Fostering the Business of Innovation: The Untold Story of *Bowers v. Baystate Technologies*

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ABSTRACT

Perhaps the law review literature does not need another article on the Federal Circuit's Bowers v. Baystate Technologies *case. That case has received more than its share of attention from commentators, all criticizing Judge Rader's majority opinion and most extolling the virtues of Judge Dyk's dissent. Despite the storm of scholarly criticism, however, courts have followed Judge Rader's opinion. This Article tells the untold story of why courts have been wise to do so. The Article explains how commentators have argued that federal intellectual property law should have preempted Bowers' claims for breach of a shrinkwrap license prohibition on reverse engineering. Instead, Judge Rader's majority opinion eliminated Bowers' copyright claim by refusing to award Bowers any remedies for copyright infringement and hinted that in many instances contract damages for breach of a prohibition on reverse engineering would be de minimus. By using remedies rather than federal law preemption, Judge Rader's approach achieved a result that was fairer to the parties and more congruent with sound innovation policy and the business of innovation.*

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INTRODUCTION

Perhaps the law review literature does not need another article on the Federal Circuit's *Bowers v. Baystate Technologies, Inc.* case.[1] That case has received more than its share of attention from commentators, all criticizing Judge Rader's majority opinion and most extolling the virtues of Judge Dyk's dissent.[2] Despite the

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[1] 320 F.3d 1317 (Fed. Cir. 2003), *cert. denied*, 123 S. Ct. 2588 (2003).

[2] *See, e.g.*, David A. Rice, *Copyright and Contract: Preemption After* Bowers v. Baystate, 9 ROGER WILLIAMS U. L. REV. 595, 644 (2004) (Professor Rice not only criticized the *Bowers* decision, he predicted that either courts would not follow it or that Congress would correct the Federal Circuit's approach); Christopher M. Kaiser, Comment, *Take it or Leave it:* Monsanto v. McFarling, Bowers v. Baystate Technologies, *and the Federal Circuit's Formalistic Approach to Contracts of Adhesion*, 80 CHI.-KENT L. REV. 487 (2005); Jonathan Wilson, Case Note, *Can a Copyright Holder Prevent Reverse*

storm of scholarly criticism, however, courts have followed Judge Rader's opinion.[3] This Article tells the untold story of why courts have been wise to do so. It shows how Judge Rader's approach assures that intellectual property and contract law work in tandem to foster the business of innovation.[4]

Following this Introduction, the Article sets out the historical backdrop of the *Bowers* case. It explains how the Federal Circuit decided the *Bowers* case in the midst of intense industry-wide debates about the enforceability of mass-market software licenses and the importance of reverse engineering in software innovation. Following the historical backdrop, the Article describes the key facts and rulings of the *Bowers* case. Finally, the Article explains how commentators have argued that federal intellectual property law should have preempted Bowers' claims for breach of a shrinkwrap license prohibition on reverse engineering. Instead, Judge Rader's majority opinion eliminated Bowers' copyright claim by refusing to award Bowers any remedies for copyright infringement and hinted that in many instances contract damages for breach of a prohibition on reverse engineering would be *de minimus*. By using remedies rather than federal law preemption, Judge Rader's approach achieved a result that was fairer to the parties and more congruent with freedom of contract and sound

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Engineering? The Federal Circuit Court Holds that the Federal Copyright Act Does Not Preempt "No Reverse Engineering" Clauses, 8 COMP. L. REV. & TECH. J. 467 (2004); Merritt A. Gardiner, Note, Bowers v. Baystate Technologies: *Using the Shrinkwrap License to Circumvent the Copyright Act and Escape Federal Preemption*, 11 U. MIAMI BUS. L. REV. 105 (2003); Bryan Seigworth, Comment, *Injuring Competition and Impeding the Progress of Science: Why* Bowers v. Baystate Technologies *Was Wrongly Decided*, 23 J.L. & COM. 205 (2004); Deanna L. Kwong, Note, *The Copyright-Contract Intersection*: SoftMan Products Co. v. Adobe Systems, Inc. & Bowers v. Baystate Technologies, Inc., 18 BERKELEY TECH. L.J. 349 (2003); Sara Bressman, Comment, *Restricting Reverse Engineering Through Shrink-Wrap Licenses*: Bowers v. Baystate Technologies, Inc., 9 B.U. J. SCI. & TECH. L. 185 (2003).

[3] *See* Davidson & Assocs. v. Jung, 422 F.3d 630 (8th Cir. 2005).

[4] Indeed, the Federal Circuit has become an expert on deciding intellectual property licensing cases that deal with business model innovation. *See* Robert W. Gomulkiewicz, *The Federal Circuit's Licensing Law Jurisprudence: Its Nature and Influence*, 84 WASH. L. REV. 199 (2009).

innovation policy.

I.   HISTORICAL BACKDROP: END USER LICENSES AND REVERSE
ENGINEERING

A.   End Users Licenses

Today, nearly every software user knows that software comes with a license (often called an "End User License Agreement" or "EULA" for short). Software developers began using EULAs in the 1980s during the personal computer revolution when software became a mass-market product. For many years, the enforceability of EULAs seemed in doubt. Scholars argued against their enforceability on a variety of grounds.[5]

Beginning with the *ProCD, Inc. v. Zeidenberg* case in 1996,[6] however, courts began to enforce EULAs.[7] By the time the Federal Circuit decided the *Bowers* case in 2003, courts enforced EULAs on a regular basis (unless the software licensor failed to give the user a meaningful opportunity to review the EULA or to manifest assent).[8] Nonetheless, dissatisfaction about the enforceability of

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[5] *See* Robert W. Gomulkiewicz, *Getting Serious About User-friendly Mass Market Licensing for Software*, 12 GEO. MASON L. REV. 687, 689-92 (2004) (summarizing the criticisms of EULAs, their benefits, and the cases that have ruled on their enforceability).

[6] 86 F.3d 1447 (7th Cir. 1996).

[7] For a case pre-dating *ProCD*, see *Arizona Retail Systems, Inc. v. Software Link, Inc.*, 831 F. Supp. 759 (D. Ariz. 1993) (enforcing one EULA in the initial transaction between a value-added reseller and a software publisher but refusing to enforce a different EULA in a subsequent transaction).

[8] *See* Mark A. Lemley, *Terms of Use*, 91 MINN. L. REV. 459, 459-60 (2006) ("Every court to consider the issue has found 'clickwrap' licenses . . . enforceable. A majority of courts in the last ten years have enforced 'shrinkwrap' licenses . . . . Finally, and more recently, an increasing number of courts have enforced 'browsewrap' licenses.") (footnotes omitted); Gomulkiewicz, *supra* note 6, at 691-92; *see*, *e.g.*, Specht v. Netscape Commc'n Corp., 306 F.3d 17 (2d Cir. 2002) (Sotomayor, J.) (enforcing the EULA in certain contexts but not others on contract formation grounds). For an explanation of how mass market licenses play a critical role in the free and open source software movement, see Robert W. Gomulkiewicz, *How Copyleft Uses License Rights to Succeed in the Open Source Software Revolution and the Implications for Article 2B*, 36 HOUS. L. REV. 179 (1999).

EULAs remained strong in many quarters.[9] Yet attention moved from their general enforceability to the enforceability of certain terms, such as prohibitions on reverse engineering (the contract term at issue in *Bowers*).[10]

B. Reverse Engineering

Reverse engineering means "to study or analyze (a device, as a microchip for computers) in order to learn details of design, construction, and operation, perhaps to produce a copy or an improved version."[11] In the software context, reverse engineering includes de-compilation or disassembly of machine-readable object code to discover human-readable source code. A competitor can use information gleaned from reverse engineering to create either a competitive product or a compatible product. Many people have highlighted the virtues of reverse engineering.[12] The Supreme Court has characterized reverse engineering as an "essential part of innovation."[13]

Some intellectual property law doctrines support reverse engineering. Trade secret law considers reverse engineering a proper means of discovering information.[14] The Copyright Act

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[9] Scholarly criticism of EULAs continues. *See, e.g.*, Elizabeth I. Winston, *Why Sell What You Can License? Contracting Around Statutory Protection of Intellectual Property*, 14 GEO. MASON L. REV. 93 (2006).

[10] Critics of EULAs also have challenged EULA limitations on the use and transfer of software, arguing that these limitations are inconsistent categorically with the Copyright Act's "first sale" doctrine. This categorical challenge has been rejected several times, most recently by the Ninth Circuit in *Vernor v. Autodesk, Inc.*, 621 F.3d 1102 (9th Cir. 2010). *See also* UMG Recordings, Inc. v. Augusto, 628 F.3d 1175 (9th Cir. 2010) (ruling that under the facts of the case, the transaction constituted a Copyright Act first sale rather than a license).

[11] Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1326 (Fed. Cir. 2003) (quoting RANDOM HOUSE UNABRIDGED DICTIONARY (2d ed. 1993)); *see also* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470 (1974).

[12] *See, e.g.*, Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575 (2002).

[13] Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 160 (1989).

[14] *See* RESTATEMENT (FIRST) OF TORTS § 757 cmt. f; RESTATEMENT (THIRD) RESTATEMENT OF UNFAIR COMPETITION § 43; UNIFORM TRADE

often does not stand in the way of reverse engineering to discover ideas even when copying is involved. Several courts, including the Federal Circuit, have ruled that making intermediate copies of software to uncover unprotectable ideas may amount to a defensible "fair use" under the Copyright Act.[15] In addition, the Digital Millennium Copyright Act permits the circumvention of technological measures in some circumstances for the purpose of engaging in reverse engineering.[16]

Despite all the positive aspects of reverse engineering, it is important not to overstate its significance. In the software industry, reverse engineering object code to discover source code can be very time consuming and may not yield much useful information.[17] In addition, a significant amount of technical information about software, including its source code, is available by license, including under various open source software licenses, through standards organizations, and in software development kits and developer tools products.

It is also important to place the discovery of information via reverse engineering in the broader context of trade secret law and practice. Contracts are a normal and necessary measure used to protect the secrecy of trade secret information.[18] Moreover, enforceable contracts foster the sharing of information by allowing trade secret holders to share confidential information with third

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SECRETS ACT § 1, official cmt.

[15] Atari Games Corp. v. Nintendo of Am., Inc., 975 F.2d 832 (Fed. Cir. 1992); Sony Computer Entm't, Inc. v. Connectix Corp., 203 F.3d 596 (9th Cir. 2000); Sega Enters. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992); Bateman v. Mnemonics, Inc., 79 F.3d 1532 (11th Cir. 1996*)*; *see also* DSC Communs. Corp. v. Pulse Communs., Inc., 170 F.3d 1354, 1363 (Fed. Cir. 1999) (noting that reverse engineering may be a fair use but not under all circumstances).

[16] 17 U.S.C. § 1201(f); *see* S. Rep. No. 105-190, at 13 (1998). The 1991 European Software Directive contains a specific exception for reverse engineering to achieve interoperability and explicitly invalidates contractual provisions to the contrary. Council Directive 91/250/EEC on the Legal Protection of Software Programs, 1991 O.J. (L 122) 42, 44.

[17] *See* Andrew Johnson-Laird, *Reverse Engineering of Software: Separating Legal Mythology from Actual Technology*, 5 SOFTWARE L.J. 331, 342-43 (1992).

[18] *See*, *e.g.*, Rockwell Graphic Sys., Inc. v. DEV Indus., Inc., 925 F.2d 174 (7th Cir. 1991).

parties in a way that retains the information's secrecy.[19] Trade secret law does not treat the acquisition of information by breach of contract as proper. To the contrary, acquiring information through breach of contract constitutes an illegal misappropriation of trade secrets.

Software developers often view their source code as a valuable trade secret and thus use contracts to bolster the secrecy that is inherent in distributing only the machine-readable object code. In other words, when software developers distribute software in object code form, they often do so because this form does not reveal secrets contained in the source code.[20] Knowing that the software user could potentially discover the secrets by de-compiling the object code, software developers get users to agree contractually that they will not reverse engineer the object code.

Sometimes these trade secret-related contracts are called non-disclosure agreements (NDAs). Now that software has become a mass-market item, EULAs also have become an important legal tool to protect the secrecy of source code. EULAs, like NDAs, protect the secrecy of software by contract.

Against this backdrop, the Federal Circuit decided the *Bowers* case. The case pits the enforceability of EULAs against the practice of reverse engineering. To those who question the enforceability of EULAs and revere the practice of reverse engineering, this case represented an opportunity for the court to rule that EULAs could not be enforced to prohibit reverse engineering. To those who count on the enforceability of EULAs to protect the secrecy of source code information, the case represented an opportunity for the court to uphold this method of contracting as an essential tool in the business of innovation.[21]

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[19] *See* Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470, 486 (1974).

[20] *See* Data Gen. Corp. v. Grumman Sys. Support Corp., 825 F.Supp. 340, 359 (D. Mass. 1993) (upholding jury verdict finding that Grumman had misappropriated trade secrets contained in object code form of Data General's software even though software had been distributed on the open market, suggesting that distribution in object code form alone may suffice to retain trade secrecy).

[21] Interestingly, the major *amicus* brief arguing against the enforcement of EULAs to prohibit reverse engineering (written by Professor Mark Lemley and submitted by, among others, the Electronic Frontier Foundation, American

II. FACTS AND RULINGS OF *BOWERS V. BAYSTATE TECHNOLOGIES*

A. Facts

Harold L. Bowers created a template to improve the operation of computer aided design (CAD) software used by engineers. Bowers' template is not a "stand alone" technology; instead, it works in conjunction with CAD software such as Cadkey, Inc.'s CADKEY tool. Bowers received a patent for his template in 1990 and (due to prior art) a reexamination certificate in 1997. He commercialized his template as the "Cadjet."

George W. Ford III envisioned a way to improve Bowers' technology. Ford created an add-on software program to insert certain technical tolerance information into designs generated by CAD software. Ford's software was particularly useful for creating CAD designs compliant with tolerance standards promulgated by the American National Standards Institute (ANSI). Ford called his software "Geodraft."

In 1989, Ford decided to rely on Bowers to commercialize Geodraft. Ford granted Bowers an exclusive license to the Geodraft software, which Bowers bundled with Cadjet to create what he called the "Designer's Toolkit." Bowers licensed the Designer's Toolkit under a shrinkwrap license that, among other things, prohibited reverse engineering. At about the same time, Baystate Technologies developed and marketed various tools for CADKEY. One of those tools, called Draft-Pak, featured a template and software that performed some of the same functions as Designer's Toolkit.

Library Association, Computer and Communications Industry Association, and thirty-three intellectual property law professors) seems to concede that EULAs can be used to protect trade secrets. According to the brief: "Amici do *not* argue that shrinkwrap licenses that diverge from the Copyright Act are always preempted, nor that all shrinkwrap restrictions on reverse engineering are preempted. In some circumstances, such as in a true trade secret context, a restriction on reverse engineering may be consistent with copyright policy." Brief of Amici Curiae in Support of Petition For Panel Rehearing and Rehearing En Banc of Defendant-Appellant Baystate Technologies, Inc. at 4, Bowers v. Baystate Techs., Inc., 320 F.3d 1317 (Fed. Cir. 2003) (Nos. 01-1108, 01-1109).

In 1988 and 1989 Bowers offered to enter into a business relationship with Baystate that included the right to bundle his template with Draft-Pak. Baystate rejected Bowers' overture, telling Bowers that it had "the in-house capability to develop the type of products you have proposed."[22] After Bowers released Designer's Toolkit in 1990, Baystate obtained copies and reversed engineered it.[23] Three months after obtaining the copies of Designer's Toolkit, Baystate released an updated version of Draft-Pak that incorporated many of the features of Designer's Toolkit.

Needless to say, this new version of Draft-Pak created intense price competition between Bowers and Baystate. To compete with Baystate, Bowers changed his marketing strategy. He entered into an agreement with Cadkey, Inc. for it to provide Designer's Toolkit free of charge with CADKEY. Bowers hoped to recoup his profits by selling software upgrades to CADKEY customers (a common business strategy for sellers of add-on products).

Baystate pressured Cadkey, Inc. into repudiating its distribution agreement with Bowers. Next, Baystate purchased Cadkey, Inc. and "eliminated Mr. Bowers from the CADKEY network—effectively preventing him from developing and marketing the Designer's Toolkit for that program."[24] On top of that, Baystate sued Bowers for declaratory judgment that his patent was invalid and unenforceable and that Baystate's products did not infringe. Bowers filed counterclaims for patent infringement, copyright infringement, and breach of contract.

B. Rulings

1. Trial Court Rulings

Following trial, the jury found for Bowers and awarded him damages: $1,948,869 for copyright infringement, $3,831,025 for breach of contract, and $232,977 for patent infringement. The district court, however, set aside the copyright damages as

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[22] *Bowers*, 320 F.3d at 1321.

[23] *Id.* at 1326-27 (court finds substantial evidence to support jury's finding that Baystate reverse engineered Designer's Toolkit).

[24] *Id.* at 1322.

duplicative of the contract damages. The judge did so because he had instructed the jury that Baystate's reverse engineering could only violate Bowers' contract if Baystate's product infringed Bowers' copyright.[25]

2. Initial Federal Circuit Ruling and Response to It

The Federal Circuit affirmed the district court's rulings on breach of contract and duplicative damages[26] but reversed its ruling on patent infringement, in a unanimous opinion written by Judge Rader and joined by Judges Clevenger and Dyk.[27] That opinion alarmed several interest groups and many intellectual property law professors. They joined the case as *amici curiae*[28] in a motion for panel rehearing and rehearing by the Federal Circuit en banc. Professor Mark Lemley served as counsel of record for the *amici*. The main thrust of the *amici* was that the Federal Circuit should consider the possibility of Supremacy Clause-based federal law preemption (often called "conflict preemption") as well as preemption based on § 301 of the Copyright Act. Although the *amici* brief contains many dire warnings about the enforcement of contractual prohibitions on reverse engineering, it concludes: "Amici do not suggest reversal of the Panel's decision. We merely urge the Court to consider conflict preemption, and to clarify that in some cases the need for 'national uniformity in the realm of intellectual property,' *Bonito Boats*, 489 U.S. at 162, requires preemption of shrinkwrap license terms."[29]

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[25] This instruction was erroneous because reverse engineering can involve use of both copyrightable and un-copyrightable material. As described *infra*, Judge Rader's opinion treated this as a harmless error.

[26] Because of its rulings in the breach of contract and damages portions of the case, the Federal Circuit did not reach the merits of the copyright infringement claim.

[27] Bowers v. Baystate Techs., Inc., 302 F.3d 1334 (Fed. Cir. 2002).

[28] *Amici* included, among others, the Electronic Frontier Foundation, American Library Association, American Association of Law Libraries, Computer and Communications Industry Association, Digital Future Coalition, and 33 intellectual property law professors.

[29] Brief of Amici Curiae, *supra* note 21, at 10.

3. Federal Circuit Ruling After Rehearing—A Revised Opinion and Judge Dyk's Dissent

The Federal Circuit panel issued a revised opinion written by Judge Rader. This time, Judge Dyk filed a separate opinion, joining the majority except for dissenting "insofar as it holds that the contract claim is not preempted by federal law."[30] Judge Dyk agreed with the majority that parties can "contract away a fair use defense" or agree "not to engage in uses of copyrighted material that are permitted by the copyright law." [31] However, Judge Dyk's dissent drew a sharp distinction between "freely negotiated" contracts and shrinkwrap licenses whose enforcement, he believed, would be "no different in substance from a hypothetical black dot law."[32]

4. Judge Rader's Majority Opinion

Judge Rader's majority opinion framed the key issue in the case as whether the Copyright Act should "preempt or narrow the scope of Mr. Bowers' contract claim."[33] The court held that it should not. To reach this conclusion, the court began in a familiar place: with freedom of contract. Judge Rader's opinion noted that "[c]ourts respect freedom of contract and do not lightly set aside freely-entered agreements."[34]

He acknowledged that at times "federal regulation may preempt private contract"[35] and noted that the Copyright Act provides such a possibility. That possibility does not arise, however, so long as a state cause of action requires an "extra element" beyond mere copying, preparation of derivative works, distribution, or public performance or display. That said, Judge Rader acknowledged that not every "extra element" would

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[30] Bowers v. Baystate Techs., Inc., 320 F.3d 1317, 1335 (Fed. Cir. 2002) (Dyk, J., concurring in part and dissenting in part).

[31] *Id.* at 1336.

[32] *Id.* at 1337.

[33] *Id.* at 1323 (majority opinion).

[34] *Id.*

[35] *Id.* at 1323-34.

establish a difference qualitative enough to survive Copyright Act preemption—some extra elements will prove to be illusory or mere labels.

Citing cases from the Fourth, Fifth, Sixth, Seventh, and Eighth circuits, Judge Rader's opinion observed that "most courts to examine this issue have found that the Copyright Act does not preempt contractual constraints on copyrighted articles."[36] That is because the mutual assent and consideration involved in contracts typically make them qualitatively different than copyrights. In addition, contracts are not a right against the world (like a copyright) but instead only affect the contracting parties. Moreover, Judge Rader's opinion did not view private contracts, even non-negotiated shrinkwrap licenses, as state government *legislation* interfering with the goals of federal copyright law, a circumstance which had led the Fifth Circuit to preempt a Louisiana statute in *Vault Corp. v. Quaid Software Ltd.*[37]

Judge Rader's opinion acknowledged that a person who reverse engineers software might be able to successfully assert a Copyright Act fair use defense but ruled that private parties "are free to contractually forego the limited[38] ability to reverse engineer a software product under the exemptions of the Copyright Act."[39] With that, the Federal Circuit turned its attention to whether Baystate had breached the contract with Bowers. It took little effort to find substantial evidence that Baystate had.

The most significant aspect of Judge Rader's opinion is also the most overlooked—the part that deals with remedies. Finding that Bowers suffered financial harm at the hands of Baystate, the jury had awarded damages for breach of contract, copyright infringement, and patent infringement. Judge Rader's opinion notes that it was proper for the jury to award damages both for infringement and breach of contract, leaving it to the trial judge to make appropriate adjustments to avoid double recovery. As mentioned previously, the district court judge did just that, setting

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[36] *Id.*

[37] 847 F.2d 255 (5th Cir. 1988).

[38] "Limited" because the cases supporting reverse engineering as a fair use do not endorse all such practices in all settings.

[39] *Bowers*, 320 F.3d at 1325-26.

aside the copyright damages as duplicative. Judge Rader's opinion affirmed the trial judge's decision to set aside the copyright damages. The Federal Circuit also found no patent infringement, so the court set the patent infringement damages aside as well. At the end of the case, therefore, Bowers received only damages for breach of contract.[40]

This Section concludes with another important remedies-related aspect of Judge Rader's opinion. I will call it "Rader's Hint." Rader's Hint is that:

> [o]f course, a party bound by such a contract may elect to efficiently breach the agreement in order to ascertain ideas in a computer program unprotected by copyright law. Under such circumstances, the breaching party must weigh the benefits of breach against the arguably de minimus damages arising from merely discerning non-protected code.[41]

III. *BOWERS V. BAYSTATE:* A BETTER BALANCE THROUGH REMEDIES

A. *Intellectual Property Law Balance*

Everyone would agree that courts should work to maintain the careful balance in intellectual property laws between exclusive rights and the public domain.[42] The critics of *Bowers* urge courts to maintain this balance by using federal law preemption to refuse to enforce standard form contractual prohibitions on reverse engineering. What the critics fail to appreciate, however, is that in *Bowers* the court *did* tend to the careful balance in intellectual property laws but it used a different and, I believe, a superior approach. The key to the Federal Circuit's approach is remedies.

Courts maintain the balance in intellectual property laws

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[40] It is also important to note that Bowers did not receive injunctive relief for breach of copyright.

[41] *Id.* at 1326.

[42] In the setting of the *Bowers* case, the Federal Circuit needed to balance the protection of trade secrets, access to unprotectable ideas and information that can be gleaned from reverse engineering, and freedom and certainty of contract.

through their work in both the liability and remedies aspects of an intellectual property infringement case. Commentators often overlook the remedies portion of the equation.[43] They forget that evaluating the soundness of an intellectual property case (like *Bowers*) involves looking not just at the court's treatment of liability, but also at whether the remedies awarded are fair to the intellectual property holder and not excessive from the standpoint of the infringer. You cannot fully assess if the court "got it right" until you see whether the court grants an injunction and/or awards damages. Even if a court finds liability for infringement, if it refuses to grant an injunction or award damages, the intellectual property holder has gained little or nothing tangible from its intellectual property right. To put it differently, in a *de minimus* damages, no-injunction scenario, the user of the intellectual property is realistically free to use the "intellectual property" as if it were in the public domain.

With this in mind, let's compare Judge Rader's remedies-based approach ("Remedies Approach") to the preemption-based approach suggested by Judge Dyk ("Preemption Approach"). Using a Remedies Approach, Bowers received only damages for breach of contract—the trial court (affirmed by the Federal Circuit) set aside copyright infringement damages and the Federal Circuit set aside patent infringement damages (finding no infringement). Under a Preemption Approach, Bowers would have received no damages whatsoever because the contractual prohibition on reverse engineering would not be enforceable and Baystate's use would be shielded under the Copyright Act as a fair use. To put it another way, the Remedies Approach forced Baystate to pay Bowers for using Bowers' information but the Preemption Approach would have allowed Baystate to use Bowers' information free of charge. Which is the better outcome, looking at the effects on intellectual property law balance and the business of innovation?

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[43] *But see* Orit F. Afori, *Flexible Remedies as a Means to Counteract Failures in Copyright Law*, 29 CARDOZO ARTS & ENT. L.J. 1 (2011); Peter Lee, *The Evolution of Intellectual Infrastructure*, 83 WASH. L. REV. 39 (2008). *See also* Robert W. Gomulkiewicz, *Enforcement of Open Source Licenses: The* MDY *Trio's Inconvenient Complications*, 14 YALE J.L. & TECH. 106 (2011) (arguing for a remedies-based approach).

Let's begin with the basic concern that the ruling in *Bowers v. Baystate* deprives the public of ideas and information. To the extent that such information is a trade secret, the law fully supports and encourages the use of contracts as a means to protect trade secrets. The *amici* in *Bowers* agreed with this proposition.[44] Given the broad scope of information that can be protected as a trade secret, in reality the amount of non-trade secret information hoarded by a contractual prohibition on reverse engineering will be insignificant in many cases.

For the sake of argument, let's assume that the amount of non-trade secret information protected by a no-reverse-engineering EULA term is significant. Neither the Preemption Approach nor the Remedies Approach prevents the discovery or use of such information. Naturally, the Preemption Approach would permit discovery and use of the information but so would the Remedies Approach if a party elects the "efficient breach" route suggested by Rader's Hint.[45]

Moreover, Rader's Hint suggests that, as a practical matter, the information gained by breach of a no-reverse-engineering clause may be used for free (or nearly so) on many occasions. According to Rader's Hint, often the damages "arising from merely discerning non-protected code"[46] will be *de minimus*.[47] That said, the Remedies Approach leaves open the possibility that, under certain circumstances, parties who reverse engineer may need to pay in

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[44] According to the *amici* brief: "Amici do *not* argue that shrinkwrap licenses that diverge from the Copyright Act are always preempted, nor that all shrinkwrap restrictions on reverse engineering are preempted. In some circumstances, such as in a true trade secret context, a restriction on reverse engineering may be consistent with copyright policy." Brief of Amici Curiae, *supra* note 21, at 4.

[45] Admittedly, some parties contemplating whether to reverse engineer will abstain out of fear of an unduly large damage award or the expense of litigation to prove that damages are *de minimus*. This chilling is not ideal, of course. A related concern with the Damages Approach is the often speculative nature of damages in many intellectual property cases. *See* Jacobsen v. Katzer, 535 F.3d 1373, 1382 (Fed. Cir. 2008). However, the point of this Article is not that the Damages Approach is perfect, but that it is better overall than the Preemption Approach.

[46] That is, code not protected by patent, copyright, or trade secret.

[47] Bowers v. Baystate Techs., Inc., 302 F.3d 1317, 1326 (Fed. Cir. 2002).

damages for use of information gained via breach of contact.

This brings us to the heart of the matter: Is innovation better served by the "always free" Preemption Approach or the "often free" Remedies Approach? The Preemption Approach's "always free" use of reverse-engineered information encourages maximal discovery and use to be sure, but does maintaining balance in the intellectual property laws really demand this approach? Or does an "always free" approach actually skew the balance and create significant problems for the business of innovation? The *Bowers v. Baystate* case serves as a useful real-world case to test these hypothetical questions.

B. A Remedies Approach Creates the Best Balance

I believe Judge Rader's opinion in the *Bowers* case demonstrates the superiority of the Remedies Approach for two reasons. First, it creates a better overall climate for the business of innovation. Second, it allows courts to decide cases fairly and leaves it to legislatures to create appropriate exceptions to the enforcement of licenses.

1. Better Climate for Business Model Innovation

A careful reading of the *Bowers* case reveals that Judge Rader's approach maximized the opportunities for both Baystate and Bowers to compete in the innovation business. The law did not prevent Baystate from discovering and using Bowers' information, and Baystate benefited financially from this information. For example, the information undoubtedly gave Baystate a time-to-market advantage and allowed Baystate to conserve resources that it otherwise would have used in independent development. Furthermore, we can even infer that, at least indirectly, Baystate used these financial benefits toward the acquisition of Cadkey, Inc., an acquisition that Baystate used to put Bowers and Ford out of the CADKEY add-on business. It is interesting to note that on appeal Baystate did not challenge the amount of the contract damages that the jury awarded—this provides at least some

indication[48] that the damages award was not excessive relative to the value Baystate received from using Bowers' information.[49]

The contract damages award that Bowers received likely also led to good things for the business of innovation. Bowers could have put his damages award to productive use as seed money for his next business venture. Some of the money may have gone to Ford as well. The Preemption Approach, by contrast, would have left Bowers without that seed capital, either keeping him on the sidelines or forcing him to start his next venture in a relatively weak financial position.

Would it have been better for the business of innovation if the court permitted Baystate to use Bowers' information free of charge (which would be the outcome under a Preemption Approach)? Some commentators would argue "yes," focusing on the intense price competition that resulted when Baystate introduced a product that competed with Bowers.[50] Such competition was short lived, however, because Baystate put Bowers and Ford out of the CADKEY add-on business. In the end, consumers had only one choice—Baystate.

In addition to producing a sound result for innovation under the facts of the *Bowers* case, in a broader sense Judge Rader's opinion bolsters the interworking of two key elements of business model innovation in the software industry: intellectual property and contract. Naturally, Judge Rader recognizes the importance of intellectual property in the software business (although his opinion carefully limits the power of the exclusive rights by dismissing the

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[48] There are many tactical reasons for not raising an issue on appeal so I do not want to make too much of this fact.

[49] It is possible that Bowers was entitled to additional damages for breach of contract. Since the district court judge instructed the jury that contract damages were coextensive with copyright damages for breach of the prohibition on reverse engineering, Bowers did not have the chance to recover damages unrelated to copyright infringement. So, for example, Bowers did not recover damages related to use of non-copyrightable ideas or information, including information held as a trade secret. Bowers did not raise this on appeal. *Bowers*, 320 F.3d at 1322. Moreover, Bowers did not bring a claim for trade secret misappropriation.

[50] *See* David A. Rice, *Copyright and Contract: Preemption After* Bowers v. Baystate, 9 ROGER WILLIAMS U. L. REV. 595, 623 (2004).

duplicative copyright damages award and the patent infringement suit). Judge Rader also recognizes the importance of freedom of contract and certainty of contract to creating a vibrant climate for business model innovation. As I have described elsewhere, innovation in the business models used to bring technology to market is just as important as the innovation that goes into building the technology.[51] Freedom and certainty of contract are key ingredients supporting business model innovation.[52] Moreover, as discussed previously, enforceable contracts are essential to trade secret protection, which is an important type of protection in the software industry, particularly for small enterprises.[53]

Even so, Judge Rader's opinion acknowledges that there may be times when federal regulation trumps freedom and certainty of contract.[54] However, a Remedies Approach does a better job of policing the limits of contract law than the Preemption Approach. Some commentators describe preemption as a sledge hammer used to kill a gnat.[55] Specifically, Judge Dyk's dissent suggests that the preemption sledge hammer should kill every prohibition-on-reverse-engineering "gnat" contained in a shrinkwrap license.[56]

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[51] Robert W. Gomulkiewicz, *The Federal Circuit's Licensing Law Jurisprudence: Its Nature and Influence*, 84 WASH. L. REV. 199, 204-08 (2009).

[52] Judge Rader's opinion in *McCoy v. Mitsuboshi Cutlery, Inc*., 67 F.3d 917 (Fed. Cir. 1995), nicely illustrates how contract law remedies in intellectual property licensing can burden and benefit licensors as well as licensees. In allowing the licensee to utilize the contract remedy of resale, Judge Rader's opinion saw "no reason why the owner of intellectual property rights deserves to evade application of the ordinary contract remedy of resale for an unjustified refusal to pay" and emphasized that "Intellectual property owners 'may contract as they choose' . . . but their intellectual property rights do not entitle them to escape the consequences of dishonoring state contractual obligations." *Id.* at 922.

[53] S*ee* ROBERT P. MERGES, PETER S. MENELL & MARK A. LEMLEY, INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE 35 (5th ed. 2010).

[54] Bowers v. Baystate Techs., Inc., 302 F.3d 1317, 1323-24 (Fed. Cir. 2002).

[55] *See* Mark A. Lemley, *Beyond Preemption: The Law and Policy of Intellectual Property Licensing*, 87 CAL. L. REV. 111, 145 (1999); *see also* J.H. Reichman & Jonathan A. Franklin, *Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information*, 147 U. PA. L. REV. 875, 920-22 (1999).

[56] Note that the *amici* brief did not go that far. *Amici* did not urge the

The weakness of the Preemption Approach is that it pays no attention to the nuances of the business setting, such as: How sophisticated is the licensee? Is the licensee a business or a consumer? Is the licensee a competitor or an end user? Did the licensee know about the prohibition on reverse engineering? Is the information discovered being used to create an interoperable product or a competitive one? Was the information available by other means? Is the information a trade secret of the licensor? The answers to all these questions matter as courts seek to maintain a proper balance in intellectual property laws as well as to foster the business of innovation.

The best way to illustrate the shortcomings of the Preemption Approach is to look at the outcome in a particularly unsympathetic case: where a large, sophisticated, well-capitalized business reverse engineers the software of a small, unsophisticated, undercapitalized entrepreneur and uses that information to compete with the entrepreneur. The Preemption Approach creates a rule where courts must *always* allow large, sophisticated, well-capitalized businesses to breach, without penalty, the no-reverse-engineering clauses in standard form contracts of small, unsophisticated, undercapitalized entrepreneurs. I doubt this outcome is needed to maintain balance in intellectual property laws or is useful in fostering the business of innovation. The superior approach, it seems, is to allow courts to look at all the facts, award damages for breach of contract when appropriate, and allow parties to breach contractual provisions with unfettered impunity only when it is clearly necessary to protect our system of innovation.[57]

Federal Circuit to reverse the ruling against Baystate but "merely urge[d] the Court to consider conflict preemption, and to clarify that *in some cases* the need for national uniformity in the realm of intellectual property" requires preemption of shrinkwrap license terms. Brief of Amici Curiae, *supra* note 21, at 10 (quotes and citation removed) (emphasis added).

[57] For example, commentators have argued that the most compelling case arises when someone seeks information simply to interoperate with a product or technology, particularly with a product or technology that dominates a market. *See* Daniel Laster, *The Secret is Out: Patent Law Preempts Mass Market License Terms Barring Reverse Engineering for Interoperability Purposes*, 58 BAYLOR L. REV. 621 (2006).

2.   Courts Decide Cases, Legislatures Make Laws

Fundamentally, *Bowers v. Baystate* is a case about a real businessman, Harold Bowers, who suffered real harm at the hands of a competitor who breached a contract. The jury and trial court judge did their best to remedy the situation by awarding Bowers monetary damages. The Federal Circuit affirmed that result. While it is true that this outcome had an impact on innovation policy writ large, the court's primary task was to apply the law to do justice for the parties before it. That's what the trial court did and that's the approach Judge Rader's opinion for the Federal Circuit took.

Fundamentally, critics of Judge Rader's opinion in *Bowers* want something that a legislative body, not courts, should provide: an exception to the general rule that courts will enforce contractual choice ("Enforcement Exception"). Specifically, they want an Enforcement Exception that would void prohibitions on reverse engineering presented in a standard form EULA.

Indeed, the European Union has enacted an Enforcement Exception in its Software Directive.[58] In the United States, members of Congress have proposed an Enforcement Exception, but Congress has never enacted it.[59] The National Conference of Commissions on Uniform State Laws also added an Enforcement Exception to the revised version of the Uniform Computer Information Transactions Act (UCITA), but that version of UCITA has not been enacted by any state.

The *amici* brief in *Bowers* and several commentators cited the latter legislative activity as support for their argument that courts should create an Enforcement Exception. Judge Rader's opinion looked at this same legislative activity and seems to have come to the opposite conclusion—that without legislation enacted by Congress or a state legislature, courts should continue to enforce standard form contracts in the normal manner. Although not articulated in Judge Rader's opinion, his approach follows

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[58] Council Directive 91/250/EEC on the Legal Protection of Software Programs, 1991 O.J. (L 122) 42, 44.

[59] This is the so-called "Boucher Bill," proposed by Representative Rick Boucher of Virginia. *See* Digital Era Copyright Act, H.R. 3048, 105th Cong. (1998).

traditional notions of judicial deference to legislatures in intellectual property law[60] and is consistent with judicial canons of interpreting legislative inaction.[61]

IV. FINAL REFLECTION

My analysis of *Bowers* finishes with a provocative reflection: that despite all the critical commentary following the Federal Circuit's decision in *Bowers*, Judge Rader's opinion gave the *amici* exactly what they asked for.

Recall that the *amici* did not call on the Federal Circuit to reverse the trial court's award of damages for breach of contract. They did *not* assert that shrinkwrap licenses that diverge from copyright are always preempted or that all shrinkwrap restrictions on reverse engineering are preempted. They did not even take a position on whether conflict preemption should apply in the *Bowers* case. Instead, the *amici* "merely urge[d]" the Federal Circuit to do two things: (1) "consider" conflict preemption; and (2) "clarify" that in some cases the need for national uniformity in the realm of intellectual property requires preemption of shrinkwrap license terms.

The Federal Circuit did in fact "consider" conflict preemption. Amici clearly, forcefully, and articulately presented the conflict-preemption argument to the court in briefing and oral argument. However, the argument did not persuade the court, not even Judge Dyk, who seems to have based his dissent on § 301 preemption rather than conflict preemption.[62] While it is true that neither Judge Rader's majority opinion nor Judge Dyk's dissent discusses conflict preemption, that does not mean the judges did not consider

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[60] *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 429 (1984); Stewart v. Abend, 495 U.S. 207, 230 (1990).

[61] *See* 2B SUTHERLAND STATUTORY CONSTRUCTION 49:10 (7th ed.); William N. Eskridge, Jr., Patterson v. McLean: *Interpreting Legislative Inaction*, 87 MICH. L. REV. 67 (1988). Commentators note, however, that interpreting legislative inaction is tricky and controversial. *See generally* Lawrence H. Tribe, *Toward Syntax of the Unsaid: Construing the Sounds of Congressional Silence*, 57 IND. L.J. 515 (1982).

[62] *See* Bowers v. Baystate Techs., Inc., 302 F.3d 1317, 1337-38 (Fed. Cir. 2002).

it; a perfectly reasonable explanation for their omission is that they did not find the argument persuasive.[63]

Judge Rader's opinion does, in effect, "clarify" that shrink wrap license terms may be preempted. The opinion does not make the clarification overtly through *dicta* which may be been what the *amici* were looking for. However, nothing in Judge Rader's opinion rules out a preemption challenge. Moreover, the opinion states clearly that ". . . at times, federal regulation may preempt private contract."[64]

CONCLUSION

Commentators worry that the Federal Circuit's decision in *Bowers v. Baystate Technolgies* created an environment that stymies innovation. Instead, the court created an environment that fosters it. Judge Rader's opinion supports all the tools necessary for success in the business of innovation: freedom and certainty of contract; intellectual property protection; *and* the flow of ideas and information. In doing so, his opinion successfully balances incentives to invent and create with public policies on promoting competition. It is a wise approach and courts have been wise to follow it.

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[63] *See* Merritt A. Gardiner, Comment, Bowers v. Baystate Technologies*: Using the Shrinkwrap License to Circumvent the Copyright Act and Escape Federal Preemption*, 11 U. MIAMI BUS. L. REV. 105, 108 (2003) ("The Federal Circuit's opinion is incomplete and fails to recognize the doctrine of conflict preemption. The court's preemption analysis is, therefore, inconsistent with the Supremacy Clause of the U.S. Constitution."); Deanna L. Kwong, Comment, *The Copyright-Contract Intersection*: SoftMan Products Co. v. Adobe Systems, Inc. *&* Bowers v. Baystate Technologies, Inc., 18 BERKELEY TECH. L.J. 349, 367 (2003) ("The Federal Circuit's preemption analysis in Bowers completely failed to consider constitutional preemption under the Supremacy Clause.").

[64] *Bowers*, 320 F.3d at 1323-24.