protection to the methodology or processes adopted by the programmer, rather than merely to the “writing” expressing his ideas. Section 102(b) is intended, among other things, to make clear that the expression adopted by the programmer is the copyrightable element in a computer program, and that the actual processes or methods embodied in the program are not within the scope of the copyright law. (House Report at 57, *reprinted in* 1976 U.S.C.C.A.N. at 5670.)

Congress plainly understood that computer programs had a functional aspect, and were used to accomplish a “process” or “method of operation.” Yet, like a compilation that can both “embody” the idea of a collection of facts and express that idea in an original selection and arrangement of those facts, Congress recognized that a computer program can both “embody” a process or method *and* contain a “copyrightable element” in the particular “expression adopted by the programmer” to implement that same process or method.⁴³

⁴³ The Court, as well, long has understood that the same text may both reveal an “idea” and contain copyrightable expression in the

Congress’ intention that courts should interpret the terms “process” and “method of operation” in Section 102(b) in a manner consistent with traditional principles, and not in some manner unique to computer programs or other utilitarian works, is shown by their inclusion in a list of undifferentiated terms following the word “idea”—a term with a settled meaning in the copyright field.⁴⁴ Under the doctrine of *noscitur a sociis*, a word in a statute “gathers meaning from the words around it.” *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 115 S. Ct. 2407, 2415 (1995), quoting from *Jarecki v. G.D. Searle & Co.*, 367 U.S. 303, 307 (1961). See *Gustafson v. Alloyd Co.*, 115 S. Ct. 1061, 1069 (1995) (single word in a statute should not be given “a meaning so broad that it is inconsistent with its accompanying words”). Thus, applying the term “method of operation” in Section 102(b) to computer programs, copyright protects the particular words or symbols selected by the programmer to express a method (like the words chosen to express an idea), but not the “method of operation” (or “idea”) itself.⁴⁵

Again, Congress confirmed this interpretation of Section 102(b) by adopting CONTU’s recommendations in the 1980 Software Amendments. CONTU realized that computer programs could be characterized as comprising a “process” or “method of operation.” CONTU Report at 18-20. Neverthe-

author’s original arrangement of words selected to describe that idea. *Holmes v. Hurst*, 174 U.S. 82, 86 (1899).

⁴⁴ See *Community for Creative Non-Violence v. Reid*, 490 U.S. 730, 739 (1989) (applying “well established” principle that when Congress uses terms that have achieved settled meaning under the common law, a court must infer that Congress intends to incorporate the established meaning of those terms, unless the statute otherwise dictates).

⁴⁵ See 1 *Nimmer*, § 2.03[D] at 2-35 (“It would, then, be a misreading of Section 102(b) to interpret it to deny copyright protection to ‘the expression’ of a work, even if that work happens to consist of an ‘idea, procedure, process, etc.’ Thus, if a given ‘procedure’ is reduced to written form, this will constitute a protectible work of authorship so as to preclude the unlicensed copying of ‘the expression’ of the procedure, even if the procedure per se constitutes an unprotectible ‘idea.’ ”).

less, the Commission agreed with Congress' earlier judgment that the "idea/expression" distinction was sufficient to guide the courts to draw an appropriate line for copyright protection of computer programs. It declared: "That the words of a program are used ultimately in the implementation of a process should in no way affect their copyrightability."⁴⁶

CONTU also proposed the inclusion of the following definition of a "computer program":

A "computer program" is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result. (*Id.* at 12.)

By incorporating this definition in Section 101 of the 1976 Act, Congress left no doubt of its intention to accord copyright protection to the particular "set of statements or instructions" expressed in a computer program, despite the fact that they would be "used" in implementing "method[s] of operation" to accomplish functional "result[s]." Moreover, because both a program's code and its menu command hierarchy express a "set of statements or instructions" that can be used to accomplish "a certain result" in a computer, they both fit the definition of a "computer program" that Congress adopted.

Had Congress intended to limit the copyright protection computer programs were to receive under Section 102, it knew how to do so. Congress confronted a somewhat analogous issue in its treatment of "useful articles," which are

⁴⁶ *Id.* at 21. CONTU did recommend one unique restriction on copyright protection for computer programs not material to the issues before the Court, proposing that owners of a legitimate copy of a program receive a limited right to make another copy or adaptation if necessary. CONTU Report at 12. That Congress enacted CONTU's one proposed limitation, but no other, demonstrates that Congress did not intend to treat programs differently from other forms of "literary works" in any other respect. *See, e.g., Russello v. United States*, 464 U.S. 16, 22 (1983) (noting that if Congress had intended to restrict the scope of a subsection of the RICO statute, "it presumably would have done so expressly" as it did elsewhere in the statute).

defined in Section 101 as articles "having an intrinsic utilitarian function that is not merely to portray the appearance of the article or to convey information." 17 U.S.C. § 101. "Useful articles" are copyrightable as "pictorial, graphic, and sculptural works"—one of the illustrative categories of works set forth in Section 102(a)—"only if, and only to the extent that, [their] design incorporates pictorial, graphic, or sculptural features that can be identified separately from, and are capable of existing independently of, the utilitarian aspects of the article." 17 U.S.C. § 101. Congress could have defined "computer programs" in a similarly qualified fashion. It did not, instead defining them as "literary works"—creating an inference that no such limitation was intended. *See BFP v. Resolution Trust Corp.*, 114 S. Ct. 1757, 1761 (1994) (when Congress includes language in one section of a statute but omits it in another, courts presume that Congress acted purposely in enacting the disparate provisions).⁴⁷

Thus, it is clear that Congress, in enacting both the 1976 Act and the 1980 Software Amendments, did *not* intend that the scope of protection for expression in computer programs should be governed by any special rules or limitations, despite its awareness that programs are utilitarian works that may be used for essentially functional purposes. Rather, Congress specifically intended the expression in computer programs to enjoy copyright protection under the same principles governing other forms of original expression in literary works. Moreover, neither the statute nor the legislative history suggests that Congress intended to treat differently those words or symbols the program displays to users in a menu command

⁴⁷ Although Congress chose *not* to classify computer programs as "useful articles," and although menus are not "useful articles" because their purpose is merely "to convey information," Judge Keeton did draw such an analogy (Pet. App. 117a), and at the trial in this case he applied the standard applicable to "useful articles" to test the copyrightability of the 1-2-3 menu command hierarchy. He found that it was, in fact, conceptually separable from, and was not "functionally dictated" by, the operations of the program that it described. Pet. App. 92a-94a.

hierarchy from those within its source or object code. The definitions Congress adopted for "literary works" and "computer programs" apply to each equally well. Congress' decision was within its Constitutional authority and fully consistent with the long-established tradition of recognizing copyright protection in the expressive elements of works that may also serve a useful purpose.

II

THE EXPRESSION IN THE LOTUS 1-2-3 MENU COMMAND HIERARCHY IS SEPARABLE FROM ITS IDEAS AND FUNCTIONALITY, AND IS THEREFORE ENTITLED TO COPYRIGHT PROTECTION

As this Court held in *Feist*, 499 U.S. at 350, Congress intended in Section 102(b) to codify the judicially-developed "idea/expression" dichotomy, which courts traditionally have applied to determine the scope of protection to be accorded to copyrighted works. "When Congress codifies a judicially defined concept, it is presumed, absent an express statement to the contrary, that Congress intended to adopt the interpretation placed on that concept by the courts." *Davis v. Michigan Dep't of Treasury*, 489 U.S. 803, 813 (1989).⁴⁸

⁴⁸ Section 102(b) is only one of several provisions in which Congress codified a judicially defined concept in the 1976 Act. *Reid*, 490 U.S. at 749 n.15. See *Feist*, 499 U.S. at 355 (stating that Congress did not intend in Section 102(a) to contract the bounds of copyrightable subject matter); *Campbell v. Acuff-Rose Music, Inc.*, 114 S. Ct. 1164, 1170 (1994) (holding that Congress intended the "fair use" provision of Section 107 of the 1976 Act "to restate the present judicial doctrine of fair use, not to change, narrow, or enlarge it in any way") (quotation omitted).

A. The Judicially-Developed Idea/Expression Dichotomy Distinguishes Between the Use of the Ideas Embodied in a Work and Their Particular Description or Explanation

The idea/expression dichotomy obliges courts to determine whether the particular element of a copyrighted work that an accused infringer has copied is merely an "idea" embodied in the original work, or is a particular way to express that idea chosen by the author from a universe of many possibilities. When the element that was copied is one of only a few conceivable ways to express the idea, or is at a level of abstraction so general that to deem it an infringement effectively precludes all others from publishing any other expression of that idea, the idea and expression are said to "merge" and copyright protection is foreclosed. *Morrissey v. Procter & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967).⁴⁹

The origin of the "idea/expression" dichotomy and the related merger doctrine generally is traced to this Court's decision in *Baker v. Selden*, 101 U.S. 99 (1879), although—like "fair use"—its roots run deep in the common law of copyright.⁵⁰ *Selden* published a series of pamphlets intro-

⁴⁹ See also *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1444 (9th Cir. 1994) (noting "well-recognized" precept that when an idea and its expression are indistinguishable, or "merged," the expression will be protected only against nearly identical copying), *cert. denied*, 115 S. Ct. 1176 (1995); *Kepra-Tregoe, Inc. v. Leadership Software, Inc.*, 12 F.3d 527, 533 (5th Cir.) noting that, when idea can be expressed in very few ways, copyright law does not protect that expression; "In such cases idea and expression are said to be merged.", *cert. denied*, 115 S. Ct. 82 (1994); *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 838 (10th Cir. 1993) ("Under the merger doctrine, copyright protection is denied to expression that is inseparable from or merged with the ideas, processes, or discoveries underlying the expression.").

⁵⁰ See, e.g., *Emerson v. Davies*, 8 F. Cas. 615, 618-19 & 625 (C.C.D. Mass. 1845) (Story, J.) (holding that plaintiff's original "plan, arrangement and combination of materials" for a series of arithmetic lessons was copyrightable, even if the materials so arranged did not originate with the author, and finding infringement when defendant copied

ducing a self-described “new system of Book-keeping” intended primarily for use by municipal treasurers, which contained a preface page, a one-page introductory essay, a collection of forms illustrating the practical use of the “system,” and another collection of blank forms.⁵¹

Baker devised a competing “system” of ledger forms that—as his counsel argued in this Court—used a different “arrangement” of columns and differed markedly from Selden’s in other respects:

The entries in Baker’s are upon the principle known as single entry; the entries in Selden’s are known as double entry. The situation of columns is reversed and other differences shown by the testimony cited above are so radical as to entirely relieve the Baker system from the charge of infringements. (Argument for Appellant at 16 & 18, *Baker v. Selden* (No. 95, October Term, 1879).)

The only commonality lay in the use of certain column headings required of county treasurers by Ohio statute (*id.* at 10-13), together with the use of ruled columns in a system based upon the “same generic principles,” which would “produce the same result” of “keep[ing] the different accounts accurately.”⁵²

Observing that the “evidence of the complainant is principally directed to the object of showing that Baker uses the

that plan and arrangement instead of composing a new arrangement from the same “common materials and common sources of knowledge, open to all men”).

⁵¹ Charles Selden, *Selden’s Condensed Ledger, and Condensed Memorandum Book, and Forms of Record, Condensed Ledger, Reports, and Condensed Memorandum Book* (5th ed. 1861) (copies of which are lodged with the Court). The pamphlets are described as “books” in the Court’s opinion because, at the time they were registered, that was the statutory category of copyrightable subject matter to which such works belonged. *Baker*, 101 U.S. at 101.

⁵² *Id.* at 16 & 18. Comparison of Baker’s ledger forms (Transcript of Record at 119-143, *Baker v. Selden*), with Selden’s reveals few, if any, literal similarities.

same system,”⁵³ the Court concluded that Baker’s system “uses a similar plan so far as results are concerned; but makes a different arrangement of the columns, and uses different headings.” 101 U.S. at 100. Thus, the Selden work was not infringed “in any way, unless the latter became entitled to the exclusive right in the system.” *Id.* at 101. The Court then rejected the contention that copyright gave Selden the “exclusive right to the use of the system or method of book-keeping” as illustrated in his forms, or in forms “made and arranged on substantially the same system.” *Id.* As the Court declared:

[W]here the art [a book] teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given therewith to the public; not given for the purpose of publication in other works explanatory of the art, but for the purpose of practical application. (*Id.* at 103.)

Conversely, the Court stated that copyright *does* protect the author’s particular *statement* of the “rules and methods of useful art” as “embodied and taught” in a copyrighted work:

The use by another of the same methods of statement, whether in words or illustrations, in a book published for teaching the art, would, undoubtedly, be an infringement of the copyright The use of the art is a totally different thing from a publication of the book explaining it. (*Id.* at 104.)

⁵³ Selden’s estatrix argued that Selden’s copyrights “extend to and embrace a *system of bookkeeping*—a combination of lines so arranged as to suggest an improved method of classifying and condensing mercantile accounts. The lines are the symbols to convey the idea of the method or plan.” Argument for Appellee at 6-7, *Baker v. Selden* (emphasis in original).

Thus, the Court concluded that the copyright in Selden's "book" of forms "did not confer upon him the exclusive right to make and use account-books ruled and arranged as designated by him and described and illustrated in said book." *Id.* at 107.

Baker v. Selden thus establishes the basic idea/expression dichotomy and the related merger doctrine. Copyright will not prevent the practical use by the public of the "art" a work teaches, or of illustrations and forms that are "necessary incidents to the art"—*i.e.*, that reflect a "merger" of idea and expression. But this limitation does not permit the unlicensed use of the author's description, explanation, or illustration of the art in another work "published for teaching the art." An element of a work, therefore, does not lose all copyright protection merely because it describes a system or method that its author intended for "people" to learn and use, as the First Circuit erroneously concluded from its reading of *Baker*. Pet. App. 18a. People may be free to use the method, but no one can publish another work describing or explaining that method using the author's particular expression of it.

To articulate the holding of *Baker v. Selden* is easier than to apply its principle. As the Second Circuit has written, the decision "offers scant guidance on how to separate idea from expression," or on how to "distinguish protectible expression from that expression which 'must necessarily be used as incident to' the work's underlying concept." *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 705 (2d Cir. 1992).⁵⁴ Applying the idea/expression dichotomy to the facts of a particular case has always presented a challenge, not only in cases involving computer programs.⁵⁵ To determine whether

⁵⁴ As the district court noted in this case, the Second Circuit's *Altai* decision takes *Baker* as the "starting point" for its analysis, but did not hold that *Baker* controlled the outcome: "The Second Circuit was sensitive not only to its duty of fidelity to precedent, but as well to its duty of fidelity to congressional mandates that came into existence long after *Baker* was decided." Pet. App. 127a.

⁵⁵ See Jane C. Ginsburg, *Four Reasons and a Paradox: The Manifest Superiority of Copyright over Sui Generis Protection of Computer*

particular expression is inseparable from or "merges" with any idea or method it embodies is, in all events, a fact-specific inquiry, which defies any "bright line" rules. After five decades on the bench, no less a jurist than Learned Hand could declare only that decisions as to when an imitator has gone beyond the idea and borrowed the expression of a work "must inevitably be *ad hoc*." *Peter Pan Fabrics, Inc. v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960). The distinctions required are the sort of subtle, yet important and necessary, judgments that courts are routinely called upon to make in copyright cases—as in many others.

Although the methodologies courts have employed vary somewhat in their details, a consensus has emerged around the so-called "abstraction-filtration-comparison" test for applying the idea/expression distinction in the context of computer programs.⁵⁶ The test draws upon the "patterns of abstraction" analysis articulated in *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930) (L. Hand, J.), *cert. denied*, 282

Software, 94 Colum. L. Rev. 2559, 2560 (1994) (disagreement over identification of the expression that may be protected without risk of monopolizing the underlying idea "is hardly peculiar to computer programs"); Arthur R. Miller, *Copyright Protection for Computer Programs, Databases, and Computer-Generated Works: Is Anything New Since CONTU?*, 106 Harv. L. Rev. 977, 1035 (1993) ("Courts always have had to struggle with the delicate questions of where the commonplace becomes originality and where legitimate imitation shades into infringement, especially in the environment of a new mode of expression.").

⁵⁶ See, e.g., *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335, 1342-43 (5th Cir. 1994) ("Generally, we endorse the abstraction-filtration-comparison method of determining copyright protection for computer programs . . ."), *opinion supplemented on denial of reh'g en banc*, 46 F.3d 408 (5th Cir. 1995); *Apple Computer v. Microsoft*, 35 F.3d at 1445-46 (endorsing "dissection" of nonliteral elements of computer programs to determine infringement and noting that abstraction-filtration-comparison test performs same analysis, although articulated differently); *Gates Rubber*, 9 F.3d at 840-41 (accepting basic three-part analysis of abstraction-filtration-comparison test articulated in *Altai*); *Altai*, 982 F.2d at 706-11. See also 3 *Nimmer*, § 13.03[F][1] at p. 13-125-50 (describing "successive filtration" test).

U.S. 902 (1931), to identify an appropriate conception of the work's unprotected ideas.⁵⁷ Typically, a "filtration" step is then applied, in which the elements of the copyrighted work are analyzed to screen out those that are unprotected for other reasons.⁵⁸ Finally, the court compares the protected elements of the copyrighted work with the accused work to determine whether infringement has occurred.

Whether any particular circuit's version of this test, or even another type of test, is preferable from a doctrinal or practical standpoint is not at issue in this case.⁵⁹ Every court of appeals that has addressed this issue (other than the First Circuit) has reached the common understanding that Section 102(b) requires courts to attempt to separate the purely functional attributes of computer programs from the particular expression chosen by the programmer to accomplish or to provide that functionality. *See Atari Games Corp. v. Oman*, 888 F.2d 878, 884-86 (D.C. Cir. 1989) (R.B. Ginsburg, J.) (reversing judgment affirming Copyright Office refusal to register copyright in video game, for failing to explain how the work was "dictated by 'functional requirements'" and lacked expression "separable from the game itself" that would

⁵⁷ In *Nichols*, Judge Hand recognized that infringement could occur without literal copying of a work's text, or "else a plagiarist would escape by immaterial variations." 45 F.2d at 121. The "abstraction" analysis seeks to identify the point in the "patterns of increasing generality" that may be discerned in a work where the statement of what has been copied is no more than an unprotected "idea" (*id.*)—*e.g.*, "a play about star-crossed young lovers," "a system for keeping municipal accounts," or "a spreadsheet program with a hierarchical menu structure." This insight continues to furnish a durable construct for idea/expression analysis.

⁵⁸ These filters are simply applications in this particular context of the traditional copyright doctrines of merger, originality, and *scènes a faire*. 3 *Nimmer*, § 13.03[F][1] at p. 13-130 & 13-135 n.303.13.

⁵⁹ See 1 William F. Patry, *Copyright Law and Practice* 225-26 (1994) (suggesting that courts should focus less on devising tests and more on interpreting the statute, including the statutory definitions, to determine the materiality of an alleged infringer's taking).

"qualify as copyrightable subject matter").⁶⁰ To employ the language of *Baker v. Selden*, courts must attempt to separate the practical *use* of the system from the author's particular *statement* explaining or describing the system. Prior to the First Circuit's decision in this case, the circuits had reached consensus that, when such a separation is possible, the expression is protected by copyright if it is only one of numerous possibilities for providing the same functionality.⁶¹ The First Circuit, alone, has seen fit to interpret Section 102(b) in a contrary manner.

B. Under the Idea/Expression Dichotomy, the 1-2-3 Menu Command Hierarchy Contains Protected Expression

The outcome in this case does not depend upon which articulation of the idea/expression distinction is employed—as Borland conceded in oral argument in the court of appeals, and as that court apparently accepted. Pet. App. 14a-15a.

⁶⁰ See also *Atari Games Corp. v. Oman*, 979 F.2d 242, 247 (D.C. Cir. 1992) (R.B. Ginsburg, J.) (reversing second refusal to register copyright in same video game, when Copyright Office failed to consider scope of expression in work as a whole under the threshold standard of creativity enunciated in *Feist*).

⁶¹ See, *e.g.*, *Autoskill Inc. v. Nat'l Educational Support Sys., Inc.*, 994 F.2d 1476, 1494 (10th Cir.) (upholding lower court's refusal to apply merger doctrine to deny protection to elements of computer program, when that court found no evidence that the program's "idea" could be expressed in only one way), *cert. denied*, 114 S. Ct. 307 (1993); *Whelan Assoc., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1236 & n.28 (3d Cir. 1986) (finding structure of computer program to be part of its expression, because "idea" of efficiently managing dental laboratory could be accomplished in a number of different ways with a number of different programs; "Where there are various means of achieving the desired purpose, then the particular means chosen is not necessary to the purpose; hence, there is expression, not idea."), *cert. denied*, 479 U.S. 1031 (1987); *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240, 1253 (3d Cir. 1983) ("If other methods of expressing that idea are not foreclosed as a practical matter, then there is no merger."), *cert. dismissed*, 464 U.S. 1033 (1984).

Indeed, the First Circuit dismissed as “immaterial” to its analysis *any* consideration of the extent to which the selection and arrangement of the 469 words comprising the 1-2-3 menu command hierarchy reflected “‘expressive’ choices,” or was capable of alternative expression. Pet. App. 17a. But these are precisely the questions a court *must* consider in order to determine whether a particular element of a work is protected by copyright. Judge Keeton engaged in detailed fact-finding on these issues in the district court upon an ample trial record, and found that Borland had copied protected expression in the 1-2-3 menu command hierarchy. The First Circuit did not disturb or reject these findings as clearly erroneous; it simply chose to ignore them.

The district court’s test for determining whether Borland had copied protected expression in the Lotus 1-2-3 menu command hierarchy was based upon one it devised in the earlier *Paperback* case (*id.* at 216a-17a), refined in light of the issues presented in this case. *Id.* at 163a-65a, 170a-71a. Like the “abstraction-filtration-comparison” test, Judge Keeton’s began with a *Nichols* “abstraction” analysis (*id.* at 118a-20a, 163a, 219a-222a), proceeding to a second step in which elements of the work that are “functionally dictated” or are “necessary incidents” to the idea, system, or method, were removed.⁶² Applying this test to the 1-2-3 menu command hierarchy, the district court considered five possible conceptions of its underlying idea and found that the following formulation was the proper one:

[Its] user interface involves a system of menus, each menu consisting of less than a dozen commands, arranged hierarchically, forming a tree in which the main menu is the root/trunk of the tree and submenus branch off from higher menus, each submenu being linked to a higher menu by operation of a command, so that all the

⁶² *Id.* at 119a-20a, 127a, 163a-65a. Judge Keeton’s test also concluded with a determination of the qualitative substantiality of the copied expression. *Id.* at 119a, 135a, 163a-65a, 171a.

specific spreadsheet operations available in Lotus 1-2-3 are accessible through the paths of the menu command hierarchy. (Pet. App. 73a-74a.)

No lesser level of abstraction is possible without defining the “idea” of the 1-2-3 menu command hierarchy as itself—a tautology the district court found to be unjustified. *Id.* at 130a. This was so because, under the district court’s definition, another spreadsheet program could offer *exactly* the same selection of functions as does 1-2-3 without infringing, so long as it used different expression in its menus. *Id.* Thus, the district court concluded that the Lotus 1-2-3 menu command hierarchy contained “expression” distinguishable from its “idea” (or “system”) and was entitled to protection.

The district court also found, after trial, that the 1-2-3 menu command hierarchy was not determined by its underlying functionality (*id.* at 84a-90a), and that the “text of the menu commands and the menu structure itself are not dictated by mechanical application of the functional considerations” Borland contended had confined its expression. *Id.* at 92a. Judge Keeton went on to apply the principles used to find separable expression in “useful articles,” even though the statutory definition of “useful articles” does not include computer programs. *See* 17 U.S.C. § 101. Judge Keeton found that the functional operations of the program could be conceptually separated from the text and arrangement of the menus explaining them, and that this latter expression “easily satisfies” the originality requirement as articulated by this Court in *Feist*.⁶³

⁶³ Pet. App. 92a. Concerning the Key Reader, the district court was careful to limit its decision *only* to the specific issues raised by Borland’s use of “phantom” 1-2-3 menus to run 1-2-3 macros. *Id.* at 39a. In particular, Judge Keeton found that Borland had implemented the Key Reader by stripping all but the first letters from “the same copy of the 1-2-3 menu structure and commands that Borland had used in its emulation interface,” in what he called a “stripped menu tree.” *Id.* at 35a. Borland nonetheless had copied protected expression because the Key Reader contained a recognizable copy of the 1-2-3 menus. *Id.* at 44a. Like a compilation that expresses, in its arrangement, an original way to

The First Circuit dispensed with the need to review the district court's fact-based conclusion by reading Section 102(b) as a definitional filter, rather than as a codification of the idea/expression dichotomy. That is, once the court of appeals decided to affix a pejorative label to the 1-2-3 menu command hierarchy, no further analysis was necessary. The court may have spared itself the difficult task of finding the line between idea and expression by ruling as a matter of law that *all* menus are *per se* uncopyrightable methods of operation—no matter how much creative, original, and separable expression they contain—but it did so at the expense of fidelity to an uninterrupted line of precedent and despite Congress' clear intent to the contrary.

III

THE FIRST CIRCUIT'S DECISION EFFECTIVELY NULLIFIES THE COPYRIGHT PROTECTION CONGRESS ENACTED FOR THE EXPRESSION IN COMPUTER PROGRAMS

The First Circuit fundamentally misread Section 102(b) of the 1976 Act as automatically barring copyright protection for any aspect of a computer program that can be described as embodying a "method of operation," regardless of the expressive elements it contains.⁶⁴ This interpretation has no support in the language of the 1976 Act, the 1980 Software Amendments, or the legislative history. It also runs directly against the entire body of decisional authority before and after the

gain access to uncopyrightable facts, the district court found that the arrangement of the 1-2-3 menu tree expresses an original way to specify the set of executable (and uncopyrightable) operations in a spreadsheet program. *Id.* at 40a-41a.

⁶⁴ Pet. App. 17a. The First Circuit essentially rewrote Section 102(b) to state: "In no case does copyright protection extend to any method of operation, or to any description, explanation, illustration, or embodiment thereof, in an original work of authorship."

passage of the 1976 Act, which consistently has applied the idea/expression distinction to determine the scope of protection for all copyrighted works. The First Circuit's ruling effectively nullifies Congress' decision to recognize copyright protection for computer programs and fails to accord to owners of copyright in such works the same scope of protection for their property that owners of copyright in other works of authorship enjoy.

A. The Decision Below Rests Upon an Interpretation of Section 102(b) Contrary to Congress' Intent

The First Circuit described the Lotus 1-2-3 menu command hierarchy as a "method of operation" because, in that court's view, it is the "means by which a person operates something"—*i.e.*, a computer—in order to achieve a functional result.⁶⁵ But the same can be said of computer programs generally, because all computer programs can be described as "the means by which a person operates" a computer—as the concurring opinion below acknowledged. *Id.* at 24a. Congress understood that computer programs were "to be used . . . in a computer in order to bring about a certain result" (17 U.S.C. § 101) when it decided to recognize their copyrightability. The First Circuit's interpretation flouts Congress' intention to give meaningful protection to a type of work that the statute explicitly covers. It therefore cannot be correct. As this Court has stated, it is the courts' "role to make sense rather than nonsense out of the corpus juris." *West Virginia Univ. Hosp., Inc. v. Casey*, 499 U.S. 83, 99 (1991).⁶⁶

⁶⁵ *Id.* at 15a. The majority cited no authority for this definition. Indeed, Borland argued in the court below that the 1-2-3 menu command hierarchy was a "system," not a "method of operation," and the meaning of the latter term was not briefed or argued by either party below.

⁶⁶ *Accord*, *Taylor v. United States*, 495 U.S. 575, 594 (1990) (declining to follow any rule that gives statutory term a meaning that is "obsolete or inconsistent with the statute's purpose"); *United States v. Ron Pair Enter., Inc.*, 489 U.S. 235, 242 (1989) (noting that drafters' intention controls interpretation of statute whenever "the literal appli-

The fallacy of the First Circuit's reasoning is shown in its attempt to distinguish the copyrightability of the 1-2-3 program code from that of the 1-2-3 menu command hierarchy. It is true, as the court observed, that Borland need not have copied the 1-2-3 code in order "to offer the same capabilities as Lotus 1-2-3," in the sense that different program codes could have been written to achieve the same functional results. Pet. App. 16a. But that observation does *not* distinguish the copyrightability of 1-2-3's code from its menu command hierarchy. As the district court found, a program need not copy the Lotus 1-2-3 menu command hierarchy in order to offer the same capabilities as 1-2-3: different menu command hierarchies can be written to express exactly the same set of functional operations, as Borland proved with its so-called "alternative" user interfaces. *Id.* at 86a-90a.

How, then, could the First Circuit have concluded that it could apply its rule of *per se* exclusion of methods of operation to menu commands but not, with comparable effect, to program code? The answer lies in an unacknowledged shift in the First Circuit's perspective. According to the court, once Lotus 1-2-3 was written, the particular words in its menus became "essential" to its operation and, therefore, unprotectable. Pet. App. 17a. Even if this were true—and it is not⁶⁷—it still would provide no basis for distinguishing the treatment of program code. Once a program is written, its particular statements and instructions also become "essential" to its operation. Only by considering the copyrightability of

cation of a statute will produce a result demonstrably at odds with the intentions of its drafters"). See also Ginsburg, *supra*, n.55 at 2569-70 (because "one should endeavor to construe statutes in a way that does not render them futile," any tension between Section 102(b) and the definition of a "computer program" must be resolved in favor of protecting "some ways of achieving 'a certain result' ") (emphasis in original).

⁶⁷ A user who had memorized Lotus 1-2-3's menu commands and the associated keystrokes or cursor movements could operate the program without reference to its menus, just as a poem or a song can be memorized with repetition.

1-2-3's menus *after* the program was written, but its code *before*, could the First Circuit purport to find a distinction. There is simply no logical basis upon which the Court can sustain the First Circuit's interpretation of Section 102(b) without frustrating Congress' manifest intention to recognize copyright protection for computer programs.

B. The Policy Arguments Raised in the Court of Appeals Do Not Justify Depriving Computer Programs of the Statutory Protection to Which They Are Entitled

Both opinions in the court of appeals display a general discomfort with the Congressional decision to recognize copyright protection for computer programs, suggesting that the First Circuit's strained interpretation of Section 102(b) was influenced by certain policy arguments that Borland and various of its *amici* advanced concerning the alleged competitive effects of a decision in Lotus' favor. Pet. App. 21a & 23a-28a. In addition to being grossly exaggerated, most of the First Circuit's assumptions are without record support because none of these issues was tried in the district court (as discussed at pp. 15-16 above).

More fundamentally, that court appears to have ignored the plain fact that Congress resolved these policy questions in the 1976 Act.⁶⁸ As this Court previously has observed, virtually every provision in the 1976 Act was the result of a long process of negotiation and deliberation, reflecting both a carefully-crafted compromise among the interested copyright constituencies and the exercise of legislative judgment. *Stewart v. Abend*, 495 U.S. 207, 225-26 (1990); *Community for*

⁶⁸ In Judge Boudin's concurring opinion, the sole citation for the proposition that courts, rather than Congress, are to determine "what may be protected and with what limitations and exceptions" (*id.* at 25a), is a single sentence in one of the lectures collected in Kaplan's *An Unhurried View of Copyright*. The lecture was delivered in 1966 and addressed, in the cited passage at page 40, the "maddeningly casual prolixity and imprecision throughout" the 1909 Act, not the as-yet-unwritten 1976 Act.

Creative Non-Violence v. Reid, 490 U.S. 730, 748 n.14 (1989); *Mills Music, Inc. v. Snyder*, 469 U.S. 153, 174 n.41 (1985).⁶⁹ This Court, accordingly, has declined to interpret provisions of the 1976 Act based on its own perception of the relevant policies. As the Court stated in *Stewart v. Abend*, 495 U.S. at 230, "it is not [the Court's] role to alter the delicate balance Congress has labored to achieve;" such "arguments are better addressed by Congress than the courts." *Id.* at 228.

For example, the concurring opinion suggests that courts should be particularly hesitant in extending copyright protection to computer programs, because to do so "can have some of the consequences of *patent* protection in limiting other people's ability to perform a task in the most efficient manner." Pet. App. at 23a (emphasis in original). Even if computer programs, standing alone, had been considered patentable subject matter at the time Congress acted—and they were not (see pp. 25-26 above)—its decision to protect computer programs under copyright law must be accepted as a deliberate and rational policy determination. The lower court's assumption that protecting the utilitarian aspects of computer programs under patent law, rather than copyright, would result in greater freedom to innovate and a lesser effect on competition is a debatable point at best.⁷⁰ Determining how

⁶⁹ See also *Miller, supra*, n.55 at 979-85 (discussing history leading to passage of 1976 Act and its treatment of computer programs; the author was a CONTU commissioner and served as a member of its software subcommittee).

⁷⁰ The numerous differences between patent and copyright law defy easy generalizations concerning which is "better" from a policy perspective. For purposes of promoting creativity, the novelty requirement for patent protection may be too high a threshold—denying *all* protection to the vast majority of original, but not truly inventive, works. If the goal is to preserve competition, patent protection may be too powerful, because a patent owner can prohibit all others from practicing the claimed invention—even innocent infringers or independent creators—unlike a copyright owner, who can demand only that subsequent authors do their own work instead of copying. See *Mazer*, 347 U.S. at 218

best to balance the countervailing factors in order to "promote the Progress of Science and useful Arts" is a task the Constitution gives to Congress, not the courts.

The First Circuit also expressed concern about the potential impact upon competition if the owners of industry-leading programs were permitted to enjoy the full protection of copyright law. Pet. App. 21a & 26a-28a. This Court, however, has rejected the notion that a copyrighted work should receive lesser rights simply due to its public importance. *Harper & Row, Publishers, Inc. v. Nation Enter.*, 471 U.S. 539, 557-59 (1985). The assertion that a software product forfeits some portion of the protection to which it should be entitled because it has become—for the moment—the most popular, is "fundamentally at odds with the scheme of copyright protection." *Id.* at 559. Moreover, because these issues were not tried in the district court, there was nothing in the record to permit an accurate or measured evaluation of the legitimacy of this concern.

The concern is overstated in all events. In a competitive market, in which consumers are free to choose among substitutable—if differently expressed—offerings, the ability of any one software vendor to force unwilling adherence to a proprietary standard may prove short-lived, if not illusory.⁷¹ When, on the other hand, the competitive marketplace has broken down, the appropriate answer is to enforce the antitrust laws, not to misinterpret copyright law.⁷² Moreover,

("Absent copying, there can be no infringement of copyright.") And, although a patent confers upon its owner a shorter period of exclusivity, the difference has little practical effect in the fast-moving software industry, in which even seventeen or twenty years is more than long enough to span many product life cycles.

⁷¹ See *Huber, supra*, n.19 at 104 (suggesting that any decision by Lotus to overprotect its copyrights could eventually prove self-defeating, in light of consumer preference for non-proprietary standards).

⁷² See, e.g., *Eastman Kodak Co. v. Image Technical Services, Inc.*, 504 U.S. 451, 479 n.29 (1992) (intellectual property protection does not create immunity from antitrust laws). The doctrine of "copyright misuse"

Section 102(b), the idea/expression dichotomy, and the merger doctrine already address the First Circuit's concern. If, as in this case, many ways exist to express the same program functionality, then the market is not deprived of products performing those functions when copyright protection is accorded to the separable expression embodied in one of those ways.⁷³ Because this principle—which the First Circuit ignored—is embedded in the statute, there is no need or reason to create new judicial limitations that Congress never intended.

In addition, the “fair use” doctrine, under appropriate circumstances, may guard against any undue adverse effect of copyright protection on competition. Like the idea/expression distinction itself, the fair use doctrine allows some opportunity for copying of another's work to fulfill the purpose of promoting “the Progress of Science and useful Arts.” *Campbell v. Acuff-Rose Music, Inc.*, 114 S. Ct. 1164, 1169 & n.5 (1994).⁷⁴ That Borland failed to make out a “fair use” defense

may also prevent a copyright owner from attempting to use its copyrights to prevent others from developing non-infringing but competitive products, and thereby obtaining excessive exclusionary power. *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970, 978-79 (4th Cir. 1990).

⁷³ Cf. *Two Pesos, Inc. v. Taco Cabana, Inc.*, 112 S. Ct. 2753, 2760-61 (1992) (holding that insistence upon rule that only “non-functional, distinctive trade dress is protected under § 43(a)” of the Lanham Act, 15 U.S.C. § 1125(a), which requires that a design not be “one of a limited number of equally efficient options available to competitors,” is sufficient “to assure that competition will not be stifled by the exhaustion of a limited number of trade dresses”).

⁷⁴ See *Sega Enter. Ltd. v. Accolade, Inc.*, 977 F.2d 1510, 1527 (9th Cir. 1992) (finding fair use when competitor copied computer programs as only way to discover their unprotected elements, but did not include the copied expression in competing products); *Lewis Galoob Toys, Inc. v. Nintendo of America, Inc.*, 964 F.2d 965, 972 (9th Cir. 1992) (finding fair use when limited portion of computer program was copied in order to provide product that worked with and complemented, but did not supersede, the original), *cert. denied*, 113 S. Ct. 1582 (1993).

in this case—or even to assert one in a timely fashion⁷⁵—does not justify the grafting of a new, judicially-created “privilege” onto the copyright statute. Pet. App. 28a.

Bluntly put, Congress did not provide courts with a blank slate to write the rules of protection for computer software. The members of the panel below were not at liberty to negate Congress' decision solely because it did not comport with their own assessment of the various policy considerations involved. In 1976, and again in 1980, Congress spoke: expression in computer programs is entitled to copyright protection under the same principles pertaining to more traditional forms of expression, despite the fact that they are complex, utilitarian, and functional works. A large and vibrant national industry has grown in reliance on these property rights as its lifeblood. The First Circuit, based on little more than its own subjective impressions and with only the vaguest understanding of the potential consequences of its decision, ventured to supplant Congress' judgment with its own. This was an error that, we respectfully submit, must be reversed.

⁷⁵ As discussed at pp. 3-4 above, Borland only belatedly asserted fair use as a defense in this case, and then failed to prove that its conduct did not, and would not, have a damaging effect on the market for Lotus 1-2-3. See *Campbell*, 114 S. Ct. at 1176 (“Since fair use is an affirmative defense, its proponent would have difficulty carrying the burden of demonstrating fair use without favorable evidence about relevant markets.”) (footnote omitted).

CONCLUSION

The judgment of the First Circuit should be reversed and this case remanded for further proceedings.

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November 9, 1995

No. _____ Supreme Court, U.S.

942003 JUN 7 - 1995

Supreme Court of the United States

OCTOBER TERM, 1994

LOTUS DEVELOPMENT CORPORATION,

Petitioner,

—v.—

BORLAND INTERNATIONAL, INC.,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE FIRST CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

Whether a computer program's particular menu command hierarchy, which the district court found to contain expression separable from its underlying idea and the functionality it describes, may be protected by copyright in light of the explicit Congressional extension of copyright to computer programs under the same principles applicable to other literary works; or whether, as the First Circuit held, Section 102(b) of the Copyright Act bars protection for any such menu command hierarchy despite its expressive characteristics, because it assists users in communicating with a computer program in order to perform useful operations.

RULE 29.1 STATEMENT

Petitioner Lotus Development Corporation has no parent corporation and no subsidiaries that are not wholly owned, except for certain foreign subsidiaries in which a minimal amount of shares (fewer than 1%), which are not publicly traded, are held by foreign nationals in accordance with local law.

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Lotus Development Corporation ("Lotus") respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the First Circuit in this case.

OPINIONS BELOW

The opinion of the court of appeals (Pet. App. 1a-28a) is reported at 49 F.3d 807. The opinions of the District Court for the District of Massachusetts (Robert E. Keeton, J.) are reported at 788 F. Supp. 78 (Pet. App. 145a-182a); 799 F. Supp. 203 (Pet. App. 106a-144a); 831 F. Supp. 202 (Pet. App. 71a-105a); and 831 F. Supp. 223 (Pet. App. 29a-70a). The opinion of the district court in the related case of *Lotus Development Corp. v. Paperback Software International* is reported at 740 F. Supp. 37 (Pet. App. 183a-269a).

JURISDICTION

The Court of Appeals entered judgment on March 9, 1995. Pet. App. 1a. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254.

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

United States Constitution, art. I, § 8, cl. 8

The Congress shall have Power . . . [t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings. . . .

17 U.S.C. § 101, 17 U.S.C. § 102, 17 U.S.C. § 103, 17 U.S.C. § 117. (The full text of the statutory provisions involved is set forth in the accompanying Appendix (Pet. App. at 270a-280a).)

STATEMENT OF THE CASE

This case presents issues of fundamental importance concerning the scope of copyright protection for computer software and the application of Section 102(b) of the Copyright Act, 17 U.S.C. § 102(b), to this type of literary work. In a series of decisions in this and a related case (Pet. App. 29a-269a), the

district court (Keeton, J.) developed criteria for applying to computer programs the "idea/expression" distinction embodied in Section 102(b) and traditionally employed to delineate the scope of copyright protection for literary works. The district court's analysis, which has become virtually canonical, has been cited with approval by the Tenth, Ninth, and Second Circuits. Its conclusion—that the menu command hierarchy of petitioner's Lotus 1-2-3 program contains protectable expression—has been expressly relied upon by the Fifth Circuit.

The First Circuit, openly acknowledging the conflict between its analysis and that of other circuits (Pet. App. at 21a-22a), reversed the district court and adopted an interpretation of Section 102(b) that reads a new threshold requirement into the copyrightability provision in Section 102(a). The First Circuit rejected the application of the "idea/expression" dichotomy to the 1-2-3 menu command hierarchy and concluded that it is barred from copyright protection, despite any original expression it may contain, because it can be characterized as comprising part of a "method of operation." Pet. App. at 21a. In so ruling, the court below denied copyright protection for the element of the 1-2-3 computer program that communicates most directly with the user, which the district court found served an explanatory and informative purpose separable from its ultimate functional uses. Because all computer programs state a "method of operation," or "method for operating the computer" (*id.* at 20a), the First Circuit's decision has unsettled the law of copyright as applied to many elements of computer programs, not just their menu command hierarchies. The practical needs for clarification and for national uniformity of law justify this Court's review.

A. Factual Background

The district court's opinion in *Lotus Development Corp. v. Paperback Software Int'l* (Pet. App. at 184a-193a & 226a-229a) (hereinafter "*Paperback*") contains a useful primer on the nature of computer programs and the elements of the programs at issue. We draw from that analysis and summarize its key points.

For Copyright Act purposes, Congress defined a "computer program" as follows:

A "computer program" is a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result. (17 U.S.C. § 101.)

The principal written manifestation of a computer program is its source or object code. Pet. App. at 187a. Source code typically is written in a form of programming language, such as BASIC or FORTRAN, that uses complex symbolic names and rules of syntax to express instructions for the computer to execute. *Id.* at 188a. The source code must be converted or "compiled" into a binary form that the digital computer can recognize, called a machine language, before the computer can execute the program. *Id.* at 189a. Compiled source code is called "object code." *Id.*

The user usually never sees or is even aware of the object or source code during operation of the program. The portion of the program the user communicates with is called the "user interface." *Id.* at 226a. This normally consists of a series of textual messages or visual images displayed on the video monitor that the program causes the computer to generate in response to instructions from the user or as a result of preceding operations. The user interface also includes the messages the user communicates to the program, which the program interprets, in context, as an instruction to the computer. Because a program's user interface is perceived in a form that usually is distinct from the program code that generates it, user interfaces often have been referred to as "non-literal elements" of computer programs. *Id.* at 258a-260a. User interfaces are, however, generated by and represented in the program code (*id.*), and frequently represent a substantial part of both the creative design effort and value in a program. *Id.* at 135a, 212a, 235a & 250a.

From a commercial perspective, personal computer programs generally are divided into two categories: operating system programs and application programs. *Id.* at 186a. Operating system programs control the basic functions of the computer, such as the internal allocation of computer memory. *Id.* Application programs permit a user to perform a set of related operations directed towards particular tasks, such as word processing or

database management. *Id.* Typically, application programs are designed to work with a particular operating system, for example, DOS or UNIX, and will not work with a computer directly. *Id.* Lotus 1-2-3 is an example of a type of application program known as a "spreadsheet" program. *Id.* These provide users with the ability to perform arithmetical and mathematical operations on numerical data entered by the user in an electronic representation of a spreadsheet grid, arranged in columns and rows; to reconfigure the style or layout of the spreadsheet to suit the user's particular needs; and to manipulate and present the data in the spreadsheet in a variety of ways, such as different tabular or graphical display formats. *Id.* at 226a-227a.

In order to cause the 1-2-3 program to perform a functional operation, the user first must communicate an instruction to the program that the program will recognize. Like a short-form instruction manual or reference guide, the Lotus 1-2-3 menu command hierarchy provides information to assist users in selecting the appropriate instructions that will cause the program to perform certain types of tasks.¹ *Id.* at 78a-79a. When the user presses the "/" (slash) key, the program displays a "menu" of ten words representing the array of available "menu commands" or instructions that the program is designed to recognize at that point, beginning with "WORKSHEET," "RANGE," "COPY," and "MOVE."² *Id.* at 227a-228a. ~~Most of these "commands" do not cause the program to perform any operation other than to display another menu, or sub-menu, of further choices, and so on until a particular instruction to the program is specified.³ At each menu level, the user indicates a selection by moving the cursor key to highlight an item and striking the "Enter" key, or by striking a letter key corre-~~

¹ These do not, however, include arithmetical and mathematical calculations, which a user indicates by operands and other notations entered in the spreadsheet itself. *Id.* at 232a-233a.

² The description in text is of the versions of Lotus 1-2-3 that Borland copied, all of which were published prior to April 1986. *Id.* at 81a, 96a & 113a. Lotus subsequently released numerous revised versions of Lotus 1-2-3 containing additional user interface features.

³ For example, the "WORKSHEET" command leads to a sub-menu of nine new choices, beginning with "GLOBAL."

sponding to the first letter of the word representing the desired menu command, e.g., "W" for "WORKSHEET." The ordering and arrangement of the various menus and dependent sub-menus is called the "menu tree" or "menu command hierarchy." *Id.* at 79a-81a. There are 469 menu commands in all, arranged in more than 50 different menus. *Id.* at 4a & 92a.

The 1-2-3 menu command hierarchy was designed in 1982 by Lotus' founder, Mitchell Kapor, and a team working under his direction. *Id.* at 231a. Kapor and his team first specified the selection of functional capabilities that the program would provide (such as changing the widths of individual columns in the spreadsheet), and implemented those capabilities in the program's code. *Id.* at 288a. The menu commands reflected Kapor's attempt to express those capabilities to users in words "that would intelligently convey to the user the purpose of each command." *Id.* at 291a. The hierarchical arrangement of the menus was intended to "reflect a structured approach that communicated the product's underlying functionality." *Id.* Kapor and his team spent hundreds of hours refining the choice of each word to use in the menus, the order in which those words would appear within each menu, and the organization of the menus in a hierarchical structure. *Id.* The menu hierarchy he ultimately selected "was based largely on my intuition and subjective judgment . . . trying as best I could to imagine myself in the role of a typical user."⁴ *Id.* at 292a.

As the district court found in this action, the 1-2-3 menu command hierarchy is only one of a very large number of possible ways to express to users the universe of available instructions for performing operations in a spreadsheet program. *Id.* at 86a-88a & 131a-133a. The record before the district court con-

⁴ 1-2-3 also was designed to allow the user to create "macros," or sequences of frequently-used commands that can be executed with a single keystroke. *Id.* at 290a. Macros may include commands other than menu commands. *Id.* at 228a-229a. In writing a macro, the user indicates a menu command either by referring to its first letter ("C" for "COPY") or by writing a series of positional commands corresponding to the movement of the cursor followed by the "ENTER" command, i.e., "{RIGHT} {RIGHT} {ENTER}." *Id.* at 31a-33a.

tained numerous examples of contemporaneous programs that performed the same basic spreadsheet functions, but employed different menu hierarchies and menu commands. *Id.* at 88a. Indeed, the district court found that, even if a software developer voluntarily restricted itself to designing a program that provided exactly the same set of functional capabilities that 1-2-3 provided, using the same type of hierarchical menu structure, there would still be millions of possible permutations for an acceptable spreadsheet menu command hierarchy. *Id.* at 131a. Other words could be chosen to represent each menu command; the order of the words within each menu could be altered; and the placement of commands in particular menus—*i.e.*, the decisions as to which commands should depend upon other commands, at what depth in the hierarchical arrangement—could be varied. *Id.* at 131a-132a. It is the copyrightability of the entire 1-2-3 menu command hierarchy, taken as a whole, and not the protection of any individual word viewed in isolation, such as the relatively standard menu commands "PRINT" or "QUIT," that is at issue in this case. *Id.* at 86a-89a.

Following its introduction in January 1983, Lotus 1-2-3 achieved great commercial success and became the most popular spreadsheet program for use with DOS operating systems. *Id.* at 230a-231a. Lotus' success was rapidly followed by imitators such as Paperback Software, who sought to enter the spreadsheet market with self-described 1-2-3 "clones," or programs displaying menu command hierarchies deliberately copied from Lotus 1-2-3, which sold at substantially lower prices. *Id.* at 147a-148a & 236a-238a. Lotus commenced the Paperback case in January 1987, alleging that copying of the 1-2-3 user interface was a violation of its copyrights in 1-2-3. *Id.* at 96a. With full awareness of that case, Borland released the first version of its spreadsheet products, called "Quattro," in November 1987, and a second product, called "Quattro Pro," in November 1989. *Id.* at 96a & 100a.

Quattro and Quattro Pro differed from earlier "clones" chiefly by providing alternate menu trees that the user could select: a so-called "native" menu tree, which was developed independently by Borland and was materially different both in menu

content and hierarchical arrangement from 1-2-3; and a "1-2-3 emulation" menu tree, which contained a virtually identical copy of the Lotus 1-2-3 menu command hierarchy. *Id.* at 82a. Both types of menu tree allowed users to invoke the same set of functional capabilities. *Id.* at 131a. Like the earlier "clone" makers, Borland copied the 1-2-3 menu command hierarchy for commercial reasons, in order to try to persuade 1-2-3 users to switch to its products by promoting the presence of the "familiar" 1-2-3 menus. *Id.* at 61a-62a. Every version of Borland's spreadsheet products sold before the district court's ruling in this case contained, in some form, a virtually identical copy of the 1-2-3 menu command hierarchy.⁵ *Id.* at 33a & 82a.

B. Legal Background

Congress' authority to confer copyright protection is stated in the Constitution of the United States, art. I, § 8, cl. 8:

The Congress shall have Power . . . [t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors . . . the exclusive Right to their . . . Writings

The First Congress applied this power to protect useful and utilitarian writings, as well as artistic and aesthetic works, extending copyright protection to "any map, chart, book or books already printed." Act of May 31, 1790, ch. 15, § 1, 1 Stat. 124, 124 (repealed 1831).

When Congress adopted the current Copyright Act in 1976, it deliberately defined the "works of authorship" eligible for copyright protection in an open-ended and general manner. Thus, Section 102(a) provides that:

⁵ After Lotus commenced this action, Borland introduced a new feature in subsequent versions of Quattro Pro called the "Key Reader." *Id.* at 33a. This was a modification of the "1-2-3 emulation" menu tree that was stripped down to just the first letters of the 1-2-3 menu commands and hidden inside the program, in what Borland referred to in its own internal documents as "phantom" 1-2-3 menus. *Id.* at 35a-36a. Although the Key Reader would not display these "phantom" menus to the user, it allowed users to execute 1-2-3 macros while working with the "native" Quattro Pro menus. *Id.* at 33a.

Copyright protection subsists . . . in original works of authorship fixed in any tangible medium of expression, *now known or later developed*, from which they can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device. (17 U.S.C. § 102(a) (emphasis supplied).)

As the emphasized language indicates, Congress intended that the types of protected “works” were not to be restricted to those expressed in media then in existence or in popular use, but also would embrace new forms of expression that would become possible only through future technological advances.

Section 102(a) goes on to state an “illustrative and not limitative” list of seven categories of protected “works of authorship,” the first of which is “literary works.” 17 U.S.C. § 102(a). Literary works are defined as works, “other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects . . . in which they are embodied.” 17 U.S.C. § 101.⁶ Congress specifically intended that computer programs be treated as “literary works”:

The term “literary works” does not connote any criterion of literary merit or qualitative value: it includes catalogs, directories, and similar factual, reference, or instructional works and compilations of data. *It also includes computer data bases, and computer programs to the extent that they incorporate authorship in the programmer’s expression of original ideas, as distinguished from the ideas themselves.* (H.R. Rep. No. 1476, 94th Cong., 2d Sess. at 54 (the “House Report”), *reprinted in* 1976 U.S. Code Cong. & Admin. News 5659, 5667 (emphasis supplied).)

The fact that a work is eligible for copyright, however, does not mean that every element of the work may be protected against copying by others, as this Court observed in *Feist Publications, Inc. v. Rural Telephone Serv. Co.*, 449 U.S. 340, 348 (1991). The *scope* of protection afforded to a copyrighted work is subject to important limiting principles, derived from the

⁶ Both a computer program’s code and its menu command hierarchy are, therefore, expressions of a literary work.

Constitution itself. The first of these is that copyright will protect only so much of a work as is original to, or created by, the author. For example, copyright in a factual compilation will extend only to the original selection, coordination, or arrangement of the facts contributed by the author, but not to the facts themselves, which the author did not create. *Id.* at 348. Relatedly, because the purpose of copyright is “[t]o promote the Progress of Science and the useful Arts,” “copyright assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed by a work.” *Id.* at 349-50.

This distinction between an idea, which copyright will not protect, and a ~~particular expression of that idea, which may be protected if original to the author,~~ “applies to all works of authorship.” *Id.* at 350. Its origin lies in this Court’s seminal decision in *Baker v. Selden*, 101 U.S. 99 (1879). Selden published a book describing a method of double-entry accounting and sued Baker for infringement when Baker subsequently published another work describing the same method in his own words. Concluding that Baker had not infringed Selden’s copyright, this Court explained:

Where the art [a book] teaches cannot be used without employing the methods and diagrams used to illustrate the book, or such as are similar to them, such methods and diagrams are to be considered as necessary incidents to the art, and given therewith to the public; not given for the purpose of publication in other works explanatory of the art, but for the purpose of practical application The use by another of the same methods of statement, whether in words or illustrations, in a book published for teaching the art, would undoubtedly be an infringement of the copyright. (101 U.S. at 103-104.)

Baker v. Selden always has been understood to permit the free use of the ~~ideas or methods explained in a useful literary work,~~ while prohibiting another from copying an author’s particular description or manner of articulation of those ideas or methods—*i.e.*, their expression.

In the years between *Baker v. Selden* and the passage of the 1976 Copyright Act, the courts recognized that copyright infringement could occur although the infringer had not copied the literal text of a work, or "else a plagiarist would escape by immaterial variations." *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 121 (2d Cir. 1930) (L. Hand, J.), *cert. denied*, 282 U.S. 902 (1931). To guide the application of the idea/expression distinction to such "non-literal" elements of copyrighted works, Judge Hand devised the "abstractions" test, articulated in *Nichols*:

Upon any work . . . a great number of patterns of increasing generality will fit equally well, as more and more of the incident is left out. The last may perhaps be no more than the most general statement of what the [work] is about, and at times might consist only of its title; but there is a point in this series of abstractions where they are no longer protected, since otherwise the [author] could prevent the use of his "ideas," to which, apart from their expression, his property is never extended. (45 F.2d at 121.)

As the courts attempted to draw the boundary between idea and expression, they developed the concept of "merger." This doctrine, too, has its roots in *Baker v. Selden*. *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 707 (2d Cir. 1992). If a particular form of expression is necessary to use of an idea—such as "the methods and diagrams" that were "necessary incidents" to the use of Baker's bookkeeping system (101 U.S. at 103)—then the expression is said to "merge" with the idea. *Altai*, 982 F.2d at 704. Under the merger doctrine, when an idea is capable of only one or a limited number of forms of expression, so that copyright in those few forms effectively would preclude others from using the idea, the expression is uncopyrightable. *Morrissey v. Procter & Gamble Co.*, 379 F.2d 675, 678-79 (1st Cir. 1967).

Congress codified the judicially developed idea/expression distinction in Section 102(b) of the 1976 Copyright Act, which provides:

In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system,

method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work. (17 U.S.C. § 102(b).)

As the legislative history explains:

Section 102(b) in no way enlarges or contracts the scope of copyright protection under the present law. Its purpose is to restate, in the context of the new single Federal system of copyright, that the basic dichotomy between expression and idea remains unchanged. (House Report at 57, *reprinted in* 1976 U.S. Code Cong. & Admin. News at 5670.)

The legislative history makes clear that Congress specifically intended the courts to apply this distinction to delineate the scope of protection for computer programs. *Id.*

In 1980, Congress reaffirmed this intention when it adopted, without material modification, the recommendations of the National Commission on New Technological Uses of Copyrighted Works ("CONTU").⁷ Congress had established CONTU in 1974 for the purpose, *inter alia*, of studying the relationship between computers and copyrights, and reporting recommendations concerning what, if any, changes in the law were appropriate to accommodate the inclusion of computer programs.⁸ Following extensive study, public hearings and debate, CONTU recommended that computer programs continue to receive protection as "literary works" under traditional copyright principles. *See* Final Report of the National Commission on New Technological Uses of Copyrighted Works (1978), at 1-2 & 37-46 (hereinafter "CONTU Report").

CONTU was well aware that computer programs were inherently functional and utilitarian as well as expressive. *Id.* at 21-23. That a work can be put to useful or functional purposes, however, does not serve to bar copyright protection for the

⁷ Pub. L. No. 96-517, § 12, 94 Stat. 3015, 3028 (1980) (codified at 17 U.S.C. §§ 101, 117). *See* H.R. Rep. No. 1307, 96th Cong., 2d Sess. at 23, *reprinted in* 1980 U.S. Code Cong. & Admin. News 6460, 6482 (the pertinent section of the bill "embodies the recommendations of [CONTU] with respect to clarifying the law of copyright of computer software").

⁸ Pub. L. No. 93-573, § 201(b)-(c), 88 Stat. 1873-74 (1974).

expressive elements of the work. In *Mazer v. Stein*, 347 U.S. 201, 218 (1954), this Court held that the sculptural base for a lamp was copyrightable to the extent that its expression could be separated from its utilitarian function, declaring that the "intended use or use in industry of an article eligible for copyright" did not preclude protection for such a work.⁹ Copyright has long protected such useful forms of writing as maps and charts, dictionaries, catalogs, textbooks, law reporters, and code books,¹⁰ as the legislative history of the 1976 Act recognized. House Report at 53-54, *reprinted in* 1976 U.S. Code Cong. & Admin. News at 5666-67.

CONTU further understood that computer programs potentially could be characterized as part of a "process" or "method of operation" under Section 102(b). CONTU Report at 18-20. Nevertheless, CONTU expressed a firm belief that the "idea/expression" distinction would suffice to guide the courts to draw an appropriate line that would still provide meaningful copyright protection for computer programs. As it declared:

That the words of a program are used ultimately in the implementation of a process should in no way affect their copyrightability. (*Id.* at 21.)

This precise issue was presented in *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d 1240 (3d Cir. 1983), *cert. denied*, 464 U.S. 1033 (1984). Franklin argued, as CONTU had anticipated, that Section 102(b) precluded copyright protection for the operating system program designed to work with the then-industry standard Apple II personal computer, on the ground that it was an uncopyrightable "process," "system," or "method of operation." 714 F.2d at 1250-52. Applying the

⁹ This Court also held in *Mazer* that the patent and copyright laws are not mutually exclusive, and that the availability of patent protection for certain aspects of an article did not bar the application of copyright to protect other aspects. *Id.* at 217.

¹⁰ See, e.g., *Orgel v. Clark Boardman Co.*, 301 F.2d 119 (2d Cir.), *cert. denied*, 371 U.S. 817 (1962) (upholding the copyrightability of analysis, organization, phrasing, and citation in textbook); *Harfield v. Peterson*, 91 F.2d 998 (2d Cir. 1937) (A. Hand, J.) (holding telegram and cable code protectable); *Reiss v. National Quotation Bureau*, 276 F. 717 (S.D.N.Y. 1921) (L. Hand, J.) (same).

idea/expression distinction and merger analysis to determine that other methods existed to create a computer program that would operate the computer, the court held that the particular set of instructions Apple had created to express that idea was protected by copyright.¹¹ The court also rejected, as a "commercial and competitive objective" that was irrelevant to its copyrightability analysis, Franklin's argument that its copying was necessary to achieve "compatibility," or to create an operating system program that would work with the body of existing application programs designed for the Apple II system. *Id.* at 1253.

Other early decisions applied the idea/expression distinction in the context of videogames, which are a type of computer program. For example, in *Atari, Inc. v. North American Philips Consumer Electronics Corp.*, 672 F.2d 607, 615-18 (7th Cir.), *cert. denied*, 459 U.S. 880 (1982), the Seventh Circuit applied Judge Hand's *Nichols* "abstractions" test to determine the scope of protection in plaintiff's PAC-MAN videogame. Although the court held that the game rules comprised an unprotectable "idea," it went on to examine plaintiff's implementation of that game to determine whether "the particular form in which it is expressed" provided "something 'new or additional over the idea'." 672 F.2d at 617 (citation omitted). Finding expressive elements that the "game as such" did "not dictate," the court held that defendant's "virtually identical" copying of those elements was an infringement. *Id.* at 618. See also *Atari Games Corp. v. Oman*, 888 F.2d 878, 884-86 (D.C. Cir. 1989) (R.B. Ginsburg, J.) (reversing and remanding judgment affirming refusal of the Register of Copyrights to register copyright in the BREAKOUT videogame, for failure to explain how, in the Register's view, the work was "dictated by 'functional requirements'" and did not contain expression "separable from the game itself" that would "qualify as copyrightable subject matter").

In *Whelan Assoc., Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987),

¹¹ A year later, the Ninth Circuit adopted the Third Circuit's analysis to reach the same conclusion in *Apple Computer, Inc. v. Formula Int'l Inc.*, 725 F.2d 521, 523-25 (9th Cir. 1984).

the Third Circuit addressed the question whether copyright in a computer program extended to its non-literal elements, as is true for other forms of literary works. The defendant in *Whelan* had not copied the literal text of plaintiff's program code, but rather had comprehensively copied its structure, sequence, and organization to create a competing program to perform the same functions. Finding support for its conclusion in Section 103 of the Copyright Act, 17 U.S.C. § 103, which extends protection to "compilations" of "pre-existing materials or of data that are selected, coordinated, or arranged" in an original way (797 F.2d at 1239), the court found no reason to treat computer programs differently from other literary works in this regard. Accordingly, the court allowed "copyrightable protection beyond the literal computer code" (*id.* at 1237), extending it also to "the particular means chosen" by the programmer to achieve the program's purpose or function so long as the means are "not necessary to that purpose or function." *Id.* at 1236.

The core of the *Whelan* holding—that copyright protection extends to the non-literal elements of computer programs—has been accepted by every court of appeals to have considered the issue.¹² The circuits also have agreed that Section 102(b) should be interpreted as embodying the "idea/expression" distinction with regard to all types of utilitarian literary works, including computer programs. Although, in the years following *Whelan*, the courts sometimes have struggled to formulate an appropriate test or methodology to follow in applying this distinction to the non-literal elements of computer programs, until the First Circuit's decision in this case the courts of appeals were moving towards a consensus on this point as well.

¹² *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335, 1341 (5th Cir. 1994); *Kepner-Tregoe, Inc. v. Leadership Software, Inc.*, 12 F.3d 527, 536 (5th Cir.), *cert. denied*, ___ U.S. ___, 115 S. Ct. 82 (1994); *Gates Rubber Co. v. Bando Chemical Indus., Ltd.*, 9 F.3d 823, 840 (10th Cir. 1993); *Autoskill, Inc. v. National Educational Support Systems, Inc.*, 994 F.2d 1476, 1495 n.23 (10th Cir.), *cert. denied*, ___ U.S. ___, 114 S. Ct. 307 (1993); *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 702 (2d Cir. 1992); *Johnson Controls, Inc. v. Phoenix Control Systems, Inc.*, 886 F.2d 1173, 1175 (9th Cir. 1989).

The district court's decision in *Paperback* has played a prominent role in this evolution. To determine whether the 1-2-3 user interface contained copyrightable expression, the district court developed a three-part test, taking Judge Hand's "abstractions" test from *Nichols v. Universal Pictures*, 45 F.2d at 121, as its starting point. In the first step, the court seeks to identify various conceptions of the "idea" behind the elements of the work at issue, ranging from the most generalized (an electronic spreadsheet), to the most particularized (the precise contents and arrangement of the 1-2-3 menu command hierarchy). Pet. App. at 220a-222a. In the second step, the court examines each element of the program tentatively identified as expression to determine whether it is "essential to" or merges with the idea itself, or is one of only a few ways to express the idea. *Id.* at 222a. In the third step, the court considers any non-essential elements of expression that remain after the second step, to ascertain whether they are qualitatively substantial enough to make their appropriation unlawful. *Id.*

Applying this test to the 1-2-3 user interface following a twelve-day bench trial, the district court concluded that certain elements were unprotected because they were essential to every expression of an electronic spreadsheet, were obvious, or were standard to such programs. *Id.* at 232a-233a. The district court also concluded that the 1-2-3 menus, considering their contents, arrangement, and presentation on the screen, contained expression that was not essential to the "idea" of a spreadsheet menu structure, and were only one of "many if not an unlimited" number of ways to express that idea. *Id.* at 234a. Finding that *Paperback* had copied these protected elements and that these elements were qualitatively substantial (*id.* at 238a-239a), the district court concluded that *Paperback* had infringed.

In *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992), the Second Circuit strongly criticized the Third Circuit's approach in *Whelan* for seeming to assume that "only one 'idea' . . . underlies any computer program, and that once a separable idea can be identified, everything else must be expression." *Id.* at 705, quoting from David Nimmer & Melville B. Nimmer, 3 *Nimmer on Copyright*, § 13.03[F][1] at 13-62.34

(hereinafter "Nimmer"). The *Altai* court adopted the "abstraction-filtration-comparison" test proposed in Nimmer, the leading treatise in this field, for determining whether an infringement of the non-literal elements of computer programs has occurred. Like the *Paperback* test, the *Altai* test also proceeds in three steps, the first of which is an "abstractions" analysis derived from Judge Hand's *Nichols* decision. 982 F.2d at 706-07. In the second step of "filtration," the court examines each element of the copyrighted work to "screen" out those that are functionally dictated, are standard to the treatment of the subject, or are not original. *Id.* at 707. This step serves to define the scope of plaintiff's copyright. *Id.* In the final step of "comparison," the court compares the elements of the copyrighted work that survive the filtration process to corresponding elements of the allegedly infringing work to determine whether enough copying has occurred to find infringement. *Id.* at 710-11.¹³ The *Altai* court cited *Paperback* with approval in its analysis. *Id.* at 702. According to the Nimmer treatise, the *Altai* and *Paperback* tests, even though phrased differently, "harmonize" and yield similar results. 3 Nimmer, § 13.03[F][1] at 13-131, n.303.13.

In *Gates Rubber Co. v. Bando Chemical Indus., Ltd.*, 9 F.3d 823, 840-41 (10th Cir. 1993), the Tenth Circuit relied upon the *Whelan*, *Paperback*, and *Altai* analyses to formulate its own variation of the "abstraction-filtration-comparison" test. The court noted the *Altai* court's criticism of the *Whelan* decision, but stated that "when a program is understood to encompass more than one idea, the general principle of *Whelan* provides a useful means to distinguish idea from expression," and found "its conclusion that the structure of a program may be protectable is sound." *Id.* at 840. Referring to Judge Keeton as having "written extensively on the subject of software protection," the court described the *Paperback* test as a "forerunner of the standard that we adopt in this case." *Id.* at 840-41.

The *Paperback* test also was cited with approval and relied upon by the Fifth Circuit in *Engineering Dynamics, Inc. v.*

¹³ Even though Judge Keeton was not required to perform a "comparison" step in this or the *Paperback* action, because in both cases the defendants admitted to copying the elements at issue, he did determine that those elements were a qualitatively substantial part of 1-2-3.

Structural Software, Inc., 26 F.3d 1335, 1343 (5th Cir. 1994). The Fifth Circuit expressly endorsed the *Gates Rubber* "abstraction-filtration-comparison" method for determining copyright protection for computer programs." *Id.* at 1342. The court described Judge Keeton's test as a "similar systematic approach." *Id.* at 1343. Thus, prior to the First Circuit's judgment in this case, the courts of appeals appeared to be converging on an appropriate methodology for applying the idea/expression distinction to non-literal elements of computer programs, based in large part upon Judge Keeton's decisions.

C. Prior Proceedings in This Case

1. In the District Court

The district court issued the *Paperback* opinion on June 28, 1990. Lotus filed this action four days later. Both parties moved for summary judgment. The district court granted Lotus' motion in part and denied Borland's motion.

The district court concluded that Borland essentially had admitted to having "copied the menu commands and command structure of Lotus 1-2-3." Pet. App. at 113a. Applying the *Paperback* test as modified in an earlier decision in this case (*id.* at 163a-165a), Judge Keeton found that the appropriate conception of the idea behind the 1-2-3 menu command hierarchy was a "system of menus," hierarchically arranged as in 1-2-3, "so that all the specific spreadsheet operations available in Lotus 1-2-3 are accessible through" the menu command hierarchy. *Id.* at 129a. The district court found that "literally millions of satisfactory menu trees" could be generated to express this idea (*id.* at 131a), and concluded that it was beyond genuine dispute "that a large part of the structure and arrangement of the [1-2-3] menu commands is not driven entirely by functional considerations." *Id.* at 133a. The district court also determined, however, that Borland had identified potential issues for trial concerning whether some aspects of the 1-2-3 menus were "functionally dictated" by certain "functional rules" or by concerns of "efficiency and usefulness." *Id.* at 116a.

Following the summary judgment decision, Borland removed the "1-2-3 emulation" menu trees from its products and began to publicize the existence of the "Key Reader." *Id.* at 54a-56a. Lotus sought and was granted leave to file a supplemental complaint alleging that the Key Reader also infringed its 1-2-3 copyrights. *Id.* The district court held two bench trials after Borland waived its jury demand. *Id.* at 75a-77a. The scope of the Phase I trial was defined by stipulation as "all issues not previously *finally* decided by way of summary judgment concerning Borland's alleged liability herein, and all its defenses thereto," excluding Key Reader issues. *Id.* at 75a. The Phase II trial addressed all issues relating to the Key Reader. *Id.* at 76a.

The district court issued separate opinions concerning the two phases of trial. In the Phase I opinion, the court held that "what Borland copied from 1-2-3 was not limited to aspects dictated by functional constraints. Rather, Borland copied the entire menu tree, much of which was the free expression of the creators of Lotus 1-2-3." *Id.* at 89a. In addition, the district court examined the 1-2-3 menu command hierarchy pursuant to the "conceptual separability" test articulated by this Court in *Mazer v. Stein*, 347 U.S. 201, 218 (1954), and found as fact that the 1-2-3 menu command hierarchy contained expressive elements that were separable from its functional aspects or ultimate uses, and was therefore copyrightable.¹⁴ *Id.* at 93a & 130a. The Phase II opinion held that the Key Reader's "phantom" menus contained a "virtually identical" copy of "details of expression of the Lotus 1-2-3 program's menu structure." *Id.* at 46a-47a. Concluding that Borland had infringed Lotus' copyrights, the district court entered a permanent injunction (at Borland's request) prohibiting further sales of Borland's products in a form that contained the infringing features. *Id.* at 69a-70a.

¹⁴ Even though the district court acknowledged that, as codified in the 1976 Copyright Act, the "conceptual separability" test applies to "useful articles" such as lamp bases falling within the definition of "pictorial, graphical, and sculptural works," rather than to "literary works" such as computer programs, Judge Keeton nonetheless applied this stricter test to the Lotus 1-2-3 menu command hierarchy. Pet. App. at 117a. See 17 U.S.C. § 101 (definitions of "useful article" and of "pictorial, graphical, and sculptural works").

2. In the Court of Appeals

The First Circuit approached the question of interpretation of Sections 102(a) and 102(b) in a fundamentally different way than did the district court. Describing the case as one of "first impression in this court" (Pet. App. at 12a), the majority acknowledged that its approach conflicted with that followed by other courts of appeals. *Id.* at 21a-22a. To the First Circuit, the "initial inquiry" was *not* "whether the Lotus menu command hierarchy incorporates expression." *Id.* at 17a. Indeed, the majority accepted the district court's finding that it did. *Id.* The majority also considered the potentially very large number of ways to express that menu command hierarchy to be "immaterial" to its analysis, again accepting the fact that numerous alternative expressions did exist. *Id.*

The majority instead read Section 102(b) as enumerating a set of "categories" of works "foreclosed from copyright protection, even if they contain original expression that would otherwise qualify for copyright protection under Section 102(a)." *Id.* at 21a. The "initial inquiry" for a court, according to the First Circuit, is to determine whether a work can be characterized as fitting into one of these categories, such as "method of operation." *Id.* at 17a. The court below opined that the 1-2-3 menu command hierarchy is a "method of operation" because it "provides the means by which users control and operate Lotus 1-2-3." *Id.* at 15a.¹⁵ Concluding that "the entire Lotus menu command hierarchy is essential to operating Lotus 1-2-3" (*id.* at 17a-18a) by analogy to the buttons on a videocassette recorder ("VCR") machine (*id.* at 18a-19a), the court of appeals saw no need to inquire further into whether or to what extent the menu command hierarchy reflected "'expressive' choices" or was capable of alternative expression. *Id.* at 17a.¹⁶ The First Cir-

¹⁵ Judge Boudin's concurrence describes this "formulation" as "defensible" upon the authority of *Webster's College Dictionary*. *Id.* at 27a. The majority cites to no authority for its interpretation.

¹⁶ The First Circuit did not mention, or apparently consider, the district court's finding that the 1-2-3 menu command hierarchy contained copyrightable expression even under the "conceptual separability" test applicable to "useful articles" such as lamp bases, as articulated by this

cuit found its conclusion to be “bolstered” by this Court’s ruling in *Baker v. Selden*, 101 U.S. 99 (1879). Pet. App. at 18a. Because Lotus wrote the menu command hierarchy “so that people could learn it and use it,” the court below declared that it “falls squarely within the prohibition on copyright protection established” in that case and codified in Section 102(b). *Id.*

Judge Boudin’s concurrence expresses the view that Congress’s role in the copyright context is limited to sketching the “broad-brush conception” and prescribing “formalities.” *Id.* at 25a. The “heart of copyright doctrine—what may be protected and with what limitations and exceptions”—is, according to him, left by “tradition” to be determined by the courts. *Id.* Judge Boudin recognized that the majority’s reading of Section 102(b) could “exclude most computer programs from protection” and that the statute could be read (and has been by other courts) “in cookie cutter fashion” as a “congressional command” to the contrary. *Id.* at 24a-25a. Nevertheless, he agreed with the majority’s result for reasons more appropriate to antitrust analysis than to copyright—in particular his concern about users being “locked into Lotus” as a “*de facto* standard for electronic spreadsheet commands.” *Id.* at 26a.¹⁷ Finding the majority’s “formulation is as good, if not better, than any other that occurs to me now as within the reach of courts” (*id.* at 28a), he declared that “the choices are important ones of policy, not linguistics, and they should be made with the underlying considerations in view.” *Id.* In Judge Boudin’s view, Congress did not resolve these important policy choices, but instead left the courts a free hand to do what they thought best.¹⁸

Court in *Mazer v. Stein*, 347 U.S. 201, 218 (1954), and codified in the 1976 Copyright Act.

¹⁷ Judge Boudin cites nothing in the record below to support his factual premises and assumptions concerning Lotus’ market position and the competitive effect of enforcing Lotus’ copyrights (issues that were *not* raised or tried in the district court), Borland’s motives for copying, or the extent to which users’ purchases of Quattro Pro proved it to be a “better product,” rather than just a cheaper imitation and substitute. *Id.* at 26a-27a.

¹⁸ Judge Keeton expressed a very different view concerning the extent to which judicial action in this field is constrained by Congressional mandate. *Id.* at 166a & 206a-207a. *Accord*, *Altai*, 982 F.2d at 702 (the “statutory terrain in this area has been well explored,” citing *Paper-*

REASONS FOR GRANTING THE PETITION

This Court has stated that the copyright law, following explicit Constitutional authority, reflects a belief that the limited monopolies it confers serve the public welfare by encouraging authors to generate new ideas and to disseminate them to the public in any originally expressed way that they may choose. *Harper & Row, Publishers, Inc. v. Nation Enterprises*, 471 U.S. 539, 546 (1985). Although the “immediate effect of our copyright law is to secure a fair return for an ‘author’s’ creative labor,” the ultimate aim of this incentive is to stimulate creativity for the “general public good.” *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 432 (1984), quoting from *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975). The policy of “encouragement of individual effort by personal gain” has long been viewed as “the best way to advance public welfare through talents of authors and inventors in ‘Science and useful Arts’.” *Mazer v. Stein*, 347 U.S. 201, 219 (1954). When Congress decided in 1976 to treat computer programs as copyrightable literary works, and reaffirmed that decision by embracing the CONTU recommendations in 1980, it manifested a policy judgment to promote progress in this nascent field of intellectual creativity by extending to the authors of these new forms of writing the same encouragement that all other authors receive. Whatever form of substantive regime this policy may dictate, it is essential to its realization that it be applied in a uniform manner.

Until the First Circuit’s decision in this case, the various courts of appeals had reached an apparent consensus on certain fundamental principles regarding copyright protection for computer software. *First*, that Congress intended that copyright protection apply to computer programs under the same principles governing other “literary works.” *Second*, that because Section 102(b) is a codification of the idea/expression distinction, any attempt to delineate the extent to which copyright will protect computer programs must be grounded in that distinction. *Third*, that the courts should extend the scope of protection for computer programs, as

back, and the legislative history “leaves no doubt that Congress intended” computer programs to be treated like other literary works).

with other types of literary works, beyond their literal manifestations to their non-literal elements as well, to the extent they reflect the author's original expression.

In the shaping of this consensus, the five opinions of Judge Keeton in this and the *Paperback* case have become a touchstone—a common citation and point of departure in any analysis of this issue. His opinions are cited with approval by the Second, Ninth, and Tenth Circuits, and relied upon explicitly by the Fifth.¹⁹ Not one of these courts has suggested that the central tenets of Judge Keeton's analysis have been anything but correct. If there is divergence, it is only on points of emphasis or in the details of the particular methodology to follow in applying that analysis to the facts of an individual case.

The First Circuit's relatively brief opinion comes as a jarring departure from the prevailing consensus and brushes all this painstaking work aside. The First Circuit quarrels with everybody: with the district court, with the Nimmer treatise, with *Learned Hand*, and with the Second, Ninth, and Tenth Circuits. Pet. App. at 14a-15a. And because the Fifth Circuit in *Engineering Dynamics* explicitly adopts Judge Keeton's analysis, the First Circuit must disagree with that circuit as well. The result is conflict both in outcome and approach, as the First Circuit openly acknowledges. *Id.* at 21a-22a. This alone justifies this Court's review.

But the potential consequences of the First Circuit's decision run deeper still. Under the First Circuit's reasoning, it is unclear what, if any, elements of computer programs would merit protection, because all programs to some degree describe a "method of operation" for a machine—as Judge Boudin concedes. This presents a serious problem for an important American industry. In the years since the adoption of the Copyright Act in 1976 and the software amendments of 1980, the computer software industry has prospered, relying primarily, as Congress no doubt expected, upon copyright law to protect the fruits of its creative efforts. Although the analogy between novels or plays and these

¹⁹ Judge Keeton's opinions below have been favorably cited in copyright cases by more than 20 different Federal trial and appellate courts.

new digital works of authorship occasionally may seem strained (no more so, of course, than with lamp bases), the growth of the industry, both in size and diversity, strongly suggests that Congress's policy decision to protect computer programs under the copyright law has worked well. The First Circuit's decision potentially destabilizes a significant portion of accepted copyright doctrine as it has been applied by the courts to computer programs, following the Congressional mandate.

I

THE DECISION OF THE COURT OF APPEALS CONFLICTS WITH DECISIONS OF NO FEWER THAN FIVE OTHER CIRCUITS

The First Circuit's rejection of the idea-expression distinction in interpreting Section 102(b) and its holding that menu command hierarchies are an uncopyrightable "method of operation" conflicts with decisions of no fewer than five other circuits. Most recently, in *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335, 1343 (5th Cir. 1994), the Fifth Circuit held that plaintiff's selection of "approximately 230 input-output formats that comprise the user interface" of a structural engineering program, "taken as a whole, readily qualify as 'expression' measured against the ideas versus expression dichotomy." *Id.* at 1343-44. These formats serve "to mediate between the user and the program, identifying what information is essential and how it must be ordered to make the program work." *Id.* at 1344. Under the First Circuit's reasoning, these characteristics would render the formats part of an unprotected "method of operation." To the Fifth Circuit, they served as indicia that the formats conveyed more than an unprotectable "idea."

The *Engineering Dynamics* court relied heavily upon Judge Keeton's opinions in *Paperback* and this case. Upon the authority of *Paperback*, it concluded that "the command format and sequence structure in an original word processing or computer spreadsheet should be copyrightable" because, as a whole, they contain "a high degree of original expression." *Id.* at 1345-46. The court recognized that the input formats at issue "ultimately act like switches in the electrical circuits of the program," but

concluded that this utilitarian function did not “outweigh their expressive purpose so as to preclude copyright protection.” *Id.* at 1346. The court went so far as to express incredulity that the law would permit blatant copying of a best-selling program’s user interface (*id.*)—the very conduct that the First Circuit not only condoned in this case, but celebrated as socially desirable. Pet. App. at 20a-21a & 26a-27a.

The First Circuit’s decision also conflicts with the Tenth Circuit’s ruling in *Autoskill, Inc. v. National Educational Support Systems, Inc.*, 994 F.2d 1476 (10th Cir.), *cert. denied*, ___ U.S. ___, 114 S. Ct. 307 (1993), as the First Circuit explicitly acknowledged. Pet. App. at 21a. In *Autoskill*, the plaintiff’s program comprised a “system” (so described) for testing reading skills in a structured, query-and-response format. 994 F.2d at 1481. The queries that the program displayed to the user consisted of a selection of individual words, arranged in sequence according to various skill types and levels, that the Tenth Circuit held to be copyrightable. *Id.* at 1495-96. The Tenth Circuit also found that the program’s “keying procedure” by which users communicated responses to the program was sufficiently expressive, applying the merger doctrine and the “idea/expression” distinction, to avoid classification as a “method of operation” under Section 102(b). *Id.* The First Circuit declares that it would have ruled otherwise. Pet. App. at 22a. The conflict is plain.²⁰

The First Circuit concedes that its decision also can be read to conflict with rulings of the Ninth Circuit (Pet. App. at 22a), which has indicated on two occasions that it considers “the non-literal components of a program,” including the “manner in which information is presented to the user” in a user interface, to constitute copyrightable subject matter upon a showing that

²⁰ The First Circuit further conflicts with the Tenth Circuit concerning the proper approach to interpreting Section 102(b). In *Autoskill*, that court declared that “[w]e must go beyond the literal language of the statute and apply the idea/expression distinction to resolve” the copyrightability issue. 994 F.2d at 1495 n.23. See also *Gates Rubber Co. v. Bando Chemical Indus., Ltd.*, 9 F.3d 823, 849 (10th Cir. 1993) (directing trial court to determine the copyrightability of “menus and sorting criteria” in plaintiff’s program under a variation of the “abstraction-filtration-comparison” test rejected by the First Circuit).

the “component in question qualifies as an expression of an idea.” *Johnson Controls, Inc. v. Phoenix Control Systems, Inc.*, 886 F.2d 1173, 1175 n.3 (9th Cir. 1989). Accord, *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465, 1476-77 (9th Cir.), *cert. denied sub nom. BB Asset Mgmt. Inc. v. Symantec Corp.*, ___ U.S. ___, 113 S. Ct. 198 (1992) (recognizing protectability of screens, menus, and keystrokes of the program’s user interface). As the First Circuit observed (Pet. App. at 22a), the holding in *Brown Bag*, narrowly construed, was to affirm a finding of no infringement because the defendant had not copied the plaintiff’s menus or keystrokes. 960 F.2d at 1475. Nonetheless, a conflict exists because the premise of the Ninth Circuit’s holding is that the menus and keystrokes were protected and therefore susceptible of being infringed, had they been copied. Moreover, the Ninth Circuit has declared that its test for determining the copyrightability of non-literal elements of computer programs, “although articulated differently,” is similar to that applied by the district court and overturned by the First Circuit in this case. *Apple Computer, Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1445-46 (9th Cir. 1994), *cert. denied*, ___ U.S. ___, 115 S. Ct. 1176 (1995).

The First Circuit’s interpretation of Section 102(b) as applied to computer programs also conflicts with that of the Second and Third Circuits. The court below specifically rejected the “abstraction-filtration-comparison” test adopted by the Second Circuit in *Computer Assoc. Int’l, Inc. v. Altai, Inc.*, 982 F.2d 693, 703-10 (2d Cir. 1992), because it perceived that test as resting upon an assumption that at least *some* element of the work being examined is potentially protectable. Pet. App. at 15a.²¹ Indeed, the First Circuit rejects not only the *Altai* test but also Judge Hand’s “abstractions” analysis from *Nichols*, declaring that the abstraction process “obscures the more fundamental question of whether a menu command hierarchy can be copyrighted at all.” *Id.*

²¹ The First Circuit faults the “abstraction-filtration-comparison” test generally “because it seems to encourage [courts] to find a base level [of abstraction] that includes copyrightable subject matter,” and implies that every case of literal similarity would result in a finding of infringement. *Id.* at 14a.

Finally, although the First Circuit does not mention it, the decision in *Whelan Assoc., Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987), remains good law in the Third Circuit, despite any criticism it has received elsewhere. Because the First Circuit finds the *Altai* test too lenient, and the *Altai* test was in turn a response to perceived limitations of *Whelan* (982 F.2d at 705), it must follow that the First Circuit also rejects the *Whelan* approach. More fundamentally, the interpretation given to Section 102(b) by the court below conflicts with that established in the Third Circuit over ten years ago in *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d at 1240, 1250-52 (3d Cir. 1983), *cert. dismissed*, 464 U.S. 1033 (1984). In that case, the Third Circuit rejected an argument that an operating "system" was "*per se* exclud[ed] from copyright protection under the express terms" of Section 102(b) (*id.* at 1250), finding instead that the "expression/idea dichotomy is now expressly recognized" in that provision. *Id.* at 1252. And unlike the Third Circuit, which refused to accept a purported "compatibility" defense it described as a "commercial and competitive objective" that did not enter into its copyrightability determination (*id.* at 1253), the First Circuit expressly relied upon Borland's professed goal of achieving "program compatibility" to support its conclusion that the 1-2-3 menu command hierarchy was an uncopyrightable "method of operation." Pet. App. at 20a.

In sum, the court below deliberately has set itself in conflict, both in outcome and approach, with the decisions of no fewer than five other circuits. As revealed by Judge Boudin's comment that "no intermediate appellate court can make the final choice" as to the "right" solution (*id.* at 27a), the First Circuit appears to have gone out of its way to invite this Court's review.

II

THE QUESTION OF FEDERAL LAW DECIDED BY THE COURT OF APPEALS UNSETTLES THE LAW IN AN IMPORTANT AREA AND THEREFORE THE PUBLIC INTEREST REQUIRES THIS COURT'S REVIEW

Both the statute and the legislative history manifest Congress's intent to protect computer programs as literary

works under the copyright law. Congress considered but rejected the establishment of special rules to apply to these new digital works of authorship.²² In so doing, Congress was fully aware of the functional nature of computer programs. The definition it adopted for them in the Copyright Act—"a set of statements or instructions to be *used* directly or indirectly in a computer *in order to bring about a certain result*" (17 U.S.C. § 101; emphasis supplied)—is ample proof, standing alone, that Congress understood that computer programs were expressive works much of whose value would lie in their utility rather than their aesthetic appeal. Congress placed its faith in the courts to give meaningful protection to programs, despite whatever difficulties and doctrinal rough edges might arise from its decision to recognize these admittedly functional works within the body of copyrightable subject matter. House Report at 57, *reprinted in* 1976 U.S. Code Cong. & Admin. News at 5670. Its decision is reflected in its specific reference to Section 102(b), which it explained was meant to restate existing case law concerning the dichotomy between expression and idea, no more and no less ("Section 102(b) . . . in no way enlarges or contracts the scope of copyright protection under present law."). *Id.*

The First Circuit's interpretation of Section 102(b) as establishing a "string of exclusions" (Pet. App. at 24a), definitional in nature, through which an element of a work must pass *before* the expressive aspects of that element may be protected, is at odds with everything that has preceded it. Since Congress acted, certain basic parameters and principles concerning the scope of protection for computer programs have been established by the Federal appellate and trial courts as they have worked over time, in response to the distinct facts of individual cases, to fulfill the Congressional mandate. None has interpreted Section 102(b) in this manner.

In the wake of the First Circuit's decision, software developers (and their investors) can no longer tell whether, or to what extent, their creative efforts will receive effective protection or

²² The only unique limitation imposed on the rights conferred on authors of computer programs was the grant of limited rights to program users to modify or make back-up copies (for personal use only) of other legitimately-acquired copies. 17 U.S.C. § 117.

may encroach upon the rights of others. In the software industry, product design decisions often are part of multi-million dollar research and development programs, followed by equally large marketing expenditures, all intended to generate sales across a national (and international) market. Uncertainty as to precisely where the line is drawn may be a long-standing problem in copyright law,²³ but when fortuities of forum and venue can lead to flatly inconsistent outcomes and analyses, an industry operating on a nationwide basis simply cannot order its affairs in accordance with the rule of law.

One obvious and important area of legal uncertainty is the extent to which a program's menus and other original, expressive elements of its user interface are eligible for copyright protection. As the software industry has flourished and the programming art has advanced, the creative efforts of software developers have become increasingly focused upon the design and implementation of user interfaces that make it easier for users to understand and put to productive use the power of computers. But the ability of developers to protect their creations from blatant copying is now in doubt. It is now legal to copy menus in the First Circuit, but not in the Fifth, Ninth, or Tenth. Without the uniformity of law that only this Court can achieve, the industry and users are left to speculate as to whether a particular product or application will receive protection or whether another will be deemed an infringement. Rational product development and investment decisions, and the continued growth of this vital industry, depend upon this Court providing a clear and final resolution of this issue.

The uncertainty created by the First Circuit's decision extends beyond the copyrightability of menu command hierarchies and other expressive elements of user interfaces. If the characterization of a work as a "method of operation," despite the presence of separable expression, is sufficient to defeat its copyrightability, then all elements of computer programs (except, perhaps, their decorative or ornamental features)—even

²³ See *Peter Pan Fabrics v. Martin Weiner Corp.*, 274 F.2d 487, 489 (2d Cir. 1960) (L. Hand, J.) (decisions as to when an imitator has gone beyond the idea and has borrowed its expression must inevitably be *ad hoc*); *Paperback*, Pet. App. at 244a-246a.

their source or object code—stand on shaky ground. As is true of menu command hierarchies, a program consists of a set of statements and instructions that achieve a functional result when communicated to a computer. Indeed, the very purpose of a computer program is to express a "method" or "process" or "system" by which a user can operate a computer to perform some functional task; the same may be said of any manual or instructional text. Whether or not a particular expression of that "method" is "essential" to use of the "method" becomes, under the First Circuit's reasoning, largely irrelevant: it depends merely on how the "method" is defined. The First Circuit's decision provides no guidance for making this determination beyond its analogies to (uncopyrightable) machines such as VCR's and food processors.

It is difficult to discern a logical boundary in the First Circuit's approach to limit the ways in which its ruling, if followed, could serve to roll back the scope of protection for computer programs generally. Carrying the First Circuit's reasoning slightly further towards its logical conclusion, for example, even the Third Circuit's seminal decision in *Apple v. Franklin*, which first extended protection to operating system software, would be called into question. Such software certainly provides a "means by which users control and operate" a computer, and thus comprises a "method of operation." Yet, without the expression in the operating system's set of instructions, no use can be made of its functional capabilities, or of programs designed to work with that operating system. It is not at all clear under what rationale the First Circuit could now sustain the *Apple v. Franklin* holding.

Thus, Judge Boudin is correct in observing that the issues raised in this case are "important ones of policy." Pet. App. at 28a. Whether the First Circuit's novel interpretation of Section 102(b) is consistent with the statement and intentions of Congress; whether copying of user interfaces serves the public interest; whether copyright law and policy as articulated by this Court over the years should be limited, when applied to computer programs, by competition policy considerations and, if so, upon what basis, and by Congress or by the courts; and whether copyright in computer programs should be construed more nar-

rowly, more critically or simply differently than in other forms of literary works, are all questions raised by the First Circuit's decision that bear upon the extent to which computer programs will receive meaningful and effective copyright protection in the future.

Finally, the First Circuit's unique view that Section 102(b) somehow "trumps" the statutory protection accorded the expressive elements of copyrightable works by Section 102(a) is a conception that is not limited to computer programs, or even literary works. It would reach all copyrightable subject matter and has the potential to undo a generation of copyright precedent. *Cf. Mazer v. Stein*, 347 U.S. 201, 218 (1954). This Court's guidance, therefore, seems imperative.

Conclusion

The petition for a writ of certiorari should be granted.

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In the Supreme Court

OF THE
United States

OCTOBER TERM, 1994

LOTUS DEVELOPMENT CORPORATION,

Petitioner,

v.

BORLAND INTERNATIONAL, INC.

Respondent.

On Petition for a Writ of Certiorari to
the United States Court of Appeals
for the First Circuit

BRIEF IN OPPOSITION TO PETITION FOR CERTIORARI

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QUESTION PRESENTED ~

Did the First Circuit correctly hold that commands used to operate a computer spreadsheet program are uncopyrightable under 17 U.S.C. § 102(b)?

RULE 29.1 STATEMENT

Respondent Borland International, Inc. has no parent corporation or subsidiaries that are not wholly owned, except for certain foreign subsidiaries in which a minimal amount of shares (fewer than 1%), which are not publicly traded, are held by foreign nationals in accordance with local law.

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No. 94-2003

In the Supreme Court

OF THE

United States

OCTOBER TERM, 1994

LOTUS DEVELOPMENT CORPORATION,
Petitioner,

v.

BORLAND INTERNATIONAL, INC.
Respondent.

On Petition for a Writ of Certiorari to
the United States Court of Appeals
for the First Circuit

BRIEF IN OPPOSITION
TO PETITION FOR CERTIORARI

INTRODUCTION AND SUMMARY

The Court of Appeals in this case held that the commands used to operate a computer spreadsheet program — common commands such as “COPY,” “MOVE,” or “PRINT” displayed to the user on a computer screen—are uncopyrightable under § 102(b) of the Copyright Act. The court’s opinion relied on the express language of the statute that forbids copyright protection for “methods of operation” and “systems.” The court also relied on this Court’s seminal decision in the area, *Baker v. Selden*, 101 U.S. 99 (1879), which mandates that claims for the protection of methods of operation and systems be governed by the *patent* law rather than the *copyright* law.

The First Circuit's opinion carefully reviewed the leading authority from the other circuits, principally the Second Circuit's decision in *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992), that sets forth a methodology for evaluating claims of copyright infringement in the text (*i.e.*, "code") and "structure" of computer programs. *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807, 814 (1st Cir. 1995), Pet. App. at 13a-15a. The First Circuit readily agreed that the methodology used in *Altai* and similar cases provides "a useful framework" for evaluating infringement claims in "code" and "code structure" but was simply inapposite to the issue here—the copyrightability of command words, or "menus," used to operate the program. 49 F.3d at 815, Pet. App. at 14a. The First Circuit viewed this issue as easily resolvable by reference to the statute and Supreme Court authority.

Judge Boudin filed a separate opinion in which he concurred in the majority's reasoning as well as its conclusion. 49 F.3d at 821, Pet. App. at 27a-28a. Judge Boudin went on to explain that extending copyright protection to the command words at issue by *judicial fiat*, as the district court had done, is at variance with the intent of Congress and is both inefficient and anticompetitive from an economic perspective. *Lotus* should look to the patent law, rather than copyright, to protect its method of operation.

The First Circuit decision reversed a series of opinions in this case from a single judge in the District of Massachusetts.¹ From the beginning, the district court eschewed a narrow focus on what was actually at issue in this case—the method by which the user tells the computer program what to do. Instead, the district court

¹See *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 788 F. Supp. 78 (D. Mass. 1992) ("*Borland I*"), Pet. App. at 145a; *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 799 F. Supp. 203 (D. Mass. 1992) ("*Borland II*"), Pet. App. at 106a; *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 831 F. Supp. 202 (D. Mass. 1993) ("*Borland III*"), Pet. App. at 71a; *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 831 F. Supp. 223 (D. Mass. 1993) ("*Borland IV*"), Pet. App. at 29a. Each of these opinions refers to and is based upon an earlier decision of the district court, *Lotus Dev. Corp. v. Paperback Software Int'l*, 740 F. Supp. 37 (D. Mass. 1990) ("*Paperback*"), Pet. App. at 183a, which decision was not appealed.

viewed the case as the opportunity to involve itself in the developing case law regarding the protection of computer program "code" and "structure." Although those issues are *not* present in this case, the district court sought to inject this case into the debate about those issues, by creating its own novel methodology to determine the copyrightability of all aspects of computer technology.

The *Lotus* petition describes the district court opinions variously as "virtually canonical," as having "a prominent role" and as a "touchstone" in computer copyright law. Petition at 2, 15, 22. Exactly the opposite is true. The district court decisions in this case and in the predecessor *Paperback* case provoked a firestorm of controversy. As the record below reflects, the district court opinions were widely criticized in the academic community,² the legal press,³ the national financial press,⁴ and the computer

²See, *e.g.*, Steven W. Lundberg et al., *Identifying Uncopyrightable Computer Implemented Processes and Systems*, 9 Computer Law., Apr. 1992, at 7, 9 ("the Court in *Lotus* [*v. Paperback*] could never have reached the correct conclusion since it never laid the fundamental groundwork for it"); Timothy S. Teter, Note, *Merger and the Machines: An Analysis of the Pro-Compatibility Trend in Computer Software Copyright Cases*, 45 Stan. L. Rev. 1061 (1993); Pamela Samuelson, *Computer Programs, User Interfaces, and Section 102(b) of the Copyright Act of 1976: A Critique of Lotus v. Paperback*, 55 Law & Contemp. Probs., Spring 1992, at 311, 352-53; Karen S. Kovach, Comment, *Computer Software Design; User Interface—Idea or Expression?* 60 U. Cin. L. Rev. 161 (1991) (*Paperback* improperly extended copyright protection to *Lotus*' menu command system); Julian Velasco, *The Copyrightability of Nonliteral Elements of Computer Programs*, 94 Columbia L. Rev. 242, 262-65 (1994). These authorities are cited in *Borland's* Petition for Initial In Banc Hearing, filed with the First Circuit on November 10, 1993 ("*Borland's* In Banc Brief"), at 2 n.9.

³See, *e.g.*, Susan Kostal, *Copyright Scholars Want a Fine Point Put on Spreadsheet Case*, S.F. Daily J., Oct. 4, 1991, at 1, 8; *Lotus Wins Copyright Suit*, Mass. Law. Wkly., Aug. 10, 1992, at 23. See *Borland's* In Banc Brief at 3 n.10.

⁴See, *e.g.*, *Borland Gains in Bid For Appeals Ruling On Lotus Copyrights*, Wall. St. J., Aug. 20, 1993, at B3; William M. Bulkeley,

industry press⁵ for extending copyright protection to put large sectors of the software industry off limits to competition, thereby producing a radical departure from the leading authority of other circuits. Although Lotus claims that the Second Circuit's *Altai* decision cites the district court opinions at issue here "with approval," Pet. at 16, in fact the Second Circuit *specifically cited* and pointedly *rejected* the district court's "incentive-based arguments in favor of broad copyright protection" as having a "corrosive effect on certain fundamental tenets of copyright doctrine." 982 F.2d at 712. Astonishingly, the Lotus petition fails to disclose the Second Circuit's pointed criticism of the district court's position.

In the proceedings below, a myriad of industry associations (representing both large and small companies), consumer groups, distinguished academics, eminent computer scientists, and even the Register of Copyrights of the United States all filed amicus briefs criticizing the district court and urging reversal of its opinions.⁶ Lotus' position, by contrast, has attracted little support

Borland Case Briefs Raise Questions About Software Copyright Protection, Wall. St. J., Oct. 4, 1991, at B4; William M. Bulkeley, *Borland Loses Infringement Claim by Lotus*, Wall St. J., Aug. 13, 1993, at B5; T.R. Reid, *Consumers Lose When Software Makers Sue Each Other*, Wash. Post, Oct. 25, 1993, at F18; John R. Wilke, *Ruling Against Borland May Intensify Copyright Debate*, Wall. St. J., August 3, 1992, at B1, B4. See Borland's In Banc Brief at 3 n.11.

⁵Heather Clancy, *Copyright laws blurred*, Computer Reseller News, Aug. 17, 1992, at 137; Peter Coffee, *Key Reader verdict shows need for open standards*, PC Week, Aug. 30, 1993, at 32; Ed Foster, *That's a nice macro you wrote. Too bad Lotus now owns it*, InfoWorld, Aug. 23, 1993, at 45; Ed Foster, *Too-tight legal controls can straightjacket a whole industry*, InfoWorld, Sept. 6, 1993, at 49; Beth Freedman, *Experts Question Ruling In Lotus-Borland Case*, PC Week, Aug. 10, 1992, at 6; Steve Gibson, *Lotus ruling will damage the industry if it protects languages*, InfoWorld, Sept. 14, 1992, at 42. See Borland's In Banc Brief at 3 n.12.

⁶See the following: Brief Amicus Curiae of Computer Software Industry Association, representing over 3000 companies and professional individuals; Brief of Amicus Curiae Software Entrepreneurs' Forum,

in the *software* industry. Its amici have consisted of a few large companies who favor the extension of copyright law to inhibit competition from the hundreds of other operating system and application software companies.

Lotus' argument that the First Circuit decision created a conflict in the circuits is pure fabrication. Lotus argues that there is a consensus in the circuits regarding the application of the "abstractions" test to computer programs, that the district court's opinions in this case are a part of that consensus, and that the First Circuit's decision departs from that body of law. But, in fact, the discussion in the circuit courts regarding the "abstractions" test is directed to different subject matter—*i.e.*, the program code and structure—rather than the menus used to operate the program. That is the principal failing in Lotus' argument and the reason Lotus lost this case. As the First Circuit made plain, this case is *not* about a computer program; it is about the menu words that are used as buttons and switches to operate the program. The First Circuit decision does not stand for the proposition that it is error to apply the "abstractions" test *to computer programs*. Rather, the First Circuit has held that it is error to apply the "abstractions" test to something (in this case menus) that is not copyrightable in the first place.

Nor did the First Circuit reject the "idea/expression" dichotomy in applying § 102(b) as Lotus asserts. Pet. at 23. Rather, referring to the express language of the statute, the First Circuit recognized that § 102(b) makes "methods of operation" and "systems" as well as "ideas" uncopyrightable. The First Circuit applied the dichotomy in the statute and case law, finding that the commands are on the uncopyrightable side of the line (which

representing over 1000 independent software developers, consultants and software providers; Amicus Brief of 81 Distinguished Computer Scientists; Brief of Amicus Curiae (PC User Groups), representing over 16,500 individual and corporate PC users, including Fortune 500 companies; Brief of Amicus Curiae of American Committee for Interoperable Systems (including members such as Sun Microsystems, Tandem Computers and AT&T Global Information Solutions); Two Briefs Amicus Curiae on behalf of 25 Distinguished Copyright Law Professors; and Brief of Amicus Curiae on behalf of the Register of Copyrights.

Lotus calls the "distinction") between "ideas," "methods of operation," and "systems," on the one hand, which are uncopyrightable, and "expression" and "description," on the other hand, which are copyrightable.⁷

Contrary to Lotus' position, *no circuit* has held that the menu commands that operate the program are copyrightable on *any theory*, "idea/expression" dichotomy, "abstractions" or otherwise. In fact, it was the district court in this case that departed from existing authority when it declined to follow the Ninth Circuit's holding that the menu command hierarchy of a spreadsheet is uncopyrightable under 17 U.S.C. § 102(b). In declining to follow the Ninth Circuit's decision, *Ashton-Tate Corp. v. Ross*, 916 F.2d 516, 521-22 (9th Cir. 1990), the district court stated:

In the interest of completeness and candor, I note as well that courts in one circuit are not bound by the decisions of other circuits.

Borland II, 799 F. Supp. at 220, Pet. App. at 136a. Apparently lacking the "completeness and candor" of the district court, the Lotus petition does not even mention the *Ashton-Tate* decision.

The only other circuit (the Tenth Circuit) to have directly considered the copyrightability of menu commands vacated a district court decision holding that menu commands are copyrightable and provided instructions for further consideration of the issue. *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, 9 F.3d 823, 843-44 (10th Cir. 1993). On remand, the district court held that the menu commands were *uncopyrightable*, citing the First Circuit's *Lotus* decision approvingly. *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, No. 92-S-136 (D. Colo. filed June 12, 1995).

⁷It is true, of course, that a computer program might be described as a "method of operating" the computer and, as a consequence, Congress was required to expressly include "computer programs" in the copyright statute to ensure that computer programs would be copyrightable. But Congress did not amend the copyright statute to make menu commands, buttons, switches, and similar methods of operating a program copyrightable. On the contrary, § 102(b) of the Copyright Act plainly states that "methods of operation" are uncopyrightable. Lotus would have the courts make law that contradicts the express language of the statute.

Lotus' assertion that "[i]t is now legal to copy menus in the First Circuit but not in the Fifth, Ninth or Tenth," Pet. at 28, is simply preposterous.

Similarly, the Lotus petition claims that a particular Fifth Circuit decision "relied heavily" on the district court's analysis. Pet. at 23, citing *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 26 F.3d 1335, 1348-49 (5th Cir. 1994). Incredibly, the Lotus petition fails to point out that following publication of its initial opinion, the Fifth Circuit was deluged by requests for rehearing from software and semiconductor companies, computer scientists and user groups, and subsequently issued a *supplemental opinion*. The Fifth Circuit limited its first decision to the facts of that case and specifically disclaimed reliance on the rationale that underlies the district court's opinions at issue here. *Engineering Dynamics, Inc. v. Structural Software, Inc.*, 46 F.3d 408, 409 (5th Cir. 1995). It is unfathomable that Lotus could assert that neither the Second Circuit nor the Fifth, Ninth and Tenth Circuits "has suggested that the central tenets of [the district court's] analysis have been anything but correct." Pet. at 22.

In short, there is simply no conflict among the circuits on the protection of menu commands and similar methods used to operate computer programs. Furthermore, given the subject matter that is really at issue in this case and the narrow basis of the First Circuit's opinion, virtually any comment by this Court on the copyrightability of code or program structure in a review of this case would be *dicta*. There are, on the other hand, a variety of cases currently proceeding through the lower courts that directly address those issues (discussed in Section IC below).

STATEMENT OF THE CASE

There is good reason why the district court's opinions in this case generated such widespread attention and controversy. In the usual software copyright case, the defendant is alleged to have copied either the text ("code") or structure of the plaintiff's computer program, or the way the plaintiff's program looks on the computer screen when it is executing. No such copying occurred here. Lotus did not even allege any copying of its code or code

structure, and even the district court found that the programs looked different on the computer screen. *Borland II*, 799 F. Supp. at 220, Pet. App. at 137a.

Users operate the program at issue here through a series of commands—common English words—arranged in hierarchies called “menus.” 49 F.3d at 809, Pet. App. at 4a. As the First Circuit opinion explains, the precise facts of this case are critical to its disposition. The menu commands of the product at issue do not function as labels or explanations for any buttons or switches used to operate the program. Rather, the menu commands *themselves* are used to operate the program in much the same way that the buttons on a video cassette recorder (VCR) operate that machine. While such utilitarian methods of operation are perhaps patentable under the patent laws, this is not a patent case since Lotus obtained no patent on this or any other relevant aspect of Lotus 1-2-3.

As the First Circuit found, “the entire Lotus menu command hierarchy is essential to operating” the program. 49 F.3d at 815-16, Pet. App. at 15a-22a. If a user types “COPY” or “C,” the program copies. Typing “PRINT” or “P” causes the computer to print. Typing more complex sequences of commands in the hierarchy executes other operations of the spreadsheet. There is other text attendant to a computer program—not copied by Borland—that communicates with the user or that provides information to the user. Such text includes books about the program, manuals, on-screen “help” text, and other textual material that *does* not operate the computer. In contrast, the words of the Lotus menu command hierarchy are literally the method of operating the spreadsheet program. These limiting facts are crucial to the disposition of this petition.

A. Factual Background

1. *The Lotus Product*

The development of the Lotus menu command hierarchy is well chronicled in the Lotus petition. According to the affidavit

submitted with the petition⁸ the commands were organized “hierarchically,” and the manner depicted in a “menu tree,” so that “the selection of one command option from the first level menu could lead in turn to another array of command options on a second level menu (or ‘submenu’) and so on.” Kapor Aff. at ¶¶44-45, Pet. App. at 287a. The Lotus developer drew a firm line between the menu choices in the hierarchy (the “command options”) and the explanation of those command options. According to the affidavit, for example, the “long prompts” (or “screen help” text) are intended to provide “information to the user” and “explanations,” while the menu commands are directed toward “performing a particular task.” Kapor Aff. at ¶¶44, 101, Pet. App. at 287a, 296a.

As set forth in great detail in the lower court record, the Lotus spreadsheet was a great success, but that success had little to do with the menu command hierarchy. Rather, when the IBM PC was introduced in August 1981, the Lotus developers, according to the district court, “exploited this opportunity” by designing the technical aspects of their spreadsheet product to take advantage of the technological advances of the IBM PC over pre-existing computers. *Paperback*, 740 F. Supp. at 65-66, Pet. App. at 231a.

The menu command hierarchy was simply not a qualitatively significant part of the product *at the time of its introduction*,

⁸It should be noted that the Kapor Affidavit was *not* prepared in support of Lotus' position in the *Borland* case. Rather, the affidavit was prepared for Lotus in the earlier *Paperback* case in which the defendant copied Lotus' entire screen display, not merely the command words. Subsequent to the *Paperback* decision, as the record below indicates, the author of the affidavit (who is the principal designer of the Lotus product) made it clear in Congressional testimony that he does not believe it is beneficial to the industry to extend copyright protection to individual elements of a screen display—*e.g.*, the menus. That, in his view, would constitute “overprotection” that is “pernicious” and “stifling.” See Brief of Amicus Curiae Software Entrepreneur's Forum, filed in the First Circuit on Dec. 23, 1993, at 6.

either from Lotus' viewpoint or the viewpoint of users.⁹ The exact words and order of the Lotus menu command hierarchy were not important to the product's initial success, but they *became* vitally important to the success of later versions of Lotus' product and spreadsheets offered by Lotus' competitors for two reasons. First, as Judge Boudin explains (and the record below demonstrates in detail), users invested their own time, money and energy in learning the Lotus commands as keystroke combinations to operate the spreadsheet, just as users operate a typewriter to produce readable text by touch typing on the standard QWERTY keyboard. 49 F.3d at 819-21, Pet. App. at 24a-26a. Second, as both the majority opinion and Judge Boudin explain,¹⁰ users automate those steps by creating "macros," computer programs written by users themselves.

Lotus' own documents and the record below demonstrate that while Lotus' product initially became a success because it was technologically superior to its early competition, it later maintained its share because, as Judge Boudin noted, the user's investment in learning the method of operation of the Lotus product and the creation of macros "locked in" those users who first selected Lotus over its inferior early competition.¹¹ Therefore, unless a new entrant with a superior product in the spreadsheet market could compete for the business of the vast majority of computer users who initially chose Lotus, competition would be limited solely to new spreadsheet users, a minor portion of the market. In short, there would be little, if any, business for which to compete.

⁹See, e.g., Raburn Decl. at ¶14, RE 3; *Borland III*, 831 F. Supp. at 213, Pet. App. at 86a-87a.

¹⁰49 F.3d at 809-10, 819-21, Pet. App. at 4a, 24a-27a. See also *Paperback*, 740 F. Supp. at 64-65, Pet. App. at 228a; *Borland II*, 799 F. Supp. at 213-14, Pet. App. at 110a; *Borland IV*, 831 F. Supp. at 227, Pet. App. at 31a.

¹¹Ex. 38 (Houdini Analysis of Competitive Products) at L047694, 1st Cir. App. 1196. As a result of macros, 1-2-3 became, in the words of Lotus' own documents, "entrenched." Ex. 39 (Review of Excel) at L046265, 1st Cir. App. 1198.

2. *The Borland Product*

The Lotus petition attempts to dismiss Borland's product as a "clone" or imitator, but the record below demonstrates otherwise. The Borland product was first introduced in 1989 and won every major award for spreadsheet excellence given in the software industry. The Borland product invariably ranked higher than the Lotus product in head-to-head reviews and user comparisons, including those conducted by Lotus.¹²

Not only was the Borland product superior from technological and performance perspectives, but it also employed a new screen display that was different in every respect (save the command words) from the Lotus products at issue in this case. See *Borland S.J. Brief* (Dkt. No. 141) at 116-34. The Borland product had its own menu command hierarchy designed specifically to take advantage of its superior technological features and a different screen display. But the Borland product also provided, as an alternative, an enhanced version of the Lotus menu command hierarchy so that users who were locked into the earlier menus could operate the new product without relearning their spreadsheet skill set or rewriting their macros.¹³

B. Proceedings in the District Court

Throughout the proceedings below, the district court resisted every attempt Borland made to secure prompt appellate review of the district court's controversial extension of copyright law. The district court's earlier *Paperback* decision had not been appealed because Lotus settled the case following the district court's ruling and the defendant went out of business.

The district court issued its first opinion in this case on March 20, 1992, indicating that it intended to continue to employ its widely criticized methodology from the *Paperback* case. *Borland I*, 788 F. Supp. at 89-90, Pet. App. at 163a. On July 31,

¹²See Ex. 1 and 2, 1st Cir. App. 1134; *Borland S.J. Brief* (Dkt. No. 141) at 2 n.3.

¹³P. Kahn Tr. at 65-66, RE 10-11; *Bosworth Tr.* at 148, 1st Cir. App. 748; Ex. 27 at L034481, 1st Cir. App. 1178.

1992, the district court published its *Borland II* decision and an accompanying procedural order holding that “[t]he menu commands and menu hierarchy of Lotus 1-2-3 have expressive aspects and are copyrightable.” Order Regulating Jury Trial, finalized Sept. 30, 1992 (Dkt. No. 232), at 18. However, the district court said that it could not determine the “precise scope of Borland’s infringement” without further trial proceedings, *Borland II*, 799 F. Supp. at 221, Pet. App. at 138a, and set a trial to begin on November 2, 1992.

Immediately following the district court’s *Borland II* decision, Borland pulled the Lotus menus from its products. On three separate occasions, Borland moved to certify for interlocutory appeal the question of the menu command hierarchy’s copyrightability. However, the district court denied all three of Borland’s motions, greatly extending the proceedings.¹⁴ Ultimately, Borland argued in favor of enjoining its own product so that appellate review would be available pursuant to the injunction statute, 28 U.S.C. § 1292(a). On August 19, 1993, the district court entered a permanent injunction against the continued sale of Borland’s product and an appeal was promptly taken to the First Circuit.

The district court refused to stay either damages discovery or a damages trial pending the First Circuit’s decision on liability. As a result, the damages phase of the case, which was eventually terminated by the First Circuit’s reversal, cost Borland millions of dollars in legal and expert fees. Although the district court was eventually reversed, the series of district court opinions, followed by the entry of a permanent injunction, had a devastating effect on Borland. For example, as the record below reflects, Borland’s stock, which traded at 86¾ in January, 1992, prior to the first of the district court’s opinions in the case, fell to 12¾ in September 1993, following entry of the injunction. Borland was required of financial necessity to sell its spreadsheet products to another company and is no longer a competitor of Lotus, which is now owned by International Business Machines Corp. (IBM). Any

¹⁴See Tr. of Sept. 23, 1992 Hearing at 54, 1st Cir. App. 18; Tr. of Oct. 16, 1992 Hearing at 15-17, 1st Cir. App. 24-25; Tr. of Aug. 19, 1993 Hearing (Dkt. No. 406) at 42-43.

further appellate proceedings, even if successful from Borland’s legal viewpoint, can be exploited by IBM to further damage Borland competitively.

REASONS FOR DENYING THE PETITION

I. THE CIRCUITS ARE IN AGREEMENT THAT WORDS USED AS BUTTONS TO OPERATE A PROGRAM, UNLIKE THE PROGRAM ITSELF, ARE UNCOPYRIGHTABLE.

A. The District Court Erroneously Applied the “Abstractions” Test to Uncopyrightable Subject Matter.

The Lotus petition attempts to inject this case into the ongoing debate in the case law involving the extent to which the “structure” of a computer program should be protected by copyright. But extending copyright protection to menus and similar methods of operation has far greater legal and economic consequences than extending copyright to the structure of a computer program. The legal argument that at least some aspects of a program’s structure might be copyrightable is a familiar one. A computer program, as defined in 17 U.S.C. § 101 (a “set of instructions” used “to bring about a certain result”), is a “literary work.” The literal elements of the program, the source code and object code, are copyrightable in the same way that the literal text of a play would be.

Within the genre of *artistic* literary works like plays, courts have created the “paraphrasing” doctrine, see Pet. at 10, also known as the concept of “comprehensive non-literal similarity,” as a basis for copyright infringement. See David Nimmer & Melville B. Nimmer, *Nimmer on Copyright*, § 13.03[A][1] at 13-29 (1994). If, for example, someone made an unauthorized translation into French of a play originally written in English, the authors would have a claim for copyright infringement, notwithstanding the fact that the original work (in English) and the unauthorized “copy” (in French) do not share any common literal expression. They are not substantially similar in terms of literal expression, but they are similar with respect to the “struc-

ture" of the play, each of its acts, each of its scenes, and, for that matter, the breakdown of the dialogue into sentences.

Because Congress decided to apply copyright protection to the code of a computer program (the "set of instructions"), one might argue (as Lotus does) that copyright doctrines for artistic literary works should apply to some extent to the code of a computer program, which is also a literary work. See, e.g., *Whelan Assoc., Inc. v. Jaslow Dental Laboratory, Inc.*, 797 F.2d 1222, 1233-34 (3d Cir. 1986), cert. denied, 479 U.S. 1031 (1987). Thus, if a programmer writes a program in "BASIC" and someone "translates" that program into the programming language "C," the second program is an unauthorized copy notwithstanding the absence of literal similarity at the code level. The two programs are "substantially similar" with respect to their detailed "structure." Hence, a few courts initially applied the doctrine of "comprehensive non-literal similarity" to protect the "structure, sequence and organization" of a computer program, at least to some limited extent. See, e.g., *Altai*, 982 F.2d at 702-04 (citing cases).

But application of the concept of "comprehensive non-literal similarity" to computer programs has been controversial because, unlike artistic works (such as plays), computer programs are utilitarian objects—they perform a function.¹⁵ Copyright, unlike patent, is a very broad, long-lasting, easily obtainable type of protection, and Congress has always taken care to ensure that easily obtainable copyright protection would not be available for the utilitarian or functional aspects of works.¹⁶ As Professor Miller, formerly a member of CONTU, stated:

The end purpose of a computer program is to achieve a utilitarian result, i.e., the computer's performance of logical operations in a way that produces the desired practical consequence. One cannot compare, therefore, the underlying

¹⁵ *Altai*, 982 F.2d at 704; Paul Goldstein, *Copyright*, § 2.15 at 195 (1989) ("*Goldstein Treatise*").

¹⁶ See, e.g., H.R. Rep. No. 1476, 94th Cong., 2d Sess. 54-55 (1976), reprinted in 1976 U.S.C.C.A.N. 5659, 5667-68.

processes of a computer program with, say, the underlying plot structure of a novel or a screenplay of a movie. This, of course, is the distinction recognized by the Supreme Court long ago in the seminal decision of *Baker v. Selden*, 101 U.S. 99 (1879).

Kenneth A. Liebman, et al., *Back To Basics: A Critique Of The Emerging Judicial Analysis Of The Outer Limits Of Computer Program "Expression,"* 2 Computer Law., December 1985 at 1, 8 (quoting Arthur Miller). Professor Miller, now Lotus' counsel, summarized this concern best when he opined in a declaration in another case: "The creativity, ideas and utilitarian aspects of a copyrighted work must look elsewhere for legal protection."¹⁷

The earliest attempt to apply "non-literal similarity" to computer programs, the Third Circuit's *Whelan* decision, resulted in protection for virtually all of the program's structure. *Whelan*, 797 F.2d at 1238. The Second Circuit in *Altai* rejected the *Whelan* test because the *Whelan* test made too much copyrightable. *Altai*, 982 F.2d at 705-06. Under the *Whelan* test, the "function" of the computer program is the work's protectable idea, and "everything that is not necessary to that purpose or function would be part of the [protectable] expression of the idea." *Whelan*, 797 F.2d at 1236. Under the "abstractions" test formulated by the *Altai* court, far fewer aspects of code structure are protected by copyright. The leading post-*Altai* decision, the Tenth Circuit's *Gates Rubber* case, limited the protection of code structure even further by requiring the lower courts specifically to consider the proscriptions of § 102(b) in applying the abstractions and filtrations formulations. *Gates Rubber*, 9 F.3d at 833, 836.

The test formulated by the district court in this case was based on *Whelan* rather than *Altai*, and, for that reason, the *Altai* court

¹⁷ In declarations in an earlier case in which Professor Miller was the retained expert for the party accused of infringement, Professor Miller opined on the CONTU deliberations and the role of copyright in protecting computer programs. Those declarations can be found in the record below as exhibits to the Reply Brief of Defendant/Appellant Borland International, Inc., filed in the First Circuit on March 1, 1994. The quoted portion in the text is from the second declaration at ¶29.

rejected the lower court's approach as having a "corrosive effect on certain fundamental tenets of copyright doctrine." *Altai*, 982 F.2d at 712. More germane for the purposes of Lotus' petition is the fact that the district court sought to apply an abstractions-type analysis to a menu command hierarchy which, unlike a "computer program," is not copyrightable in the first place. *Borland II*, 799 F. Supp. at 216-19, Pet. App. at 128a-135a.

The "abstractions" test was initially applied to the text of plays—clearly copyrightable subject matter. Similarly, the leading cases cited by Lotus—*Whelan*, *Altai* and *Gates Rubber*—apply the abstractions test to the code of "computer programs" which Congress expressly has said is copyrightable. By contrast, the district court here applied its own variant of the abstractions test to the method of operating the program, the menu commands. The Lotus petition deftly slides over this critical distinction. Compare Pet. at 14-16 (describing the application of the test by various courts of appeals to the "program") with Pet. at 17 (discussing the district court's application of the test to so-called non-literal elements).

As the First Circuit opinion points out, the abstractions test assumes that the work at issue is copyrightable. 49 F.3d at 815, Pet. App. at 14a. Application of the "abstractions" test to the menu command hierarchy inevitably led the district court to find *something* in the menu command hierarchy copyrightable, *id.*, and the district court concluded that the specific commands and order chosen by Lotus were protected by copyright. *Borland II*, 799 F. Supp. at 217, Pet. App. at 131a. In other words, as the First Circuit explained, the district court's test devolved to a question of whether choices exist for the subject matter at issue. 49 F.3d at 811, 816, Pet. App. at 6a, 17a. Under the district court's methodology, if there are choices, the subject matter at issue is copyrightable. But the mere existence of a choice does not turn uncopyrightable subject matter into copyrightable "expression." One might equally argue that the engines of a Ferrari and a Volkswagen embody different "expressions" of the process of internal combustion, or that the QWERTY and Dvorak keyboards are different ways of "expressing" the means by which the user operates a typewriter.

Lotus responds to this reasoning by arguing that "computer programs," unlike car engines and keyboards, are copyrightable. Pet. at 29. Had the district court applied its abstractions test to the *computer program*, Lotus' argument would be germane. But the district court applied its test to the menu command hierarchy, not to the program. *Borland II*, 799 F. Supp. at 216-19, Pet. App. at 128a-135a.

Had the district court applied an abstractions test to the *programs* at issue, it would have quickly found no code or "structural" similarity on any level whatsoever—nonliteral or otherwise. Indeed, there was no allegation in this case that Borland copied or even had access to the "structure" of the Lotus program. Lotus did not produce its code in discovery, neither party introduced the code of its program into evidence at trial, and there is every reason to believe that the Lotus program and the Borland program have vastly different structures to perform the same functions. In short, even after application of the "abstractions" test to the program, the district court would still be faced with the issue of whether the menu commands are copyrightable. That issue can only be resolved by reference to the statute and case law dealing with utilitarian works. In any event, the issues of nonliteral similarity and copyrightability of code structure could not properly be reviewed by this Court in this case, since the narrow issue present here does not raise those broader issues.

B. The District Court's Decision to Extend Copyright to the Words That Operate the Program Ran Afoul of Both the Statute and the Case Law.

The First Circuit's reversal of the district court rests on the familiar language of § 102(b):

In no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work.

Although the Lotus petition at one point claims that the First Circuit's opinion rejected the idea/expression dichotomy, Pet. at

23, the earlier discussion in the Lotus petition correctly points out that § 102(b) is, in fact, the legislative *embodiment* of the idea/expression dichotomy. Pet. at 10. In short, the First Circuit embraced the demarcation in § 102(b) between copyrightable subject matter and uncopyrightable “methods of operation,” “systems,” and “ideas” which must look to patent law for protection. It was the district court that altered that fundamental demarcation. The First Circuit merely followed the “line” between copyrightable and uncopyrightable subject matter previously established by Congress and this Court in *Baker v. Selden*.

Confronted with the plain language of § 102(b) proscribing copyright protection for methods of operation, the district court limited the statute to abstractions. In the view of the district court, whenever any words are attached to § 102(b) subject matter (such as “processes” or “methods of operation”), the words become copyrightable. See *Borland I*, 788 F. Supp. at 91, Pet. App. at 167a; 49 F.3d at 816, Pet. App. at 17a. As the First Circuit pointed out, limiting uncopyrightable § 102(b) subject matter to abstractions moves the line established long ago in *Baker v. Selden* between copyrightable and uncopyrightable subject matter. For more than 100 years, until the district court’s opinion, copyright law was grounded on the proposition that the barest words that state a system or operate a machine (e.g., “move,” “copy”), as opposed to a description of those operations (e.g., the long prompts) are uncopyrightable. The district court’s opinions moved the “line” between copyrightable and uncopyrightable subject matter established in *Baker v. Selden*, and that is what produced the enormous public outcry.

In *Baker*, the plaintiff, Charles Selden, obtained a copyright on a pamphlet that explained a systematic approach to bookkeeping. The pamphlet contained a complex series of ledgers or forms, like the various screen displays in the Lotus user interface. The Selden forms each contained grids, columns, and various alternative short textual descriptive “headings” or “captions” (such as “Balance Forward”) like the Lotus menu commands.

The defendant, Baker, published forms similar in headings and arrangement to those of Selden. Selden sued Baker for copyright infringement because of the similarity, arguing—as Lotus argues

here—that there was “original expression” in the selection, ordering and arrangement of the headings and columns of the ledgers each contained in his copyrighted pamphlet. See *Baker v. Selden*, 101 U.S. at 101.

Manifestly, since the words on Baker’s forms were different from those on Selden’s, this Court could have found for Baker solely on the ground that the textual labels were not substantially similar. But this Court did not take that route. Stating the principal issue in the case as whether Baker could use “similar ruled lines and headings, or ruled lines and headings made and arranged on substantially the same system, without violating [Selden’s] copyright,” *id.*, at 101, this Court held that Selden’s ledgers, including their column arrangement and textual headings, were not copyrightable at all—and could be copied verbatim. *Id.* at 107.

As the *Altai* court observed, 982 F.2d at 704, the holding of *Baker* that methods of operations and systems are not copyrightable is *not* restricted to *pure abstractions*:

[T]he holding in *Baker* goes farther. The [Supreme] Court concluded that those aspects of a work, which “must necessarily be used as incident to” the idea, system or process that the work describes, are also not copyrightable. 101 U.S. at 104.

The First Circuit relied upon *Baker* in the same manner as did *Altai*. It relied upon Baker’s limitations on the scope of copyright to conclude that the commands used to operate the Lotus program were not copyrightable. 49 F.3d at 816–17, Pet. App. at 18a. Indeed, the district court’s limitation on § 102(b) not only ran afoul of *Baker v. Selden* but was also at variance with the unique facts of this case. Here, as the First Circuit explained, the words at issue are more fundamental to the operation of the program than even labels on buttons would be. 49 F.3d at 817, Pet. App. at 18a–19a. Here, the words of the menu command hierarchy are “essential to operating” the program and, hence, are part of the method of operation. *Id.* at 18a. As the First Circuit explained, “it would be impossible to operate [the Lotus program] without employing its menu command hierarchy.” *Id.* at

19a. The holding of the First Circuit, narrowly tailored to the facts before it, is wholly consistent with similar cases in other circuits.

C. There Is No Conflict Among the Circuits That Menu Commands and Similar Methods of Operation Are Uncopyrightable.

Lotus argues that the First Circuit's reasoning is contrary to the law in other circuits, and that review of this case is needed to resolve a conflict in the circuits. To the contrary, there is no such conflict on the narrow issue actually presented here.

1. *The Ninth Circuit.* Lotus cites two cases for an alleged conflict between the First and Ninth Circuits. First, *Johnson Controls, Inc. v. Phoenix Control Sys., Inc.*, 886 F.2d 1173, 1175-76 (9th Cir. 1989), is a code structure case and not pertinent here at all. Second, Lotus relies upon *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465, 1477 (9th Cir.), cert. denied sub. nom. *BB Asset Mgmt. Inc. v. Symantec Corp.*, 113 S. Ct. 198 (1992), as allegedly creating a conflict. This is misplaced. That Ninth Circuit opinion specifically affirmed the lower court's holding that the menus at issue were "unprotectable under copyright." *Id.* at 1472. (While there is ambiguous *dicta* elsewhere in *Brown Bag* which Lotus cites for the proposition that "menus and keystrokes" are copyrightable, which the First Circuit also noted, see 49 F.3d at 819 n.14, Pet. App. at 22a n.14, that *dicta* does not alter the Ninth Circuit's ultimate opinion.)

In fact, a prior Ninth Circuit decision—not cited by Lotus—explicitly held that the menu commands of a spreadsheet software product were uncopyrightable. *Ashton-Tate Corp. v. Ross*, 916 F.2d 516 (9th Cir. 1990). In *Ross*, the plaintiff alleged that he had designed and given Ashton-Tate a complete menu hierarchy, including numerous submenus, which Ashton-Tate incorporated into its "Full Impact" spreadsheet product without compensating him. Unlike this case, Ross' list was handwritten, and had been developed before any computer code was written. However, like the Lotus 1-2-3 menu tree, Ross' tree contained both main menus and submenus. (A copy of Ross' actual menu

hierarchy was included in the district court record in this case. See *Borland II*, 799 F. Supp. at 220, Pet. App. at 136a.)

The *Ashton-Tate* district court ruled against Ross, finding that he was not entitled to compensation because the spreadsheet menu hierarchy was not entitled to copyright protection. Citing 17 U.S.C. § 102(b), the District Court held that Ross' "list of labels for user commands . . . is not protected under federal law." *Ashton-Tate Corp. v. Ross*, 728 F. Supp. 597, 602 (N.D. Cal. 1989). On appeal, Ross renewed his argument, the very same argument to justify copyrightability (*i.e.* the presence of choices) advanced by the district court here. Ross argued that his menu command hierarchy evidenced

numerous decisions by the authors about the ordering of the commands and their arrangement in the user interface. The fact that the authors of these design documents chose the order and groupings displayed, out of a nearly infinite number of possibilities, constitutes creative authorship.

Appellants' [Ross'] Opening Brief on Appeal at 25, 1st Cir. App. 1168. The Ninth Circuit confronted this argument directly and rejected it, stating that "[t]his argument is meritless for the reasons given in the district court's order, 728 F. Supp. at 602. The list simply does not qualify for copyright protection." 916 F.2d at 521-22.

Lotus does not mention *Ashton-Tate*, perhaps because the district court explicitly declined to follow it. *Borland II*, 799 F. Supp. at 220, Pet. App. at 136a. By reversing the district court and agreeing with *Ashton-Tate's* conclusion, the First Circuit removed any conflict with the Ninth Circuit, rather than creating one.

2. *The Tenth Circuit.* Lotus argues, and the First Circuit suggested, that the court's holding was in conflict with *dicta* in a footnote in *Autoskill, Inc. v. National Educ. Support Sys., Inc.*, 994 F.2d 1476, 1495 n.23 (10th Cir.), cert. denied, 114 U.S. 307 (1993). A careful examination of *Autoskill* and subsequent Tenth Circuit authority reveals that there is no such conflict worthy of review at this time. Footnote 23 in *Autoskill* appears to hold that, for the purposes of a preliminary injunction, the district court did

not improperly enjoin a computer program where a student/user selected responses to the program's queries "by pressing the 1, 2, or 3 keys." 994 F.2d at 1495 n.23. The First Circuit noted this *dicta* and declined to "follow" the reasoning of this footnote. 49 F.3d at 813, 818-19, Pet. App. at 12a, 21a-22a.

To the extent that the *Autoskill* footnote bears on the issues of copyrightability of menus and was rejected by the First Circuit, it had *already been rejected* by the Tenth Circuit itself. In *Gates Rubber*, 9 F.3d 823, the Tenth Circuit limited its prior holding in *Autoskill* because that case only involved the review of a preliminary injunction order. *Id.* at 841. The Tenth Circuit vacated the *Gates Rubber* district court's finding that computer menus were copyrightable, and remanded the case to that district court for further consideration and analysis under the appropriate legal standards. *Id.* at 843-44.

The uncopyrightability of computer menus in the Tenth Circuit was confirmed by the very recent decision by the *Gates Rubber* district court, after the Tenth Circuit's remand. *Gates Rubber Co. v. Bando Chem. Indus., Ltd.*, No. 92-S-136 (D. Colo. filed June 12, 1995). Using the analysis ordered by the Tenth Circuit, the District of Colorado found that the menus of that program were uncopyrightable. Slip op. at 6-7. It saw no conflict among the circuits. To the contrary, the Colorado court approvingly cited the First Circuit's opinion in *Lotus v. Borland* without noting any conflict. *Id.* at 7. To the extent that *Gates Rubber* still poses any issues worthy of review, this Court can ultimately grant review of that case.¹⁸

¹⁸A few district courts have protected the menu aspects of screen displays by generally focusing on artistic and stylistic aspects of display, rather than the words themselves. For example, in *Digital Comm. Assoc., Inc. v. Softklone Distrib. Corp.*, 659 F. Supp. 449, 460 (N.D. Ga. 1987), the district court protected the "highlighting" and "capitalizing" of certain menus only because they "have no relationship to the functioning... of the computer program." Similarly, *Manufacturers Technologies, Inc. v. CAMS, Inc.*, 706 F. Supp. 984, 995-998 (D. Conn. 1989), provided protection to only the three screens that were not limited by functionality and denied copyright protection to the words and format of most menus. Where only the methods of operation were

3. *The Fifth Circuit.* Lotus also relies upon *Engineering Dynamics*, 26 F.3d 1335 (5th Cir. 1994), *supplemented on pet. for reh'g*, 46 F.3d 408 (5th Cir. 1995). Initially, *Engineering Dynamics* was the only court of appeals case which, like the district court opinions here, purported to apply an "abstractions"-like test *directly* to a "non-literal element." That particular non-literal element was the input formats to the computer program, and not a method of operating the program. Therefore, § 102(b) did not play any role in the court's decision. Indeed, the court did not base its reasoning on any analysis of § 102(b) or of methods of operation.

As discussed above, following the publication of the original opinion in *Engineering Dynamics*, the Fifth Circuit was deluged with requests for rehearing. It issued a supplemental opinion (not cited by Lotus) which greatly if not completely undercuts Lotus' arguments. The Fifth Circuit's supplemental opinion rejected the assertion that it protected the user formats in that case because there were "numerous ways the input formats could be organized." It instead stated that "[t]he panel did not say that in any case involving user interface the fact that the 'author' has selected from among possible formats is dispositive." 46 F.3d at 409. This is consistent with the First Circuit's views on one of the issues in dispute here, namely whether the availability of "expressive choices" in designing the menu command hierarchy makes the menus copyrightable. See 49 F.3d at 816, Pet. App. at 17a. Significantly, since the Fifth Circuit remanded that case for further proceedings, this Court can eventually review *Engineering Dynamics* if those proceedings result in any real conflict with the First Circuit.

4. *The Second and Third Circuits.* Finally, Lotus argues that this case conflicts with the Second and Third Circuit opinions in *Altai* and *Whelan*. As explained above, those cases involved the non-literal copying of code structure, rather than the "method of operation" issues involved here, and hence do not conflict with

involved, district courts have declined to protect computer menus under the copyright laws. See *Mitek Holdings, Inc. v. Arce Eng'g Co.*, 864 F. Supp. 1568, 1579-80 (S.D. Fla. 1994).

the narrow issues presented by this case. Moreover, Lotus is incorrect that the First Circuit "rejected" *Altai's* abstraction-filtration-comparison test. The First Circuit did not reject *Altai*; to the contrary, it held that "the *Altai* test may provide a useful framework for assessing the alleged nonliteral copying of computer code." 49 F.3d at 815, Pet. App. at 14a. That issue is not present here, and could not properly be dealt with by this Court upon review. Finally, while *Altai* and numerous other courts have harshly criticized *Whelan*, see 982 F.2d at 705-06, that hardly makes *this* a suitable case to review the viability of *Whelan*. Indeed, since *Altai* is still pending before the Second Circuit, this Court can grant review of that case to address the *Altai/Whelan* debate.

II. THE FIRST CIRCUIT OPINION REMOVES THE UNCERTAINTY PRODUCED BY THE DISTRICT COURT AND UPHOLDS THE OVERALL INTELLECTUAL PROPERTY FRAMEWORK ESTABLISHED BY CONGRESS.

A. The First Circuit Opinion Restores Clarity and Predictability to the Law.

In the First Circuit, many of Borland's amici urged reversal of the district court because of the uncertainty created by the district court's methodology and result. It is ironic in the extreme that Lotus would now petition this Court, claiming it is the First Circuit's decision that has produced uncertainty. Software developers obviously need clear rules to enhance productivity. Prior to the district court's decisions, developers and their counsel, relying on § 102(b), *Baker v. Selden* and *Ashton-Tate v. Ross*, believed that menu commands and similar methods of operating a program were uncopyrightable. The First Circuit has now restored that clarity.

The alternative offered by Lotus, a case-by-case determination of whether § 102(b) means what it says, would have a chilling effect on software development. One need look no further than the facts of this case to understand the grave difficulties such a regime would portend. Here, two years, two opinions, hundreds of pages, and millions of dollars into this case, the district court

could still not determine the "precise scope of Borland's infringement," *Borland II*, 799 F. Supp. at 221, Pet. App. at 138a, without another year and one-half of proceedings. Under the regime proposed by Lotus, new and better products that compete for the business of a competitor's customers can be brought to market legally only at the cost of one's company. In rejecting such a regime, the First Circuit has restored clarity to at least a portion of the overall intellectual property protection framework established by Congress. Equally important is the fact that the First Circuit's opinion restores the long-standing demarcation between copyright and patent law.

Copyright is broad, long-lasting, easily obtainable protection. Copyright protection is obtained for copyrightable elements of a computer program merely by making a deposit of any copyrightable subject matter (such as code). See Copyright Office Circular 61, *Copyright Registration for Computer Programs*, at 2, 1st Cir. App. 1170. There is no examination procedure. The copyright lasts for approximately 75 years. Because copyright protection is so easy to obtain, and lasts so long, it was neither intended for, nor is it suited for, the granting of government-sanctioned monopolies for methods of operation. See, e.g., *Goldstein Treatise*, § 2.3.1 at 78, § 2.15.2 at 207; Paul Goldstein, *Infringement of Copyright in Computer Programs*, 47 U. Pitt. L. Rev. 1119, 1123-24 (1986). The monopoly on a menu command hierarchy or similar "method of operation" has far greater ramifications than even the monopoly on the "structure" of a program. Protecting code structure has no preclusive effect on the program's users. However, precluding a competitor's product from offering another's method of operation means that users will lose their investment in the skill set necessary to implement that method of operation if they switch to a competitor's product. 49 F.3d at 821, Pet. App. at 26a-27a.

Such a broad government-sanctioned monopoly must be secured, if at all, through the patent system. Patents on "methods of operation" are difficult to obtain and last a relatively short period of time (20 years or less). Patent applications must state the invention, describe the prior art, and set forth the claims for protection clearly and specifically. There is a complex examination process to ensure that the patentee will be contributing

something new to the state-of-the-art (*i.e.*, something novel and non-obvious, an advancement over the prior art, etc.), as the quid pro quo for the grant of monopoly. None of these safeguards are present in the copyright system established by Congress because it was (and is) not contemplated that the scope of copyright protection is tantamount to that of patent. Unless § 102(b) is recognized for what Congress intended it to be, the copyright law would afford over-extensive protection to works by applying only the most minimal level of scrutiny. The First Circuit's opinion is consistent with the intellectual property framework established by Congress and supports its rationale.

In short, Lotus lost this case because it tried to secure patent-type protection without satisfying the patent requirements of novelty, examination and contribution to the prior art. If, like the plaintiff in *Baker v. Selden*, Lotus cannot meet these requirements, or if it chooses not even to try, it should not be able to claim the same scope of protection through copyright law. That, as the *Baker* Court observed, "would be a surprise and a fraud upon the public. That is the province of letters-patent not of copyright." 101 U.S. at 102.

B. Both Copyright and Patent Remain Sources of Strong Protection, Providing Enormous Incentives for Authors and Inventors of Software Products to Innovate.

Lotus' suggestion that the First Circuit's ruling "could serve to roll back the scope of protection for computer programs generally," Pet. at 29, is wholly unfounded. Copyright protection remains a powerful and sufficient incentive for the development of new software. Copyright protects against piratical copying of object code. Copyright protects against appropriation of source code, either literally or by paraphrasing. Perhaps, in appropriate circumstances, copyright also protects against copying the detailed "structure" of another's program.

Nor does the First Circuit's opinion call into question the screen display portion of a "user interface." *Compare* Pet. at 28. As the *Altai* court observed, copyright protection for screen displays does not depend on the protection of "non-literal elements" of the computer program. Rather, copyright protects

against the unauthorized reproduction of "certain types of screen displays," that are "copyrighted separately as an audiovisual work." *Altai*, 982 F.2d at 703. The First Circuit did not even remotely suggest that screen displays are uncopyrightable. Rather, its holding that menu commands are uncopyrightable does not interfere with the protection of screen displays "because the way the screens look has little bearing on how users control the program." 49 F.3d at 816 & n.10, Pet. App. at 16a & n.10.

Menu commands and similar methods of operating the program continue to be protected by the patent law, as they always have been. The record below contains several examples of menu command hierarchies, including those of IBM (Lotus' new owner) that are protected by utility patents. Borland S.J. Brief, Exs. 16 & 23 (U.S. Patents Nos. 4,989,141, 4,611,306). Indeed, the U.S. Patent and Trademark Office has recently announced it is changing the rules for patentability of software, making it even easier to obtain software patents.¹⁹

CONCLUSION

This Court has made it clear that only Congress may redraw the balance between private monopoly and public access. The courts are required to defer to Congress "when major technological innovations alter the market for copyrighted materials." *Sony Corp. v. Universal City Studios, Inc.*, 464 U.S. 417, 431 (1984). If Congress has not expressly chosen to expand the scope of copyright protection, it is not the job of the courts to do so. On the contrary, "[i]n a case like this, in which Congress has not plainly marked our course, we must be circumspect in construing the scope of rights created by a legislative enactment which never contemplated such a calculus of interests." *Id.* The district court

¹⁹See U.S. Department of Commerce, Press Release No. 95-21, *Software Patent Guidelines Released Today*, 6/1/95, 60 Fed. Reg. 28,778 (proposed June 2, 1995); B. Rosewicz, *Patent Office Acts to Clarify Software Rules*, Wall St. J., June 2, 1995, at A1; U.S. Department of Commerce, Press Release No. 95-18, *USPTO to Develop Guidelines to Protect Software Inventions*, 3/30/95; M. Betts, *Feds to ease software patent guidelines*, Computerworld, April 17, 1995, at 20.

in this case plainly thought that it was empowered to create new law in "uncharted" territory and to "draw the line between copyrightable and non-copyrightable elements of computer programs." *Borland I*, 788 F.Supp. at 90, Pet.App. at 165a; *Paperback*, 740 F.Supp. at 53, Pet.App. at 206a. In so doing, the district court usurped the role of Congress. The First Circuit corrected this error.

Twenty years ago, the first personal computers had no screens or keyboards; the users operated the machines by pressing buttons or switches on the front of the machines. No one would ever claim that such buttons were copyrightable. Twenty years from now, users will operate personal computers with spoken words, and without any physical buttons or keyboards. It is inconceivable that anyone could claim that such spoken methods of operation will be copyrightable. At the intermediate stage of technology relevant here, Lotus used typed words as the buttons or switches to operate its spreadsheet program. Those words are no more copyrightable than physical buttons were twenty years ago, or than spoken commands will be twenty years from now.

For the foregoing reasons, the petition for a writ of certiorari should be denied.

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July 6, 1995

No. 94-2003

Supreme Court, U. S.

~~FILED~~

JUL 18 1995

IN THE
Supreme Court of the United States CLERK

OCTOBER TERM, 1994

LOTUS DEVELOPMENT CORPORATION,

Petitioner,

—v.—

BORLAND INTERNATIONAL, INC.,

Respondent.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES
COURT OF APPEALS FOR THE FIRST CIRCUIT

**PETITIONER'S REPLY IN SUPPORT
OF PETITION FOR A WRIT OF CERTIORARI**

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AMENDED RULE 29.1 STATEMENT

On July 5, 1995, Lotus Development Corporation became a wholly owned subsidiary of White Acquisition Corporation, itself a wholly owned subsidiary of the International Business Machines Corporation ("IBM").

IBM has no parent corporation and no subsidiaries that are not wholly owned, except for certain foreign subsidiaries in which a minimal amount of shares (fewer than 1%), which are not publicly traded, are held by foreign nationals in accordance with local laws, except for IBM World Trade Corporation, a wholly owned subsidiary of IBM, which owns, directly or indirectly, more than 50 percent but less than 100 percent of the following corporations:

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AXONE S.A.
BLU A.G.E.S. Puglia e Basilicata S.r.l.
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Bridgware Europe B.V.
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CGI Informatica Holding BV
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CGI Informatik GmbH

CGI Informatique S.A.
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 CGI Systems Inc.
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 CIMAD Consultants N.V.
 City Info Finland Oy
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 CS Technical Staff Co., Ltd.
 DST Logistica S.r.l.
 Datablue
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 EDB Gruppen A/S
 EDB Gruppen Herning
 EDB Gruppen K benhavn Holding A/S
 EDB Gruppen Oslo
 EDB Gruppen Silkeborg A/S
 Ediat
 EG af 25.10.91 ApS
 EG Data Inform A/S
 EG Data Inform Prod. A/S
 EG Gruppen Kolding A/S
 EG Image A/S
 Electronic Business Machines (EBM)
 Eurequip S.A.
 FINEST S.A.
 GMV Conseil
 HG Gruppen Hjørring A/S
 I-LINIE Software GmbH

IBD Informationssysteme Betriebs-
 und Dienstleistungs-GmbH
 IBM Japan GB Kansai Solution Co., Ltd.
 IBM Japan GB Solution Co., Ltd.
 IBM Japan GB Tokai Solution Co., Ltd.
 IBM South Africa Group Ltd.
 IBM South Africa (Pty) Ltd.
 IBM Unternehmensberatung GmbH
 ICG Informationssysteme Consulting und
 Betriebs-Gesellschaft GmbH
 ID Centeret Hj.
 ID Centeret Hjørring
 IDG Informationsverarbeitung und
 Dienstleistungen GmbH
 Industria Per IL Software S.p.A.
 Integrated Systems Solutions Corporation Australia Ltd.
 International Information Products
 (Shenzhen) Company Ltd.
 International Outsourcing Services (Pty) Ltd. (IOS)
 IPN Informatica per Il Negozio S.r.l.
 ISD Informationssysteme und Dienstleistungs GmbH
 IT Partner Herning A/S
 Japan Business Logistics Co., Ltd.
 Logic Line Operations S.A.
 Logiciels Sirc Inc.
 Logon Solution Integrator (Logon S.I.)
 MAS A/S
 MAS Worldwide Limited
 MONTICS, S.A.
 NSI S.r.l. Nuove Soluzioni Informatiche S.r.l.
 NULOGIX Technical Services Inc./Services
 Techniques NULOGIX Inc.
 PARTITIEL S.A.
 Personal Computer Co., Brasil S.A.
 Polar Bear Software Corporation
 Prodstar Benelux BV
 Prodstar (Deutschland) GmbH

Prodstar Espana S.A.
 Prodstar GB Limited
 Prodstar Portugal Lda.
 Prodstar Production Software
 Prodstar S.A.
 Progipt, S.A.
 PYRENEES INFORMATIQUE S.A.
 R. J. Thompson Data Systems Inc.
 Rigorsoft Solucoes Informaticas, S.A.
 Service Maintenance Systems (SMS) S.A.
 Service Plus Ltd.
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 SISTEMI INFORMATIVI S.p.A.
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 Softcycle S.A.
 Sulzer Informatik AG
 Tiltan System Engineering Ltd.
 Tunisian Business Machines (TBM)
 Viamet B.V.
 V.T. Nielsen Data A/S

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Borland's Brief fails to confront the central issue presented by this case: whether, and to what extent, the Congressional mandate extending copyright protection to computer programs protects expressive elements of user interfaces, as well as programming code. It then distorts the pertinent case law in an effort to show that the First Circuit's unprecedented use of Section 102(b) to deny protection to such expressive elements does not conflict with the law of other circuits. Borland concedes that a uniform, national answer to these questions is of vital importance to the software industry (Borland Br. at 24), but it fails to demonstrate that the First Circuit has provided any usable answer, much less one that has nationwide acceptance.

1. Borland's position rests upon three false premises.

First, Borland repeatedly mischaracterizes the nature of Lotus' claims and the scope of the district court's holdings. Lotus did not claim, and the district court did not rule, that Lotus' copyrights gave it a monopoly on the use of any individual menu command such as "COPY," "MOVE," or "PRINT." *See* Borland Br. at 1, 5 & 8. Rather, the issue at all times has been the copyrightability of the Lotus 1-2-3 menu tree or command hierarchy *taken as a whole*—a collection of 469 different menu commands, organized and sequentially arranged into more than 50 different menus. This distinction is critical. It is, in fact, the structure and arrangement of the *entire* 1-2-3 menu hierarchy that Borland copied in its products and that the district court found to contain sufficient original expression to be copyrightable. Pet. App. at 86a-89a. Borland's focus upon individual commands is a classic example of what Professor Nimmer called the fallacy of *reductio ad absurdum*: if the first word of a work is not protectable, standing alone, and the second is not, and so on, then the entire work must be unprotected.¹ Yet, as is true for any literary work, it is the com-

¹ Declaration of Melville B. Nimmer, dated November 15, 1984, at ¶ 14, appended to Anthony L. Clapes, Patrick Lynch and Mark R. Steinberg, *Silicon Epics and Binary Bards: Determining the Proper*

bination and arrangement of the individual words in the 1-2-3 menus as a whole that give them their context, meaning, and communicative power—and that make them copyrightable.

Second, Borland misdescribes the Lotus 1-2-3 user interface in an attempt to reinforce the First Circuit's erroneous analogy comparing the words displayed in the 1-2-3 menus to the buttons on a machine. *See* Pet. App. at 18a-19a. It is simply untrue that a 1-2-3 user can instruct the program to perform an operation by typing out a menu command, such as "PRINT," as Borland represents. Borland Br. at 8. Neither are the words "used as buttons to operate a program." *Id.* at 13. Rather, the words serve to explain to users what their available command choices are at a given point in the operation of the program, and to identify the keystrokes that will communicate those choices to the program.² It is the keystrokes—not the words appearing on the screen—that cause the program to take any action. Indeed, Lotus could have designed a user interface that did *not* display such information to the user (Pet. App. at 286a-288a); users could have been forced, for example, to remember the permissible keystrokes and to rely upon printed documentation for any necessary reminders. That this table of contents conveniently appears on the screen instead should not transform the character of those words from their fundamentally informative purpose into the equivalent of a mechanical device.

Recognition of this distinction also provides the appropriate perspective from which to consider Borland's argument that the 1-2-3 menu command hierarchy should be protected, if at all, under patent rather than copyright law. Borland Br. at 25-26. According to Borland, copyright in a computer program covers only its code, and "perhaps" the "detailed 'structure' " of its

Scope of Copyright Protection for Computer Programs, 34 UCLA L. Rev. 1493, 1585, 1588-89 (1987).

² The permissible keystrokes include the first letters of the words appearing in a particular menu or the "ENTER" key, which will communicate the currently highlighted menu command.

code. *Id.* at 26. That is, in Borland's view, copyright properly protects the digital notations that operate within the machine causing it to function, but *not* the English words that appear on the screen to assist a person in using the program, because the latter (but not the former) is a "method of operation." *Id.* at 18-19. Thus, according to Borland, an arrangement of words conveying information to human beings must be protected by patent, while machine-level communication is covered by copyright. Far from restoring "the overall intellectual property protection framework established by Congress," as Borland claims (*id.* at 25), this proposal would turn it on its head.

Third, Borland depicts the 1-2-3 menu command hierarchy as distinct from the computer program that generates it, drawing a bright line between a "computer program" (which it defines as consisting only of programming code) and any informational content that the same code is designed to display. *Id.* at 17.³ Borland's entire legal analysis rests upon this distinction, which it purports to draw from the definition of a "computer program" found in Section 101 of the Copyright Act. 17 U.S.C. § 101. That definition—"a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result"—contains, on its face, no limitation that restricts its applicability to programming code. The 1-2-3 menu commands fit the statutory definition equally well, as they express a set of instructions to be used in a computer to produce particular results.⁴ Certainly from the perspective of a typical user any suggestion that the user inter-

³ Contrary to Borland's suggestion (*id.*), the facts of this case prove this to be incorrect. The district court received in evidence the print-out of a particular file, stored internally in the Borland programs, in which every word from the 1-2-3 menus, arranged as in the 1-2-3 menu hierarchy, was spelled out. *See* Pet. App. at 34a-35a.

⁴ The menu commands also fit the literal definition of a "literary work" found in the same section: "works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied." 17 U.S.C. § 101.

face is not an integral part of the computer program seems absurd.⁵

2. Borland's argument also reveals a basic misperception of the role of the Section 101 definitions in the overall scheme of the Copyright Act. The definitions neither delimit the bounds of copyrightable subject matter, nor specify the scope of protection afforded to copyrightable works. That is the purpose of Section 102(a), with its illustrative but not limitative list of the types of works eligible for copyright, and of the limitations found in Section 102(b). It is no more accurate to employ the definition of a "computer program" in Section 101 as a basis for precluding protection for menus that a program displays, than to use the statutory definition of a "motion picture"—defined as a "series of related images which, when shown in succession, impart an impression of motion" (17 U.S.C. § 101)—to preclude protection for a motion picture's plot, dialogue, or characters, all of which plainly are copyrightable and covered by the copyright in the motion picture itself.

Borland agrees that Section 102(b) is "the legislative *embodiment* of the idea/expression dichotomy," which supplies the "'line' between copyrightable and uncopyrightable subject matter." Borland Br. at 18 (emphasis in original). But the First Circuit disregarded the district court's finding that the 1-2-3 menu hierarchy contains expression separable from its underlying idea. Pet. App. at 17a. Beyond its misplaced reliance on the definition of a "computer program" in Section 101, Borland proffers no reason why the 1-2-3 menu command hierarchy can

⁵ Neither does the Copyright Office share Borland's view on this subject. In its *amicus* brief, the Copyright Office declared: "Menu screens are integral parts of computer programs, and they may or may not contain copyrightable expression." Brief Amicus Curiae on Behalf of the Register of Copyrights, at 5. Contrary to Borland's contention (Borland Br. at 4), this brief was *not* filed in the court of appeals, urging reversal, but in the district court, and in it the Copyright Office expressly declared that its "brief should not be taken as commenting on the copyrightability or scope of protection to be accorded the works at issue in this case, i.e., those relating to Lotus 1-2-3." *Id.* at 3.

be considered an unprotected "method of operation" that would not, under the First Circuit's reasoning, also preclude copyright protection for computer programs generally. The uncertainty confronting the software industry in the wake of the First Circuit's decision is both genuine and profound,⁶ and Borland's Brief does nothing to obviate the need for this Court's resolution of the issue.

3. Borland misreads the pertinent decisions from other circuits to argue that the First Circuit's decision presents no conflict.

a. Borland inaccurately portrays the Fifth Circuit's denial of a petition for rehearing en banc in *Engineering Dynamics Inc. v. Structural Software Inc.*, 26 F.3d 1335 (5th Cir. 1994), *pet. for reh'g en banc denied*, 46 F.3d 408 (5th Cir. 1995), as retreating from its earlier opinion extending copyright protection to a computer program's user interface. Borland Br. at 23. In seeking rehearing of the Fifth Circuit's decision, the defendant Structural Software and its amici argued—as do Borland and many of the same amici in this case—that the court erroneously had based its original decision solely upon the existence of alternatives to plaintiff's choice of input formats. The Fifth Circuit rejected that characterization of its rationale as "overly simplistic" (46 F.3d at 409), observing that its conclusion rested upon many facts, including a finding that the plaintiff's user interface reflected a sufficient degree of creativity to qualify as original expression under this Court's ruling in *Feist Publications, Inc. v. Rural Telephone Serv. Co.*, 499 U.S. 340, 358 (1991). *Engineering Dynamics*, 46 F.3d at 409. The court neither modified nor withdrew any of its previous rulings on copyrightability, including its reliance on Judge Keeton's decisions below. To the contrary, the Fifth Circuit reaffirmed its direction to the district court to apply the abstrac-

⁶ See Brief Amicus Curiae of Intellectual Property Owners in Support of Petitioner, at 9-10; Brief Amicus Curiae of Information Technology Industry Council in Support of the Petition for a Writ of Certiorari, at 3 & 10-11.

tion-filtration-comparison test to determine the precise scope of protection in plaintiff's user interface, in particular by identifying elements that were functionally dictated. *Id.* at 410.

In this case, Judge Keeton specifically found, after trial, that the 1-2-3 menu command hierarchy was *not* dictated by the functionality it allowed users to achieve, in addition to finding that numerous viable alternatives existed to that particular menu command hierarchy. Pet. App. at 89a, 93a & 130a. Under the Fifth Circuit's ruling in *Engineering Dynamics*, these findings would compel a conclusion of copyrightability. The First Circuit, in contrast, either ignored these findings or deemed them irrelevant to its analysis. *Id.* at 17a. The conflict is square. Indeed, Borland argued before the First Circuit that the *Engineering Dynamics* court erred when it "adopted" Judge Keeton's reasoning and held that a computer program's user interface is copyrightable.⁷

b. Borland fares no better in its attempt to depict the law of the Ninth Circuit as not in conflict with the First. Borland casually dismisses the Ninth Circuit's decision in *Johnson Controls, Inc. v. Phoenix Control Systems, Inc.*, 886 F.2d 1173 (9th Cir. 1989), as "not pertinent here at all" (Borland Br. at 20), despite the court's explicit statement that:

[w]hether the non-literal components of a program, including the structure, sequence and organization and user interface, are protected depends on whether, on the particular facts of each case, the component in question qualifies as an expression of an idea or an idea itself. (*Id.* at 1175.)

Borland similarly mischaracterizes the Ninth Circuit's decision in *Brown Bag Software v. Symantec Corp.*, 960 F.2d 1465 (9th Cir.), cert. denied sub nom. *BB Asset Mgmt. Inc. v. Symantec Corp.*, ___ U.S. ___, 113 S. Ct. 198 (1992). The district court did not hold "that the menus at issue were 'unprotectable by

⁷ Letter of Gary L. Reback, counsel of record for Borland, to Clerk of the Court for the First Circuit, dated September 27, 1994.

copyright' " (Boland Br. at 20), and neither did the Ninth Circuit. Borland refers to a portion of the district court's decision, as summarized by the Ninth Circuit, rejecting plaintiff's claim that its copyright protected certain functional "features" of the program, such as the ability to access files or to print. 960 F.2d at 1472.⁸ The district court carefully distinguished these unprotectable "features" from the "expression" in "the programs' respective opening menus," which it found were "not substantially similar". *Id.* at 1473. The Ninth Circuit recognized this distinction, affirming the district court's test for comparing "the expressions embodied" in the programs' menus. *Id.* at 1475. That the Ninth Circuit considered the menus to comprise protected expression is obvious throughout its analysis. They simply had not been copied in that case.

Borland faults Lotus for not discerning a different rule in the Ninth Circuit's earlier decision in *Ashton-Tate Corp. v. Ross*, 916 F.2d 516 (9th Cir. 1990). Lotus is not alone in concluding that this decision has no bearing upon the issues in this case. The First Circuit did not mention that case, and the Ninth Circuit omitted any such reference when it discussed the menus at issue in *Brown Bag* two years later. Contrary to Borland's assertion, the Ninth Circuit did *not* hold in *Ross* that "the menu commands of a spreadsheet software product were uncopyrightable" (Borland Br. at 20); that question was not before the court. Rather, the issue was whether Ross, having furnished a document consisting of "only a list of labels for user commands" that he "thought should be included" in a predecessor to the Ashton-Tate program,⁹ could claim to be a joint author of the program's eventual user interface. *Ashton-*

⁸ In this case, Judge Keeton drew the same distinction, specifically finding that 1-2-3's "features" or functional capabilities comprise part of the unprotected "idea" underlying the 1-2-3 menu command hierarchy, rather than part of the protected expression. Pet. App. at 129a.

⁹ Judge Keeton explicitly considered this and other facts in the course of distinguishing this case from *Ross* in his analysis (Pet. App. at 135a-36a), and did not disregard the *Ross* decision merely because it arose in another circuit, as Borland suggests. Borland Br. at 6.

Tate Corp. v. Ross, 728 F. Supp. 597, 602 (N.D. Cal. 1989). The Ninth Circuit's holding was that this handwritten list—not the program's menu commands and hierarchy—did not qualify for copyright protection, and thus Ross had no claim to joint authorship in the program. 916 F.2d at 522.¹⁰

c. Borland further errs by asserting that the Tenth Circuit “rejected” its decision in *Autoskill, Inc. v. National Educational Support Systems, Inc.*, 994 F.2d 1476 (10th Cir.), *cert. denied*, 114 U.S. 307 (1993), five months later in *Gates Rubber Co. v. Bando Chemical Indus., Ltd.*, 9 F.3d 823 (10th Cir. 1993). Borland Br. at 22. In *Gates Rubber*, the Tenth Circuit explicitly adopted the abstraction-filtration-comparison test “which we previously approved for use in the context of a preliminary injunction ruling in *Autoskill*,” also citing with approval Judge Keeton's decision in *Lotus Development Corp. v. Paperback Software Int'l*, 740 F. Supp. 37 (D. Mass. 1990). *Gates Rubber*, 9 F.3d at 834. The court of appeals directed the district court to apply that test to determine the copyrightability of plaintiff's menus (*id.* at 843-44)—a senseless direction if the Tenth Circuit agreed with the First Circuit that menus are *per se* ineligible for copyright. Thus, under the law of the Tenth Circuit but not the First, menus may be protected to the extent they contain identifiably separable expression. This rule is wholly unaffected by the district court's subsequent factual finding that the menus at issue in *Gates Rubber* fell “towards the idea end of the idea-expression dichotomy” because the “universe of choices to accomplish [their] task is relatively small.” *Gates Rubber Co. v. Bando Chemical Indus., Ltd.*, No. 92-S-136, slip.

¹⁰ Among the reasons given by the district court for its conclusion was the fact that Ross “did not contribute in any manner” to the “implementation of his suggested commands” in the program, and therefore had contributed only an “idea” rather than expression to the creation of the program's user interface. 728 F. Supp. at 602. Borland glides over this and other critical facts necessary to a proper understanding of the *Ross* decision by use of ellipsis (Borland Br. at 21), which omits, between the first six and last five words of the quote, five complete sentences and virtually all of the district court's explanation for its conclusion.

op. at 7 (D. Colo. filed June 12, 1995). In contrast, Judge Keeton in this case found that the possible “universe of choices” for a spreadsheet menu hierarchy providing the same functionality as in *Lotus 1-2-3* was virtually unlimited (Pet. App. at 131a), although, as noted above, his decision did *not* rest upon that finding alone. *Id.* at 93a, 129a, 130a & 133a.

d. Borland also claims that the Second Circuit “pointedly rejected” Judge Keeton's *Paperback* analysis in *Computer Assoc. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693 (2d Cir. 1992). Borland Br. at 4 (emphasis in original). In fact, the Second Circuit cited *Paperback* with approval in support of critical steps in its own reasoning no fewer than five times.¹¹ Borland ignores these substantive citations in favor of the court's single reference in *dicta* concerning the potential policy implications of the Second Circuit's decision, leading to a conclusion that courts must apply, “in accordance with Congressional intent, long-standing principles of copyright law to computer programs.” 982 F.2d at 712. It is precisely these “long-standing principles”—including the principle that Section 102(b) must be interpreted by applying the idea/expression dichotomy to *each* element of a copyrighted work for which protection is sought—that both the Second Circuit and the district court below espoused and followed, but the First Circuit ignored.

Borland accuses Judge Keeton of having rejected or ignored well-settled principles in order to achieve a “controversial extension of copyright law” in this case. Borland Br. at 3, 11.

¹¹ Specifically, the Second Circuit cited *Paperback* for its exposition of the pertinent legislative history (982 F.2d at 702); for the principle that non-literal elements of computer programs, like other literary works, are protected by copyright (*id.* at 703); for the conclusion that the idea/expression distinction should be used to determine which aspects of computer programs are copyrightable (*id.* at 704); for its use of merger doctrine to address the question of substantial similarity “in the context of computer program structure” (*id.* at 709); and, explicitly agreeing with Judge Keeton's “approach,” for the conclusion that merger is “an effective way to eliminate non-protectable expression contained in computer programs.” (*Id.*)

This is not correct. Faithful to the Congressional mandate, Judge Keeton applied traditional copyright doctrine to the task of defining the scope of protection available to computer programs—a new, high technology form of “literary work”. He took as his guide the landmark decisions of Judge Learned Hand that have, for decades, instructed the courts in the proper use of the idea/expression dichotomy, the merger doctrine and other time-tested analytic tools to distinguish the protected from the unprotected elements of literary works. The result was an analysis that not only has influenced the tests subsequently adopted in decisions of the Second, Fifth, Ninth, and Tenth Circuits, as those courts have all acknowledged, but also has generated considerable favorable commentary in the academic community.¹² Judge Keeton’s conclusion that a computer program’s menu command hierarchy is copyrightable where, as here, its original expression is separable from its underlying functionality, is consistent with decisions from across the land.¹³ The First Circuit is the first court to hold otherwise.

CONCLUSION

For these reasons and for the reasons set forth in the petition, the petition for a writ of certiorari should be granted.

¹² See, e.g., Jane C. Ginsburg, *Four Reasons and a Paradox: The Manifest Superiority of Copyright Over Sui Generis Protection of Computer Software*, 94 Colum. L. Rev. 2559, 2571 n. 68 (1994); Arthur R. Miller, *Copyright Protection for Computer Programs, Databases and Computer-Generated Works: Is Anything New Since CONTU?*, 106 Harv. L. Rev. 997 (1993); Robert D. Sprague, *Multimedia: The Convergence of New Technologies and Traditional Copyright Issues*, 71 Den. U.L. Rev. 635 (1994); Nicholas P. Terry, *GUI Wars: The Windows Litigation and the Continuing Decline of “Look and Feel”*, 47 Ark. L. Rev. 93 (1994).

¹³ See, e.g., *Engineering Dynamics*, 26 F.3d at 1343-44; *Gates Rubber*, 9 F.3d at 849; *Brown Bag*, 960 F.2d at 1475-76.

Respectfully submitted,

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