The Battle Over UNIX:
SCO v. Linux, AIX and the Open Source Community
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In the past year, the battle over UNIX has generated significant litigation and lots of anxiety among the open source community and software users alike. However, the multi-front battle is complex, making it hard to understand what's going on and what's at stake. This Article explains the disputes, summarizes the latest status, and offers some possible lessons to learn.

The battle involves UNIX, a computer operating system software program. The term "UNIX" describes a family of software products that conform to certain common standards promulgated by the Open Group. The "original" version of UNIX was developed by Bell Labs in 1969. Since then, UNIX's efficiency and reliability has made it a very popular software program, spawning a wide variety of compatible versions. For example, IBM has a version of UNIX called "AIX," which traces its lineage to the original Bell Labs software. Another UNIX-compatible program is "Linux," an open source project that includes some code contributed from AIX by IBM.

Last year, Caldera Systems, Inc., d/b/a The SCO Group ("SCO"), announced that it was going to assert ownership over the original Bell Lab's version of UNIX source code and all derivations of it. SCO's claims sent shock waves through the software community. Given UNIX's ubiquity, SCO's claims potentially implicate anyone using AIX, Linux and other variations of UNIX.

Indeed, SCO has sparked a war over UNIX, which has resulted in four interrelated lawsuits. The war started when SCO sued IBM for providing AIX to the open source community to enhance Linux. In response to SCO's lawsuit against IBM, Novell declared that it had some rights to the UNIX code, which raised questions about SCO's ownership of the UNIX code. SCO responded by suing Novell for publicly disparaging SCO's title to UNIX.

Realizing that SCO's claims threatened its business (and spooked its customers), Red Hat, a software vendor that markets a Linux version, sued SCO for a declaratory judgment of non-infringement and asserted that SCO's ownership claim misleads Linux consumers.

Finally, SCO recently took its claims to their logical conclusion by suing two end users of Linux and AIX, AutoZone and DaimlerChrysler.

The war over UNIX has divided the software industry in two. The anti-SCO forces include IBM, Novell, Red Hat and the open source community. The open source community has been particularly active in challenging SCO's claims, generating evidence to contradict them and raising money for a legal defense fund for Linux users.

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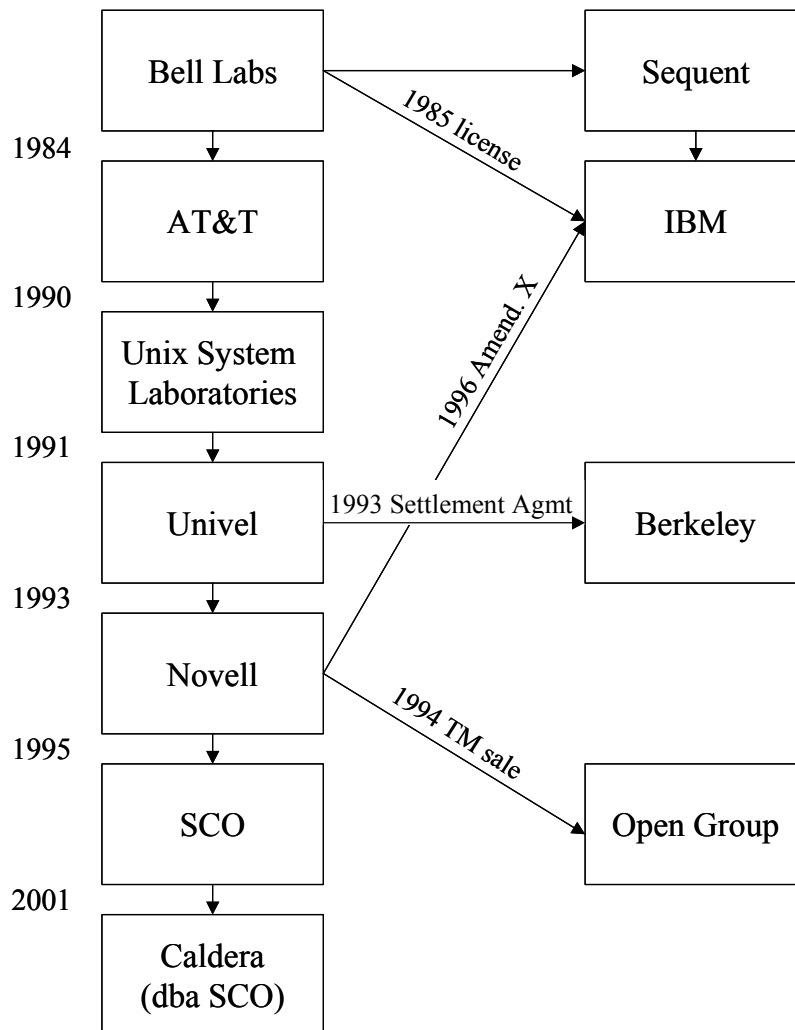[**] Assistant Professor, Marquette University Law School. Email: eric.goldman@marquette.edu.

However, some software industry participants have sided with SCO. A prominent ally is Microsoft, which appears to have helped SCO raise $50 million by introducing SCO to a funding source called BayStar Capital. Although SCO recently bought out that investment, the buyout left SCO with a substantial war chest. Microsoft's interests in the matter may result from the strong competitive threat that Linux has posed to Microsoft's software program.

This article summarizes the events associated with the battle over UNIX. First, this article discusses the chain of title to the UNIX code. Second, the article summarizes the various litigations and the software community's response to SCO's efforts. Finally, the article offers some lessons that might be learned from these battles.

Who Owns UNIX?

The UNIX code has a complex ownership history. To understand SCO's claim to own the original UNIX code, we need to trace the chain of title that's illustrated by this flow chart:

Unix Code Chain of Title

Bell Labs	→ *1985 license* →	Sequent
1984 ↓		↓
AT&T		IBM
1990 ↓		
Unix System Laboratories		
1991 ↓	*1996 Amend. X*	
Univel	1993 Settlement Agmt →	Berkeley
1993 ↓		
Novell		
1995 ↓	*1994 TM sale* →	Open Group
SCO		
2001 ↓		
Caldera (dba SCO)		

Bell Laboratories originally developed and owned the UNIX code. In 1984, a court order broke up Bell Systems, and AT&T received ownership of the UNIX code. In February 1985, AT&T granted to IBM a non-exclusive license to the UNIX System V source code. AT&T also had a similar contract with Sequent, later acquired by IBM, which licensed Sequent's version of UNIX (called Dynix/ptx).

In 1990, AT&T reorganized its business and transferred title to UNIX System Laboratories, Inc. ("USL"), a new wholly-owned subsidiary. In 1991, Novell and USL formed a joint venture called Univel, and USL contributed its rights to UNIX to the joint venture. Two years later, Novell bought out USL's interest in Univel and renamed it the Novell UNIX Systems Group. In 1994, Novell transferred the UNIX trademark to X/Open (now called The Open Group). In 1995, Novell sold UNIXWare (Novell's variation of UNIX) and the original Bell Labs version of UNIX to SCO. In 2001, SCO sold the SCO brand, SCO OpenServer (SCO's version of UNIX) and the Bell Labs version of UNIX to Caldera, which now does business under the SCO name.

Through this series of transactions, SCO believes that it acquired all of the rights to the UNIX code and has assumed all of the licensing and sublicensing agreements granting third party rights to UNIX. For example, SCO believes it has assumed AT&T's rights under the licensing agreement between IBM and AT&T from 1985.

However, there remains significant disputes over what rights SCO acquired and how Linux infringes those rights. Twice, SCO has offered proof that Linux contains code copied from the original Bell Laboratories UNIX code base. The first time, SCO showed Linux code that appears identical to UNIX, even including developer comments and spelling errors from the original UNIX code. In December 2003, SCO claimed that portions of 72 Linux files had been "copied verbatim" from SCO's "copyrighted UNIX code base." In response to each SCO offer of proof, the open source community declared that SCO does not own the code it claims was copied and, even if it did, the code was traceable to other legal UNIX sources.

SCO's rights may also be limited by the terms of a confidential 1993 settlement agreement that derives from a lawsuit SCO's predecessors (USL and Novell) brought against UC Berkeley and Berkeley Systems Development (among others) over another variation of UNIX called 4-4BSD. Because the case file was sealed, we do not know what USL/Novell agreed to, but the continued public availability of BSD may favorably impact other variations of UNIX as well.

IBM Litigation

SCO's lawsuit against IBM alleges that IBM exceeded the scope of its 1985 license with AT&T by providing UNIX code for incorporation into Linux. However, SCO has inconsistently pled its complaint against IBM. Initially, SCO asserted that IBM breached the contract, misappropriated trade secrets and infringed SCO's copyrights and patents. SCO also claimed that IBM engaged in unfair trade practices because IBM undertook these efforts to increase the sales of its new Linux services business and to destroy UNIX's value by boosting the free alternative Linux. SCO later hedged on its copyright infringement claim, suggesting that it was only pursuing a breach of contract action.

Most recently, however, SCO reasserted that IBM infringed its copyrights. SCO filed a second amendment to its complaint, once again claiming copyright infringment. In that amendment, SCO dropped the trade secret misappropriation claim, a logical move given that SCO distributed Linux and posted some UNIX code, in 2002, to its own website. The court allowed the amendment because IBM did not object.

SCO now claims that the 1985 AT&T/IBM license agreement gives SCO ownership over any derivative work made to the UNIX code. If SCO owns the derivative works made by IBM, then IBM breached its contract and infringed SCO's copyright. SCO has revoked the license and is now demanding damages of $5 billion. SCO further claims that IBM has also breached the contracts with Sequent (now owned by IBM). IBM also entered into an October 1996 agreement, a royalty buyout known as Amendment X, that places further restrictions on IBM's use of the software. SCO claims that IBM has breached those provisions too.

IBM has denied virtually all of SCO's claims. IBM has raised the following affirmative defenses: lack of standing, statute of limitations, economic-loss and independent-duty doctrines, laches, delay, unclean hands, waiver, estoppel, federal law preemption, and improper venue. In IBM's first counterclaim, it alleged that SCO breached the same contracts and engaged in unfair competition and patent and copyright infringement. In its most recent amended counterclaim, IBM dropped one of its claims of patent infringement by SCO.

On March 24, 2004, SCO filed a motion to "bifurcate" the patent claims into a separate case from the other legal claims, effectively splitting the lawsuit into two independent matters. In response, IBM sought a declaratory judgment ruling that "IBM does not infringe, induce the infringement of or contribute to the infringement of any SCO copyright through its Linux activities, including its use, reproduction and improvement of Linux, and that some or all of SCO's purported copyrights in Unix are invalid and unenforceable."

On June 10, 2004, Judge Dale Kimball of U.S. District Court in Utah denied SCO's motion to bifurcate the trial. At the same time, Judge Kimball pushed the five-week trial, scheduled for April 2005, back to November 2005.
Novell Litigation

Believing that its asset sale to SCO left it with some ownership of UNIX, Novell sent a letter on May 28, 2003 to SCO asking them to verify the allegations SCO made in its complaint against IBM. SCO responded by producing Amendment #2 to the 1995 SCO-Novell Asset Purchase Agreement, but Novell claims to have no record of this amendment.

After Novell publicly questioned SCO's claim to own UNIX, SCO sued Novell on January 20, 2004. SCO claims that Novell slandered SCO's title to UNIX, which has damaged SCO's reputation and relationship with potential customers by claiming to own part of the UNIX code. Novell has moved to dismiss the case, and SCO has opposed the motion. Also, in an unusual procedural move, SCO asked to move the Novell lawsuit from federal to state court,

On June 9, 2004, Judge Kimball denied both SCO's request to move the case to state court and Novell's motion to have the case dismissed. However, the judge raised the requirements for SCO's "slander of title" claim, requiring SCO to allege specific financial damage attributable to Novell's actions. Despite denying Novell's motion to dismiss, Judge Kimball seemed troubled by the interaction between the initial asset sale and the subsequent amendment, labeling the net effect "ambiguous."

Meanwhile, Novell has recently acquired SuSE, a Linux distributor. By putting Novell in the Linux business, this acquisition gives Novell even more motivation to disprove SCO's claim that it owns all UNIX rights.

End Users Targeted, and Red Hat and Other Vendors Respond

SCO initially targeted IBM but also repeatedly threatened to sue individual users of both Linux and AIX. In December 2003, SCO raised the stakes by sending letters to some of the largest companies in the world, informing them that Linux is an "unauthorized derivative of UNIX." On March 2, 2004, SCO made good on these threats, suing AutoZone for copyright infringement based on AutoZone's use of Linux. The next day, SCO sued DaimlerChrysler for breaching a UNIX System V licensing agreement and possibly contributing UNIX source code to Linux. Both defendants have yet to respond to these claims.

Using a bug in Microsoft Word that exposes a file's "metadata," it was discovered that SCO initially planned to sue Bank of America instead of DaimlerChrysler. No explanation has been offered for why SCO changed its mind.

Recognizing its end users' potential liability, Linux distributor Red Hat, Inc. sued SCO. Red Hat claims that its software does not infringe and SCO's claims of ownership amount to false advertising, deceptive trade practices, unfair competition and trade libel. SCO moved to dismiss the complaint, but SCO's motion was denied. Instead, the judge has put the case on hold until the SCO/IBM litigation is resolved. Red Hat has requested that the judge reverse that decision and instead move the case forward independently from the SCO/IBM litigation. Red Hat's motion is currently pending.

To assuage customer fears, several software vendors, including Novell, Red Hat, IBM and Hewlett-Packard, have promised to indemnify their customers for SCO's claims. An industry-wide legal defense fund, established by the Open Source Development Labs consortium, is raising $10 million from companies like Intel, IBM and MontaVista Software.

Open Source Community Rallies Against SCO

The open source community consists of software programmers who voluntarily donate their time and skills to make software programs freely available to everyone to use. This community has rallied against SCO for at least five reasons.

First, many community members subscribe to the philosophy that "information wants to be free." SCO's attempts to appropriate UNIX for itself, and in the process remove some UNIX variations from the public domain, runs directly contrary to that philosophy.

Second, should SCO win, the software industry will lose control over a widely-used program. Furthermore, the many hours invested by the open source community in Linux and other infringing UNIX variations may be lost.

Third, the lawsuit injects the specter of legal liability into the operation of the open source community. The open source community is premised on the free exchange of software, which works only if everyone contributing to the collective storehouse has sufficient intellectual property rights to make the contribution. Instead, if even one developer contributes infringing works to the storehouse, all downstream users run the risk of being sued for infringement. This risk of infringement reduces user willingness to adopt open source software. Thus, the SCO litigation jeopardizes the entire open source model by undercutting the attractiveness of the software it produces.

Fourth, Caldera Systems, the corporate entity now trading as SCO, originated as an open-source company (originally, its only product was a Linux version). The open source community feels betrayed by a company that formerly supported and marketed open source products.

Finally, many community members feel personally attacked by SCO's actions. One open source programmer commented that the SCO complaint "slandered open source developers in passing, with SCO asserting that the Linux operating system had been worthless junk produced by incompetents before IBM injected stolen SCO technology into it."

Clearly, SCO's actions pose a significant challenge to the open source community. It is a challenge they are not taking lightly.

Lessons to Learn

A person can commit copyright infringement even without knowing that the work was subject to copyright, so even unintentional infringers do not get a free pass under copyright law. Thus, the open source community's success requires that every contributor understand copyright law and provide only non-infringing code. A single bad apple can spoil the barrel.

In this case, Linux's usability depends upon IBM's judgment to contribute some AIX code to it. If IBM misjudged its legal rights to make that contribution, all downstream users of Linux may bear the consequences.

Software end users take on some legal risk of infringement in every software license they make. However, while a software vendor has significant financial incentive to manage this risk, the open source community's diffuseness makes it harder for open source end users to know what they are getting. Therefore, end users of open source software need to choose their software knowingly.

IBM's role in the dispute also prompts a lesson. If IBM contributed code to Linux but lacked the legal rights to do so, it has unwittingly exposed itself to legal liability. Proper diligence of software is necessary before deciding to contribute software to the open source community.

SCO's actions suggest two other lessons. First, SCO purchased assets with a complex chain of title. While this is not inherently a problem, the messy history does raise the possibility that one or more of the transactions along the way did not transfer all of the rights to the code, leaving SCO with some risk that its lawsuit will unravel as more questions are asked about each step in the chain of title. Therefore, thorough diligence is warranted before bringing a lawsuit over assets with a complex past.

Second, SCO's claim that UNIX is protected by a trade secret is substantially undercut by prior distributions of the purportedly secret code. Thus, decisions to post source code to the web should be considered for their consequence on IP protection.

In light of these lessons, regardless of who wins or loses the lawsuits, we may all be a little wiser about managing software assets and using open source software based on the war over UNIX.

Lessons to Learn:
- Users of open source software may not be able to defend against a copyright infringement claim if a contribution to the software was infringing
- Before releasing software to the open source community, a company needs to make sure that it has the rights to do so
- A company procuring title to software needs to make sure the chain of title is clean
- Posting source code to a website will significantly reduce or eliminate any ability to claim trade secret protection for that code

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