Federal Circuit Rules Coding Language Creative, Subject to Copyright Protection

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In a significant ruling that affects creators of software and programming language, the Federal Circuit, in a unanimous panel opinion published on May, 9, 2014, reversed a district court's decision on copyrightability and concluded that the declaring codes and the structure, sequence and organization of the API packages [of JAVA] are entitled to copyright protection. *Oracle America, Inc. v. Google, Inc.*, No. 2013-1021-1022 Slip Op. at 5 (Fed Cir. May 9, 2014) (*"Oracle Opinion*"). It did not decide Google's fair use defense; "[b]ecause the jury hung on fair use." The Federal Circuit panel remanded Google's fair use defense for further consideration in light of its decision. *Id.*

Sun Microsystems, Inc. ("Sun"), which was later acquired by Oracle, developed the Java platform and released it in 1996. By utilizing a virtual machine, the Java platform enabled software developers to write a single program that could run on different types of computer hardware. The platform includes a number of ready-to-use programs, called packages, that perform common computer functions. The district court analogized the collection of these packages to a library, describing the collection in the following way; "each package is like a bookshelf in the library, each class is like a book on the shelf, and each method is like a how-to chapter in a book." *Id.* at 7 (citation omitted). Each package contains two types of source code: (1) declaring code, which identifies the function of the package; and (2) implementing code, which implements the function.

Oracle licenses JAVA in three ways. First, a general public license, which is free of charge, requires that any innovation be publicly dedicated and that a license be open source. Second, a specification license allows use of the declaring code and the platform's organization but requires that the user write its own implementing code. Third, Oracle also offers a commercial license, which, in exchange for a royalty, allows the user to keep its own code private.

In 2005, Google acquired Android, a software platform for mobile devices. While Google initially sought a license from Sun for the use of the JAVA platform, negotiations broke down when Google refused to make its implementation compatible with the JAVA virtual machine. After negotiations broke down, Google proceeded to write its own implementation for the function of the Java packages. To make programming of applications for its Android system easier, Google retained the structure, sequence and organization of the

Java platform and copied verbatim 7,000 lines of declaring source code for certain Java packages. Google launched its Android platform in 2007.

On April 16, 2012, the trial began on Oracle's copyright infringement claim, with a jury to decide the issues of infringement and Google's fair use defense and the district court to decide copyrightability. On May, 7, 2012, the jury returned a verdict finding that Google had infringed Oracle's copyright in 37 packages, but could not decide the fair use defense. Thereafter on May 31, 2012, the district court decided "that the replicated elements of the Java . . . packages - including the declarations and their structure, sequence, and organization - were not copyrightable." *Id.* at 13 (quotation omitted). Both Google and Oracle appealed.

Discussion

The Federal Circuit commences its decision with the uncontroversial acknowledgment that "the application of copyright law in the computer context is often a difficult task." *Id.* at 17. The Court then found error with the district court's failure to distinguish the relatively low threshold required to prove that a work is copyrightable from the standards required to prove infringement. *Id.* While there is no question that software is subject to copyright protection, unique attributes of software highlight the dichotomy between idea and expression, only the latter of which is the subject of copyright protection as well as the distinction between expression and functionality, the latter being within the realm of patent rather than copyright law. "In assessing copyrightability, the district court is required to ferret out apparent expressive aspects of a work and

then separate protectable expression from unprotectable ideas, facts, processes, and methods of operation. " *Id.* at 22 (internal quotations omitted).

As recognized by the Federal Circuit, it is well-established the creativity of computer software that copyright protects extends to both elements that are literary - the source code, as well as non-literary - a program's sequence structure, and organization. *Id.* at 20. In assessing copyrightability in this case, the district court interpreted Section 102(b) of the Copyright Act "to preclude copyrightability for any functional element 'essential for interoperability' 'regardless of its form.'" Finding that the declaring code and structure utilized by Google were essential to interoperability, it held that what was utilized was not copyrightable. *Id.* at 26.

Google argued that the district court had correctly applied the "merger" doctrine, finding that the essential functional elements of the declaring code and structure caused any expression to "merge" with the idea and prevent copyright protection. Oracle countered that the declaring code and structure, while essential to interoperability, remained expressive because the code and structure could have been written and organized in any number of ways to achieve the necessary functionality. *Id.* at 26.

The Federal Circuit agreed with Oracle. The Federal Circuit found error in the district court's focus on the options available to Google at the time of copying. "It is well-established that copyrightability and the scope of protectable activity are to be evaluated at the time of creation, not at the time of infringement." *Id.* at 31. The Federal Circuit observed further that "merger cannot bar copyright protection for any lines of declaring source code unless Sun/Oracle had only one way, or a limited number of ways, to write them." *Id.* at 30. The evidence showed that Oracle had "unlimited options as to the selection and arrangement of the 7000 lines Google copied." *Id.* at 30. Accordingly, the merger doctrine did not apply, and the declaring code is copyrightable.

Turning next to the organization, sequence and structure of the Java platform, the Federal Circuit rejected the conclusion that systems and methods of operation can never be copyrightable. *Id.* 40. Specifically, the Federal Circuit concludes "that a set of commands to instruct a computer to carry out desired operations may contain expression that is eligible for copyright protection." *Id.* at 42-43. The Court agreed with Oracle that under Ninth Circuit law, an original work, even one that serves a function, is entitled to copyright protection as long as the author had multiple ways to express the underlying idea," *Id.* at 43, as was true here. Because "Google could have structured Android differently and could have chosen different ways to express and implement the functionality that it copied," the Federal Circuit concluded that the organization, sequence and structure of the Java platform were indeed copyrightable. The Federal Circuit also noted that that Google's desire "to capitalize on the preexisting community of programmers who were accustomed to using the Java API packages . . . has nothing to do with copyrightability." *Id.* at 53.

Finally, the Federal Circuit concluded that the record was insufficient to allow it to make a *de novo* assessment of Google's fair use defense and remanded the case back to the district court. *Id.* at 61-62.

Conclusion

The Federal Circuit's decision goes far to solidify the creativity underlying programming and programming language. Even though most experience with software is with the functional end product, coders and those who think about coding have long advocated for recognition of the underlying creativity of the organization and structure of their languages as well as the creative process employed to implement a function. Coders refer to "elegance" to describe the ability to achieve a function with the fewest lines of code. The process of coding is a process of refinement and expression that evolves and morphs over time and through interaction, in a manner not different from writing a novel or applying paint to a canvas. This underlying creativity is known and accepted in the coding community. The Federal Circuit has recognized and acknowledged that the creativity underlying the process can be protected by copyright law.

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