

THE INCREDIBLY EVER-SHRINKING THEORY OF JOINT INFRINGEMENT: MULTI-ACTOR METHOD CLAIMS

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I. INTRODUCTION

At the Intellectual Property Owner's Annual Meeting in the fall of 2003, one of the keynote speakers¹ spoke passionately about common patent drafting errors. The speaker addressed one drafting error particularly common in business method patents: the failure to write method claims that can be infringed by a single entity and the consequent inability to enforce a property right in the patented invention. This drafting error results in multi-actor method claims where the explicit language of the claim identifies different actors performing various steps. The speaker's mantra resonated with many in attendance, myself included: "Who are you going to sue?" Awakened to this issue by the speaker's ardent comments, my colleague and I returned from the convention and began an analysis of our pending patents to identify claims that would require multiple actors to perform the complete claimed method. Indeed, we found some patent applications with claims exhibiting this type of drafting error. Fortunately, we were able to amend the claims successfully so that all steps could be performed by a single entity. This was our very first exposure to the concept of "joint infringement."²

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BMC Resources, Inc. is a subsidiary of Fiserv, Inc. BMC Resources was the plaintiff in one of the principal cases this article addresses.

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¹ Based on the recollection of a colleague and myself who attended, the speaker was Thomas L. Irving, a partner in the chemical patent practice at Finnegan, Henderson, Farabow, Garrett & Dunner, LLP. However, Mr. Irving's presentation did not include an explicit reference to the topic of multi-actor method claims.

² See, e.g., *On Demand Mach. Corp. v. Ingram Indus.*, 442 F.3d 1331, 1345 (Fed. Cir. 2006) ("Where the infringement is the result of the participation and combined action(s) of

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More recently, I have followed some key patent infringement cases where the method claims at issue required other parties besides the alleged infringer to perform one or more of the claim steps. This article will examine those cases and their impact on patent infringement jurisprudence in depth. A key focus will be the interaction of the agency and tort-based concept of vicarious liability with the evolving theory of joint infringement.

This article also discusses the related issue of multi-jurisdictional or extraterritorial performance of method claims and the implications of finding liability for infringement. One flavor of extraterritorial performance closely resembles joint infringement by multiple actors: where different steps of the claimed method are performed in more than one jurisdiction.³ Another flavor involves the supply of a component from the United States that is then used in the performance of the method claim.⁴

A. *A Brief Introduction to Patents and Method Claims*

A patent is an intellectual property right granted for a limited time to allow inventors or owners of the patent right to recoup their investment in discovering and developing a new, useful, and non-obvious invention.⁵ The Constitution authorizes Congress “[t]o promote the Progress of Science and useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their respective . . . Discoveries.”⁶ Congress enacted the first Patent Act in 1790 and has made several major revisions since then, most recently in 1952.⁷ The United States district courts have original subject matter jurisdiction over all patent cases because all patents are governed by federal law.⁸ Since 1982, all appeals from district courts

one or more persons or entities, they are joint infringers and are jointly liable for the infringement.”).

³ See, e.g., Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 263–67 (2005).

⁴ *Id.*

⁵ JANICE M. MUELLER, *AN INTRODUCTION TO PATENT LAW* 6 (2d ed. 2006).

⁶ U.S. CONST. art. I, § 8. This constitutional provision is sometimes referred to as the “Intellectual Property Clause.” MUELLER, *supra* note 5, at 29.

⁷ MUELLER, *supra* note 5, at 30–31. The Patent Act is codified in Title 35 of the United States Code. See 35 U.S.C. §§ 1–376 (2006).

⁸ MUELLER, *supra* note 5, at 32–33. Accord 28 U.S.C. § 1338(a) (2006) (“The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents . . .”); see also *Holmes Group, Inc. v. Vornado Air Circulation Sys.*,

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raising issues concerning federal patent law are heard by the U.S. Court of Appeals for the Federal Circuit—now the source of most patent case law.⁹

A patent property right “is a *negative* right; i.e., a right to exclude others from making, using, selling, offering to sell, or importing the patented invention in the United States during the term of the patent.”¹⁰ A patent property right now typically expires twenty years from the filing date of the patent application (or the filing date of its earliest ancestor).¹¹

Issued patents consist of multiple parts, including the written description, associated drawings, and most importantly, the claims.¹² The written description and associated drawings disclose (“teach”) the invention and how to practice it.¹³ In contrast, the patent claims define the scope of the patent owner’s negative right to exclude—much as a deed defines the “metes and bounds” of real property.¹⁴

Software-related inventions (which constitute the bulk of the patents discussed herein) may be claimed in both product and method claims.¹⁵ A product claim describes a tangible item,¹⁶ such as a computer system or a software application. In contrast, a process or method claim consists of a sequence of actions to be performed.¹⁷

Because a process is “nothing more than the sequence of actions of which it is comprised,” infringement of a method or process claim does not

Inc., 535 U.S. 826, 830 (2002) (explaining that the well-pleaded complaint rule governs whether a case arises under federal law).

⁹ MUELLER, *supra* note 5, at 35–36.

¹⁰ *Id.* at 14 (referring to 35 U.S.C. § 154(a)(1)).

¹¹ *Id.* at 17 (citing 35 U.S.C. § 154(a)(2)). Congress revised § 154 in 1995 so some patents (those already issued or pending in 1995) remained in force with termination occurring either twenty years from filing or seventeen years from issuance, whichever date was later. *Id.* Also, an issued patent’s term may be adjusted due to patent office delay during prosecution. *Id.* at 18.

¹² *Id.* at 8.

¹³ *Id.*

¹⁴ *Id.* at 14.

¹⁵ Nari Lee, *Fragmented Infringement of Computer Program Patents in the Global Economy*, 48 IDEA 345, 357 (2008).

¹⁶ See, e.g., *NTP, Inc. v. Research in Motion, Ltd.*, 418 F.3d 1282, 1317 (Fed. Cir. 2005) (citing *In re John Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002)).

¹⁷ See *id.* at 1318; *Ricoh Co. v. Quanta Computer Inc.*, 550 F.3d 1325, 1335 (Fed. Cir. 2008) (quoting *Kollar*, 286 F.3d at 1332).

occur unless the alleged infringer performs every recited step of the claimed method.¹⁸

B. Thesis

The precise boundaries and contours of direct infringement of multi-actor claims under a theory of joint infringement remain unclear, despite recent Federal Circuit decisions.¹⁹ The theory of joint infringement still has some vitality; however, recent decisions have significantly narrowed the theory's applicability to infringement claims where multiple parties perform the steps of the claim(s).²⁰ Indeed, the Federal Circuit's most recent decision in this area has largely eviscerated the theory's usefulness in proving infringement of such claims.²¹ Consequently, it is now questionable whether and under what circumstances owners of patents, including multi-actor method claims—especially business method claims covering web-based inventions—can recover against alleged infringers for any type of infringement (direct or indirect).

In one leading case, *BMC Resources, Inc. v. Paymentech, L.P.*,²² the Federal Circuit imposed a “direct or control” standard for assessing direct infringement under a joint infringement theory, holding that a party could be found liable for direct infringement so long as the party directed or controlled each step of the patent process.²³ This standard requires a showing of more than mere collaboration of independent parties.²⁴ Subsequently, in *Muniauction Inc. v. Thomson Corp.*,²⁵ another Federal

¹⁸ *NTP, Inc.*, 418 F.3d at 1318; *see also* *Joy Techs, Inc. v. Flakt, Inc.*, 6 F.3d 770, 775 (Fed. Cir. 1993) (“A method claim is *directly* infringed only by one practicing the patented method.”).

¹⁹ *See, e.g.*, *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378 (Fed. Cir. 2007) (holding that direct infringement requires a party to perform or use each and every step or element of a claimed method or product); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318 (Fed. Cir. 2008).

²⁰ *See, e.g.*, *BMC Res., Inc.*, 498 F.3d at 1373; *Muniauction, Inc.*, 532 F.3d at 1318.

²¹ *See* Brief of Amicus Curiae Intellectual Prop. Owners Ass'n in Support of Petition for Panel Rehearing and Rehearing *En Banc* at 5, *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318 (Fed. Cir. 2008) (No. 2007-1485).

²² 498 F.3d 1373 (Fed. Cir. 2007).

²³ *See BMC Res., Inc.*, 498 F.3d at 1380.

²⁴ *See id.* at 1381 (“[E]xpanding the rules governing direct infringement to reach independent conduct of multiple actors would subvert the statutory scheme for indirect infringement.”).

²⁵ 532 F.3d 1318 (Fed. Cir. 2008).

Circuit panel closed the door on most joint infringement allegations by modifying the *BMC Resources* “direct or control” standard to an “on behalf of” standard.²⁶ Under this standard, the requirements for direct infringement are met only where the law would traditionally hold the alleged infringer vicariously liable for the acts of other parties.²⁷ This narrowing constraint greatly increases the number of patents that provide a right without a remedy and unnecessarily goes beyond the broader standard of *BMC Resources*. Additionally, recovery by finding liability for “indirect infringement”²⁸ has become more problematic because liability for indirect infringement requires a predicate finding of direct infringement.²⁹

C. Introductory Background on Multi-Actor Claims

In 2005, Professor Mark Lemley jointly published a highly influential article reviewing patent infringement decisions involving divided or multi-actor method claims.³⁰ He reviewed a number of examples where courts found liability for direct infringement even though no single entity performed all elements of the claimed method—often because the allegedly infringed claim was not written to cover a single actor.³¹

1. The Rise of Explicitly Multi-Actor Method Claims

Method claims that explicitly recite steps performed by multiple entities proliferated with the rise of electronic commerce.³² This proliferation coincided with the immense increase in business method

²⁶ See *Muniauction, Inc.*, 532 F.3d at 1330 (“In this case, Thomson neither performed every step of the claimed methods nor had another party perform steps *on its behalf*. . . . Therefore, Thomson does not infringe the asserted claims as a matter of law.”) (emphasis added).

²⁷ See *Muniauction, Inc.*, 532 F.3d at 1330.

²⁸ See 35 U.S.C. § 271(c) (2006) (providing an example of “contributory [infringement]”).

²⁹ See, e.g., *Minn. Mining & Mfg. Co. v. Chemque, Inc.*, 303 F.3d 1294, 1304–05 (Fed. Cir. 2002).

³⁰ Lemley, *supra* note 3. Although Professor Lemley and others prefer the term “divided” to describe claim methods performed by multiple parties, I will use the term “multi-actor” except in quotes using “divided.”

³¹ *Id.* at 258–59.

³² See Joshua P. Larsen, *Liability for Divided Performance of Process Claims After BMC Resources, Inc. v. Paymentech, L.P.*, 19 DEPAUL J. ART TECH. & INTELL. PROP. L. 41, 42 (2008).

patent filings that followed the Federal Circuit's 1998 decision in *State Street Bank & Trust Co. v. Signature Financial Group*.³³ In that decision, a Federal Circuit panel held that business method claims are patentable subject matter under 35 U.S.C. §101.³⁴ During that same period, thousands of "dot-com" (or "dot-bomb" as many eventually became) start-ups needed capital infusions to develop and launch their web-based products and services.³⁵ Venture capitalists often viewed patent protection of the start-ups' innovations as a critical factor in funding decisions.³⁶

As web-based businesses flourished, the distributed nature of the Internet and particularly the World Wide Web led inventors to describe their inventions in terms of the actions performed by the different parties involved (e.g., a consumer using a web browser interacting with an e-commerce site that also communicates to fulfillment warehouses).³⁷

³³ 149 F.3d 1368 (Fed Cir. 1998). See also John M. Carson & Eric M. Nelson, *Legal Victory for Electronic Commerce Companies: State Street Bank & Trust v. Signature Financial Group Signals Fall of Last Barrier to Internet Software Patents*, 21 T. JEFFERSON L. REV. 193, 207 (1999) ("[T]he Deputy Commissioner of Patents and Trademarks Q. Todd Dickinson recently reported . . . *State Street* has triggered a 'boom' in patent applications for business method-related software.").

³⁴ Cf. *State St. Bank & Trust Co.*, 149 F.3d. at 1375 ("Since the 1952 Patent Act, business methods have been . . . subject to the same legal requirements for patentability as applied to any other process or method."). The Federal Circuit, sitting *en banc*, recently renounced *State Street's* "useful, concrete, and tangible result" test for patentable subject matter; however, the court explicitly reaffirmed *State Street's* rejection of a "so-called 'business method exception'" to patentability. See *In re Bilski*, 545 F.3d 943, 959–60 (Fed. Cir. 2008). The U.S. Supreme Court recently granted certiorari to determine the appropriate test for patentability of method claims and whether there should be a "business method exception." *In re Bilski*, 545 F.3d 943 (Fed. Cir. 2008) *cert. granted*, 129 S.Ct. 2735 (2009).

³⁵ See Scott Herhold, *Start-ups Win Hearts of Investors; Record Venture Capital Flows into Silicon Valley*, SAN JOSE MERCURY NEWS, Feb. 8, 1999, at 1A ("Venture capitalists shattered their record by putting \$4.55 billion into Silicon Valley start-ups during 1998 [V]enture capitalists have been looking for Internet deals that play off the success of Amazon.com and eBay").

³⁶ See Carson & Nelson, *supra* note 33, at 193–94 ("Before funding a startup e-commerce company, a venture capitalist will review the business plan for something proprietary; something to maintain a competitive edge and block others from entering into direct competition [A] company may seek legal protection through its contracts, copyrights, trade secrets and patents.").

³⁷ See *id.* at 196–97 (providing an example of Sun Microsystem's electronic shopping cart patent).

A patent belonging to “The Real Estate Network”³⁸ provides an example where a court found explicit claim language identifying multiple actors:

1. A method of acquiring and displaying real estate information utilizing an information processing system containing file server means for serving files, . . . and database storage means for storing information . . . the method comprising the steps of:

- a) receiving real estate related information;
- b) storing . . . real estate data and related information as information records in said database storage means . . . ;
- c) receiving digital electronic first end user information from a first end user relating to said first end user’s real estate needs;
- d) selectively providing digital electronic information of portions of said real estate data . . . ;
- e) *accessing data files by said first end users*, said accessing data files by said first end users being a plurality of inquiries from individual first end users, said end user inquiries being the retrieving and viewing of text and/or graphic data from a database;
- f) generating a demographics information database by compiling and merging a plurality of first end user inquiries . . . ; and
- g) providing a second end user with said demographic information³⁹

In granting summary judgment as to non-infringement, the court construed step (e) of this claim to require action by “first end users.”⁴⁰ Those “first

³⁸ Apparatus & Method for Interactive Commc’n for Tracking & Viewing Data, U.S. Patent No. 5,584,025 (filed Apr. 12, 1995).

³⁹ Keithley v. Homestore.com, Inc., 636 F.Supp.2d 978, 980 (N.D. Cal. 2008) (quoting ’025 Patent col. 14 ll.34–65 (emphasis added)).

⁴⁰ See *id.* at 981.

end users” were separate and distinct actors from the defendant who provided the system allegedly performing the other steps of the claim.⁴¹

2. *Single Actor Method Claims Performed by Multiple Actors*

Method claims do not always specify which actor or entity must perform the various steps of the claim.⁴² As *Zinus, Inc. v. Simmons Bedding Co.*⁴³ illustrated, multiple actors can perform the steps of a method claim that do not explicitly specify actors.⁴⁴ In that case, Simmons Bedding accused Zinus, Inc. of practicing the method of packaging a mattress assembly as claimed.⁴⁵ The first method claim of Simmons Bedding’s patent read as follows:

1. A method of packaging a mattress . . . comprising the steps of:

providing a tube of deformable material . . . ;
inserting a mattress assembly . . . into said
tube . . . ; sealing a first end of said tube;
evacuating air from said tube through said second
end thereby deforming said tube around said
mattress assembly and causing said mattress
assembly to compress; inserting said evacuated
tube into a containment sleeve . . . ; *removing said
evacuated tube from said containment sleeve;*
[and] *whereby said mattress assembly in said tube
gradually returns to an uncompressed state.*⁴⁶

Zinus, Inc. manufactured the “Duffel Bag Mattress-In-A-Box” product and supplied the product to Wal-Mart for retail sale to consumers.⁴⁷ While the defendant allegedly performed the initial steps of the claimed method, Wal-Mart customers who purchased the mattresses performed the final

⁴¹ *See id.* at 985 (“The Court concludes that Move does not perform every step of Claim 1, nor does Move have another party perform steps on its behalf.”).

⁴² *See, e.g.*, Method of Packaging Resiliently Compressible Articles, U.S. Patent No. Re. 36,142 col.4 ll.6–33 (filed Aug. 28, 1997).

⁴³ No. C 07-3012 PVT, 2008 WL 682858 (N.D. Cal. Mar. 11, 2008).

⁴⁴ *See id.* at *3.

⁴⁵ *See id.* at *1.

⁴⁶ Method of Packaging Resiliently Compressible Articles, U.S. Patent No. Re. 36,142 col.4 ll.6–33 (filed Aug. 28, 1997) (emphasis added).

⁴⁷ *Zinus, Inc.*, 2008 WL 682858, at *1.

step of removing the tube from its cover after which the tube gradually returned to an uncompressed state.⁴⁸ This case provides a good example of a multi-actor scenario that does not necessarily arise from the language of the claim, but rather occurs in the context of a particular use. In another instance, a single entity could practice each and every step of this claim by itself.

D. How Does the Theory of Joint Infringement “Fit” in the Overall Rubric of Patent Infringement?

Allegations of patent infringement involving multiple parties may be framed in several ways: direct infringement, indirect infringement, vicarious liability, and joint liability.⁴⁹ Each of these forms of infringement allow a patentee to sue different defendants.⁵⁰

Liability under a theory of joint infringement represents a judicially created exception to the general rule for direct infringement of a method claim, which as discussed above, requires that a party perform “each and every step or element of a claimed method.”⁵¹ The exception allows a finding of liability for direct infringement, even though no one party performs all the steps of the claim.⁵² Although this article will explore the current contours of the theory in detail, “[i]t is well settled that a party cannot avoid infringement merely by having a third party practice one or more of the required steps.”⁵³ The finding of direct infringement under this exception is noteworthy because it eliminates the need for the patentee to prove the intent or knowledge element required for indirect infringement liability.⁵⁴

1. Direct Infringement: 35 U.S.C. § 271(a)

Direct infringement of a patent is a strict liability offense involving an objective assessment of whether a party infringes one or more claims of a

⁴⁸ See *id.* at *3.

⁴⁹ Lee, *supra* note 15, at 372.

⁵⁰ *Id.*

⁵¹ *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378 (Fed. Cir. 2007).

⁵² See Lemley, *supra* note 3, at 282.

⁵³ *Ralston Purina Co. v. Far-Mor-Co., Inc.*, 586 F. Supp. 1176, 1226 (D. Kan. 1984), *aff'd in part, rev'd in part*, 772 F.2d 1570 (Fed. Cir. 1985); see also *E.I. Dupont De Nemours & Co. v. Monsanto Co.*, 903 F. Supp. 680, 735 (D. Del. 1995), *aff'd*, 92 F.3d 1208 (Fed. Cir. 1996) (“[A] party cannot avoid liability for infringement by having someone else perform one or more steps of a patented process for them.”).

⁵⁴ See Lemley, *supra* note 3, at 282.

patent.⁵⁵ The “infringer’s knowledge or negligence is not relevant to a determination of direct infringement.”⁵⁶ Infringement of most claim types results from the manufacture, offer of sale, sale, or use of the claimed invention (or some combination of these acts).⁵⁷ However, the mere sale of a product that enables the practice of a patented method is insufficient for a finding of direct infringement.⁵⁸ For example, “a party that sells or offers to sell software containing instructions to perform a patented method does not infringe the patent under § 271(a).”⁵⁹

Instead, direct infringement of a method claim requires actual practice or use, including the actual performance of “each and every step of [the] claimed method.”⁶⁰ Likewise, the mere sale of a process or knowing how a process should be carried out is not a “sale” of the invention for purposes of § 271(a) because the sale does not involve actual practice of the

⁵⁵ See Lee, *supra* note 15, at 372; see also *BMC Res., Inc.*, 498 F.3d at 1381 (“Direct infringement is a strict-liability offense . . .”).

⁵⁶ Lee, *supra* note 15, at 373. Prior to *In re Seagate Techs., LLC*, 497 F.3d 1360 (Fed. Cir. 2007), parties with knowledge (“actual notice”) of an issued patent owed a duty of care to avoid patent infringement. *Id.* at 1368 (“Where . . . a potential infringer has actual notice of another’s patent rights, he has an affirmative duty to exercise due care to determine whether or not he is infringing.” (quoting *Underwater Devices Inc. v. Morrison-Knudsen Co., Inc.*, 717 F.2d 1380, 1389 (Fed. Cir. 1983))). The *Seagate* court repudiated *Underwater Devices*’ duty of care standard finding that it set a threshold for willful infringement that was akin to negligence. See *id.* at 1371. The court announced a new “objective recklessness” standard for a finding of willful infringement under which “a patentee must show by clear and convincing evidence that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent.” *Id.*

⁵⁷ 35 U.S.C. § 271(a) (2006).

⁵⁸ *Joy Tech., Inc. v. Flakt, Inc.*, 6 F.3d 770, 773 (Fed. Cir. 1993) (“[T]he sale of equipment to perform a process is not a sale of the process . . .”).

⁵⁹ *Ricoh Co., Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325, 1335 (Fed. Cir. 2008). The *Ricoh* court did leave open the question as to “whether a process may ever be sold,” so as to constitute direct infringement. *Id.*

⁶⁰ *Joy Tech, Inc.*, 6 F.3d at 775; Lemley *supra* note 3, at 260–61; see also *BMC Res., Inc.*, 498 F.3d at 1381 (“Direct infringement . . . is limited to those who practice each and every element of the claimed invention.”); accord *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279 (Fed. Cir. 1992) (overturning a double patenting rejection because “[a]nything less than a process with all 9 steps [for obtaining caffeine from green coffee] is not what is claimed, and is, therefore, not patented”).

process.⁶¹ However, the sale of a process could constitute indirect infringement where the buyer actually performs the steps of the method.

2. *Indirect Infringement: 35 U.S.C. § 271(b) and (c)*

In contrast to the strict liability nature of direct infringement, indirect infringement requires a subjective element of either specific intent or knowledge.⁶² Liability for indirect infringement exists when a party either knowingly induces another party to directly infringe (“inducement”)⁶³ or knowingly supplies a component that the supplier knows to be used by another party to directly infringe the patent (“contributory infringement”).⁶⁴ Proving liability for indirect infringement is more difficult than proving the strict liability tort of direct infringement. First, a finding of direct infringement is a predicate to liability for indirect infringement.⁶⁵ The court must find specific instances of direct infringement or at least find that the accused product necessarily infringes the patent.⁶⁶

Second, indirect infringement “requires evidence of specific intent to induce infringement, or knowledge that a good [or service] is specially adapted for aiding infringement and has no other use.”⁶⁷ For example, inducement is a specific intent tort where the inducer takes active steps to encourage others to perform the infringing act.⁶⁸ A person only commits the tort of inducement if he or she affirmatively intends for another person

⁶¹ See *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002) (holding that the sale of a process does not constitute a “sale” under 35 U.S.C. § 102(b)).

⁶² See *Lee*, *supra* note 15, at 372; see also *BMC Res., Inc.*, 498 F.3d at 1381 (“[I]ndirect liability requires evidence of ‘specific intent’ to induce infringement. Another form of indirect infringement, contributory infringement under § 271(c), also requires a mens rea (knowledge) and is limited to sales of components or materials without substantial noninfringing uses.”).

⁶³ 35 U.S.C. § 271(b) (2006) (“Whoever actively induces infringement of a patent shall be liable as an infringer.”).

⁶⁴ See 35 U.S.C. § 271(c) (2006); see also *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 936–37 (2005) (“[O]ne who distributes a device with the object of promoting its use to infringe copyright . . . is liable for the resulting acts of infringement by third parties.”).

⁶⁵ See, e.g., *Ricoh Co., Ltd. v. Quanta Computer Inc.*, 550 F.3d 1325, 1341 (Fed. Cir. 2008) (“[A] finding of inducement requires a threshold finding of direct infringement.”).

⁶⁶ *Id.*

⁶⁷ E.g., *Lemley*, *supra* note 3, at 261–62.

⁶⁸ See, e.g., *DSU Med. Corp. v. JMS Co., Ltd.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006).

or entity to directly infringe the claimed invention.⁶⁹ Mere knowledge that others could *possibly* infringe does not meet the specific intent requirement for inducement.⁷⁰ The inducer must “actively and knowingly [aid] and [abet] another’s direct infringement.”⁷¹

Likewise, contributory infringement requires knowledge that the product or service provided to the alleged direct infringer is a product or service that has no use other than to aid in infringement.⁷² Here, unlike inducement, courts may impute or presume knowledge from the distribution in commerce by the alleged infringer of a “non-staple” component of the invention.⁷³

Prior to the most recent Federal Circuit cases on the theory of joint infringement, Professor Lemley argued that permitting the individual non-infringing acts of unrelated parties to add up to infringement would render both statutory categories of indirect infringement meaningless—especially inducement.⁷⁴ Under a pure theory of joint infringement, a patentee could simply allege that a party performed one step of a method claim and another unrelated party performed another step—effectively eviscerating the specific intent prong of inducement and thereby contravening Congress’ intent.⁷⁵ This would potentially “sweep a large number of [individual actors] within the ambit of direct infringement”—a particularly troubling possibility given the strict liability nature of direct infringement.⁷⁶ Although the Federal Circuit’s more recent decisions may have assuaged Lemley’s concerns, the question remains whether the

⁶⁹ See *id.* at 1305–06; *ACCO Brands, Inc. v. ABA Locks Mfr. Co.*, 501 F.3d 1307, 1312 (Fed. Cir. 2007).

⁷⁰ *E.g.*, *Warner Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1364 (Fed. Cir. 2003).

⁷¹ *E.g.*, *Ricoh Co., Ltd.*, 550 F.3d at 1340 (quoting *Water Techs. Corp. v. Calco, Ltd.*, 850 F.2d 660, 668 (Fed. Cir. 1988)).

⁷² *MUELLER*, *supra* note 5, at 315–16; *e.g.*, *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 183 (1980) (holding that where the defendant supplied a herbicide for weed control there was no legitimate use other than in the claimed method).

⁷³ See, *e.g.*, *Dawson Chem. Co.*, 448 U.S. at 185–86 (holding that a “non-staple” component is a product or material “especially made or especially adapted for use in an infringement of [the] patent”); *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 932 (2005) (“[W]here an article is ‘good for nothing else’ but infringement . . . there is no injustice in presuming or imputing an intent to infringe.” (citations omitted)).

⁷⁴ Lemley, *supra* note 3, at 262.

⁷⁵ *Id.*

⁷⁶ *Id.* at 282.

decisions have gone so far as to leave no recourse to the patentee in most multi-actor claim situations. If one party does not perform each and every step, and the mastermind is not vicariously liable for the other actor(s), then there is no direct infringement. At that point, the lack of the predicate finding of direct infringement takes numerous alleged indirect infringement situations out of play.

II. A RELATED ISSUE: MULTI-JURISDICTIONAL PERFORMANCE OF METHOD CLAIMS

Patent rights are territorial and based on national patent law.⁷⁷ Consequently, infringement normally “occurs [only] by a singular and complete action in one territory.”⁷⁸ This general rule also applies to extraterritorial performance of a patented method or process.⁷⁹ However, the use of software-based inventions, often expressed via method claims, has become increasingly fragmented—especially in the context of an essentially borderless Internet.⁸⁰ Software and business method patents challenge the classic model of a single infringer performing all elements of a claim within one territory.⁸¹

Software and business method patents often describe applications that consist of multiple components distributed across a network, such as the Internet.⁸² As a result, the inventions claimed by those patents often dictate steps involving multiple distributed components.⁸³ Given the realities of distributed application architectures and “today’s modular and complex business environment[s],” multiple actors located in different territories may practice all of the steps of a claimed invention.⁸⁴ Some steps of a method claim may “occur at a server location and other steps

⁷⁷ See *Zoltek Corp. v. United States*, 442 F.3d 1345, 1362 (Fed. Cir. 2006).

⁷⁸ Lee, *supra* note 15, at 347; e.g., *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 441 (2007) (“It is the general rule under United States patent law that no infringement occurs when a patented product is made and sold in another country.”).

⁷⁹ See *Pellegrini v. Analog Devices, Inc.* 375 F.3d 1113, 1117 (Fed. Cir. 2004) (“U.S. patent laws ‘do not, and were not intended to, operate beyond the limits of the United States.’” (quoting *Brown v. Duchesne*, 60 U.S. 183, 195 (1856))).

⁸⁰ See Lee, *supra* note 15, at 347.

⁸¹ See *id.*

⁸² See *id.*

⁸³ Cf. *id.* at 348 (“It is likely that multiple patents cover one computer program, and fragments of multiple patents may cover the use of one function of a commercially available program.”).

⁸⁴ *Id.*

[may] occur at a user location” (such as a web browser executing on a user’s personal computer, communicating with a remote web server).⁸⁵

The following sections will address two scenarios relating to the cross-border practice of software-based inventions by multiple actors. The first scenario involves having one entity in the United States perform some elements of the invention while an extraterritorial entity performs other elements. The second scenario involves the exportation of software from the United States to the extraterritorial entity so that entity can perform particular steps.

A. Alleged Direct Infringement of a Method Claim Where One or More Steps Are Performed Extraterritorially

One extraterritorial issue involving method claims concerns the situation where a patentee alleges direct infringement of a method claim and one or more steps of the claim are performed extraterritorially. Here, while a single actor performs all steps of a method claim, some steps are performed within the United States, while one or more other steps are performed outside of the United States.

The Federal Circuit addressed such a situation in *NTP, Inc. v. Research in Motion, Ltd.*⁸⁶ In *NTP*, the court observed that “the precise contours of infringement of a method claim have not been clearly established.”⁸⁷ The court explained that “[w]hen the claim . . . involves a method or process, direct infringement under § 271(a) does not occur unless all steps . . . of the claimed method are performed by the accused infringer.”⁸⁸ Consequently, “a process cannot be used ‘within’ the United States as required by Section 271(a) unless each of the steps is performed within this country.”⁸⁹

In *NTP*, the accused system offered by Research in Motion (“RIM”) used a relay switch located in Canada.⁹⁰ The asserted method claims included a step which could be satisfied only by RIM’s use of the relay.⁹¹ The court held that the location of the relay in Canada precluded a finding of direct infringement under § 271(a).⁹² Additionally, because there was

⁸⁵ *Id.*

⁸⁶ 418 F.3d 1282 (Fed. Cir. 2005).

⁸⁷ *Id.* at 1319.

⁸⁸ *Id.* at 1321. The *NTP* court did not consider the scenario where direct infringement is found under a theory of joint infringement.

⁸⁹ *Id.* at 1318 (citations omitted).

⁹⁰ *Id.* at 1313.

⁹¹ *Id.* at 1318.

⁹² *Id.*

no direct infringement, RIM could not be liable for indirect infringement of the method claims under § 271(b) or § 271(c).⁹³

Interestingly, the Federal Circuit found direct infringement by RIM of NTP's system claims even though those claims also included an "interface switch" limitation, satisfied only by RIM's Canada-based relay.⁹⁴ The court held that the infringing "use of a claimed system under section § 271(a) is the place at which the system as a whole is put into service, i.e., the place where control of the system is exercised and beneficial use of the system obtained."⁹⁵ The jury properly found that the infringing use of "NTP's asserted system claims occurred within the United States."⁹⁶

Thus, the *NTP* court took different approaches to system claims as opposed to method claims in situations where one or more claim steps were performed outside the United States.⁹⁷ With a system claim, one can look at the "situs of the infringement"—where the use of the system occurs—particularly where the system is used "as a whole" and where "the components are used collectively, not individually."⁹⁸ In contrast, because a method is nothing more than a sequence of actions, use of a method "necessarily involves doing or performing each of the steps [or actions] recited."⁹⁹ Consequently, a § 271(a) infringing "use" does not occur "unless each of the [method claim] steps is performed within" the United States.¹⁰⁰

A patentee can often claim the same invention using both system (apparatus) and method claims.¹⁰¹ Patentees should take advantage of this opportunity to protect their ability to pursue direct infringement claims against RIM-style infringers, i.e., infringers who perform steps both inside and outside of the United States. Even though method claims describing an invention would not be infringed where one or more steps are

⁹³ *Id.*

⁹⁴ *See id.* at 1313.

⁹⁵ *Id.* at 1317.

⁹⁶ *Id.*

⁹⁷ *See id.* at 1317–18.

⁹⁸ *Id.* at 1316, 1318. Professor Lemley noted that previous courts had found direct infringement under § 271(a) in limited extraterritorial situations where a significant portion of the accused functionality sits in the United States. *See* Lemley, *supra* note 3, at 269. He refers to the approach used in these previous cases and by the Federal Circuit in *NTP, Inc.* as a "locus of infringement" approach. *Id.*

⁹⁹ *NTP, Inc.*, 418 F.3d at 1318.

¹⁰⁰ *Id.*

¹⁰¹ *See id.* at 1317–18.

performed extraterritorially, liability for direct infringement of the system claims could be found.

B. Alleged Indirect Infringement of Software-Based Inventions Arising from Export of Components for Extraterritorial Use of the Patented Invention

In 1984, Congress closed one loophole in patent law relating to cross-border or extraterritorial infringements of United States patents by enacting 35 U.S.C. § 271(f).¹⁰² Subsection (f) represents an exception to the general rule that infringement does not occur when a patented invention is used in another country.¹⁰³ This section focuses on the exportation of “components of ‘a patented invention’ for use outside the United States.”¹⁰⁴ It allows a finding of indirect infringement (secondary liability) when someone engages in cross-border acts which mirror the conduct specified in the two types of indirect infringement: inducement and contributory infringement (discussed earlier).¹⁰⁵ For example, § 271(f)(1) mirrors § 271(b) inducement in that it makes supplying components of a patented invention from the United States an act of infringement, where the components are supplied so as to “actively induce the combination of such components outside the United States” in a way that would constitute infringement in the United States.¹⁰⁶ Likewise, § 271(f)(2) borrows language from § 271(c) to allow a finding of infringement where

¹⁰² See *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 457 (2007) (“Section 271(f) was a direct response to a gap in our patent law revealed by this Court’s *Deepsouth* decision.”). In *Deepsouth Packaging Co. v. Laitram Corp.*, 406 U.S. 518 (1972), the Court refused to find patent infringement where component parts of a patented machine were sold separately to foreign buyers who assembled the machines offshore. See *id.* at 525–26.

¹⁰³ See *Lee*, *supra* note 15, at 347.

¹⁰⁴ *E.g.*, *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 576 F.3d 1348, 1368 (Fed. Cir. 2009) (Newman, J., dissenting).

¹⁰⁵ See discussion *supra* Part I.D.2.

¹⁰⁶ 35 U.S.C. § 271(f)(1) (2006):

Whoever without authority supplies . . . in or from the United States all or a substantial portion of the components of a patented invention, where such components are uncombined in whole or in part, in such manner as to actively induce the combination of such components outside of the United States in a manner that would infringe the patent if such combination occurred within the United States shall be liable as an infringer.

components especially made or adapted for the invention are supplied extraterritorially with the knowledge that the components are intended to be assembled outside the United States in an infringing manner.¹⁰⁷ Section 271(f) indirect infringement liability allows a patent owner to recover damages from an exporter for the manufacture, sale, or use of a patented invention extraterritorially by other entities—acts that would constitute direct infringement if performed in the United States.¹⁰⁸

The Supreme Court, and most recently the Federal Circuit sitting *en banc*, have clarified the circumstances where software based inventions may be found to be infringed under § 271(f).

1. Section 271(f) Can Apply to Software-Based Inventions

In *Microsoft Corp. v. AT&T Corp.*,¹⁰⁹ the Supreme Court dealt with § 271(f) as it applies to software exported abroad.¹¹⁰ The Court addressed the question “when, or in what form, does software qualify as a ‘component’ under § 271(f)?”¹¹¹ It analogized software to music in both an abstract and tangible form.¹¹² One can conceptualize software “in the abstract” as a set of instructions to direct a computer, but detached from a storage or transfer medium (analogous to “The notes of Beethoven’s Ninth Symphony”).¹¹³ Alternatively, software can exist as a tangible copy where the instructions reside on a medium such as a disk or CD-ROM (analogous to the sheet music for Beethoven’s Ninth).¹¹⁴ The Court held that “[a]bstract software code is an idea without physical embodiment, and as

¹⁰⁷ 35 U.S.C. § 271(f)(2) (2006):

Whoever without authority supplies...any component of a patented invention that is especially made or especially adapted for use in the invention and not a staple article or commodity of commerce suitable for substantial noninfringing use, where such component is uncombined in whole or in part, knowing that such component is so made or adapted and intending that such component will be combined outside the United States in a manner that would infringe the patent if such combination occurred within the United States, shall be liable as an infringer.

¹⁰⁸ See Lee, *supra* note 15, at 367.

¹⁰⁹ 550 U.S. 437 (2007).

¹¹⁰ See *id.* at 442.

¹¹¹ *Id.* at 447.

¹¹² *Id.* at 447–48.

¹¹³ *Id.*

¹¹⁴ *Id.* at 448.

such, it does not match § 271(f)'s categorization: 'components' amenable to 'combination.'"¹¹⁵ However, a tangible copy of executable software (as opposed to software in the abstract) may qualify as a "component" under § 271(f).¹¹⁶

The *Microsoft* Court clarified the Federal Circuit's holding in *Eolas Technologies, Inc. v. Microsoft Corp.*¹¹⁷ by ruling that software only qualifies as a § 271(f) "component" when delivered outside the United States via an installable medium such as a CD-ROM or via an installation file downloadable over the Internet.¹¹⁸ Therefore, § 271(f) infringement of a software-based invention requires components of the invention to be in tangible form when exported from the United States.

The *Microsoft* Court did not reach the question of whether software required in the performance of a *method claim*, practiced abroad, would qualify as a § 271(f) component and thereby result in infringement liability for the software's supplier.¹¹⁹ The invention at issue claimed a tangible speech processing apparatus, and the alleged component, the Microsoft master disk, was a tangible item.¹²⁰ The Court did not reach the question of whether "an intangible method or process . . . qualifies as a 'patented invention' under § 271(f)," or whether "the combinable components of that invention might be intangible as well."¹²¹

2. Section 271(f) Does Not Apply to Method Claims

In *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*,¹²² the Federal Circuit sitting *en banc* resolved the question left open by the *Microsoft* Court—whether § 271(f) applies to method claims.¹²³ In an eleven to one decision, the court held that the section does not extend to method claims.¹²⁴ The court overturned its 2005 decision in *Union Carbide*

¹¹⁵ *Id.* at 449.

¹¹⁶ *Id.* at 451–52.

¹¹⁷ 399 F.3d 1325 (Fed. Cir. 2005) (holding that software qualifies as a component under § 271(f) without specifying if software was considered in its physical form, or in the abstract).

¹¹⁸ *See Microsoft Corp.*, 550 U.S. at 449.

¹¹⁹ *See id.* at 452 n.13.

¹²⁰ *See id.* at 449, 461.

¹²¹ *Id.* at 452 n.13.

¹²² 576 F.3d 1348 (Fed. Cir. 2009).

¹²³ *See id.* at 1359.

¹²⁴ *Id.* at 1359. Judge Newman passionately dissented from the *en banc* majority's decision. *Id.* at 1366.

Chemicals & Plastics Technology Corp. v. Shell Oil Co.,¹²⁵ in which it had held that “§ 271(f) governs method/process inventions.”¹²⁶ Since § 271(f) no longer applies to method claims, a party seeking to avoid infringement of a method claim may export a software module or application abroad and then perform the steps of the method claim with impunity.¹²⁷

The *Cardiac Pacemaker* court’s rationale for holding that § 271(f) is inapplicable to method claims rests on its construction of the combination of the statutory terms: “patented invention,” “component,” and “supplied.”¹²⁸ First, the court recognized that the patented invention of a method patent is a “series of acts or steps.”¹²⁹ A method claim’s elements are “the steps that comprise the method.”¹³⁰ Therefore, the component of a method claim is “a step in the method or process.”¹³¹ Arguing from a distinction present in the language of § 271(c), the court construed components to include only the steps of the process and not any material or apparatus used by the steps.¹³²

The *en banc* panel then determined that the term “supply,” as applied to § 271(f), requires that components be supplied in or from the United States.¹³³ Supply implies “the transfer of a physical object.”¹³⁴ Because a method step is intangible, transfer is impossible.¹³⁵ Therefore, the court held that “because one cannot supply the step of a method, § 271(f) cannot apply to method or process patents.”¹³⁶

¹²⁵ 425 F.3d 1366 (Fed. Cir. 2005).

¹²⁶ *Id.* at 1380.

¹²⁷ *Compare* Microsoft Corp. v. AT&T Corp., 550 U.S. 437, 449 (2007) (holding that abstract software exported from the United States without physical embodiment does not trigger the provisions of §271(f)), *with Cardiac Pacemakers, Inc.*, 576 F.3d at 1365 (holding that §271(f) does not apply to method/process patents).

¹²⁸ *See Cardiac Pacemakers, Inc.*, 576 F.3d at 1362–64.

¹²⁹ *Id.* at 1363 (quoting *In re Kollar*, 286 F.3d 1326, 1332 (Fed. Cir. 2002)).

¹³⁰ *Id.*

¹³¹ *Id.* at 1362.

¹³² *See id.* at 1363–64 (“Congress clearly believed that a ‘component’ was separate and distinct from a ‘material or apparatus for use in practicing a patented process.’”). *Accord* 35 U.S.C. § 271(c) (2006).

¹³³ *See Cardiac Pacemakers, Inc.*, 576 F.3d at 1364.

¹³⁴ *Id.*

¹³⁵ *Id.*

¹³⁶ *Id.*

Because Congress passed the original statute to override the Supreme Court's decision in *Deepsouth Packaging*,¹³⁷ the *en banc* majority viewed it as Congress' role, and not the court's, to choose whether to extend the statute to cover method patents.¹³⁸ Additionally, the court viewed the *Microsoft* Court's affirmation that the presumption against extraterritoriality applies to § 271(f) as a compelling reason "not to extend the reach of Section 271(f) to method patents."¹³⁹

Judge Newman wrote a lengthy dissent to the *en banc* majority's exclusion of method patents from the reach of § 271(f).¹⁴⁰ Her dissent argued that Congress intended the statute to preclude the evasion of United States patents, and therefore, "is not limited to any particular class of patentable subject matter," including method patents.¹⁴¹ She argued that the statute's requirement that components be supplied does not preclude the statute from applying to method claims.¹⁴² Process information forming part of the steps of a method claim can readily be "supplied from one entity to another."¹⁴³ Judge Newman believed the *en banc* majority "over-reacted as well as overreached" by destroying the availability of § 271(f) for all process industries.¹⁴⁴ From Judge Newman's perspective, the majority's decision "reopens, for process inventions, the loophole that [Congress] . . . plugged [with] § 271(f) for all patented inventions."¹⁴⁵

The *Cardiac Pacemaker* court did not exclude apparatus claims covering software inventions from the reach of § 271(f).¹⁴⁶ As noted above, many patents covering software-based inventions include both method and apparatus ("system") claims to cover different aspects of the invention.¹⁴⁷ Consequently, patentees of software-based inventions may still be able to pursue § 271(f) infringement claims against alleged

¹³⁷ *Id.* at 1360. *See supra* note 102 and accompanying text.

¹³⁸ *See Cardiac Pacemakers, Inc.*, 576 F.3d at 1364 ("[T]he Supreme Court has advised us that it is Congress's right, not the courts', to extend [§ 271(f)] beyond the *Deepsouth* problem it was designed to fix.").

¹³⁹ *Id.* at 1365.

¹⁴⁰ *Id.* at 1366–74 (Newman, J., dissenting).

¹⁴¹ *See id.* at 1366.

¹⁴² *See id.* at 1372–73.

¹⁴³ *Id.* at 1371.

¹⁴⁴ *Id.* at 1374.

¹⁴⁵ *Id.*

¹⁴⁶ *See id.* at 1363 ("Our precedents draw a clear distinction between method and apparatus claims for purposes of infringement liability . . .").

¹⁴⁷ *See discussion supra* Part II.

infringers who export software components, as long as the asserted patent includes system as well as method claims.

III. THE LAW OF AGENCY

A. *Relevant Aspects of the Law of Agency and Vicarious Liability*

While a professor at Harvard Law School, future Supreme Court Justice Oliver Wendell Holmes delivered two lectures on the law of agency and the history of its development through the common law. The Harvard Law Review subsequently published those lectures in two consecutive volumes.¹⁴⁸ Holmes described the doctrine of agency as a legal fiction of identity—the fiction being “that, within the scope of the agency, principal and agent are one.”¹⁴⁹ He viewed agency as “simply a branch of the law of master and servant”—both of which are traceable to the common law.¹⁵⁰ The maxim of “[*q*]ui facit per alium facit per se” is traceable to historical English law and stands for the proposition that people are answerable for wrongs that they have intentionally brought to pass through the actions of another.¹⁵¹ Holmes believed the legal fiction of identity could be found as early as Edward III, where a court held that “if an abbot has a wardship, and a co-canon commits waste, the abbot shall be charged by it, ‘for that is adjudged the deed of the abbot.’”¹⁵²

Doctrines of agency appear in numerous areas of the law.¹⁵³ In tort law, “masters are held answerable for conduct on the part of their servants,” whereas in contract law, “an undisclosed principal may bind or may be bound to another, who did not know of [the principal’s] very existence at the time [the principal] made the contract.”¹⁵⁴ Agency law applied in intellectual property infringement cases represents a subset of

¹⁴⁸ Oliver Wendell Holmes, Jr., *Agency I*, 4 HARV. L. REV. 345 (1891) [hereinafter *Agency I*]; Oliver Wendell Holmes, Jr., *Agency II*, 5 HARV. L. REV. 1 (1891) [hereinafter *Agency II*].

¹⁴⁹ *Agency I*, *supra* note 148, at 345.

¹⁵⁰ See *Agency II*, *supra* note 148, at 6.

¹⁵¹ *Agency I*, *supra* note 148, at 347. For example, the doctrine of *respondeat superior* was applied in the time of Edward I and appeared in the Statute of Westminster the Second. *Id.* at 356.

¹⁵² *Id.* at 357 (quoting Y. B. 49 Ed. Ill. 25, 26, pl. 3).

¹⁵³ *E.g.*, *id.* at 348.

¹⁵⁴ *E.g.*, *id.*

the doctrines that appear throughout the rest of the law.¹⁵⁵ In a lecture published in his second article on agency, Holmes explored the doctrine of vicarious liability.¹⁵⁶ He viewed vicarious liability as a “fiction of law” by which judges say “that you did the act complained of, although we both know perfectly well that it was done by somebody else whom the plaintiff could have sued if he had chosen”¹⁵⁷ Vicarious liability most commonly rests on the principle of *respondeat superior*, under which “employers are generally jointly and severally liable . . . for the torts of employees committed within the scope of employment.”¹⁵⁸ However, there are other forms of vicarious liability, including those where persons act in concert as partners or joint enterprisers, and are vicariously liable for the acts of each other “committed as part of their expressly or tacitly agreed-upon activity.”¹⁵⁹ Regardless, vicarious liability ordinarily requires some kind of consensual arrangement in which an agent agrees to act under a principal’s control.¹⁶⁰

In discussing the applicability of vicarious liability, Holmes drew an important distinction between the acts of a servant and those of an independent contractor: “an employer is not liable for the torts of an independent contractor, or, in other words . . . an independent contractor is not a servant.”¹⁶¹ According to Holmes, the line between a servant and an independent contractor is found “in common-sense, which steps in and declares that if the employment is well-recognized as very distinct, and all the circumstances are such to show that it would be mere folly to pretend

¹⁵⁵ See, e.g., *id.* at 347 (“If a trespass results, it is as much the trespass of the principle In such cases there is nothing peculiar to master and servant; similar principles have been employed where independent contractors were employed.”).

¹⁵⁶ See *Agency II*, *supra* note 148, at 1.

¹⁵⁷ *Id.*

¹⁵⁸ DAN B. DOBBS, *THE LAW OF TORTS* 905 (West Group 2000) (citations omitted); see also, e.g., *Barnett v. Clark*, 889 N.E.2d 281, 283 (Ind. 2008) (“The general rule is that vicarious liability will be imposed upon an employer under the doctrine of *respondeat superior* where the employee has inflicted harm while acting ‘within the scope of employment.’”) (internal quotations omitted).

¹⁵⁹ DOBBS, *supra* note 158, at 906.

¹⁶⁰ *Id.* at 910.

¹⁶¹ *Agency II*, *supra* note 148, at 14–15.

that the employer could exercise control in any practical sense, then the fiction is at an end.”¹⁶²

Dobbs has observed, “The putative general rule is that employers are not subject to vicarious liability for the torts of carefully selected independent contractors.”¹⁶³ An employer of an independent contractor generally does not have the same “right of control over the manner, means, and details of the [independent contractor’s] work” that the employer would have the right to exercise with a true servant.¹⁶⁴ Instead, the employer of an independent contractor only has the right to specify the desired result and to assess “whether the end product is acceptable.”¹⁶⁵ In assessing whether an actor is a servant or an independent contractor, the essential inquiry is the employer’s right to control the means and manner of work, not the degree of control actually exercised (although the latter may be indicative of the former).¹⁶⁶ The principle that vicarious liability does not extend to independent contractors has undoubtedly influenced the most recent Federal Circuit decisions addressing the question of when a theory of joint infringement can lead to liability for direct infringement.

¹⁶² *Id.* at 15; *see also* RESTATEMENT (SECOND) OF AGENCY § 220 (1958) (defining a “servant” and setting forth elements to be balanced in order to determine whether one is a servant or an independent contractor).

¹⁶³ DOBBS, *supra* note 158, at 917; *see also* Machado v. City of Hartford, 972 A.2d 724, 730 (Conn. 2009) (citing the general rule that “an employer is not liable for the negligence of its independent contractors”). Dobbs, however, deemed this general rule putative “because the rule is ‘riddled with exceptions.’” DOBBS, *supra* note 158, at 917 n.1 (citing Gordon v. Sanders, 692 So. 2d 939, 941 (Fla. Dist. Ct. App. 1997)) (“The law recognizes a wide variety of exceptions to the ‘independent contractor rule,’ including situations where the contractual duties are deemed to be nondelegable.”).

¹⁶⁴ *E.g.*, DOBBS, *supra* note 158, at 917.

¹⁶⁵ *E.g.*, *id.*

¹⁶⁶ *See id.* (citing McDonald v. Hampton Training Sch. for Nurses, 486 S.E.2d 299, 301 (Va. 1997)). Furthermore, Dobbs has stated that evidence showing an employer’s exercise of actual control may be indicative of a right or power to control. *See id.* at n.4; *see also* Farlow v. Harris Methodist Fort Worth Hosp., 284 S.W.3d 903, 911 (Tex. Ct. App. 2009) (determining whether one is a servant or independent contractor for purposes of vicarious liability, extrinsic evidence may provide evidence of an employment relationship, “such as instances of actual control by the principal sufficient to show that the true agreement of the parties vested a right of control establishing an employment relationship”) (citations omitted).

B. The Application of Vicarious Liability in Copyright Law

Because courts, including the Supreme Court, sometimes look to patent law for guidance in copyright cases, the treatment of vicarious liability in copyright law is worth exploring.¹⁶⁷ Unlike in patent law, where at least some statutory expression of vicarious liability has been codified, vicarious liability in copyright law rests in the case law.¹⁶⁸

The seminal case on vicarious liability for copyright infringement is the Second Circuit's decision in *Shapiro, Bernstein & Co., Inc. v. H. L. Green Co., Inc.*¹⁶⁹ In *Shapiro*, the plaintiffs, copyright licensors of several popular musical compositions, alleged that H. L. Green ("Green") was liable for the infringing conduct of a concessionaire, Jalen Amusement Company ("Jalen"), which made bootleg copies of records and sold them in Green's stores.¹⁷⁰ Green allegedly "contributed to and participated actively in the sale" of the bootleg records sold by Jalen.¹⁷¹ The trial court dismissed the infringement claims against Green, holding that Green was not liable for Jalen's infringing activities.¹⁷²

On appeal, the Second Circuit examined the nature of the relationship between Green and Jalen.¹⁷³ Notably, the concession license provided that Jalen and its employees must "abide by, observe and obey all rules and regulations promulgated" by Green, which had the authority to discharge any Jalen employee who conducted himself or herself improperly.¹⁷⁴ The license also obligated Jalen to indemnify Green against all claims arising from the conduct of the concession.¹⁷⁵ Although Jalen handled the day-to-day operations, all revenues flowed through Green's point-of-sale system, and Green retained at least ten percent of the gross revenues, remitting the net revenues to Jalen.¹⁷⁶ The district court noted that Green neither

¹⁶⁷ See, e.g., *Metro-Goldwyn-Mayer Studios Inc. v. Gorkster, Ltd.*, 545 U.S. 913, 930 (2005).

¹⁶⁸ E.g., *id.* at 930 (quoting *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 434–35 (1984)).

¹⁶⁹ 316 F.2d 304 (2d Cir. 1963).

¹⁷⁰ *Id.* at 305–06.

¹⁷¹ *Id.* at 306.

¹⁷² See *id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ See *id.*

participated in Jalen's record sales, nor knew of the unauthorized copying.¹⁷⁷

Nevertheless, the Second Circuit reversed the lower court's dismissal and found Green liable for Jalen's sale of the bootleg records.¹⁷⁸ The court applied the agency doctrine of *respondeat superior* to copyright infringement, stating, "Many of the elements which have given rise to the doctrine . . . may also be evident in factual settings other than that of a technical employer-employee relationship."¹⁷⁹ On this basis, the court held:

When the right and ability to supervise coalesce with an obvious and direct financial interest in the exploitation of copyrighted materials—even in the absence of actual knowledge . . . the purposes of copyright law may be best effectuated by the imposition of liability upon the beneficiary of that exploitation.¹⁸⁰

Here, Green retained the right to supervise Jalen's conduct throughout the thirteen-year duration of the concession.¹⁸¹ By sharing in the gross revenues, Green had a direct financial interest in Jalen's success.¹⁸² Green's power to police the conduct of its concessionaire, combined with a clear financial interest, justified the imposition of vicarious liability on Green for Jalen's copyright infringement.¹⁸³

Eight years later, the Second Circuit relied on *Shapiro* to find a community concert promotion company vicariously liable for copyright infringement of Gershwin's "Bess, You Is My Woman Now."¹⁸⁴ The promotion company, Columbia Artist Management Company ("CAMI"), managed concert artists and organized hundreds of local community concert associations.¹⁸⁵ The community concert associations produced

¹⁷⁷ *Id.*

¹⁷⁸ *Id.* at 307.

¹⁷⁹ *Id.*

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ *See id.*

¹⁸⁴ *Gershwin Publ'g Corp. v. Columbia Artist Mgmt., Inc.*, 443 F.2d 1159, 1160, 1163 (2d Cir. 1971).

¹⁸⁵ *Id.* at 1160–61.

audiences for CAMI-managed artists via sales of memberships in annual concert series.¹⁸⁶

The booked artists performed the Gershwin piece without obtaining the copyright owner's permission.¹⁸⁷ Consequently, both the artists and the local community concert associations that provided the venues were concededly liable for copyright infringement.¹⁸⁸ However, CAMI argued it could not be held liable because it had no formal power to control either the local association or the artists it booked and managed.¹⁸⁹

The Second Circuit found CAMI liable as a vicarious infringer.¹⁹⁰ Even though CAMI did not control the associations or artists, the local associations depended on CAMI for direction in matters, such as copyright licensing requirements.¹⁹¹ Further, CAMI was in a position to police the infringing conduct of its artists.¹⁹² Finally, CAMI derived substantial financial benefit from the actions of the primary infringer through its share of artists' fees and revenue from the sale of programs to local associations.¹⁹³ Thus, the court determined that the imposition of vicarious liability was appropriate because CAMI had the right and ability to supervise the infringing activities, and it had a direct financial interest in those activities.¹⁹⁴

Subsequent to *Shapiro and Gershwin*, in *F.E.L. Publications, Ltd. v. National Conference of Catholic Bishops*,¹⁹⁵ the Northern District of Illinois denied a motion to dismiss a copyright infringement complaint against defendants even though the complaint contained no factual allegations of unauthorized copying.¹⁹⁶ Due to the lack of such allegations, the court said a finding of liability would have to rest on "some theory of

¹⁸⁶ *Id.* at 1161.

¹⁸⁷ *Id.* at 1160.

¹⁸⁸ *See id.* ("CAMI concedes that . . . concert artists managed by it performed . . . for profit . . . without the permission of plaintiff Gerswhin Publishing Company, the copyright proprietor, and that the performing artists and local association are, therefore, liable for infringement . . .").

¹⁸⁹ *See id.* at 1163.

¹⁹⁰ *Id.*

¹⁹¹ *See id.*

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 1162–63.

¹⁹⁵ 466 F. Supp. 1034 (N.D. Ill. 1978).

¹⁹⁶ *Id.* at 1040.

vicarious liability.”¹⁹⁷ The court held that vicarious liability may exist where an agency or partnership relationship between the direct infringer and the alleged vicarious infringer exists.¹⁹⁸ The court further held the Second Circuit’s requirements of a right of supervision and a direct financial interest in the infringing activities serve as an alternative where evidence of agency or partnership is lacking.¹⁹⁹

The Supreme Court briefly discussed vicarious liability as a basis for copyright infringement in *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*²⁰⁰ The Court cited *Shapiro* for the proposition that one “infringes vicariously by profiting from direct infringement while declining to exercise a right to stop or limit it.”²⁰¹ The Court recognized that doctrines of secondary liability for copyright infringement, including vicarious infringement, are “well-established in the law” even though they emerged from common law principles.²⁰² In *Grokster*, the plaintiff argued that the defendants could be liable under a vicarious liability theory even though they initially lacked knowledge of the directly infringing activities of others.²⁰³ However, because the Court found liability under an inducement theory, it declined to analyze whether vicarious infringement could be found without knowledge of others’ infringing conduct.²⁰⁴ Thus, following *Grokster*, a finding of copyright infringement under a theory of vicarious liability still requires both the authority to police infringing activities and a financial interest in the profit from those activities.

IV. VICARIOUS LIABILITY AND JOINT INFRINGEMENT IN PATENT LAW

A. *Early Cases Involving the Theory of Joint Infringement and Agency*

In reviewing the Federal Circuit’s recent decisions on the theory of joint infringement, it becomes clear that agency and vicarious liability play an increasing role. Prior to some of the more recent decisions, a number of

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* (“One may be liable as a vicarious infringer, if a special relationship such as agency or partnership exists . . .”).

¹⁹⁹ *Id.* (“[I]n the absence of [an agency or partnership] relationship . . . [vicarious liability may exist] if the defendant has the right and ability to supervise the infringing activities as well as a direct financial interest in those activities.”).

²⁰⁰ See *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 930 (2005).

²⁰¹ *Id.* (citing *Shapiro, Bernstein & Co. v. H.L. Green Co.*, 316 F.2d 304, 307 (2d Cir. 1963)).

²⁰² *Id.*

²⁰³ *Id.* at n.9.

²⁰⁴ *Id.*

courts looked to indicia of an agency relationship in their analysis of joint infringement allegations.²⁰⁵ Courts have found direct infringement of multi-actor claims in cases where “a single defendant seeks to avoid liability for an infringing act by employing agents to perform the steps of the potential patented process.”²⁰⁶ In these cases, courts sometimes conflated the concepts of direct infringement and inducement, finding that the parties are part of a “collaborative scheme directed by one of them to cause infringement.”²⁰⁷

In *Marley Mouldings Ltd. v. Mikron Industries, Inc.*,²⁰⁸ the court found direct infringement where a close connection existed between the coordinating party (the alleged direct infringer) and another entity that performed steps on its behalf.²⁰⁹ The alleged infringer “through its connection with the entity performing only part of the process . . . [was] in actuality performing the combination of each and every step of the claimed method.”²¹⁰

In *Mobil Oil Corp. v. W.R. Grace Co.*,²¹¹ a case alleging infringement of patents on oil-cracking catalysts, the court combined the concepts of agency and indirect infringement via inducement or contribution of a non-staple component to find liability for direct infringement.²¹² Evidence showed that:

[W.R. Grace] knew at the time it sold each of its accused catalysts that its customers would place the [purchased] catalysts . . . into their . . . units and that . . . the catalysts . . . would be subjected to the heating . . . conditions specified in [the claims], and that consequently all of the

²⁰⁵ Cf. Lemley, *supra* note 3, at 260 (“Where there is no agency relationship or similar coordination . . . courts have not been willing to apply the law of inducement to aggregate the disparate acts of unrelated parties. Courts require proof of a sufficient connection between the coordinator and the entity performing the steps . . .”).

²⁰⁶ *See id.*

²⁰⁷ *Id.*

²⁰⁸ No. 02 C 2855, 2003 WL 1989640 (N.D. Ill. Apr. 30, 2003).

²⁰⁹ *See id.* at *2–3.

²¹⁰ *Id.* at *3.

²¹¹ 367 F. Supp 207 (D. Conn. 1973).

²¹² *Id.* at 254 (“The accused catalysts were specially adapted for sue [sic] in cracking gas oil to produce gasoline.”).

effects of [the process] would be achieved by defendant's customers.²¹³

As the court noted, W. R. Grace was able to reap the patented invention's benefits without having to incur the full expense of "carrying it out."²¹⁴ The court held that Grace directly infringed the patent because it "in effect, made each of its customers its agent in completing the infringement step, knowing full well that the infringement step would in fact be promptly and fully completed by those customers."²¹⁵ Thus, even though W. R. Grace functioned as a supplier of the key catalyst component and might have been liable for indirect infringement, the court found it liable for direct infringement because an agency relationship existed between Grace and the purchasers of the catalysts.²¹⁶

B. The Recent History of Federal Circuit Cases Involving Multi-Actor Claims

1. The Dictum That Ignited a Controversy

In *On Demand Machine Corp. v. Ingram Industries, Inc.*,²¹⁷ a Federal Circuit panel made the following observation about a jury instruction given by the district court concerning liability for joint infringement: "We discern no flaw in this instruction as a statement of law."²¹⁸ The district court's jury instruction articulated the basis for a finding of liability based on joint infringement: "When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method."²¹⁹

The Federal Circuit panel's observation about the jury instruction opened a Pandora's box of joint infringement claims and became subject to considerable scrutiny in subsequent Federal Circuit decisions.²²⁰ The

²¹³ *Id.* at 253.

²¹⁴ *Id.*

²¹⁵ *Id.*

²¹⁶ *See id.*

²¹⁷ 442 F.3d 1331 (Fed. Cir. 2006).

²¹⁸ *Id.* at 1345.

²¹⁹ *Id.* at 1344–45.

²²⁰ *E.g.*, Harold C. Wegner, *Post-Paymentech e-Business "Joint" Infringement*, IPFRONTLINE, Oct. 1, 2007, <http://www.ipfrontline.com/depts/article.asp?deptid=4&id=16127>; *see also* *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007)

(continued)

Federal Circuit heard *On Demand Machine* on appeal from a jury verdict of willful infringement of U.S. Patent No. 5,465,213 (“the ’213 patent”).²²¹ On Demand Machine’s (“ODMC”) patent described a “book manufacturing system” that could be deployed in a retail store to allow customers to print a copy of a book on demand.²²² The in-store system provided a computer console to allow customers to view promotional and other information about books prior to purchase.²²³

The defendants in the case included Ingram Industries, Inc., Lightning Source, Inc., and Amazon.com, Inc.²²⁴ Lightning Source, a subsidiary of Ingram Industries, is a book printing company that prints books in response to wholesale orders from various entities, including Amazon.com.²²⁵ Amazon sold books via its website, which provided promotional and other sales information about books to retail customers.²²⁶ ODMC alleged its patent was jointly infringed “when a customer orders from Amazon upon reviewing Amazon’s promotional information, and Amazon in turn orders that book be printed by Lightning Source”²²⁷

The jury found the defendants infringed claim eight of the ’213 patent, which covered a “method of high speed manufacture of a single copy of a book.”²²⁸ The claim included the steps of “storing sales information relating to said plurality of books in a computer,” and “providing means for a customer to visually review said sales information.”²²⁹ In its infringement arguments, ODMC argued that “Amazon.com provide[d] sales information, producing joint infringement” for the portion of “Lightning Source’s production . . . ordered by Amazon.”²³⁰ The Federal Circuit panel reviewed the district court’s construction of a number of terms in these steps and in each case overturned the lower court’s

(finding it unlikely that the *On Demand* court intended to change patent law jurisprudence through dicta that “was not even directly necessary to its decision”).

²²¹ *On Demand Mach. Corp.*, 442 F.3d at 1333; *Sys. & Method of Mfg. a Single Copy Book*, U.S. Patent No. 5,465,213 (filed July 12, 1993).

²²² *On Demand Mach. Corp.*, 442 F.3d at 1334.

²²³ *Id.*

²²⁴ *Id.* at 1333.

²²⁵ *Id.* at 1335.

²²⁶ *Id.*

²²⁷ *Id.* at 1344.

²²⁸ *Id.*

²²⁹ *Id.* at 1336.

²³⁰ *Id.* at 1339.

construction.²³¹ The panel also found the claim's preamble limited the scope of the invention to the manufacture of a single copy of a book, as opposed to Lightning Source's practice of manufacturing books in batches.²³² The court then held that under the correct claim construction, "no reasonable jury could find infringement" because even collectively, the defendants did not practice the invention.²³³

Even though the court's holding rested on the conclusion that the defendants did not practice the claimed method as properly construed, the panel commented on the district court's jury instruction regarding joint infringement:

It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.²³⁴

The panel then observed that, "[w]e discern no flaw in this instruction as a statement of law," and proceeded to elaborate on its reasons for finding that the defendants, even if acting jointly, did not practice the claimed invention.²³⁵

Following this decision, some patentees viewed the court's assessment of the jury instruction on joint infringement as an enunciation of a new

²³¹ See *id.* at 1337–43.

²³² See *id.* at 1343–44 (“[T]he entirety of the claim implements the preamble’s high speed manufacture of a single copy The preamble embraces the totality of these limitations, and limits the claim to the subject matter of the preamble.”). A preamble limits a claim if “it states a necessary and defining aspect of the invention.” *Id.* at 1343. The appropriate inquiry is “whether the preamble is necessary to give life, meaning and vitality to the claims or counts.” *Id.*

²³³ See *id.* at 1345.

²³⁴ *Id.* at 1344–45.

²³⁵ *Id.* at 1345.

“participation and combined action(s)” rule on when the theory of joint infringement applies.²³⁶

2. *The Federal Circuit Brings Clarity with BMC Resources’ “Direct or Control” Standard*

a. *BMC Resources’ Patents and Allegations of Joint Infringement by Paymentech*

In *BMC Resources*, BMC Resources (“BMC”) owned two patents that claimed a method of paying bills by touch-tone telephone using a debit card.²³⁷ The claimed method allowed authorization of the debit card transactions over an electronic funds transfer (“EFT”) network without requiring the entry of a personal identification number (“PIN”).²³⁸ An “interactive voice response unit (“IVR”) . . . prompt[ed] the [customer] to enter an access code, account number, debit card number, and payment amount.”²³⁹ The debit card number and payment amount were passed “to a debit network and on to a . . . financial institution” for approval and debiting of the customer’s account.²⁴⁰ Thus, BMC’s “method for PIN-less debit bill payment (PDBP)” featured “the combined action of several participants, including the payee’s agent” or payment processor, a remote EFT network, and the financial institution that issued the debit card.²⁴¹

In the district court, BMC moved for summary judgment of infringement on the grounds that Paymentech both directly and indirectly

²³⁶ See Supplemental Brief to Advise the Court of New Fed. Circuit Auth. On Joint Infringement in Support of BMC’s Objections at 2, *BMC Res., Inc. v. Paymentech, L.P.*, No. 3:03-CV-1927-M (N.D. Tex. Apr. 11, 2006) (“*On Demand* establishes that joint infringement is shown where the ‘infringement results from the participation and combined action(s) of more than one person or entity.’” (citing *On Demand Mach. Corp.*, 442 F.3d at 1344)). See also *Yodlee, Inc. v. CashEdge, Inc.*, No. C 05-01550 SI, 2007 WL 2220970, at *3 (N.D. Cal. Aug. 1, 2007) (“Yodlee alleges direct infringement under a theory of ‘divided infringement,’ contending that together, CashEdge and its partner financial institutions infringe[d] . . . and ‘that a party cannot avoid infringement by simply contracting with another party to jointly build an infringing system.’” (citation omitted)).

²³⁷ See *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1375 (Fed. Cir. 2007); U.S. Patent No. 5,715,298 (filed Jan. 22, 1997); US Patent No. 5,870,456 (filed Oct. 7, 1997).

²³⁸ *BMC Res., Inc.*, 498 F.3d at 1375. EFT networks such as those typically used for ATM transactions most often require the entry of a cardholder’s PIN to authenticate the cardholder as owner of the debit card. See ’456 Patent col.2–3.

²³⁹ *BMC Res., Inc.*, 498 F.3d at 1375.

²⁴⁰ *Id.*

²⁴¹ See *id.*

infringed (via inducement) two dependent claims in the two patents.²⁴² Because BMC recognized that Paymentech itself did not perform all steps of the dependent claims, BMC based its direct infringement allegation on a theory of joint infringement.²⁴³ BMC alleged Paymentech “participat[ed] in and coordinat[ed] the performance of PIN-less debit bill payment transactions among itself, its retail merchant customers, various debit networks, and participating financial institutions.”²⁴⁴ BMC relied in part on the Federal Circuit’s general approval in *On Demand Machine* of the district court’s jury instruction on joint infringement.²⁴⁵

Claim two of U.S. Patent No. 5,715,298 offers a good illustration of the steps performed by the various parties. Claim two includes the following paraphrased steps (in terms of its applicability to payments using a PIN-less debit card number):

1. prompt the caller to enter a payee account number;
2. determine the validity of the payee account number;
3. prompt the caller to enter a PIN-less debit card number;
4. determine whether the debit card number is valid;
5. prompt the caller to enter a payment amount;
6. access a remote payment network associated with the card number;
7. determine the account associated with the card number by the remote payment network;
8. determine whether sufficient funds exist in the account to complete the payment by the remote payment network;
9. charge the payment amount against the account;
10. add the payment amount to an account associated with the entered payor account number;
11. inform the caller that the payment has been authorized;
12. log the transaction details in a transaction log file; and
13. inform the caller that the payment has been declined if sufficient funds do not exist in the account associated with the debit card.²⁴⁶

²⁴² See *id.* at 1376.

²⁴³ See *id.* at 1378.

²⁴⁴ *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2006 WL 306289, at *2 (N.D. Tex. Feb. 9, 2006).

²⁴⁵ *BMC Res., Inc.*, 498 F.3d at 1378 (“BMC argued that *On Demand* changed the law governing joint infringement by multiple parties.”).

²⁴⁶ See U.S. Patent No. 5,715,298 col.11–12 (filed Jan. 22, 1997).

b. Paymentech and Its Partners' Accused Process

Paymentech performs the role of a middleman between its merchant clients and their customers on the one side, and the debit card networks and card issuing financial institutions on the other.²⁴⁷ Merchant customers initiate bill payments via telephone to a merchant's IVR.²⁴⁸ That system prompts the callers for the required payment information and then transmits the information to Paymentech.²⁴⁹ Paymentech in turn initiates a debit transaction to a debit network.²⁵⁰ The debit network routes the request to the card-issuing financial institution ("FI"), which authorizes and charges the payment amount against the customer's account.²⁵¹

c. What Kind of Connection Is Required to Find a Defendant Liable for Direct Infringement When Other Parties Perform Some Steps of the Claimed Method?

The district court reviewed earlier federal decisions involving multiple parties' involvement in the performance of a method or process claim.²⁵² The district court viewed those earlier decisions to require that where multiple entities participate in carrying out the steps of a claim, an alleged infringer is liable for direct infringement only when that entity is "connected" to the other actors involved.²⁵³ However, the district court found a lack of consensus regarding "what kind of 'connection'" should be required among the multiple actors to support a finding of direct infringement.²⁵⁴ Also, the district court disregarded BMC's reliance on the *On Demand Machine* panel's approval of the jury instruction on joint infringement.²⁵⁵ The district court viewed the Federal Circuit's approval as dictum because the *On Demand Machine* panel did not rely on the relationship between the joint actors in its holding of noninfringement.²⁵⁶

²⁴⁷ See *id.* at 1375–76 (explaining Paymentech's process for PIN-less debit bill payment transactions).

²⁴⁸ *Id.* at 1375.

²⁴⁹ *Id.*

²⁵⁰ *Id.* at 1376.

²⁵¹ *Id.*

²⁵² See *BMC, Res., Inc. v. Paymentech, L.P.*, No. 3:03-CV-1927-M, 2006 WL 1450480, at *3 (N.D. Tex. May 24, 2006).

²⁵³ *Id.*

²⁵⁴ *Id.*

²⁵⁵ See *id.* at *3 n.3.

²⁵⁶ *Id.*

Finding no controlling Federal Circuit or Supreme Court precedent establishing the requisite degree of connection between joint actors, the district court adopted the “direct or control” standard recommended by the magistrate in the case.²⁵⁷ When a party alleges direct infringement by a defendant and other entities perform some of the steps of the claimed method, the standard requires that the defendant “directs or controls the actions of the other entity or entities.”²⁵⁸

d. The District Court’s Application of the “Direct or Control” Standard

The district court analyzed Paymentech’s degree of involvement in the various steps of the claimed payment method.²⁵⁹ The following table summarizes Magistrate Judge Kaplan and the district court’s view of Paymentech’s role in each step relative to the other parties:

Action	Paymentech’s Participation
Prompting: When a customer calls to pay a bill, the merchant IVR prompts the caller for account number, debit card number, and payment amount.	“Paymentech works closely with its merchant customers in developing IVR scripts used to ‘prompt’ callers.” ²⁶⁰
Transmitting: Merchant transmits payment information to Paymentech.	Paymentech provides “ongoing technical assistance for processing” payment transactions. ²⁶¹
Debiting: Paymentech initiates a debit transaction to the appropriate debit network.	Paymentech contracts with debit networks to allow merchants to use the networks. ²⁶² It forwards a given debit transaction to the appropriate network, but does not control the

²⁵⁷ See *id.* at *6 (“Having reviewed the Findings and the authorities cited by Plaintiff, the Court agrees with Judge Kaplan . . .”).

²⁵⁸ *Id.*

²⁵⁹ *Id.* at *5–6.

²⁶⁰ *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2006 WL 306289, at *5 (N.D. Tex. Feb. 9, 2006). The amount of assistance provided by Paymentech to merchant clients in the development of the IVR varies. *Id.*

²⁶¹ *Id.*

²⁶² *BMC Res., Inc.*, 2006 WL 1450480, at *5 (“Paymentech petitioned the debit networks for authorization for the merchants to use the networks . . .”).

	actual processing of transactions by the debit networks. ²⁶³
FI Routing: Debit network routes the debit request to the issuing FI.	The debit card number supplied by Paymentech to the debit network includes a “bank identification number” or “BIN.” ²⁶⁴
FI Authorization and Debiting: FI authorizes or declines the transaction, and debits the customer’s account.	Paymentech includes BIN numbers and other “indicator[s]” intended for FIs in the transactions. ²⁶⁵
Informing: Merchant IVR informs the customer of the transaction status.	Paymentech receives transaction status from the FI via the debit network and passes that status information back to the merchant’s IVR for relay to the customer caller. ²⁶⁶

The district court reached a different conclusion as to the degree of direction or control Paymentech exercised over the other parties.²⁶⁷ Magistrate Judge Kaplan found that evidence of Paymentech’s involvement in the steps performed by the retail merchants viewed most favorably to BMC was “sufficient to create a genuine issue of material fact as to whether Paymentech directs or controls . . . [those] steps.”²⁶⁸ In contrast, Magistrate Judge Kaplan reached quite a “different conclusion with respect to the relationship between Paymentech, the debit networks, and participating financial institutions.”²⁶⁹ The district court agreed with the magistrate’s finding that no evidence “showed that Paymentech directs

²⁶³ See *id.* at *4 n.5 (“[D]ebit networks follow their own rules and regulations for processing DBP [debit bill pay] transactions, and . . . Paymentech can be fined if a merchant fails to comply with those regulations.”).

²⁶⁴ See *id.* at *5 n.7.

²⁶⁵ See *id.* at *5 n.8.

²⁶⁶ See *id.* at *1.

²⁶⁷ See *id.* at *5 (“BMC has provided evidence of some relationship between Paymentech and the debit networks BMC has provided little evidence of any relationship between Paymentech and any financial institutions.”).

²⁶⁸ *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2006 WL 306289, at *6 (N.D. Tex. Feb. 9, 2006). The merchants performed the prompting and informing steps in the table above. *Id.*

²⁶⁹ *Id.*

or controls the . . . activities of the debit networks and the financial institutions.”²⁷⁰ The district court observed that BMC tried to conflate its arguments regarding its relationship to the debit networks and financial institutions by trying to treat those “affiliated” entities as a “unitary entity.”²⁷¹

The court instead analyzed the relationships separately and found insufficient evidence of direction or control by Paymentech of either entity sufficient to raise a genuine issue of material fact.²⁷² Paymentech managed the relationship between its merchant clients and the debit networks, and submitted debit transactions to the networks for processing.²⁷³ However, the networks “follow[ed] their own rules and regulations.”²⁷⁴ Indeed, a network could have fined Paymentech if its merchant clients failed to comply with network rules.²⁷⁵ Further, evidence of the existence of at least one contractual relationship between Paymentech and a debit network did not provide the level of direction or control required by the standard.²⁷⁶

Furthermore, the district court found no evidence that Paymentech or any other entity directed or controlled the financial institutions’ performance of the authorization and debiting steps.²⁷⁷ Paymentech provided transaction and card data to the financial institutions through the debit networks; however, the court found mere data transmission through an intermediary insufficient evidence of direction or control.²⁷⁸ The district court commented that even if it had applied the looser standard of “some connection” proposed by *BMC Resources*, the evidence was insufficient to survive summary judgment of non-infringement in favor of Paymentech.²⁷⁹ The relationship between Paymentech and the financial institutions was simply too attenuated, especially given the lack of a contractual relationship between the entities.²⁸⁰ The district court’s finding that Paymentech did not even direct or control the debit networks’ transactions, which flow between itself and the financial institutions,

²⁷⁰ See *BMC Res., Inc.*, 2006 WL 1450480, at *4–5.

²⁷¹ See *id.* at *4.

²⁷² See *id.* at *5–6.

²⁷³ See *id.* at *5.

²⁷⁴ *Id.* at *4 n.5.

²⁷⁵ *Id.*

²⁷⁶ See *id.* at *5.

²⁷⁷ See *id.* at *6.

²⁷⁸ See *id.* at *5.

²⁷⁹ See *id.* at *6.

²⁸⁰ *Id.*

further accentuated the finding of any connection, much less one that would meet the “direct or control” standard.²⁸¹

e. The Federal Circuit’s Truncated Analysis and Affirmance of the District Court’s “Direct or Control” Standard

On appeal, the Federal Circuit affirmed the “direct or control” standard for a finding of direct infringement articulated by the district court.²⁸² The panel also affirmed the district court’s reading of the Federal Circuit’s dictum in *On Demand Machine*, holding, “*On Demand* did not change [the Federal Circuit’s] precedent with regards to joint infringement.”²⁸³

Perhaps unfortunately, the Federal Circuit focused its factual analysis on the dispositive aspects of Paymentech’s defense against joint infringement.²⁸⁴ The panel did not review the district court’s findings regarding Paymentech’s relationship to all four of the parties who performed steps of the claimed method.²⁸⁵ Instead, the court confined its analysis to Paymentech’s relationship (or lack thereof) with the debit networks and financial institutions involved in the authorization and debit process.²⁸⁶ Like the district court, the Federal Circuit found the evidence of a relationship between Paymentech and the debit networks insufficient for imposition of infringement liability under the “direct or control” standard.²⁸⁷ Evidence that Paymentech supplied transaction data to the debit networks was inadequate, given the complete lack of evidence that the data included “instructions or directions” as to how the debit networks should process the transactions.²⁸⁸ The panel agreed that even less evidence existed in support of a finding that Paymentech directed or controlled the conduct of the financial institutions in performing steps of the claimed method.²⁸⁹

The Federal Circuit’s decision to apply a truncated infringement analysis could, and arguably has, led to a stricter view of the “direct or

²⁸¹ *Id.*

²⁸² *See* *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1382 (Fed. Cir. 2007).

²⁸³ *Id.* at 1380. The panel approvingly quoted Paymentech’s brief: “[i]t is unlikely the Court intended to make a major change in its jurisprudence in the . . . [statement] that was not even directly necessary to its decision in the case.” *Id.*

²⁸⁴ *See id.* at 1381.

²⁸⁵ *Id.*

²⁸⁶ *See id.* at 1381–82.

²⁸⁷ *Id.* at 1381.

²⁸⁸ *Id.*

²⁸⁹ *Id.* at 1382.

control” standard than either it or the district court intended. The district court’s detailed examination of all the relationships among the parties performing steps of the allegedly infringed claims provides a more nuanced perspective on the “direct or control” standard. The magistrate judge recognized the possibility that assisting merchant clients with the development of IVR scripts and supplying them with documentation regarding transaction formats might equate to direction or control of the merchants by Paymentech.²⁹⁰ Subsequent courts who apply the “direct or control” standard without reviewing the richer fact analysis of the district court could grant summary judgment of non-infringement in cases that might have otherwise gone to the jury.

f. Vicarious Liability in BMC Resources

The *BMC Resources* panel used the doctrine of vicarious liability to support its assertion that an infringer cannot escape liability by having someone else perform steps on his or her behalf:

[T]he law imposes *vicarious liability* on a party for the acts of another in circumstances showing that the liable party controlled the conduct of the acting party. . . . [A] defendant cannot thus avoid liability for direct infringement by having someone else carry out one or more of the claimed steps on its behalf.²⁹¹

Likewise, “[a] party cannot avoid infringement . . . simply by contracting out steps of a patented process to another entity.”²⁹² The court’s analysis seems to imply that “contracting out steps” to another entity imposes an agency relationship sufficient for the “direct or control” standard.

However, the *BMC Resources* panel did not require a finding of vicarious liability of other actors to the “mastermind” as a predicate for finding direct infringement under a theory of joint infringement. Instead, the court viewed evidence that the alleged infringer controlled the conduct of other parties as a basis for imposing vicarious liability on the controlling party.²⁹³ Even so, the court recognized the “control or direction” standard for a finding of joint infringement constitutes a high bar that “may in some circumstances allow parties to enter into arms-length agreements to avoid

²⁹⁰ See *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2006 WL 306289, at *5 (N.D. Tex. Feb. 9, 2006).

²⁹¹ *BMC Res., Inc.*, 498 F.3d at 1379 (emphasis added).

²⁹² *Id.* at 1381.

²⁹³ See *id.* at 1379.

infringement.”²⁹⁴ But the high bar is necessary to avoid allowing joint infringement to “subvert the statutory scheme for indirect infringement.”²⁹⁵ Allowing a finding of direct infringement simply on the basis of the “independent conduct of multiple actors” (without a directing or controlling mastermind) would undermine the indirect infringement torts of contributory infringement or inducement—both of which require a predicate finding of direct infringement.²⁹⁶

After *BMC Resources*, independent conduct of multiple parties (“mere arms-length cooperation”) performing the steps of a method claim does not constitute joint infringement. Likewise, the simple supply of information by one party to another party in an otherwise arms-length relationship does not constitute joint infringement.²⁹⁷ On the other hand, full direction and control of an entity acting as an agent is sufficient, but not necessary for joint infringement liability.²⁹⁸ What remained unclear following *BMC Resources* was how extensive the mastermind’s direction and control over the other actors had to be to constitute joint infringement. Could joint infringement be found where the mastermind-actor relationship involves more direction or control than the mere supply of information from the mastermind to the actor, but less direction or control than that implicit in an agency relationship?

3. Vicarious Liability Becomes a Necessary Condition for Joint Infringement.

In *Muniauction, Inc. v. Thomson Corp.*,²⁹⁹ a Federal Circuit panel, including two of the members of the *BMC Resources* panel, elaborated on the earlier panel’s “direct or control” standard.³⁰⁰ The decision applied a

²⁹⁴ *Id.* at 1381.

²⁹⁵ *See id.*

²⁹⁶ *See id.*

²⁹⁷ *Id.* (“[E]vidence that Paymentech provides data (debit card number, name, amount of purchase, etc.) to the debit networks, absent any evidence that Paymentech also provides instructions or directions regarding the use of those data, [is] inadequate.”).

²⁹⁸ *See id.* (“A party cannot avoid infringement, however, simply by contracting out steps of a patented process to another entity. In those cases, the party in control would be liable for direct infringement.”).

²⁹⁹ 532 F.3d 1318 (Fed. Cir. 2008).

³⁰⁰ *See id.* at 1329–30 (reviewing Federal Circuit precedent using the *BMC Resources* decision for guidance). The *Muniauction* panel consisted of Judges Gajarsa (who authored the opinion), Plager, and Prost. *Id.* at 1321. Judge Prost and Judge Gajarsa were also on the *BMC Res., Inc.* panel along with Judge Rader, who wrote the opinion. *See BMC Res.,*

(continued)

BMC Resources analysis in assessing whether method claims involving two actors were infringed by Thomson's municipal bond auction system.³⁰¹

The Federal Circuit heard this case on appeal from the Western District Court of Pennsylvania, which held that Thomson had willfully infringed the valid claims of Muniauction's patent.³⁰² The district court awarded \$77 million in enhanced damages and permanently enjoined Thomson from continued infringement.³⁰³ The patent at issue was U. S. Patent No. 6,161,099 ("the '099 patent") and was "directed to electronic methods for conducting . . . original issuer municipal bonds auctions over . . . the Internet, using a web browser."³⁰⁴

The first issue before the court was the validity of the '099 patent's independent claims in light of the recent Supreme Court decision *KSR International Co. v. Teleflex Inc.*,³⁰⁵ which rejected the Federal Circuit's "teaching-suggestion-motivation test for obviousness."³⁰⁶ Under *KSR International*, "a court must ask whether the [claimed] improvement is more than the predictable use of prior art elements according to their established functions."³⁰⁷ The court compared the elements of the independent claims to a prior art system—which actually formed part of the accused service³⁰⁸—and found that the only element unique to the claims was the use of a web browser.³⁰⁹ Both the prior art system and Internet web browsers existed prior to the filing date of the patent.³¹⁰

Inc., 498 F.3d at 1375. As both panels were unanimous in their decisions, it is difficult to argue an intra-circuit split exists over what constitutes sufficient direction or control. *Id.*; *Muniauction, Inc.*, 532 F.3d at 1321.

³⁰¹ See *Muniauction, Inc.*, 532 F.3d at 1321, 1328–30.

³⁰² See *Muniauction, Inc. v. Thomson Corp.*, 502 F. Supp. 2d 477, 493 (W.D. Pa. 2007).

³⁰³ *Id.*

³⁰⁴ *Muniauction, Inc.*, 532 F.3d at 1321; Process & Apparatus for Conducting Auctions over Elec. Networks, U.S. Patent No. 6,161,099 col.1 ll.13–15 (filed May 29, 1998).

³⁰⁵ 550 U.S. 398 (2007).

³⁰⁶ *Muniauction, Inc.*, 532 F.3d at 1323; see also 35 U.S.C. § 103(a) (2006) (forbidding issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been *obvious* at the time the invention was made to a person having ordinary skill in the art to which subject matter pertains") (emphasis added).

³⁰⁷ *Muniauction, Inc.*, 532 F.3d at 1325 (citing *KSR Int'l. Co.*, 550 U.S. at 401).

³⁰⁸ See *id.* at 1323 ("The accused process has as its genesis the Parity® system discussed in the '099 patent.").

³⁰⁹ *Id.* at 1325.

³¹⁰ *Id.* at 1326.

Consequently, the court concluded that the two asserted independent claims were “obvious as a matter of law.”³¹¹ The “modification of Parity® [the prior art system] to incorporate web browser functionality represent[ed] a combination of two well known prior art elements to a person of ordinary skill in the art.”³¹² The court also cited other patents predating the filing of the ’099 patent that used “internet and web browser technology to conduct electronic auctions.”³¹³ Even though these patents dealt with other types of auctions, “[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one.”³¹⁴ The court also found some of the patent’s dependent claims obvious under the same analysis.³¹⁵

A number of dependent claims survived the court’s invalidity analysis.³¹⁶ As a result, the court proceeded to analyze whether Thomson’s web-based auction system infringed any of those dependent claims.³¹⁷ The court confined its infringement analysis to the independent claims already held invalid because “[a] conclusion of noninfringement as to the independent claims requires a conclusion of noninfringement as to the dependent claims.”³¹⁸

Muniauction’s allegation of direct infringement relied on a theory of joint infringement because “no single party perform[ed] every step of the asserted claims.”³¹⁹ For example, the method of independent claim one (on which a number of the valid claims depended³²⁰) required “inputting data associated with at least one bid for at least one fixed income financial instrument into said bidder’s computer via said input device.”³²¹ Indeed, claim one concluded with a “wherein” clause requiring that at least one of

³¹¹ *Id.* at 1325.

³¹² *Id.* at 1326.

³¹³ *Id.*

³¹⁴ *Id.* (quoting *KSR Int’l. Co.*, 550 U.S. at 417).

³¹⁵ *See id.* at 1328.

³¹⁶ *See id.* at 1328–30.

³¹⁷ *Id.*

³¹⁸ *Id.* at 1328–29 n.5.

³¹⁹ *See id.* at 1328.

³²⁰ *See id.* (finding dependent claims 2, 18, 20, 24, 32, 40, 42, and 46 all valid); U.S. Patent No. 6,161,099 (filed May 29, 1998).

³²¹ *Muniauction, Inc.*, 532 F.3d at 1328–29 n.5.

the steps be “performed using a web browser.”³²² In the accused system, the bond bidder performed the inputting step using a computer and web browser as the input device.³²³ The auctioneer’s system performed a majority of the other steps of claim one.³²⁴

The joint infringement issue before the court was “whether the actions of at least the bidder and the auctioneer” could be combined “so as to give rise to a finding of direct infringement by the auctioneer.”³²⁵ The court applied *BMC Resources*’ “control or direction” standard “for whether a method claim is directly infringed by the combined actions of multiple parties.”³²⁶ The “control or direction” standard as articulated by *BMC Resources* states:

[W]here the actions of multiple parties combine to perform every step of a claimed method, the claim is directly infringed only if one party exercises ‘control or direction’ over the entire process such that every step is attributable to the controlling party, i.e., the ‘mastermind’.³²⁷

In contrast, “mere ‘arms-length cooperation’” by multiple parties “will not give rise to direct infringement by any party.”³²⁸

Here, the issue of infringement turned on “whether Thomson sufficiently control[led] or direct[ed] other parties (e.g., the bidder) such that Thomson itself can be said to have performed every step of the asserted claims.”³²⁹ The district court, having issued its decision prior to *BMC Resources*, read *On Demand Machine* as requiring the alleged direct infringer to have less than “direct control” over the other actors.³³⁰ The court’s jury instructions reflected that reading and instructed the jury to:

³²² *Id.* at 1323 (“[W]herein at least one of the inputting step, the automatically computing step, the submitting step, the communicating step and the displaying step is performed using a web browser.”).

³²³ *See id.* at 1328 n.5.

³²⁴ *See id.* at 1328–29.

³²⁵ *Id.* at 1329.

³²⁶ *Id.*

³²⁷ *Id.* (citing *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380–81 (Fed. Cir. 2007)).

³²⁸ *Id.* (citing *BMC Res., Inc.*, 498 F.3d at 1381).

³²⁹ *Id.* at 1329.

³³⁰ *Id.* (relying on *Muniauction, Inc. v. Thomson Corp.*, 502 F. Supp. 2d 477, 492 (W.D. Pa. 2007)).

Consider whether the parties are acting jointly or together in relation to the electronic auction process. Are they aware of each other's existence and interacting with each other in relation to the . . . process? Is there one party teaching, instructing, or facilitating the other party's participation in the electronic auction process?³³¹

Subsequently, the district court upheld the jury's finding of direct infringement because the evidence supported its finding of a sufficient connection between the parties.³³²

The Federal Circuit rejected the district court's reading of *On Demand Machine* based on *BMC Resources*' interpretation of that decision "as 'not in any way rely[ing] on the relationship between the parties.'"³³³ Further, the court found that the questions posed in the jury instructions were irrelevant to whether Thomson satisfied *BMC Resources*' "control or direction" standard.³³⁴ Thomson's exercise of control over system access and its usage instructions to bidders were insufficient for a finding of liability for direct infringement.³³⁵

The *Muniauction* panel then proceeded to articulate its gloss on *BMC Resources*: "The control or direction standard is satisfied in situations where the law would traditionally hold the accused direct infringer *vicariously liable* for the acts committed by another party that are required to complete performance of a claimed method."³³⁶ Here, the court found no basis under which Thomson "might be vicariously liable for the actions of the bidders" (using the web browser interface).³³⁷ It therefore found that the defendants did not infringe the valid dependent claims.

V. DISTRICT COURT DECISIONS FOLLOWING *BMC RESOURCES* AND *MUNIAUCTION*

Even after *Muniauction*'s elaboration of *BMC Resources*' "direct or control" standard, district court decisions have varied in the extent of direction or control required for liability under a theory of joint infringement. Some variation seems to arise out of the *Muniauction*

³³¹ *Id.*

³³² *Id.*

³³³ *Id.* at 1329–30 (quoting *BMC Res., Inc.*, 498 F.3d at 1380).

³³⁴ *Id.* at 1330.

³³⁵ *Id.*

³³⁶ *Id.* (citing *BMC Res., Inc.*, 498 F.3d at 1379) (emphasis added).

³³⁷ *Id.*

panel's statement that *BMC Resources*' "direct or control" standard is *satisfied* where applying agency law, the alleged infringer would be held vicariously liable for the acts of the other parties who perform steps of the method claim.³³⁸ Some district courts read that language to mean the standard is *only* satisfied when vicarious liability is found.³³⁹ Other courts view that language as allowing for a spectrum of direction or control relationships between the parties.³⁴⁰ Courts taking the latter view tend to view vicarious liability as sufficient, but not necessary, for joint infringement liability.³⁴¹ The two district decisions discussed below illustrate the two different approaches.

A. One Approach: Vicarious Liability Is Sufficient but Not Necessary for Joint Infringement Liability

In *Akamai Technologies, Inc. v. Limelight Networks, Inc.*,³⁴² Akamai, an Internet content delivery service, sued its competitor, Limelight Networks ("Limelight"), alleging infringement of Akamai's patent on content delivery systems and methods.³⁴³ The initial trial occurred subsequent to the Federal Circuit's *BMC Resources* decision and prior to *Muniauction*.³⁴⁴

Neither party disputed that Limelight's customers performed one or more steps of the asserted claims.³⁴⁵ Therefore, the judge instructed the jury that Limelight could be found liable for direct infringement, only if Limelight directed or controlled the actions performed by its customers.³⁴⁶

³³⁸ *Id.*

³³⁹ See, e.g., *Advanced Software Design Corp. v. Fiserv, Inc.*, No. 4:07CV185 CDP, 2009 WL 2855808, at *5 (E.D. Mo. Aug. 31, 2009); *Global Patent Holdings, LLC v. Panthers BRHC LLC*, 586 F. Supp. 2d 1331, 1335 (S.D. Fla. 2008).

³⁴⁰ See, e.g., *Ksolo, Inc. v. Catona*, No. CV 07-5213-CAS (AGRx), CV 08-1801-CAS (AGRx), 2008 WL 4906115, at *3 (C.D. Cal. Nov. 10, 2008); *Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811, 829 (S.D. Tex. 2008); *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 614 F. Supp. 2d 90, 120 (D. Mass. 2009).

³⁴¹ *Akamai Techs., Inc.*, 614 F. Supp. 2d at 120.

³⁴² 614 F. Supp. 2d 90 (D. Mass. 2009).

³⁴³ See *id.* at 100; see *Global Hosting, Sys.*, U.S. Patent No. 6,108,703 (filed May 19, 1999).

³⁴⁴ *Akamai Techs., Inc.*, 614 F. Supp. 2d at 116–17.

³⁴⁵ *Id.*

³⁴⁶ See *id.* at 118.

The jury then found sufficient evidence of direction or control for a finding of patent infringement and awarded Akamai \$45.5 million in damages.³⁴⁷

Following the jury verdict, Limelight moved for judgment as a matter of law (“JMOL”).³⁴⁸ Limelight argued that it did not direct or control its customers who performed steps of the asserted claims.³⁴⁹ However, the judge ruled sufficient evidence existed for a jury to have found “direction or control” under the *BMC Resources* standard.³⁵⁰ That evidence included the existence of contractual relationships between Limelight and its customers.³⁵¹ Additionally, Limelight provided its customers with “instructions explaining how to use its content delivery service.”³⁵²

Following the Federal Circuit’s *Muniauction* decision, Limelight moved for reconsideration of its earlier JMOL.³⁵³ Limelight argued that *Muniauction* required a showing that the alleged infringer is vicariously liable for any steps performed by others for a jury to find it liable for direct infringement.³⁵⁴ Mere control by the alleged infringer “over access to an Internet-based system, coupled with instructions to customers on how to use that system, is insufficient to establish direct infringement.”³⁵⁵

In analyzing Limelight’s arguments, the court assessed whether, following *Muniauction*, vicarious liability is a necessary, or simply a sufficient, condition to satisfy *BMC Resources*’ direction or control standard.³⁵⁶ The court read *Muniauction* as treating vicarious liability as a point along the “spectrum of possible interactions ranging from an arms-length agreement to ‘contracting out steps of a patented process to another entity.’”³⁵⁷ Vicarious liability is an alternate theory of liability and sits at a different point on the continuum than having another party perform steps on the alleged infringer’s behalf.³⁵⁸ The court posited that if vicarious

³⁴⁷ *Id.* at 95.

³⁴⁸ *Id.* at 119.

³⁴⁹ *See id.*

³⁵⁰ *Id.*

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ *Id.*

³⁵⁴ *Id.*

³⁵⁵ *Id.*

³⁵⁶ *Id.* at 120.

³⁵⁷ *Id.* (quoting *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007)).

³⁵⁸ *Id.* (citing *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1330 (Fed. Cir. 2008)).

liability were a necessary condition for a finding of joint infringement, “an entity could use a patented method with impunity by hiring an independent contractor to perform one or more steps of that method.”³⁵⁹ Thus, the court concluded, “While a showing of vicarious liability is sufficient to find direction or control, it is not a necessary requirement.”³⁶⁰

Nevertheless, the court did view *Muniauction* as establishing a new data point on the direction or control continuum.³⁶¹ Specifically, *Muniauction* established that a showing of control over access to a system coupled with instructions to customers on how to use that system is insufficient for a finding of joint infringement.³⁶² The court noted that, in *Muniauction*, the fact that the alleged infringer charged customers a fee to use the system was insufficient to establish direction or control.³⁶³ Therefore, “direction or control requires *something more* than merely a contractual agreement to pay for a defendant’s services and instructions or directions on how to utilize those services.”³⁶⁴

The court then applied its view of *Muniauction* to Limelight’s alleged infringing system and found no support for a finding that Limelight was vicariously liable for the actions of its customers.³⁶⁵ The court also did not find the “something more” required in addition to contractual agreements and instructions for use.³⁶⁶

Although mastermind cannot shield itself from infringement by contracting out steps to be performed by others, “the existence . . . of a contract for services does not give rise to direction or control, even if the customer must perform one or more steps of the patented process.”³⁶⁷ As with Thomson, the alleged infringer in *Muniauction*, Limelight’s customers pay to access its content delivery service.³⁶⁸ Limelight does not contract out steps of the patented claim to another party to perform; rather, Limelight’s customers perform one or more steps in their use of Limelight’s service.³⁶⁹ Further, the court found no evidence that

³⁵⁹ *Id.*

³⁶⁰ *Id.*

³⁶¹ *Id.*

³⁶² *See id.* at 121 (citing *Muniauction, Inc.*, 532 F.3d at 1330).

³⁶³ *Id.*

³⁶⁴ *Id.* (emphasis added).

³⁶⁵ *Id.* at 122.

³⁶⁶ *Id.*

³⁶⁷ *Id.* at 121.

³⁶⁸ *See id.*

³⁶⁹ *Id.*

Limelight's agreements with its customers were anything other than the result of "arms-length contract negotiation."³⁷⁰ Based on the lack of sufficient direction or control under the new bar established by *Muniauction*, the court granted the motion for reconsideration and found no direct infringement.³⁷¹

B. Another Approach: Liability for Joint Infringement Requires a Relationship That Gives Rise to Vicarious Liability

In *Global Patent Holdings, LLC v. Panther BRHC LLC*,³⁷² the patent owner alleged direct infringement by the defendant under a theory of joint infringement.³⁷³ The plaintiff's amended complaint explicitly alleged joint infringement through the joint action of the defendant and a user of its website.³⁷⁴ In a nod to the *BMC Resources* standard, the complaint alleged that the defendant's website controlled and directed the performance of the method steps not performed by the defendant itself.³⁷⁵

The defendant did business as the Boca Raton Resort & Club ("Boca Resort") and operated the resort's website.³⁷⁶ Boca Resort moved for dismissal of the complaint on the basis of the plaintiff's failure to adequately state a claim for direct infringement.³⁷⁷ Boca Resort argued that the complaint failed to allege "sufficient 'direction or control' over third party 'joint infringers'" in light of *BMC Resources*.³⁷⁸

In considering the motion, the court analyzed the standard established by *BMC Resources* and *Muniauction* to ascertain the level of "direction or control" required for joint infringement liability.³⁷⁹ The court concluded that "mere guidance or instruction" in how to perform method steps is insufficient.³⁸⁰ Rather, the third party actor "must perform the steps of the patented process by virtue of a contractual obligation or other relationship

³⁷⁰ *Id.* at 122.

³⁷¹ *Id.* at 123.

³⁷² 586 F. Supp. 2d 1331 (S.D. Fla. 2008).

³⁷³ *See id.* at 1332–33.

³⁷⁴ *Id.* at 1333.

³⁷⁵ *See id.*

³⁷⁶ *Id.* at 1331, 1333.

³⁷⁷ *Id.* at 1333.

³⁷⁸ *Id.*

³⁷⁹ *Id.* at 1334–35.

³⁸⁰ *Id.* at 1335.

that gives rise to vicarious liability”³⁸¹ The court viewed this kind of relationship as a requirement for a finding of joint infringement.³⁸²

The parties agreed that practice of the asserted method claim requires two entities: “a remote computer user and the website server.”³⁸³ Also, practice of the method does not begin until a remote user visits the resort’s website.³⁸⁴ The plaintiff argued that the actions on the part of the remote computer user are controlled by Boca Resorts because it downloads Javascript code to the user’s computer and that code allows the process to begin.³⁸⁵

Applying the stricter vicarious liability relationship view of the Federal Circuit standard, the court found that the downloading of code was insufficient to constitute direction or control by Boca Resort of the remote user.³⁸⁶ Remote users access Boca Resort’s website of their own free will; they are not contractually bound to do so.³⁸⁷ Plaintiff’s complaint did not allege that the remote users were Boca Resort’s agents or that they “visit the website within the scope of their agency relationship.”³⁸⁸ The court found that the plaintiff insufficiently alleged any relationship giving rise to vicarious liability on the part of Boca Resort.³⁸⁹ Finding that the plaintiff’s allegation of joint infringement was insufficient, the court granted the motion to dismiss.³⁹⁰

VI. CONCLUSION

In *BMC Resources*, the Federal Circuit rightfully observed that proper claim drafting can help patentees avoid the risk of being unable to enforce their patent rights against infringers who collaborate with other parties.³⁹¹ With care and forethought, a patent drafter can “usually structure a claim to capture infringement by a single party.”³⁹² The Federal Circuit’s

³⁸¹ *Id.*

³⁸² *Id.*

³⁸³ *Id.*

³⁸⁴ *Id.*

³⁸⁵ *Id.*

³⁸⁶ *Id.*

³⁸⁷ *Id.*

³⁸⁸ *Id.*

³⁸⁹ *See id.* (finding that the plaintiff did not allege any facts that would render the defendant vicariously liable for the acts of the remote user).

³⁹⁰ *Id.* at 1335–36.

³⁹¹ *See BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007).

³⁹² *Id.* (citing Lemley, *supra* note 3, at 272–75).

exhortation, along with earlier calls for careful single-actor claiming by Professor Lemley and others, indeed helps the patent community create stronger patents. However, many important and perhaps seminal patents filed during the early days of e-commerce in the 1990s may as a practical matter be unenforceable.

As this article discussed, some patented methods explicitly require multiple parties to perform the various steps. Others patents may have perfectly well drafted claims, but nevertheless discover they cannot recover against clever entities that use the law to avoid infringement. Those entities might avoid infringement by practicing certain steps of a claimed method off-shore or by collaborating with other parties to practice the claim in a way that doesn't involve a single mastermind directing or controlling the other actors.

Muniauction's vicarious liability gloss on *BMC Resources* "direct or control" standard has increased the potential for parties to collaborate in such a way as to avoid infringement of claimed methods. Under the *BMC Resources* expression of the "direct or control" standard, the finding of an agency relationship sufficient for imposition of vicarious liability on an accused infringer would probably meet the standard. However, other evidence of direction or control insufficient for vicarious liability might also meet the standard. Therefore, a patent holder could recover against infringers who directed and controlled other entities in the performance of a claimed method, but where the level of direction and control did not rise to the level of agency or vicarious liability. If district courts treat *Muniauction* to require vicarious liability on the part of the alleged direct infringer, those same patent holders would no longer be able to recover against such alleged infringers.

As more district courts apply this new standard for liability under a theory of joint infringement and the resulting decisions are reviewed by the Federal Circuit, hopefully a more balanced approach to the standard will emerge. Today, the balance between the rights of patent holders and entities who wish to practice many e-commerce and Internet-based inventions seems heavily tilted towards the latter.