

Software IP — It's Not Just For Tech Cos. Anymore

By **Joshua Simmons**

Law360, New York (August 3, 2017, 2:37 PM EDT) -- There can be little question that the dynamic for protecting software using intellectual property is changing. For years, commentators treated technology companies as the sole source of software innovation and patent law as the primary means of protecting against unfair competition. Neither proposition was true then, and it is becoming increasingly clear to the IP community that neither proposition is true now.

Certainly, many of the amazing strides in software development have been made by tech companies. Software innovations, however, are being made by companies that may not be identified primarily as “tech companies.” These leaders in the entertainment, financial services, health care and media industries, among others, are making major advances both within their fields and the software industry.



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At the same time, it has become more complicated for counsel to advise on the best strategy for protecting those inventions. Where once filing patent applications would have been obvious, judicial, legislative and agency activity has made patents more difficult to secure and enforce. As a result, software creators have turned to more dynamic, broad-based IP protection strategies, including filing copyright registrations, shoring up trade secret protection, and ensuring open source compliance, as well as strategic prosecution and enforcement of patent rights.

This article will discuss some of these trends, and the challenges of developing a deliberate software protection strategy.

Surprise — You’re a Software Company!

When you look under the surface, many companies have engineers developing software that the company would like to prevent from slipping into other market participants’ hands:

- The entertainment industry is producing special effects and motion capture software, as well as making strides in data mining, storage, and transmission; online and real-world gaming; and computer and system security.
- The health care market creates software for use in treatment protocols whether for monitoring, dosage regulation, or reporting; programs for financial and clinical management; and customer-facing apps for diagnoses, checkups or marketing.
- Financial services companies create processes for automated data gathering, verification, analysis and distribution; authentication, security, and risk management; and client engagement. They also develop web crawling and scraping technology.[1]

These businesses are primarily focused on creating entertaining audiovisual works, life-saving pharmaceuticals, or investment strategies. Yet, their software may represent significant opportunities to differentiate themselves from their competitors.

OK, I'm a Software Company — Now What?

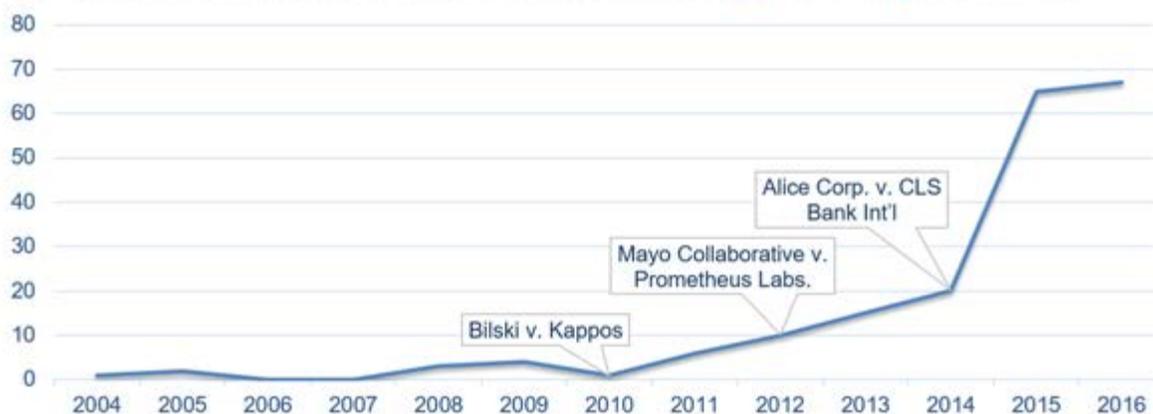
A software portfolio may include stand-alone computer programs, applications used within broader ecosystems, other technology infrastructure, or innovative approaches to existing software-related tasks. Within these portfolios, intellectual property may protect a variety of components. Depending on the nature of the particular program, this may include the user interface that customers or employees use to interact with a program or app,[2] and the program's other forms of output.[3] It also may include the program's object code: "the binary code — a series of zeroes and ones — that computers can read." [4] Or its source code: "the spelled-out program commands that humans can read." [5] IP also may protect less-obvious software components, such as modules (the "simpler constituent problems or 'subtasks'" in a larger program" [6]) or parts of a program controlling data including how it "should be introduced, how the data should be inputted, and how it should be combined with other data." [7] Even the structure and organization of the program and its modules, [8] or the language in which the program is written, [9] may be protected.

Once the scope of a company's software portfolio is determined, the question becomes: What intellectual property rights protect the software?

Patent

Up until recently, the answer likely would have been patent law. The Patent Act protects the invention of "any new and useful process, machine [or] manufacture ... or any new and useful improvement thereof." [10] Software fits within those categories, but recent Supreme Court cases have resulted in the well-documented and sharp uptick in patents being invalidated on the ground that they are directed to patent-ineligible subject matter: [11]

District Court Invalidations Based on Ineligible Subject Matter



In addition, the America Invents Act has resulted in a growing number of software-related patents being invalidated through inter partes review proceedings: [12]

PTAB Trial Results By Technology Center (2012–July 2017)



This is not to say that patents cannot protect software. Recent Federal Circuit decisions have held that screen displays,[13] filtering technologies[14] and database innovations[15] may be patent-eligible. These increasing challenges to patent protection suggest, however, that companies should consider whether their software portfolios can or should be protected using other IP disciplines as well.

Copyright

One popular alternative to patent law is copyright law. There is no question that copyright protects computer programs, which the Copyright Act defines as a “set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.”[16] Thus, unlike patent law, which is struggling to define the contours of eligibility, it is fairly straightforward to show that a program is copyrightable. The question then is how far the scope of copyright protection extends. “It is well established that copyright protection can extend to both literal and non-literal elements of a computer program”: [17] the literal elements being source code and object code, and the nonliteral elements being the organization and user interface.[18] Copyright protection, however, does not “extend to any idea ... process, system, [or] method of operation.”[19] Similarly, copyright protection may be constrained by the doctrines of merger,[20] scènes à faire[21] and fair use.[22] Defendants have relied on such doctrines in recent cases, trying to excuse admitted copying of competitors’ programs.[23] Like patent eligibility, the scope of copyright protection remains a hotly contested legal issue.

Trade Secret

In addition to copyrights and patents, programs may be protectable as trade secrets if their “source code is not easily copied or ascertainable by inspection of the program.”[24] To ensure such protection, however, companies must be careful about how they seek to protect their software using other intellectual property disciplines. If a patent or copyright application discloses what was a trade secret, protection may be unavailable. As a result, careful consideration of what to include in a patent application (particularly if the patent may never issue or be unenforceable in court) and use of the Copyright Office’s regulations permitting redaction of source code prior to its submission as a deposit copy are critical.[25]

Open Innovation

Finally, companies must decide whether to engage in collaborative innovation. With strong intellectual property protection in hand, software can be developed in an open environment with the knowledge that the legal disciplines discussed above will protect the IP owner. Moreover, intellectual property can be used as the basis for contractual agreements that add additional protection. Of particular note, software companies must decide whether to participate in the creation of and whether to employ open source software. As noted by the Federal Circuit, such projects can be a boon in developing market share, free incubation of ideas, and the rapid development of products. [26] They come with risks, however. Whereas enforcement of open source licenses once focused on mere compliance with license terms, an increasing number of cases have been brought against competitors where noncompliance was alleged as the basis for some of the claims.[27] Furthermore, participation in open source projects has been used to support license and other defenses to IP claims.[28]

Conclusion

Against this backdrop, it is clear that whether a tech company or not, businesses on the forefront of innovation must carefully consider and develop an intellectual property protection strategy for their software.

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[1] Joshua L. Simmons, Searching for Web Crawling's Legal Boundaries, N.Y.L.J. May 22, 2017, <https://www.kirkland.com/sitecontent.cfm?contentID=223&itemId=3602>.

[2] Johnson Controls, Inc. v. Phoenix Control Sys., Inc., 886 F.2d 1173, 1175 (9th Cir. 1989).

[3] Design Data Corp. v. Unigate Enter., Inc., 847 F.3d 1169 (9th Cir. 2017) (protection might "extend to the program's output if the program 'does the lion's share of the work' in creating the output and the user's role is so 'marginal' that the output reflects the program's contents").

[4] Lexmark Int'l v. Static Control Components, 387 F.3d 522, 533 (6th Cir. 2004).

[5] Id.

[6] Computer Assocs. Int'l, Inc. v. Altai, Inc., 982 F.2d 693, 697 (2d Cir. 1992).

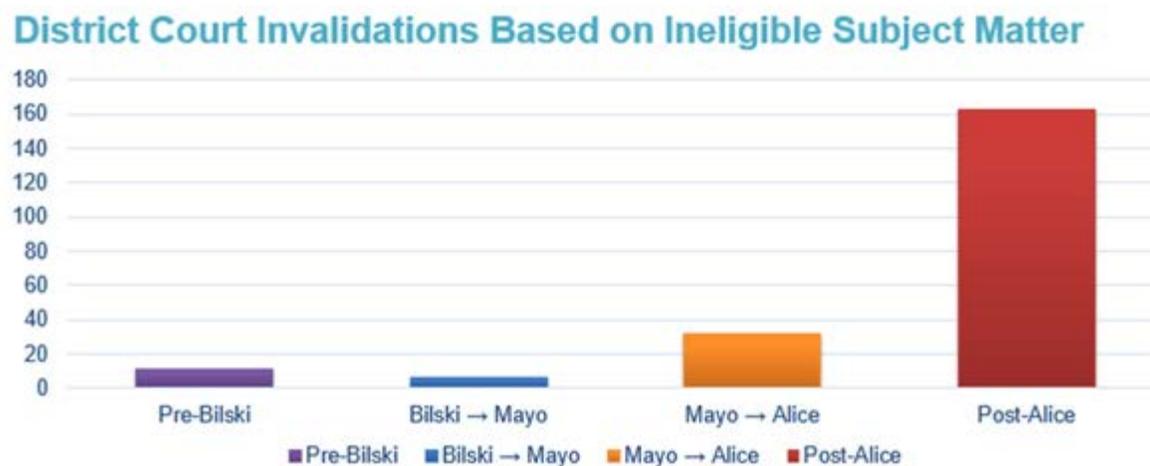
[7] Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1230 (3d Cir. 1986).

[8] Computer Assocs., 982 F.2d at 698.

[9] Joshua L. Simmons & Megan L. McKeown, Contentious Construction: Does Language Fit into Copyright's Mold?, *Landslide*, July/August 2017, at 44.

[10] 35 U.S.C. § 101.

[11] Chart reflects district court cases with at least one invalidity finding, filed after January 1, 2000, and sorted by termination date. The data also can be summarized as follows:



[12] The technology centers reflected in the chart are: 1600: Biotechnology and Organic Chemistry; 1700: Chemical and Materials Engineering; 2100: Computer Architecture, Software, and Information Security; 2400: Computer Networks, Multiplex Communication, Video Distribution, and Security; 2600: Communications; 2800: Semiconductors, Electrical and Optical Systems and Components; 3600: Transportation, Construction, Electronic Commerce, Agriculture, National Security and License & Review; 3700: Mechanical Engineering, Manufacturing, Products.

[13] *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299 (Fed Cir. 2016) (“[A]utomate a 3-D animator’s tasks” by “determining when to set keyframes and setting those keyframes,” using “rules that are applied to the timed transcript to determine the morphy weight outputs.”); *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) (System for “generating a composite web page that combines certain visual elements of a ‘host’ website with content of a third-party merchant,” such as combining the “logo, background color, and fonts of the host website with product information from the merchant.”).

[14] *Bascom Global Internet Serv., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) (“[S]ystem for filtering Internet content” by “individual-customizable filtering on a remote ISP server” or “a hybrid filtering scheme implemented on the ISP server.”); *Amdocs (Isr.) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288 (Fed Cir. 2016) (System for “merging data in a network-based filtering and aggregating platform as well as a related apparatus for enhancing networking accounting data records.”).

[15] *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327 (Fed. Cir. 2016) (“[I]nnovative logical model for a computer database” by including “all data entities in a single table, with column definition provided by rows in that same table.”).

[16] 17 U.S.C. § 101.

[17] *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1355 (Fed. Cir. 2014).

[18] *Id.*

[19] 17 U.S.C. § 102(b).

[20] *Johnson Controls*, 886 F.2d at 1175 (“Where an idea and the expression ‘merge,’ or are ‘inseparable,’ the expression is not given copyright protection.”).

[21] *Mitel, Inc. v. Iqtel, Inc.*, 124 F.3d 1366, 1374 (10th Cir. 1997) (“Under the scenes a faire doctrine, expressive elements of a work of authorship are not entitled to protection against infringement if they are standard, stock, or common to a topic, or if they necessarily follow from a common theme or setting. ... [This includes] elements of a work that necessarily result from external factors inherent in the subject matter of the work.”).

[22] *Wall Data v. L.A. Cnty. Sheriff’s Dep’t.*, 447 F.3d 769, 777 (9th Cir. 2006).

[23] See, e.g., *Oracle*, 750 F.3d at 1348; *Commonwealth of Puerto Rico v. OPG Tech., Inc.*, No. 15 Civ. 3125, 2016 WL 5724807, at *16 (D.P.R. Sept. 6, 2016); *SAS Institute Inc. v. World Programming Ltd.*, 64 F. Supp. 3d 755, 775 (D.N.C. 2014).

[24] *LinkCo, Inc. v. Fujitsu Ltd.*, 230 F. Supp. 2d 492, 499 (S.D.N.Y. 2002).

[25] See 37 C.F.R. § 202.20(c)(2)(vii).

[26] See *Jacobsen v. Katzer*, 535 F.3d 1373 (Fed. Cir. 2008).

[27] See *id.*; *Artifex Software, Inc. v. Hancorn, Inc.*, No. 16 Civ. 6982, 2017 WL 1477373 (N.D. Cal. Apr. 25, 2017); *MedioStream, Inc. v. Microsoft Corp.*, 749 F. Supp. 2d 507 (E.D. Tex. 2010); cf. *Hellwig v. VMware Global, Inc.*, No. 310 89/15 (Hamburg D.C. July 8, 2016).

[28] See *Blizzard Entm’t, Inc. v. Lilith Games (Shanghai) Co.*, No. 3:15 Civ. 4084, 2017 WL 2118342

(N.D. Cal. May 16, 2017) (reference to open source used as basis for copyright abandonment defense); Adtile Techs. Inc. v. Perion Network Ltd., No. 15 Civ. 1193, 2016 WL 3457152 (D. Del. June 23, 2016) (trade secrets publicly disclosed through open source project); Lumetrics, Inc. v. Bristol Instruments, Inc., 101 F. Supp. 3d 264 (W.D.N.Y. 2015) (allegations of failure to disclose use of open source software sufficient to state fraud on the Copyright Office defense).

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