

I. PEACE AT LAST? EXECUTIVE AND LEGISLATIVE BRANCH ENDORSEMENT OF RECENT SOFTWARE COPYRIGHT CASE LAW

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For the past ten years, U.S. courts have wrestled with the application of copyright protection to computer programs. Two issues in particular have received great attention in the courts and in the trade press because of their impact on competition in the software industry: the protectability of interface specifications and the permissibility of software reverse engineering.¹ During this period, the executive and legislative branches of the U.S. government have largely remained on the sidelines. Now that the courts have finally reached a consensus on these issues favoring software interoperability, both the executive and legislative branches have ratified these judicial conclusions. With this ratification, the software copyright wars are officially over, at least in the United States, and interoperability has prevailed.

A. The Executive Branch's Endorsement of Interoperability Case Law

When the Second Circuit in 1992 issued the leading decision on the scope of protection for computer programs, *Computer Associates v. Altai*, 982 F.2d 693 (2d Cir. 1992), the decision provoked extensive discussion in copyright and software industry circles. The executive branch, however, remained mum, even as circuit after circuit voiced agreement with the *Altai* court that copyright protection did not extend to the interface specifications of computer programs. Now, in what may well be the most important case it has brought this decade, *U.S. v. Microsoft*, the executive branch is relying heavily on *Altai* and its progeny. This reliance signals the executive branch's agreement with the reasoning and results in those cases.

¹ For a more general discussion of these developments, see Jonathan Band and Masanobu Katoh, *Interfaces On Trial* (1995).

In the antitrust case against Microsoft, the Antitrust Division and nineteen state governments (collectively the “Government”) objected to Microsoft’s insertion of certain restrictions in its licensing agreements: requiring the preinstallation and display of Internet Explorer and preventing OEMs from utilizing preferred means of developing and installing their own add-on programs or customizing the user interface. In its motion for summary judgement, Microsoft defended this practice on the ground that copyright in Windows 95 and Windows 98 programs entitled it to impose whatever terms it wished in its Windows license agreements. The Government filed a response on August 31, 1998, which rested heavily on the interoperability cases in its rejection of Microsoft’s contentions.

The court agreed with the Government’s arguments and denied Microsoft’s motion. But more important than the court’s agreement with the arguments is the fact the Government made them at all. It is now the official policy of the United States government that copyright law should be construed narrowly so as not to impede software interoperability.

1. No Moral Right In Software

The Government first rejected Microsoft’s claim that it had a “moral right” in its software. Recognizing that “moral right” is a continental law concept largely foreign to American jurisprudence, the Government went on to assert that “whatever policy justifications might exist for a moral right in the integrity of works of art, they are substantially weaker when the work at issue is a computer program.” Response at 77. It then proceeded to discuss the functional nature of programs -- particularly operating systems -- and noted that numerous cases have allowed defendants to make alterations to plaintiffs’ programs. In the course of this discussion, the Government cited with approval six of the most important software copyright

cases that shaped the contours of today's software protection: *Lotus v. Borland*, *DSC v. DGI*, *Mitel v. Iqtel*, *Mitek v. Arce*, *Sega v. Accolade*, and *Vault v. Quaid*.²

2. Limited Scope of Copyright Protection

The Government next refuted Microsoft's argument that it is free to do whatever it wishes in licensing its copyrighted works. Citing *Computer Associates v. Altai* and two Supreme Court cases,³ the Government argued that copyright does not provide an unbounded property right, but rather it is a limited power designed to encourage to a reasonable degree the creation of new works of ownership.

Discussing the limits of copyright with respect to computer programs, the response states that "it is by now well established that the copyright in a computer program cannot extend to the functional aspects of that computer program; to design choices dictated by necessity, cost, convenience or consumer demand." Response at 79. To support this statement, the Government turned to a recent appellate decision, *Mitel v. Iqtel*, which it summarized as follows: "interface specifications of a communications protocol are freely copiable because they are functional rather than expressive." *Id.* The *Mitel* decision squarely addressed and rejected the protectability of technical interface specifications. A brief discussion of this case, which has received little attention, is set forth in the Appendix.

3. Copyright Misuse Doctrine Limits Copyright Owners' Licensing Rights

The Government then argued that copyright does not provide Microsoft with the unfettered right to license its intellectual property as it sees fit. The Government argued that the

² *Lotus Dev. Corp. v. Borland Int'l*, 49 F.3d 807 (1st Cir. 1995); *DSC Communications v. DGI Technologies*, 81 F.3d 597 (5th Cir. 1996); *Mitel v. Iqtel*, 124 F.3d 1366 (10th Cir. 1997); *Mitek Holdings v. Arce Eng'g*, 89 F.3d 1548 (11th Cir. 1996); *Sega of America v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1992); *Vault v. Quaid Software*, 847 F.2d 255 (5th Cir. 1988).

³ *Stewart v. Abend*, 495 U.S. 207 (1990); *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151 (1975).

copyright misuse doctrine imposes significant restrictions on the ability of a copyright owner to extend its control to adjacent markets, to prevent the development and use of interoperable programs by competitors, or to impose anticompetitive restrictions on licensees. The Government found several cases instructive, including *DSC v. DGI*, in which the Fifth Circuit held that it was likely copyright misuse for DSC to use its copyright in the computer program operating a telephone switch to try to prevent a competitor from designing and testing a compatible switch that used DSC's protocol.⁴ The response also cited two other appellate decisions, *Lasercomb* and *PMI v. AMA*,⁵ both of which found copyright misuse where a copyright owner entered into license agreements that restricted its licensees from competing with it.

4. Copyright Confers No Antitrust Immunity

Finally, the Government rebutted Microsoft's claim that licensing of copyrighted materials is exempted from antitrust scrutiny. Noting that a copyright does not give its owner immunity from antitrust and other laws of general applicability, the Government stated that a copyright owner may not use licensing agreements to impose certain anticompetitive restrictions on its licensees. Furthermore, the response quoted Justice Scalia's dissent in *Eastman Kodak v. Image Technical Services*, 504 U.S. 451 (1992), that power gained through a legal advantage in copyright "can give rise to liability if a seller exploits his dominant position in one market to expand his empire into the next."

B. The FTC Joins Antitrust Division In Endorsing Interoperability Case Law

A few months after the Second Circuit's issuance of *Computer Associates v. Altai*, the Ninth Circuit handed down an equally momentous decision: *Sega v. Accolade*. There the court

⁴ 81 F.3d at 601.

⁵ *Lasercomb America v. Reynolds*, 911 F.2d 970 (4th Cir. 1990); *Practice Management Info. Corp. v. American Med. Ass'n*, 121 F.3d 516 (1997).

held that the copying incidental to the reverse engineering of software for the purpose of achieving interoperability was permitted under copyright's fair use doctrine. Although the U.S. government never questioned the case domestically, in foreign contexts both the Patent and Trademark Office and the Office of the U.S. Trade Representative suggested that *Sega* was a minority view.⁶ They did this in an effort to dissuade foreign governments from adopting exceptions to their copyright laws permitting software reverse engineering.

However, on October 30, 1998, the staff of the Federal Trade Commission's Policy Planning Office and Bureaus of Consumer Protection and Competition sent a letter to the drafters of Article 2B of the Uniform Commercial Code which publicly voiced their concerns over several of the draft's provisions.⁷ In particular, the FTC stated that UCC2B's provisions may limit the reverse engineering permitted under *Sega*, and thereby dampen competition in the software industry. Thus, the FTC agreed with the *Sega* court's reasoning and underlying pro-competitive policy.

In a section entitled "Balance of Innovation and Competition Incentives in Article 2B," the FTC staff explained that Article 2B was inconsistent with existing intellectual property and antitrust laws and policies:

Some provisions in Article 2B implicitly endorse a contracting/licensing structure that allows software and other information to be distributed with significant restrictions on users' rights to compete. Those restrictions could be contract/license terms that explicitly forbid competition with the seller/licensor of the good or terms that restrict in some manner 'reverse engineering,' i.e., the detailed analysis by one firm of another firm's product in order to produce a related good.

⁶ See, e.g., Band & Katoh, *Interfaces on Trial* at 297-316; J. Band and T. Isshiki, *Gunboat Diplomacy on the Pearl River: The Tortuous History of the Software Reverse Engineering Provisions of Hong Kong's New Copyright Bill*, *The Computer Lawyer* (Feb. 1998).

⁷ The first footnote in the letter notes "[t]his comment represents the views of the Bureaus of Consumer Protection and Competition and of the Policy Planning office and does not necessarily represent the views of the FTC or any individual Commissioner. The FTC, however, has authorized the staff to submit this comment."

Letter at 5.

The FTC staff summarized the testimony the FTC had received at its 1995 hearings on Competition Policy in the New High-Tech, Global Market. It discussed expert testimony that “next-generation innovations . . . are often built on the basis of access to information regarding prior-generation products.” *Id.* at 6. Accordingly, contractual restrictions on access to such information may inhibit the quantity, quality, and rate of future innovation.

The FTC staff then surveyed relevant intellectual property principles. The staff quoted the Supreme Court’s statement in *Feist v. Rural Telephone*, 499 U.S. 340, 350 (1991), that copyright “assures authors the right to their original expression, but encourages others to build freely upon the ideas and information conveyed in a work.” The FTC staff noted that “several courts of appeal have held that the Copyright Act’s protection for ‘fair use’ of a copyrighted product precludes a software vendor’s attempt to enjoin a purchaser’s reverse engineering.”

Letter at 7. The staff proceeded to quote passages from the Ninth Circuit’s decision in *Sega v. Accolade*:

The Ninth Circuit . . . found that if it were to hold that reverse engineering ‘is per se an unfair use, the owner of the copyright [would] gain[] a de facto monopoly over the functional aspects of his work - aspects that were expressly denied copyright protection by Congress.’ The court said that such ‘an attempt to monopolize the market by making it impossible for others to compete runs counter to the [Copyright Act’s] statutory purpose of promoting creative expression and cannot constitute a strong equitable basis for resisting the invocation of the fair use doctrine.’

Letter at 7 (citations omitted).

The FTC staff turned to copyright misuse and antitrust cases where copyright owners have attempted to use licensing to expand their copyright protection. Citing *PMI* and *Lasercomb*, the staff observed that restrictions that run afoul of the copyright laws include (a) a

provision requiring the licensee to use the licensor's product exclusively and (b) a provision suppressing any attempt by the licensee to independently implement the idea which licensor's product expresses.

After this survey of applicable legal principles, the FTC staff addressed Article 2B. It objected to Article 2B's broad scope of "contractual use restriction" which could inhibit innovation and competition in the markets for computer software and other products containing information. Under Article 2B, the reverse engineering necessary to develop a product could be prohibited by a license term. Although such a term may well be unenforceable under the copyright or antitrust laws, Article 2B declares that the restrictive term "would in most circumstances be enforceable."⁸ In the FTC staff's view, this statement of presumptive validity could chill licensees from asserting rights under federal and state intellectual property and antitrust laws.

C. Section 1201 of the Digital Millennium Copyright Act

Not to be left out of the act, Congress in 1998 also weighed in favor of software reverse engineering and interoperability.

Section 1201 of the Digital Millennium Copyright Act, passed by Congress in October, 1998, implements the provisions of the World Intellectual Property Organization Internet Treaties relating to technological protection measures. Specifically, Section 1201 prohibits the development, distribution, and use of technologies which circumvent other technologies which protect an author's copyrights. Developers of interoperable software explained to Congress that this prohibition could prevent reverse engineering necessary for achieving interoperability. If a software vendor placed a software "lock" on a program which prevented the reverse engineering

⁸ The proposal only recognizes *enforceable* "contractual use restrictions." See § 2B-102 Reporter's Note 11 ("The adjective 'enforceable' clarifies that the definition does not include terms invalidated under this Article or other law, including federal intellectual property law and state laws which limit enforcement of some restrictions on use of information.")

of the program, the circumvention of that software lock would violate Section 1201. Thus, Section 1201 could prevent the interoperable software developer from exercising his fair use privilege recognized in *Sega*.

Accordingly, Congress created an exception explicitly directed at reverse engineering. Section 1201(f) allows software developers to circumvent technological protection measures in a lawfully obtained computer program in order to identify the elements necessary to achieve interoperability of an independently created computer program with other programs. A person may engage in this circumvention only if the elements necessary to achieve interoperability are not readily available and the reverse engineering is otherwise permitted under the copyright law.⁹ Furthermore, a person may develop and employ technological means to circumvent and make available to others the information or means for the purpose of achieving interoperability.¹⁰

This exception is notable in several respects. First, the language describing the acts of reverse engineering which justify circumvention comes directly from Article 6 of the European Union Software Directive. This may well be the first time language from an EU Directive has been incorporated verbatim into the U.S. Code. Incorporation of Article 6 language was no accident. Competing factions of the computer industry have long fought over the permissibility of software reverse engineering. The language of the Software Directive, adopted in 1991, resulted from a compromise between these factions. Accordingly, it was only logical to include this language, which both factions could accept, in the U.S. statute.¹¹

⁹ 17 U.S.C. § 1201(f) (1998).

¹⁰ Thus, Section 1201(f) provides an exception to all the prohibitions of Section 1201: Section 1201(a)(1)'s prohibition on the circumvention of access controls, Section 1201(a)(2)'s prohibition on the manufacture and distribution of devices which circumvent access controls, and Section 1201(b)'s prohibition on the manufacture and distribution of devices which circumvent copy controls

¹¹ For a more detailed discussion of the history and meaning of the European Software Directive, see Band & Katoh, *Interfaces on Trial* at 227-82.

Second, and more important, the exception represents the first Congressional recognition of the legitimacy of software reverse engineering. To be sure, Congress *did not* say that all software reverse engineering was permissible, or that all copying incidental to reverse engineering would always be a fair use. Rather, Congress simply indicated that it would permit circumvention when the underlying reverse engineering was not an infringement. But permitting circumvention when this condition was met indicates that Congress believed that the condition could be met; that is, that the copying incidental to reverse engineering could be a fair use. This signals Congress' basic agreement with the judicial rulings in *Sega v. Accolade*, and its progeny.

The Senate Judiciary Committee's report could not be clearer on this point. It states that this exception was "intended to allow legitimate software developers to continue engaging in certain activities for the purpose of achieving interoperability to the extent permitted by law prior to the enactment of this chapter."¹² The Committee evidently understood that if a dominant vendor placed on its program a technological measure that prevented reverse engineering, a legal prohibition on circumventing that technological protection could preclude other companies from obtaining the interface information necessary to operate in the dominant vendor's computing environment. Citing *Sega*, the Committee states that "[t]he objective is to ensure that the effect of current case law interpreting the Copyright Act is not changed by enactment of this legislation for certain acts of identification and analysis done in respect of computer programs."¹³ The Committee concludes by noting that "[t]he purpose of this section is to foster competition and innovation in the computer and software industry."¹⁴

¹² S. Rep. 105-190 at 32 (1998)

¹³ *Id.*

¹⁴ *Id.*

D. Conclusion

With the adoption of Section 1201(f) and the issuance of the FTC staff letter, U.S. agencies can no longer marginalize *Sega* in efforts to prevent foreign governments from adopting reverse engineering exceptions to their copyright laws. Rather, these documents indicate that it is the policy of the U.S. government to encourage competition in the software industry by means of eliminating barriers on reverse engineering. Likewise, the Government's response in the Microsoft case proclaims that copyright law cannot be abused to prevent legitimate competition. The executive and legislative branches have caught up with the judicial branch, and the pro-competitive position of the U.S. government is unambiguous.

E. Appendix: *Mitel v. Iqtel*¹⁵

The *Mitel* case involved simple codes programmed into communications hardware for facilitating functions such as speed dialing. Mitel was the dominant company in the industry, and the technicians who installed the hardware and software were familiar with the 60 Mitel commands. Iqtel developed competitive hardware with its own command system. The Iqtel software was capable of understanding the Mitel commands via a translation module, which contained a copy of the Mitel commands. The Iqtel manual also contained a listing of the Mitel commands with a cross index to the Iqtel commands. The district court, following the First Circuit in *Lotus v. Borland*,¹⁶ held that the Mitel command set was an unprotected method of operation. The court also rested its decisions on grounds that Mitel's commands codes are unoriginal, dictated by external factors and unprotectable under the *scenes a faire* doctrine.

The Tenth Circuit affirmed the district court's ruling. But instead of following *Lotus* directly, the Tenth Circuit applied the abstraction-filtration-comparison test. After applying this test, it found all Mitel commands unprotected. The Tenth Circuit ruled that most of the commands were unoriginal because they were

¹⁵ *Mitel v. Iqtel*, 124 F.3d 1366 (10th Cir. 1997).

¹⁶ *Lotus Dev. Corp. v. Borland Int'l.*, 49 F.3d 807 (1st Cir. 1995), *aff'd without opinion by an evenly divided Court*, 116 S. Ct. 804 (1996).

either arbitrary or simply sequential. With respect to the few commands which were slightly original, the court found them unprotected under the *scenes a fair* doctrine. Under this doctrine, the court excludes from protection those elements of a work that necessarily result from external factors inherent in the subject matter of the work. The *Mitel* court listed the external factors set forth in *Computer Associates v. Altai* and *Gates v. Bando Chemical* [cite]: hardware standards and mechanical specifications, software standards and compatibility requirements, computer manufacturer design standards, industry programming practices, and practices and demands of the industry being serviced.