

S102588

**IN THE SUPREME COURT
OF THE STATE OF CALIFORNIA**

DVD COPY CONTROL ASSOCIATION, INC.,

Plaintiff/Appellant

v.

ANDREW BUNNER

Defendant/Respondent.

Sixth Appellate District, No. H021153
Santa Clara County Superior Court No. CV 786804
The Honorable William J. Elfving

**APPLICATION FOR LEAVE TO FILE
BRIEF OF AMICUS CURIAE
COMPUTER PROFESSIONALS
FOR SOCIAL RESPONSIBILITY**

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- David S. Touretzky, *Free Speech Rights for Programmers*, Communications of the ACM, Vol. 44, No. 8. Aug. 2001 at 25 10
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- L. Jean Camp & Ken Lewis, *Code as Speech: a discussion of Bernstein v. USDOJ, Karn v. USDOS, and Junger v. Daley in light of the U.S. Supreme Court's shift to Federalism*, Ethics and Information Technology, March 2001. Vol. 1, No. 2, pp. 1-16 8
- Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 Yale.L.J. 1575 (2002) *passim*
- Restatement (First) of Torts § 757 cmt. f (1982) 3
- Will Knight, "Computer Scientists Boycott U.S. Over Digital Copyright Law", *New Scientist*, July 01, 2001. Available at: <http://www.newscientist.com/news/news.jsp?id=ns99991063> 10

Statement of interest

This brief *amici curiae* in support of Respondent Andrew Bunner is submitted by the Computer Professionals for Social Responsibility (CPSR). CPSR is a public interest alliance of computer scientists and others concerned about the impact of computer technology on the public. As technical experts, CPSR members provide the public and policymakers with realistic assessments of the power, promise, and limitations of computer technology. As concerned citizens, we direct public attention to critical choices concerning the applications of computing and how those choices affect society.

CPSR has a strong interest in the legal principles regarding reverse engineering of computer software. At issue here is the balance between public and private interests. Trade secret law protects the legitimate interests of private companies, but an overbroad interpretation of these laws would encroach upon the public's right to speak and ability to build upon current knowledge. CPSR has long advocated freedom of expression as a core value of our society. We believe that freedom to innovate is important to support the advancement of technology.

SUMMARY OF ARGUMENT

This brief argues that the Respondent Andrew Bunner did not violate the Uniform Trade Secrets Act (UTSA) by republishing information derived from reverse engineering:

1. The UTSA does not restrict scientists from republishing publicly available information acquired by reverse engineering, unless those disseminating

information have undertaken an affirmative duty of nondisclosure. A manufacturer cannot impose such a duty on the general public by claiming trade secret misappropriation after the “secret” becomes public knowledge.

2. Granting the preliminary injunction would restrict speech outside the scope of trade secret law, sending a chilling effect across the scientific community. Computer scientists would refrain from speaking precisely about products they have purchased and wish to study and improve upon. Such a constraint would substantially impede technological progress.

3. Reverse engineering, or starting with the known product and working backward to find the method by which it was developed, facilitates innovation, encourages competition, and creates new markets. Suppressing discourse on findings acquired by reverse engineering undermines these important social goals.

ARGUMENT

An engineer who legitimately obtains a copy of a computer program is legally entitled to study and analyze the underlying ideas and principles of the program through reverse engineering. Reverse engineering, is a proper means of discovery. CAL. CIV. CODE § 3426.1(a) (2000); *Sega Enters. Ltd. v. Accolade, Inc.*, 977 F.2d 1510 (9th Cir. 1993). Whatever information is discovered, even if originally proprietary, is no longer protected by trade secret law. A website owner who then obtains that information from a public source has a right to circulate it. Jon Johansen learned to decrypt CSS through reverse engineering. Respondent Andrew Bunner then learned of the decryption program from Slashdot, a popular

Internet news source. Reading from a public news site is a legitimate means of acquiring information.¹

Once information is publicly disclosed, it is no longer secret and belated claims that the information contains a trade secret cannot bind members of the public to a duty of non-disclosure. The creation of such a duty would impermissibly expand trade secret law beyond well-recognized restraints and significantly chill speech in the computer science arena. Prohibiting discussion of widely known information would place an impossible onus on the scientist to confirm the claimed trade secret status of every piece of information. In addition, such an unprecedented expansion of trade secret law to restrict public discourse on findings obtained via reverse engineering would significantly hamper progress in software development and other computer-related industries.

California is the nation's -- and perhaps the world's -- seat of technological innovation, and as such has a particular interest in crafting sensible and balanced trade secret law. The purpose of trade secret law is to enforce business ethics and preserve contractual and fiduciary relationships. Non-fiduciaries are not bound by trade secret obligations, and trade secret law was never intended to grant owners a monopoly on the use of alleged trade secret information. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 475 (1974). Thus, a balanced trade secret law enforces fiduciary interests while protecting the rights of innovators and researchers.

¹ See [the still-influential](#) Restatement (First) of Torts § 757 cmt. f (1982).

I. DEFENDANT’S REPLICATION OF INFORMATION ACQUIRED FROM
A PUBLIC NEWS SITE DOES NOT CONSTITUTE TRADE SECRET
MISAPPROPRIATION.

Misappropriation means the disclosure of a trade secret by a person who, at the time of disclosure, knew or had reason to know that such knowledge was derived from a person who utilized improper means to acquire it or owed a duty to maintain its secrecy. CIV. CODE § 3426.1(a). Since DVD-CCA presented no evidence regarding Bunner’s knowledge of improper means nor any breached duty of secrecy, Bunner did not misappropriate DVD-CCA’s trade secret. Information regarding CSS was acquired by proper means – reverse-engineered by Jon Johansen and read by Bunner from an Internet news website. DVD-CCA failed to establish that Bunner or the publisher of the website from which Bunner acquired DeCSS owed a duty of secrecy. The claimed “secret” was already widely available at the time Bunner republished DeCSS. DVD-CCA asks this court to impermissibly expand trade secret law by claiming its public statements that allege trade secret misappropriation impose upon the general public a duty to maintain its secrecy and that Bunner’s speech can be enjoined from publication.

A. Reverse engineering is expressly allowed as a proper means of discovery.

It is well recognized that a trade secret does not offer protection against discovery by fair and honest means, which includes reverse engineering. *Sinclair v. Aquarius Electronics, Inc.*, 42 Cal.App.3d 216, 226, 116 Cal.Rptr. 661 (1974).

California's Uniform Trade Secret Act expressly states that reverse engineering, or starting with the known product and working backward to find the method by which it was developed, is a proper means of discovery. *See* CIV. CODE § 3426.1(a).

Legitimate buyers of DVDs and DVD players are not barred from reverse engineering these products, including the CSS program encoded onto DVDs and players. A lock purchaser's reverse engineering of his own lock, and subsequent publication of a method he discovered to duplicate keys for these locks, is an example of independent invention and reverse engineering expressly allowed by trade secret law. *Chicago Lock Co. v. Fanberg*, 676 F.2d 400, 405 (9th Cir. 1982). Similarly, a DVD purchaser's reverse engineering of CSS on his own DVD and subsequent posting of a code he programmed to decrypt CSS is an example of legitimate reverse engineering. *See id.* Just as the locksmiths in *Chicago Lock Co.* employed proper means of discovery when they discovered the correlation between serial number and key code, so did the creator of DeCSS when he invented it to decipher the CSS code. *See id.* Thus, Bunner did not misappropriate DVD-CCA's trade secret regarding CSS when he read and published information properly acquired by reverse engineering.

B. DVD-CCA's claims that CSS was misappropriated do not impose a duty of nondisclosure on the general public.

The publication of reverse engineering results posted by another is not misappropriation unless the publisher, or the source from which the information is acquired, undertook an affirmative duty, contractual or fiduciary, to keep the results secret. *See* CAL. CIV. CODE § 3426.1(b)(2)(B)(iii) (2000). The trade secret holder is protected disclosure by those to whom the secret has been confided under express or implied restriction of disclosure. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 475 (1974).

In order to enjoin website owners from publication of DeCSS, DVD-CCA must establish that every person who disseminated it undertook an affirmative duty of secrecy. *See id.* DVD-CCA failed to show that Bunner, or anyone, signed or breached any agreement not to disclose trade secrets regarding CSS.

DVD-CCA's public statements claiming trade secret misappropriation do not establish a nondisclosure obligation on anyone. DVD-CCA no longer had a trade secret at the time Bunner republished DeCSS – its “secret” was already legitimately obtained by reverse engineering and then widely published in news reports, where Bunner learned of it. The assertion that a matter is readily ascertainable through published materials is a viable defense to misappropriation. CIV. CODE § 3426.1, Legislative Committee Comment—Senate. DVD-CCA seeks to recapture information that has already entered public domain by asserting trade secret misappropriation. Imposing a nondisclosure obligation upon all members of the public based on a mere trade secret misappropriation claim would in effect convert a company's trade secret into a state-conferred monopoly much like that

of a federal patent. *See Chicago Lock Co.*, 676 F.2d at 405. Such an expansion of California trade secret law would undermine the federal scheme of intellectual property regulation. *See id.*

Therefore, without any showing that Bunner or other website owners owed a duty of confidentiality regarding CSS, DVD-CCA holds no right to enjoin him from publishing information he acquired from public Internet news sites.

II. EXPANDING THE BOUNDS OF TRADE SECRET LAW WOULD CHILL SPEECH ACROSS THE SCIENTIFIC COMMUNITY.

A. DeCSS source code is speech protected by the First Amendment.

Several federal appellate courts have concluded that computer code is creative expression worthy of First Amendment protection. The Ninth Circuit Court of Appeals affirmed a lower court's holding which initially established First Amendment protection for computer code. *Bernstein v. United States Department of Justice*, 176 F.3d 1132, 1141 (9th Cir. 1999) *rehearing en banc granted and opinion withdrawn* 192 F.3d 1308. The Sixth Circuit Court of Appeals has also extended First Amendment protection to computer code. *Junger v. Daley*, 209 F.3d 481, 485 (6th Cir. 2000). Scholars and academics have written extensively about the computer code as speech, likening it to the language of law:

Computer code, like legal code, is speech, specialized formal speech but speech nonetheless. Like the law, computer code is speech critical to expanding and understanding the discourse currently raging about the structure of our increasingly information-based society. We call upon the court to recognize the importance of Bernstein's ability to distribute cryptographic code specifically because the code itself is a message to the mathematicians and cryptographers who understand the language of computers, just as a proposed law is a message to the

lawyers and legislators who understand the language of the law. Code distribution, adoption, and alteration is the moot court of the computer profession.²

Computer source code is an expressive means for exchange of information and ideas about computer programming. It falls under the protection of the First Amendment. *Junger v. Daley*, 209 F.3d at 485. Although a computer program differs from conventional language in that it is executable on a computer, its functional capacity does not negate its expressive nature as speech. *Universal City Studios v. Corley*, 273 F.3d 429, 447 (2nd Cir. 2001). DeCSS is not only a functional code that unlocks an encrypted DVD movie, it also a form of communication entitled to First Amendment protection. *Id.* at 453.

B. The preliminary injunction seeks to silence protected speech.

The preliminary injunction would prohibit publication not only of the DeCSS program, but also English language narrative descriptions of DeCSS not rendered in computer code, and critical analyses and scholarly works derived from the CSS information. A professor would not be able to post online class materials concerning DeCSS.³ An engineer who discovers a problem with a competitor's or a client's technology would hesitate to inform or suggest improvements.⁴

² L. Jean Camp & Ken Lewis, *Code as Speech: A discussion of Bernstein v. USDOJ, Karn v. USDOS, and Junger v. Daley in light of the U.S. Supreme Court's shift to Federalism*, Ethics and Information Technology, March 2001. Vol. 1, No. 2, pp. 1-16.

³ See David S. Touretzky, *Free Speech Rights for Programmers*, Communications of the ACM, Vol. 44, No. 8. Aug. 2001 at 25.

Computer code is the most efficient and precise way of communication among programmers. *Junger v. Daley*, 209 F.3d at 484. Print journals and papers in the computer science community communicate first by a general discussion in English about the algorithm, followed by posting of the full source code.⁵ The most effective way to understand a code is to see it, run it, test it for weakness, and improve upon it.⁶ The science of cryptography depends on cryptographers' ability to exchange ideas in code, to test and refine those ideas, and to challenge them with their own codes.⁷

DVD-CCA seeks to extend trade secret restrictions, beyond those who owe a fiduciary or contractual duty of nondisclosure, to all members of the public. Granting the preliminary injunction would not only hinder scientists' ability to improve upon current technologies, but it would also silence valuable speech protected by the First Amendment. Interfering with the ability of academics and professionals to speak freely in code will chill scientific discourse and force the risk-adverse to communicate in a less optimal form.⁸

⁴ Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 Yale.L.J. 1575, 1646 (2002).

⁵ *Universal City Studios v. Corley*, 111 F. Supp.2d 346. Tr. (Touretzky) at 1084-86.

⁶ Tr. (Touretzky) at 1084-86.

⁷ Samuelson & Scotchmer, *The Law and Economics of Reverse Engineering*, 111 Yale L.J. 1575, 1647.

C. Scientists would refrain from discussing and building on prior public knowledge for fear that a company can later claim trade secret misappropriation.

Allowing the DVD-CCA to impose trade secrecy duties on the public, even after CSS was no longer secret, would materially restrict speech. If a company can retroactively claim trade secret after its publication, researchers who obtain information from journals or news publications would hesitate to use such knowledge. Computer professionals would refrain from exchanging knowledge based on subjects read from trade journals because they cannot be sure whether such information contains trade secrets. Trade secret holders have the responsibility of preserving the secrecy of their information. DVD-CCA seeks to shift the burden of verifying the “secret” status of publicly available information onto researchers, which would effectively silence the scientific community. Without the ability to freely discuss and build upon public knowledge, science will not progress.

III. PROHIBITING DISCOURSE CONCERNING SOFTWARE REVERSE
ENGINEERING UNDERMINES SOCIETY’S INTERESTS IN
INNOVATION AND COMPETITION.

⁸ *Universal City Studios v. Corley*, Tr. (Touretzky) at 1084-86. *See also* “Computer Scientists Boycott U.S. Over Digital Copyright Law”, *New Scientist*, July 01, 2001 by Will Knight. Available on the Internet at <http://www.newscientist.com/news/news.jsp?id=ns99991063>.

Public policy strongly favors reverse engineering. The Court must permit researchers to disclose and discuss results legitimately acquired through reverse engineering.

A. Reverse engineering facilitates technological innovation, particularly the development of compatible devices and interoperable computer software.

The Supreme Court has recognized reverse engineering as “a fair and honest means of starting with the known product and working backwards to divine the process which aided in its development or manufacture.” *Kewanee Oil v. Bicron*, 416 U.S. 470, 476 (1974). Reverse engineering enables engineers and developers to extract public elements, ideas and functions unprotected by patent or copyright, from products. It thus enables them to develop new products to interoperate with or compete with existing ones, in turn challenging other developers to improve these existing products. Furthermore, by setting high standards for protectability, “the competitive reality of reverse engineering may act as a spur to the inventor, creating an incentive to develop inventions that meet the rigorous requirements of patentability.” *Bonito Boats. v. Thunder Craft*, 489 U.S. 141 160 (1989).

For example, through reverse engineering of Microsoft’s Windows file sharing protocols, programmers created the Samba software that enables users of UNIX, Linux, and other computer operating systems to share files and printer

services over a network with Microsoft Windows machines.⁹ This work has allowed companies to mix operating systems on their networks, using each for the tasks to which they find it best suited.

Reverse engineering for interoperability gives products' end-users new options. Connectix's development of the reverse-engineered Virtual Game System emulator for the Sony Playstation offered game-players a wider range of platforms on which to run Playstation games. *Sony Computer Entertainment, Inc. v. Connectix Corp.*, 203 F.3d 596 (9th Cir. 1998). Software developer Accolade was able to produce several new games for the Sega Genesis console, including "Mike Ditka Power Football" and "Star Control," through reverse engineering after Sega would not disclose the details of its console's operation. The Ninth Circuit approved, saying the reverse engineering violated neither copyright nor trademark law.

Sega Enters. Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1993).

B. Software reverse engineering allows new and smaller businesses to compete with larger, established software businesses.

Software reverse engineering not only promotes technological innovation, but it also advances society's interest by preventing monopolization by large software companies.

Interoperable programs, created through reverse engineering, can run on multiple platforms (operating systems).¹⁰ Often, the only applications that can run on a platform are those designed by or licensed by the platform's developer.¹¹

⁹ See <<http://us1.samba.org/samba/about.html>>

¹⁰ *Id.* at 1623

¹¹ Samuelson & Scotchmer, *The Law and Economics of Reverse Engineering*, 111 Yale.L.J.1575, 1622.

Once scientists are able to study and reverse-engineer the platform interfaces, than software developers can create many more applications to run on that platform.¹²

Reverse engineering allows smaller businesses to neutralize the threat of “tipping.”¹³ Tipping occurs when a single operating system becomes the standard, creating a monopoly for the platform developer with exclusive licensing schemes.¹⁴ DVD-CCA, having sole control over CSS licenses, completely controls the market for DVD players, including the features available to consumers.¹⁵ Insofar as the interface becomes a *de facto* standard, consumers will benefit from competitive pricing and the availability of more consumer-friendly applications.¹⁶

Reverse engineering is a crucial technique through which technological advancements are made, and trade secret law expressly permits these kinds of uses. *See Sinclair v. Aquarius Electronics*, 42 Cal.App.3d 216, 226; CIV. CODE § 3426.1(a).

Once DVD-CCA distributes CSS in every DVD and player, it can not prevent third parties from studying that program and disseminating whatever

¹² *Id* at 1622.

¹³ *Id.* at 1625.

¹⁴ *Id.*

¹⁵ Deborah Durham-Vichr, *DeCSS Trial Wrap Up*, at <http://www.linuxworld.com/linuxworld/lw-2000-08/lw-08-decsswrapup.html> (visited July 2, 2002).

¹⁶ *Id.*

information they derived from reverse engineering. Without showing that each person in the extended chain of DeCSS publishers assumed an affirmative obligation of further nondisclosure, DVD-CCA cannot establish misappropriation of trade secret that warrants the issuance of a preliminary injunction that would restrict speech.

CONCLUSION

For the foregoing reasons, Computer Professionals for Social Responsibility (CPSR) respectfully requests the Court uphold the Appellate Division's ruling against the preliminary injunction.

Dated: July 10, 2002

Respectfully submitted,

COMPUTER PROFESSIONALS
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