

NOTE

ELIMINATING THE SINGLE-ENTITY RULE IN JOINT INFRINGEMENT CASES: LIABILITY FOR THE LAST STEP

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INTRODUCTION

WORLD Wide Web creator Tim Berners-Lee foresaw trouble for the Internet twenty years ago. As more people gained web access and websites increasingly embedded pictures, songs, videos, advertisements, and other content more complex than mere text, server congestion threatened to grind content delivery to a halt.¹ So Berners-Lee challenged his colleagues at MIT to generate a new, more efficient way to deliver web content.² Professor Tom Leighton and Ph.D. student Danny Lewin unveiled their revolutionary solution at the 1997 MIT Entrepreneurship Competition.³

Their new method re-examined the previously assumed direct link between a web user and a content provider's server. Under the traditional approach in the mid-1990s, a given server hosted all of a website's content: the page with its text, the pictures, the videos, and any other content that a user would see when she accessed the site. Leighton's and Lewin's approach divided these responsibilities to lessen the load on any one specific server. Their method replicated a provider's embedded content—such as videos, pictures, or banner ads—onto a set of servers in various locations throughout the country.⁴ The provider's

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¹ See Company History, Akamai Techs., http://www.akamai.com/html/about/company_history.html (last visited May 11, 2014).

² Id.; see also Adam L. Penenberg, Speed Racer, *Forbes* (Sept. 20, 1999, 12:00 AM), <http://www.forbes.com/forbes/1999/0920/6407200a.html> (recounting the development of Akamai and tracing its roots to Berners-Lee's challenge).

³ See Akamai Techs., *supra* note 1.

⁴ See Penenberg, *supra* note 2.

web page, meanwhile, “tagged” the embedded objects so that the page would tell web browser programs to access the content from one of the various servers that now hosted the embedded content as opposed to loading the content directly from the provider’s server.⁵ This allowed users accessing a web page to receive the “base document” from one server and the “tagged” embedded objects—the images, video, or ads now pervasive on even basic websites—from another server.⁶ This method lessened crashes, especially during peak web-traffic events such as the NCAA men’s basketball tournament, and it allowed for faster, more efficient content delivery.⁷ Lewin and Leighton founded Akamai Technologies⁸ and, with a license they acquired from MIT for the newly patented method, changed the Internet forever.⁹ Within a year of Akamai’s founding, Yahoo, CNN, and the New York Times had all signed on as clients.¹⁰ The company now delivers between fifteen and thirty percent of all web content and facilitates more than two trillion Internet interactions every day.¹¹

Rivals saw opportunity. Limelight Networks, a competitor in the content-delivery business, came up with a simple work-around that allowed it to sell a service that duplicated Akamai’s method without (Limelight hoped) infringing the patent. Under Limelight’s approach, instead of the parent company (in this case, Limelight) tagging the embedded objects, the clients (websites) would do it themselves.¹² This minor tweak, which would still allow Limelight to deliver content to web users by sending base documents straight from the provider’s server and tagged objects from other servers, allowed Limelight to take advantage of the U.S. Court of Appeals for the Federal Circuit’s “single-

⁵ Akamai Techs. v. Limelight Networks, 692 F.3d 1301, 1306 (Fed. Cir. 2012) (en banc) (per curiam), cert. granted, 134 S. Ct. 895 (2014).

⁶ Akamai Techs. v. Limelight Networks, 629 F.3d 1311, 1314–16 (Fed. Cir. 2010), reh’g en banc granted, vacated sub nom. Akamai Techs. v. MIT, 419 F. App’x 989 (Fed. Cir. 2011).

⁷ Id. at 1315; Todd Leopold, The Legacy of Danny Lewin, the First Man to Die on 9/11, CNN.com (Sept. 11, 2013, 7:24 AM), <http://www.cnn.com/2013/09/09/tech/innovation/danny-lewin-9-11-akamai/>.

⁸ Brief in Opposition at 3, Limelight Networks v. Akamai Techs., 134 S. Ct. 2111 (2014) (No. 12-786).

⁹ Akamai, 692 F.3d at 1333 (Newman, J., dissenting).

¹⁰ See Penenberg, supra note 2.

¹¹ See Facts and Figures, Akamai Techs., http://www.akamai.com/html/about/facts_figures.html (last visited Apr. 16, 2014).

¹² Akamai, 692 F.3d at 1333 (Newman, J., dissenting).

entity rule.”¹³ That rule provides that only parties “who practice each and every element of the claimed invention” are liable for direct infringement.¹⁴

Akamai sued Limelight for infringement, and a jury found Limelight liable for more than \$45.5 million in damages.¹⁵ But the district court held as a matter of law that Limelight did not infringe the patent because of the single-entity rule: Its customers, not Limelight itself, performed one of the steps of the patented method by tagging the objects.¹⁶ The case rose all the way to the U.S. Supreme Court in the October 2013 Term,¹⁷ but the questions at the heart of the matter—can multiple parties combine to infringe a patent, and if so, under what legal standard?—remain unsettled.

Direct infringement of a patent is a strict liability offense under the Patent Act of 1952 (“the Patent Act”), and liability attaches to any party who “makes, uses, offers to sell, or sells any patented invention.”¹⁸ The problem in *Akamai Technologies v. Limelight Networks*, as in cases similar to it, arose because the plaintiff owned a *method* patent.¹⁹ Unlike other patentable inventions, such as a “machine, manufacture, or composition of matter,”²⁰ a method (or “process”) is intangible. While determining who made, used, or sold a tangible item is often simple and occurs at a specific point in time, determining who used a patent that consists of nothing more than a series of steps is a complex question. Modern technology, which allows parties to easily work together and divide the steps among themselves, exacerbates the problem.

The Federal Circuit has, through a series of cases, attempted to identify the legal relationship necessary among the parties for one or all of them to be liable as direct infringers. These efforts have led to a string of splintered decisions that culminated with an en banc decision in *Akamai* that the Supreme Court promptly rejected while offering no

¹³ See *id.* at 1319–21.

¹⁴ *Id.* at 1347 (Linn, J., dissenting) (quoting *BMC Res. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007)).

¹⁵ *Akamai Techs. v. Limelight Networks*, 614 F. Supp. 2d 90, 95 (D. Mass. 2009), *aff’d*, 629 F.3d 1311 (Fed. Cir. 2010), *reh’g en banc granted*, vacated *sub nom. Akamai Techs. v. MIT*, 419 F. App’x 989 (Fed. Cir. 2011), *rev’d and remanded*, 692 F.3d 1301 (Fed. Cir. 2012), *cert. granted* 134 S. Ct. 895 (2014).

¹⁶ *Id.* at 96, 122.

¹⁷ See *Limelight Networks v. Akamai Techs.*, 134 S. Ct. 2111 (2014).

¹⁸ 35 U.S.C. § 271(a) (2012).

¹⁹ 692 F.3d at 1306.

²⁰ See 35 U.S.C. § 101.

additional guidance about what the correct approach might be. Scholarly attempts to solve the riddle have likewise failed to identify an adequate solution. This Note considers and rejects these prior approaches and offers a new path forward by rejecting and replacing the single-entity rule.

This Note will proceed in five Parts. Part I will review the joint infringement doctrine leading up to *Akamai* and briefly summarize that case. Part II will consider and critique alternative theories of joint, direct liability that courts and scholars have suggested. Part III will reconsider the premise of joint infringement cases by examining the legal underpinnings of the Federal Circuit's "single-entity rule" and call for the rule's elimination. Part IV will offer a new, alternative approach, suggesting that the party who completes the last step of a method patent, accomplishes the result the method is designed to achieve, and would fail to accomplish that result but for each prior step having already been completed "uses" the patent and thus directly infringes it under the text of the Patent Act. Part V will conclude by considering, and responding to, potential ramifications of this approach.

I. THE JOINT INFRINGEMENT DOCTRINE

Section 271(a) of the Patent Act provides in relevant part that "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States . . . infringes the patent."²¹ Courts refer to this section as defining "direct infringement."²² Under current Federal Circuit precedent, a defendant does not "use" a patented method—and therefore does not directly infringe that method—unless he practices all of the method's steps.²³ For example, if Alex performs some but not all of the steps, and Bob performs the remaining steps, neither Alex nor Bob will be liable for direct infringement under Section 271(a) since neither has performed all of the steps. This principle is known as the "single-entity rule."²⁴ In limited circumstances, however, courts attribute Bob's actions to Alex and hold Alex liable as a direct infringer. If Alex is vicariously liable for Bob's actions, for instance,

²¹ 35 U.S.C. § 271(a).

²² See, e.g., *Limelight*, 134 S. Ct. at 2116.

²³ See, e.g., *NTP, Inc. v. Research In Motion*, 418 F.3d 1282, 1318 (Fed. Cir. 2005). Part III of this Note challenges this rule's validity and argues the Patent Act does not require it.

²⁴ See *supra* notes 13–14 and accompanying text.

then he will be liable for direct infringement if their combined actions use the patent.²⁵ This doctrine, which considers when and under what circumstances courts can attribute one party's actions to another for purposes of direct infringement liability, is known as the "joint infringement" doctrine.²⁶ Joint infringement is only an issue in method patent cases.²⁷ In claims for infringement of other, tangible patents, such as a product or apparatus, the party that installs the final part of the patented item "makes" the invention and, absent a defense, is liable as a direct infringer.²⁸

A. *Pre-Akamai*

The joint infringement doctrine is a recent innovation. Early decisions, occurring outside of the Internet or digital technology context (and some before Congress created the Federal Circuit), employed a variety of often-incomplete standards.²⁹ The last decade, however, has seen a rise in joint infringement claims before the Federal Circuit, perhaps because of a rise in the number of method claims that do not involve physical components and that allow multiple parties to more easily divide the steps using advanced technology.³⁰ As a result, the

²⁵ See *BMC Res. v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007), overruled by *Akamai*, 692 F.3d 1301.

²⁶ See *id.* at 1378 (referring to "the law governing joint infringement by multiple parties").

²⁷ See *Akamai*, 692 F.3d at 1305–06 ("The problem of divided infringement in induced infringement cases typically arises only with respect to method patents. When claims are directed to a product or apparatus, direct infringement is always present, because the entity that installs the final part and thereby completes the claimed invention is a direct infringer.").

²⁸ *Id.* at 1305–06, 1316.

²⁹ See, e.g., *Fromson v. Advance Offset Plate*, 720 F.2d 1565, 1567–68 (Fed. Cir. 1983) (suggesting that a customer may directly infringe a method claim where its vendor performs the initial steps and the customer performs the final step); *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980) ("When infringement results from the participation and combined action of several parties, 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." (citations omitted)). But see, e.g., *Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291–92 (9th Cir. 1974) ("We question whether a method claim can be infringed when two separate entities perform different operations and neither has control of the other's activities. No case in point has been cited.").

³⁰ See Mark A. Lemley et al., *Divided Infringement Claims*, 33 *AIPLA Q.J.* 255, 256 (2005) ("These distributed or divided patent claims are surprisingly common, particularly in the field of computer networking, where a patented process may involve some steps performed on the client side and others performed on the server side.").

Federal Circuit further developed the joint infringement doctrine in a series of recent rulings.

The court first squarely addressed the issue in 2007 in *BMC Resources v. Paymentech, L.P.*³¹ The court first noted that the “single-entity” rule in method patent cases required one party to perform all steps of the claimed process.³² Reasoning that joint infringement only occurred if the law could attribute one party’s performance to another, the *BMC* court concluded that the proper standard “requir[ed] control or direction for a finding of joint infringement.”³³ The court further held that the “party in control” or the “mastermind” would be liable for direct infringement in such instances.³⁴ The court also stated that “[a] party cannot avoid infringement . . . simply by contracting out steps of a patented process to another entity.”³⁵

A year later, the court revisited its joint infringement test in *Muniauction, Inc. v. Thomson Corp.*³⁶ There, the court held that the *BMC* “control or direction” standard applied in cases where the law would otherwise hold one party vicariously liable for the other’s actions.³⁷ The *Muniauction* court drew a distinction between a controlling party “mastermind” and, “[a]t the other end of this multi-party spectrum, mere ‘arms-length cooperation’ [that] will not give rise to direct infringement by any party.”³⁸ *Muniauction* thus limited the scope of joint infringement claims under the *BMC* standard.

The court further narrowed the doctrine in *Golden Hour Data Systems v. emsCharts, Inc.*,³⁹ where two companies had “formed a strategic partnership, enabled their two [software] programs to work together, and collaborated to sell the two programs as a unit.”⁴⁰ Thus combined, the software allegedly completed all the steps of the claimed method, but the Federal Circuit concluded that the companies were not direct infringers because “there was insufficient evidence of ‘control’ or ‘direction’ by

³¹ 498 F.3d at 1378.

³² *Id.* at 1380. Part III of this Note challenges the single-entity rule’s validity and Part IV suggests an alternative approach.

³³ *Id.* at 1381.

³⁴ *Id.*

³⁵ *Id.*

³⁶ 532 F.3d 1318 (Fed. Cir. 2008), overruled by *Akamai*, 692 F.3d 1301.

³⁷ *Id.* at 1330.

³⁸ *Id.* at 1329.

³⁹ 614 F.3d 1367 (Fed. Cir. 2010), overruled by *Akamai*, 692 F.3d 1301.

⁴⁰ *Id.* at 1371.

[either member of the partnership] to find joint infringement of any of the method claims.”⁴¹ The joint infringement doctrine thus teetered on the brink of irrelevancy: Two sophisticated companies who explicitly agreed to work together to perform a patented method were not liable for doing so. Two years later, the court sought a solution.

B. Akamai v. Limelight

The Federal Circuit avoided the *BMC*, *Muniauction*, and *Golden Hour* line of cases in an en banc opinion in *Akamai Technologies v. Limelight Networks*.⁴² Like the defendant in *BMC*, the defendant in *Akamai* sold software that performed the same method as the plaintiff’s patent but had customers perform one of the steps.⁴³ The defendant (Limelight) not only had a contract with its customers but also provided instructions on “how to utilize its content delivery service.”⁴⁴ Nevertheless, both the district court and the Federal Circuit held that Limelight’s relationship with its customers did not create vicarious liability as *Muniauction* now required.⁴⁵

But though the briefing in the case focused on the single-entity rule and joint, direct infringement,⁴⁶ the en banc Federal Circuit issued an opinion that approached the issue from an entirely different route. The court held that the defendant may have *induced* infringement,⁴⁷ and thus violated Section 271(b) of the Patent Act, which provides that “[w]hoever actively induces infringement of a patent shall be liable as an infringer.”⁴⁸ Because the court determined that its reasoning did not rely on the joint infringement doctrine, it did not return to the single-entity rule or otherwise consider the question of joint, *direct* infringement under Section 271(a).⁴⁹

This ruling departed from Federal Circuit precedent in two significant ways. First, and most importantly, it held for the first time that a party

⁴¹ Id. at 1373 (agreeing with the district court’s conclusion on this point without “extended discussion”).

⁴² 692 F.3d 1301 (en banc) (per curiam).

⁴³ Id. at 1306.

⁴⁴ Id. at 1335 (Newman, J., dissenting) (quoting *Akamai Techs. v. Limelight Networks*, 614 F. Supp. 2d 90, 119 (D. Mass. 2009)).

⁴⁵ Id. at 1318 (majority opinion).

⁴⁶ Id. at 1306.

⁴⁷ Id. at 1319.

⁴⁸ 35 U.S.C. § 271(b) (2012).

⁴⁹ *Akamai*, 692 F.3d at 1307.

could be liable for induced infringement even if no party had committed direct infringement. The court claimed that its new construction was permissible because Section 271(a) defined only “infringing conduct,” not “infringement” as used in other sections of the statute.⁵⁰ This holding was contrary to significant Supreme Court and Federal Circuit precedent.⁵¹ In an attempt to distinguish its new rule from precedent, the Federal Circuit contended that while there was no liable direct infringer, there was still “actual infringement” that could serve as the necessary predicate for liability under Section 271(b).⁵² The majority relied heavily on a statement from Giles Rich,⁵³ a principal drafter of the Patent Act (and later a long-time judge on the Federal Circuit⁵⁴), which arguably indicated that there could be contributory infringement even if there was no direct infringer.⁵⁵

⁵⁰ Id. at 1309.

⁵¹ See *Joy Techs. v. Flakt, Inc.*, 6 F.3d 770, 774 (Fed. Cir. 1993) (collecting cases holding that there can be no contributory or induced infringement unless there is also direct infringement).

⁵² *Akamai*, 692 F.3d at 1308 (emphasis added).

⁵³ Id. at 1310 (quoting Contributory Infringement of Patents: Hearings on H.R. 5988, H.R. 4061, and H.R. 5248 Before the Subcomm. on Patents, Trade-Marks, and Copyrights of the H. Comm. on the Judiciary, 80th Cong. 5 (1948) (statement of Giles Rich, Vice President, New York Patent Law Association) [hereinafter 1948 Hearings]).

⁵⁴ Rich would later become Judge Rich after his appointment to the U.S. Court of Customs and Patent Appeals in 1956. He sat on the bench, including the Federal Circuit at its inception in 1982, for a total of forty-three years. See Philip C. Swain, A Brief Biography of Giles Sutherland Rich, 3 J. Fed. Cir. Hist. Soc’y 9, 21 (2009). Both the *Akamai* majority and dissenting opinions relied on his statements when trying to discern Congress’s intent behind the Patent Act. See *Akamai*, 692 F.3d at 1310–11; id. at 1323 (Newman, J., dissenting); id. at 1340–41 (Linn, J., dissenting). Judge Linn, however, cited Rich only to show some inconsistencies in his statements and cast doubt on the majority’s reliance on his testimony. He noted that “the Supreme Court has repeatedly admonished that Congressional hearing testimony, not from a member of Congress, is not entitled to any weight or significance in statutory interpretation.” Id. at 1341 (Linn, J., dissenting) (citing *Kelly v. Robinson*, 479 U.S. 36, 51 n.13 (1986)). But precedent suggests that the Supreme Court may assign Rich’s statements about the Patent Act more weight and deference than the Court typically gives to statements by non-legislators. See, e.g., *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 206–13 (1980) (citing Rich’s testimony extensively while trying to discern Congress’s intent in the Patent Act of 1952).

⁵⁵ At the time of these hearings, the term “contributory infringement” was used to encompass both induced infringement, now defined under 35 U.S.C. § 271(b) (2012), and contributory infringement, now defined under 35 U.S.C. § 271(c). See 1948 Hearings, *supra* note 53, at 15 (statement of Robert W. Byerly, Chairman, Committee on Patents, Association of the Bar of the City of New York); see also Giles S. Rich, *Infringement Under Section 271 of the Patent Act of 1952*, 21 Geo. Wash. L. Rev. 521, 537 (1953) (“Paragraphs (b) and (c) [of Section 271] deal with two kinds of contributory infringement.”).

The second novel aspect of the *Akamai* en banc holding was the Federal Circuit's determination that multiple parties could infringe a patent without any agency relationship or vicarious liability amongst them. The court concluded that "[S]ection 271(b) extends liability to a party who advises, encourages, or otherwise induces others to engage in infringing conduct" and therefore "[i]t is enough that the inducer 'cause, urge, encourage, or aid' the infringing conduct and that the induced conduct is carried out."⁵⁶ By moving joint infringement claims to induced infringement under Section 271(b), instead of direct infringement under Section 271(a), the Federal Circuit avoided the *BMC*, *Muniauction*, and *Golden Hour* doctrine that a party is only liable for another's actions if the former party is vicariously liable for the actions of the latter.

Both parties petitioned for writs of certiorari. Limelight argued that the Federal Circuit's new rule that there can be induced infringement under Section 271(b) even though no party is liable for direct infringement under Section 271(a) was wrong because induced infringement requires a predicate act of direct infringement.⁵⁷ *Akamai*, sensing trouble, cross-petitioned. Its petition asked the Court to affirm or, in the alternative, to consider addressing the original issue on appeal: under what standard a party or parties could be liable for direct infringement under Section 271(a).⁵⁸ But the Court granted only Limelight's petition,⁵⁹ leaving unsettled the question of whether—and if so, under what standard—two parties can be jointly liable for direct infringement.

C. The Supreme Court Weighs In: Limelight v. Akamai

Given the obvious departure from Federal Circuit precedent, it was no surprise that the Supreme Court's decision in *Limelight Networks v. Akamai Technologies* unanimously reversed the Federal Circuit's en banc decision.⁶⁰ Indeed, the Court showed little patience with the

⁵⁶ *Akamai*, 692 F.3d at 1307–08 (alteration removed) (quoting *Arris Grp. v. British Telecomms. PLC*, 639 F.3d 1368, 1379 n.13 (Fed. Cir. 2011)).

⁵⁷ Petition for Writ of Certiorari at 16–17, *Limelight Networks v. Akamai Techs.*, 134 S. Ct. 2111 (2014) (No. 12-786).

⁵⁸ Conditional Cross-Petition for Writ of Certiorari at 18, *Akamai Techs. v. Limelight Networks*, 134 S. Ct. 2723 (2014) (mem.) (No. 12-960).

⁵⁹ See *Limelight Networks v. Akamai Techs.*, 134 S. Ct. 895 (2014) (mem.).

⁶⁰ 134 S. Ct. 2111.

Federal Circuit, noting that the analysis in the en banc court's majority opinion "fundamentally misunderstands what it means to infringe a method patent."⁶¹ Even Akamai refused to fully support the en banc holding in front of the Court. Instead, all parties, including the Court, agreed with the "simple truth" that induced infringement under Section 271(b) "may arise 'if, but only if, [there is] . . . direct infringement [as defined under Section 271(a)].'"⁶² In just ten short pages, the Court undid the Federal Circuit's most recent and most fruitless attempt to solve the joint infringement riddle.

But the Court's opinion is most significant for what it did *not* say. After granting Limelight's petition and denying Akamai's cross-petition for review,⁶³ the Court confined itself only to the very narrow question of whether the Federal Circuit's new test was correct.⁶⁴ This did not have to be the case. Although the Court had already rejected Akamai's petition for certiorari, the company nevertheless asked the Court to review the Federal Circuit's single-entity rule, most recently stated in *Muniauction*.⁶⁵ The Court declined.⁶⁶ Alternatively, the Court could have held, as a preliminary matter, that the single-entity rule is the correct conception of direct infringement under Section 271(a) before arriving at its ultimate holding that there can be no indirect infringement without a predicate act of direct infringement. But instead the Court arrived at its decision by "[a]ssuming without deciding that the Federal Circuit's holding in *Muniauction* is correct,"⁶⁷ an assumption it noted more than once.⁶⁸

Simple assumptions might not ordinarily indicate skepticism. But the Court dropped other clues that suggested misgivings about the single-entity rule. Most prominently, the Court acknowledged that the rule creates an exploitable loophole for "would-be infringer[s]" to walk through, and it labeled that result a "concern."⁶⁹ The Court followed that acknowledgement by concluding its opinion with a thinly veiled

⁶¹ Id. at 2117.

⁶² Id. (quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 341 (1961)).

⁶³ See *Akamai*, 134 S. Ct. 2723.

⁶⁴ See *Limelight*, 134 S. Ct. at 2120.

⁶⁵ See id.

⁶⁶ Id.

⁶⁷ Id. at 2117.

⁶⁸ Id. at 2119.

⁶⁹ Id. at 2120.

suggestion to the Federal Circuit: “[O]n remand, the Federal Circuit will have the opportunity to revisit the [joint, direct infringement] question if it so chooses.”⁷⁰ The next Part of this Note examines possible solutions that the Federal Circuit may consider on remand.

II. PROPOSED JOINT INFRINGEMENT TESTS

Since the Federal Circuit decided *BMC Resources v. Paymentech, L.P.*⁷¹ in 2007, a number of court opinions and scholarly articles have attempted to explain how multiple parties, working together, might jointly, directly infringe a method patent. Besides the *Akamai* en banc majority’s proposed solution, most of these explanations borrow from various tort doctrines typically used to attribute the actions of one party to another. This Part examines several proposed approaches to joint, direct infringement but ultimately concludes that each contains flaws that doom their application.

A. *The BMC and Muniauction Vicarious Liability Standard*

The Supreme Court wasted little time disposing of the en banc Federal Circuit’s newfangled induced-infringement-without-direct-infringement approach to joint infringement in *Limelight Networks v. Akamai Technologies*.⁷² But that did not settle the larger issue. The consequence of the Court’s reverse and remand in *Limelight* is the opportunity for the Federal Circuit to reconsider the original issue: Under what circumstances can a court attribute one party’s actions to another so that the second party could be liable for direct infringement under Section 271(a)? Before *Akamai* (and, at least temporarily, post-*Limelight*) the Federal Circuit answered that question with *BMC and Muniauction, Inc. v. Thomson Corp.*⁷³

BMC, like *Akamai*, involved a method patent in which the defendant had customers perform some steps of the method.⁷⁴ The court held that a defendant who “participates in or encourages” another to infringe a patent is traditionally liable for indirect infringement, but only if another party is liable for direct infringement (reasoning that *Akamai* would later

⁷⁰ *Id.*

⁷¹ 498 F.3d 1373 (Fed. Cir. 2007).

⁷² 134 S. Ct. 2111.

⁷³ 532 F.3d 1318 (Fed. Cir. 2008).

⁷⁴ *BMC*, 498 F.3d at 1375–76.

contradict).⁷⁵ This standard, the court held, amounted to vicarious liability.⁷⁶

The court then recognized but rejected a potential loophole to limiting joint, direct infringement claims to those featuring vicarious liability. Instead of allowing a party “to escape infringement by having a third party carry out one or more of the claimed steps on its behalf,” the court wrote, “the 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.”⁷⁷ The court went on to hold that the defendant did not infringe BMC’s patent because the evidence was insufficient to show that the defendant “control[led] or direct[ed]” its customers.⁷⁸ A year later in *Muniauction*, the court clarified that BMC’s “control or direction standard” is met when “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.”⁷⁹

These decisions set out a narrow standard that parties can easily circumvent.⁸⁰ Outside of the limited context of vicarious liability, where one party has an agency relationship with the other(s), parties can work together and concoct plans to use a patented method while evading liability. *Muniauction* and *BMC* provide obvious examples of how this might happen: In both cases, the defendants combined with software users to perform all the steps of the patented methods, but there was no liability because the relationship between a company and its customers

⁷⁵ Id. at 1379 (citing *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004)).

⁷⁶ Id.

⁷⁷ Id. (citing *Engle v. Dinehart*, 213 F.3d 639 (5th Cir. 2000) (unpublished table decision)). The *Engle* court cited the Restatement (Second) of Agency § 220 cmt. d. (1958) as the source for its holding on this point. *Engle*, 213 F.3d 639.

⁷⁸ *BMC*, 498 F.3d at 1381.

⁷⁹ *Muniauction*, 532 F.3d at 1330.

⁸⁰ See, e.g., Stacie L. Greskowiak, Note, Joint Infringement After *BMC*: The Demise of Process Patents, 41 Loy. U. Chi. L.J. 351, 398–401 (2010) (describing how the loophole violates fundamental patent policies); Joshua P. Larsen, Note, Liability for Divided Performance of Process Claims After *BMC Resources v. Paymentech, L.P.*, 19 DePaul J. Art Tech. & Intell. Prop. L. 41, 43–46, 58–59 (2008) (depicting the ease with which a single entity or multiple entities could avoid infringement liability on a patented process under the *BMC* standard); Long Truong, Note, After *BMC Resources v. Paymentech, L.P.*: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable, 103 Nw. U. L. Rev. 1897, 1918–22 (2009) (explaining and offering solutions to the standard’s loophole for process and improved process patent infringement).

is not one of “direction or control” where the law would impose vicarious liability.⁸¹ The *BMC* court also recognized another possible end-around by acknowledging that its control and direction standard “may in some circumstances allow parties to enter into arms-length agreements to avoid infringement.”⁸² The Federal Circuit wasted little time in turning this speculation into law. In *Golden Hour Data Systems v. emsCharts, Inc.*,⁸³ the court held there was no liability as a matter of law even though two companies partnered together to sell their software, which when combined performed a patented method.

Golden Hour exposed the inadequacy of the Federal Circuit’s “control or direction” test. The defendants in that suit laid out a path that all future patent thieves can follow to avoid liability for infringing a patented method. Eviscerating the protection afforded by Section 271(a) has the effect of making interactive method claims unenforceable⁸⁴ and, as discussed in Section IV.B, is contrary to Congress’s intent to provide patent holders with broad protection. Reverting to the *BMC* and *Muniauction* standard thus appears, much like the *Akamai* solution, to be an unpalatable solution to the joint infringement problem.

B. Alternative Solutions Based on Tort Doctrines

In the search for a middle ground—something between the “control or direction” standard’s narrow protection of method patents and *Akamai*’s “induced infringement absent direct infringement” standard that bent the statute to provide broader protection—commentators have turned to various tort doctrines to solve the joint infringement conundrum. This Section examines these solutions, but ultimately rejects each for the same reasons: They presume an individual tortfeasor, they try to fit a negligence-based concept into a strict liability statute, or they do both.

⁸¹ See *Muniauction*, 532 F.3d at 1323–24; *BMC*, 498 F.3d at 1375–76.

⁸² *BMC*, 498 F.3d at 1381.

⁸³ 614 F.3d 1367, 1369–71 (Fed. Cir. 2010).

⁸⁴ See Ronald Mann, Argument Preview: Ending the Term Not with a Bang but a Whimper, SCOTUSblog (Apr. 28, 2014, 12:00 PM), <http://www.scotusblog.com/2014/04/argument-preview-ending-the-term-not-with-a-bang-but-a-whimper/> (“The Federal Circuit rule . . . seemed to say that [method] patents . . . would as a practical matter *never* be enforceable.”).

1. Joint Enterprise Doctrine

Perhaps in response to the criticism of *Muniauction*'s and *BMC*'s limited protection for patent holders, as exemplified by *Golden Hour*, Judge Linn's dissent in the *Akamai* en banc decision raised the possibility of looking to tort law's joint enterprise doctrine.⁸⁵ The joint enterprise doctrine provides that:

All members of a joint venture may be jointly and severally liable to third persons for wrongful acts committed in furtherance of the joint enterprise or venture. Thus, the negligence of one participant in the enterprise or venture, while acting within the scope of agency created by the enterprise, may be imputed to another participant so as to render the latter liable for the injuries sustained by third persons as a result of the negligence.⁸⁶

Turning to the joint enterprise doctrine to determine when to find vicarious liability, Judge Linn claimed, would expand the *BMC* and *Muniauction* standard's coverage and require an overruling of *Golden Hour*.⁸⁷

There are several reasons why the joint enterprise doctrine is an inapt fit in the joint infringement context. First, it presumes acts that are "wrongful," such as "the negligence of one participant." This assumes a single member of the group has *individually* breached a duty; courts use the doctrine to determine *who else* is also liable for that harm. The key issue in joint infringement cases, however, is the first-order question: Under what circumstances is *any* party liable for the plaintiff's harm? The joint enterprise doctrine, as traditionally used in tort law, provides no answer to that question.

A second problem with relying on joint enterprise to assign liability for direct infringement is that the doctrine describes only how a party can be held responsible for the harm caused by another party's *negligence*. Direct infringement under Section 271(a), by contrast, is a

⁸⁵ *Akamai*, 692 F.3d at 1349 (Linn, J., dissenting).

⁸⁶ 48A C.J.S. Joint Ventures § 62 (2014).

⁸⁷ *Akamai*, 692 F.3d at 1349 (Linn, J., dissenting). Interestingly, Judge Dyk, who authored the *Golden Hour* opinion, 614 F.3d 1367, joined Judge Linn's dissent despite the explicit call for reversing *Golden Hour*. See *Akamai*, 692 F.3d at 1337, 1349 (Linn, J., dissenting) ("Because the parties in [*Golden Hour*] would have satisfied the test for joint enterprise based on common purpose and an equal right of mutual control . . . the en banc court should expressly overrule the holding in that case.").

strict liability statutory tort.⁸⁸ While imposing liability on members of a joint enterprise for a negligence tort might make sense because the parties are in a position to deter unreasonable conduct, strict liability does not require a showing of intent or notice.⁸⁹ A party could therefore be liable not just for unintentionally violating a statute herself but for a cohort's unintentional, unknowing conduct. Relying on a joint enterprise theory in this context would thus broaden the doctrine's scope beyond situations in which courts have traditionally applied it.

Even ignoring these problems, the elements of the joint enterprise doctrine indicate that it might solve *Golden Hour*, but it would provide no solution to *Akamai*, *BMC*, *Muniauction*, or any other case where software customers or users play a role in the infringement. To find that parties were engaged in a joint enterprise, a court (often a jury) must find:

- (1) an agreement, express or implied, among the members of the group;
- (2) a common purpose to be carried out by the group;
- (3) a community of pecuniary interest in that purpose, among the members;
- and (4) an equal right to a voice in the direction of the enterprise, which gives an equal right of control.⁹⁰

At the very least, both software makers and their customers fail at step four. The customers do not get to control how the company designs its software, and the company cannot control the customer and make her use the software in any specific way.⁹¹ Moreover, while Judge Linn argued in *Akamai* that the defendants in *Golden Hour* would be liable under this test, parties looking to avoid liability in the future could easily circumvent the joint enterprise doctrine. Two (or more) parties negotiating an arms-length contract could insert a term that explicitly disavows one of the parties' right to "a voice in the direction of the

⁸⁸ *BMC*, 498 F.3d at 1381 ("Direct infringement is a strict-liability offense . . ."). Compare 35 U.S.C. § 271(a) (2012) (codifying that "whoever without authority . . . uses . . . any patented invention . . . during the term of the patent therefor, infringes the patent" without any intent requirement), with 35 U.S.C. § 271(b)–(c) (assigning liability only to one who "actively induces infringement" or who contributes to infringement by providing a part of a patent "knowing the same to be especially made or especially adapted for use in an infringement of such patent" (emphases added)).

⁸⁹ Restatement (Second) of Torts § 519 cmt. d (1977).

⁹⁰ Restatement (Second) of Torts § 491 cmt. c (1965).

⁹¹ An argument could possibly be made that the corporation-customer relationship fails each or all of the four elements. The fourth element appears the most clearly absent, and thus a consideration of the earlier steps is unnecessary.

enterprise, which gives an equal right of control.” Instead, that party’s one and only task would be to perform a single step of a method with no interest as to the broader purpose of the other party’s work.

In summary, the joint enterprise doctrine does not appear to be a promising solution to the joint infringement dilemma. It presumes the condition (fault on behalf of one of the parties) that it would purport to prove, and it would broaden the doctrine’s scope by applying its negligence principles to a strict liability offense. And beyond those conceptual difficulties, it is not clear that it would be an effective solution in practice. At least one major loophole that gives rise to this class of cases would still exist, and another could quickly follow.

2. Civil Conspiracy

Another proposed approach for direct infringement liability is to impute the actions of multiple parties to each other through a civil conspiracy theory.⁹² Unlike criminal conspiracy, which prohibits the agreement to commit a crime,⁹³ civil conspiracy does not create liability for the agreement itself.⁹⁴ It is instead a rule of joint and several liability that allows plaintiffs to recover from any individual party to an agreement for harm that any of the group’s members caused pursuant to that agreement.⁹⁵ The common law elements of civil conspiracy are:

- (1) an agreement between two or more persons;
- (2) to participate in an unlawful act, or a lawful act in an unlawful manner;
- (3) an injury caused by an unlawful overt act performed by one of the parties to the agreement;
- (4) which overt act was done pursuant to and in furtherance of the common scheme.⁹⁶

The obvious problem with this theory is the third element, which requires that *one* party to the agreement perform an act that causes harm.⁹⁷ In the joint infringement context, no individual party commits an

⁹² See Larsen, *supra* note 80, at 64–68.

⁹³ See 18 U.S.C. § 371 (2012); Larsen, *supra* note 80, at 65.

⁹⁴ 16 Am. Jur. 2d Conspiracy § 53 (2009).

⁹⁵ *Id.*; Larsen, *supra* note 80, at 66.

⁹⁶ *Halberstam v. Welch*, 705 F.2d 472, 477 (D.C. Cir. 1983) (citing William L. Prosser, *Handbook of the Law of Torts* 292 (4th ed. 1971)). The *Halberstam* panel featured Judges Wald (who wrote the opinion), Bork, and Scalia. *Id.* at 474.

⁹⁷ This was not an issue in *Halberstam*, where the court held the defendant was complacent with her husband’s series of burglaries. *Id.* at 474–75; see also Jerry Whitson,

unlawful act. Relying on civil conspiracy to join parties who commit joint infringement would once again require presuming the very condition the theory is supposed to prove, similar to one of the flaws with applying the joint enterprise doctrine.⁹⁸

The parallel flaws between joint enterprise and civil conspiracy do not end there. Both also attempt to fit the square peg that is a negligence theory into the round hole of a strict liability statute. As the D.C. Circuit noted in *Halberstam v. Welch*,⁹⁹ civil conspiracy corresponds to the Restatement of Torts section titled “Persons Acting in Concert.”¹⁰⁰ But the Restatement expressly “takes no position on whether the rules stated in [that] Section are applicable when the conduct of either the actor or the other is free from intent to do harm or negligence but involves strict liability for the resulting harm.”¹⁰¹ As with joint enterprise, relying on civil conspiracy to close the joint infringement loophole would widen the scope of liability beyond what Congress intended. By attaching liability to parties to an agreement who did not intend for their cohorts to infringe a patent, courts would be expanding both statutory liability and the reach of a tort doctrine while providing little deterrent effect.

Both joint enterprise and civil conspiracy are conceptually attractive but ultimately flawed approaches to the joint infringement issue. Both, in fact, were doomed from the start. Looking to theories of joint and several liability requires first presuming the harm the theory is supposed to prove and, second, applying negligence tort theories to a strict liability statute. Any solution to the problem is thus unlikely to rest in tort theory. It instead lies in the text of the statute or, if not, with Congress.

III. CHALLENGING THE PREMISE: ELIMINATING THE SINGLE-ENTITY RULE

Despite numerous opinions issued over more than five years of frequent litigation and various scholarly and judicial attempts, no party has yet offered a satisfactory explanation of how multiple parties can combine to infringe a method patent under the Patent Act. This lack of success has led many, including the federal government, to suggest that

Note, Civil Conspiracy: A Substantive Tort?, 59 B.U. L. Rev. 921, 926 n.41 (1979) (collecting cases).

⁹⁸ See supra Subsection II.B.1.

⁹⁹ See *Halberstam*, 705 F.2d at 477.

¹⁰⁰ Restatement (Second) of Torts § 876 (1979).

¹⁰¹ *Id.*

no such solution exists as the statute is currently written and that only Congress can or should solve the problem.¹⁰²

Deferring to Congress, however, leaves inventors holding valid patents without legal recourse¹⁰³ while they wait for a notoriously slow process to restore protection of their property interest, and it discourages potential inventors from innovating in the meantime.

Of course, deferring to Congress, even if it creates poor incentives as a matter of policy, would still be necessary if the text of the Patent Act did not offer an adequate solution to joint infringement. This Note suggests, however, that the statutory text *does* offer a solution. Part IV will argue that the party who completes the final step of the method and thereby accomplishes the desired result only because each prior step was already completed (by *any* party) “uses” the method and infringes the patent under the text of the statute. Parties who induced or contributed to this infringement could then be held liable under Sections 271(b) or 271(c) if the patent holder could prove those parties had the requisite scienter.

The Federal Circuit’s entrenched single-entity rule, however, presents a barrier to “last-step liability.”¹⁰⁴ No court can assign liability to a party who completes some, but not all, steps of a method patent in light of this entrenched Federal Circuit rule. But this Part argues that the Patent Act does not actually require the single-entity rule. The Federal Circuit derived the rule, which serves as the premise that has led to the line of joint infringement cases, after confusing Supreme Court and lower court “missing-element” cases with joint infringement cases. The rule also runs contrary to the Supreme Court’s warning that “[a] categorical rule

¹⁰² See, e.g., Brief of Cargill, Inc., The Coca-Cola Co., General Mills, and Hormel Foods Corp. in Support of Petitioner Limelight Networks at 21–25, *Limelight Networks v. Akamai Techs.*, 134 S. Ct. 2111 (2014) (No. 12-786); Brief of the Clearing House and the Financial Services Roundtable as Amici Curiae Supporting Petitioner Limelight Networks at 6, *Limelight*, 134 S. Ct. 2111 (No. 12-786) (“The Federal Circuit’s decision [in *Akamai*] appears to have been motivated by policy concerns about the enforceability of so-called ‘interactive’ method patents. Addressing such concerns is the role of Congress, not the federal courts.”); Brief for Microsoft Corporation as Amicus Curiae at 3–11, *Limelight*, 134 S. Ct. 2111 (No. 12-786); Brief for the United States as Amicus Curiae Supporting Petitioner at 30–34, *Limelight*, 134 S. Ct. 2111 (No. 12-786).

¹⁰³ See Mann, *supra* note 84 and accompanying text.

¹⁰⁴ See *supra* notes 13–14 and accompanying text.

denying patent protection for ‘inventions in areas not contemplated by Congress . . . would frustrate the purposes of the patent law.’”¹⁰⁵

Eliminating the single-entity rule allows for a straightforward resolution of joint infringement cases, presented in Part IV. This Part will therefore provide the basis on which an alternative theory could proceed by examining the flawed foundation on which the single-entity rule lays and how it led to the modern joint infringement doctrine.

A. Precedent and the Failure to Distinguish Between the Single-Entity Rule and “Missing-Element” Cases

While the three separate opinions in *Akamai* tussled over how (and whether) to fit joint liability into Section 271, the primary obstacle was the premise. The real difficulty of the case is in the majority’s introduction: “The problem of divided infringement in induced infringement cases typically arises only with respect to method patents. When claims are directed to a product or apparatus, direct infringement is always present, because the entity that installs the final part and thereby completes the claimed invention is a direct infringer.”¹⁰⁶ The majority then tried to creatively sidestep the single-entity rule—which led to the Supreme Court’s unanimous reversal.¹⁰⁷ The better approach would have been to recognize that this “problem” is not a problem at all. The single-entity rule that liability attaches only to a *single party* who practices every step of a method patent is a castle built on sand. It is a judge-made rule derived from a misreading of precedent that the text does not require.

The earliest hint of the single-entity rule predates the Federal Circuit. In *Roberts Dairy Co. v. United States*, the Court of Claims, while laying out its rule before beginning its analysis, stated:

It is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized. Thus, in order to find infringement in the present case, each and every step of each of the claims of the patents in suit . . . must have been practiced by the defendant.¹⁰⁸

¹⁰⁵ *Bilski v. Kappos*, 130 S. Ct. 3218, 3227 (2010) (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980)).

¹⁰⁶ *Akamai*, 692 F.3d at 1305–06.

¹⁰⁷ See *supra* Section I.C.

¹⁰⁸ 530 F.2d 1342, 1354 (Ct. Cl. 1976) (citations omitted).

There is a critical difference between these two sentences. While the first sentence makes no mention of *who* must utilize all steps or stages of the claimed process, the second assigns that responsibility to the defendant. Importantly, the court cited precedent only after the first sentence; the second sentence was a restatement of the same rule.¹⁰⁹ Though it likely seemed harmless at the time (for reasons discussed below), this translation marked a significant, and likely accidental, shift in law.

An examination of the case that the *Roberts Dairy* court cited for its rule, and that case's foundation, reveals that the *Roberts Dairy* court did not intend to inadvertently create the single-entity rule. The lone case and only legal authority the *Roberts Dairy* court cited¹¹⁰ for the principle that "a method . . . is not infringed unless all steps . . . are utilized" was *Engelhard Industries v. Research Instrumental Corp.*¹¹¹ The *Engelhard* court was careful with its language, saying only that "[a] patent for a method or process claim is not infringed unless all of the steps or stages of the process are used."¹¹² The court never discussed who had to complete the steps or stages. *Engelhard*, in turn, cited two Supreme Court cases for its holding: *Royer v. Coupe*¹¹³ and *Goodyear Dental Vulcanite Co. v. Davis*.¹¹⁴

And here is the vital point that the Federal Circuit would later miss: In none of these cases was joint infringement an issue. Each case in this line was a missing-element case in which the defendants argued that at least one step in the patented method was not completed by *anybody*. In *Royer*, for instance, the defendant's process did not include the first step of the plaintiff's patented method;¹¹⁵ in *Goodyear*, the defendants used a different material that was not equivalent to a necessary element of the plaintiff's patent;¹¹⁶ and in *Engelhard*, the defendant's method did not "incorporate [a] distinctive feature of the [plaintiff's] invention."¹¹⁷ Even *Roberts Dairy*, the Court of Claims ruling that subsequent courts relied

¹⁰⁹ See *id.* (citing *Engelhard Indus. v. Research Instrumental Corp.*, 324 F.2d 347 (9th Cir. 1963), and no other legal authority).

¹¹⁰ See *id.* at 1354.

¹¹¹ 324 F.2d 347 (9th Cir. 1963).

¹¹² *Id.* at 351.

¹¹³ 146 U.S. 524 (1892).

¹¹⁴ 102 U.S. 222 (1880).

¹¹⁵ *Royer*, 146 U.S. at 530.

¹¹⁶ *Goodyear*, 102 U.S. at 229–30.

¹¹⁷ *Engelhard*, 324 F.2d at 351.

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on as the bedrock of the entire joint infringement doctrine, is inapposite. The *Roberts Dairy* court found no infringement because the challenged military specification did not require government contractors to heat an egg product to the same temperatures as listed in the defendant's claimed method.¹¹⁸ In fact, the court went on to conclude that if the plaintiffs could show that the egg product actually was heated to the temperature required in the claim, infringement would follow.¹¹⁹ Notably, it did not mention *who* would have to do the heating.¹²⁰

Courts for more than a century correctly held that a defendant does not infringe a patented method unless each step is completed. Not until 1976, however, did courts begin stating that the defendant has to complete each step. And more importantly, not until the last decade did the Federal Circuit begin applying this rule to allow defendants to escape liability when all steps of a patented method had been performed, resulting in an invasion of the patent holder's property interest.

B. From a Non-Existent Rule to Akamai

The Federal Circuit is unaware of the shaky ground on which its precedent stands. The *Akamai* majority cited two cases that supposedly stand for the proposition that direct infringement of a method patent does not occur unless *one party* performs *all* the steps: *BMC Resources v. Paymentech, L.P.*, its own precedent from 2007, and *Muniauction, Inc. v. Thomson Corp.*, its own precedent from 2008.¹²¹ Neither the *BMC* nor the *Muniauction* courts engaged in any discussion of what it means to "use" a patented method. The courts in both cases instead mistook missing-element cases for single-entity cases.

1. BMC and the Cases It Cites: Joy, Fromson, and Cross Medical Products

In laying out its rule, the *BMC* court claimed that "[f]or process patent or method patent claims, infringement occurs when a party performs all of the steps of the process."¹²² The court cited only *Joy Technologies v.*

¹¹⁸ *Roberts Dairy*, 530 F.2d at 1354.

¹¹⁹ *Id.* at 1354–55.

¹²⁰ *Id.*

¹²¹ *Akamai*, 692 F.3d at 1307.

¹²² *BMC Resources v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007).

*Flakt, Inc.*¹²³ as standing for that proposition. *Joy* stands for no such thing.

The issue in *Joy* was whether a party who sells but does not use a machine that performs a process is liable for infringement of that process. *Joy* had a patent for a method of gas desulfurization.¹²⁴ The defendant was building a power plant capable of using the patented process, but the company did not plan to complete the plant (and therefore would not “use” and directly infringe the process) until after the patent term’s expiration.¹²⁵ The *Joy* court held that merely selling something that can perform a method without actually using (or “practicing”) the method was not direct infringement.¹²⁶ Because the patent would not be “used” until after its term expired, the defendant also could not have induced or contributed to any infringement.¹²⁷

The *BMC* court mistakenly believed that because there was no direct infringement for *selling* a patented process to another party, there was also no direct infringement for *using* the patented process. But the *Joy* court clearly contemplated that the owners of the plant would practice, and therefore directly infringe, the patent but for the patent term’s expiration.¹²⁸ The court similarly believed that the defendant could be liable under Section 271(b) or 271(c) if that were the case.¹²⁹ *Joy* stands for the proposition that a party can only infringe a method patent by using it, not by selling or making it. The case had nothing to say about joint, direct infringement or the single-entity rule.

After citing *Joy* as the basis for the single-entity rule, the *BMC* panel proceeded to offer two cases as examples of when a court found no

¹²³ 6 F.3d 770, 773 (Fed. Cir. 1993). It is possible to read *BMC* as also citing *Warner-Jenkinson Co. v. Hilton Davis Corp.*, 520 U.S. 17 (1997), and two Federal Circuit cases for this rule. But *Warner-Jenkinson*, as admitted in the *BMC* panel’s parenthetical, stands only for the proposition that each element in a patent claim is material and must be completed (sometimes dubbed the “all-elements rule”) in the context of the doctrine of equivalents. See *BMC*, 498 F.3d at 1378–79. That is, a method patent is not infringed unless each step is performed (with no regard to who completes those steps). It has nothing to say about who must complete each step and does not discuss § 271 at any point. The two Federal Circuit cases cited likewise focus on the all-elements rule and not the single-entity rule. See *Canton Bio-Med. v. Integrated Liner Techs.*, 216 F.3d 1367, 1370 (Fed. Cir. 2000); *Gen. Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1274 (Fed. Cir. 1992).

¹²⁴ *Joy*, 6 F.3d at 771–72.

¹²⁵ *Id.* at 773, 776.

¹²⁶ *Id.* at 775.

¹²⁷ *Id.*

¹²⁸ *Id.* at 776.

¹²⁹ *Id.* at 776–77.

liability for a party who practiced some, but not all, steps of a patented process.¹³⁰ Both support an opposite conclusion.

In *Fromson v. Advance Offset Plate*, the court concluded that the defendant could not be liable for direct infringement because some of its customers, and not the defendant itself, completed the final step of the patented method.¹³¹ But the court immediately noted that the defendant “could be liable for contributory infringement.”¹³² The likely explanation for this theory of liability is that the court assumed that the defendants’ customers directly infringed the patent by completing only the last step of the method.¹³³ Back when the Federal Circuit was in its infancy, the single-entity rule did not exist.

The second case the *BMC* court cited, *Cross Medical Products v. Medtronic Sofamor Danek*, is less on point because it involves a system patent, not a method patent, and the court considered whether the defendant, Medtronic, “made” rather than “used” the claimed system apparatus.¹³⁴ But it is illustrative nonetheless. In that case, the court determined that the defendant could not be liable for direct infringement because surgeons completed the final step by “operatively join[ing]” the device to bone as necessary to complete the patent.¹³⁵ The court went on to conclude, however, that there was a genuine issue of material fact as to whether the surgeons, by completing only this last step, infringed the patent, which would in turn expose the defendant manufacturer to liability for either induced or contributory infringement.¹³⁶

The *BMC* court referred to the single-entity rule just one final time in its opinion: “Direct infringement is a strict-liability offense, but it is limited to those who practice each and every element of the claimed invention.”¹³⁷ This is patently false: No such rule applies to non-method

¹³⁰ *BMC*, 498 F.3d at 1380 (citing *Fromson v. Advance Offset Plate*, 720 F.2d 1565, 1568 (Fed. Cir. 1983), and *Cross Med. Prods. v. Medtronic Sofamor Danek*, 424 F.3d 1293, 1311 (Fed. Cir. 2005)).

¹³¹ 720 F.2d 1565, 1567–68 (Fed. Cir. 1983).

¹³² *Id.* at 1568.

¹³³ See *id.* at 1368 (“Because the claims include the application of a diazo coating or other light sensitive layer and because Advance’s customers, not Advance, applied the diazo coating, Advance cannot be liable for direct infringement with respect to those plates but could be liable for contributory infringement.”).

¹³⁴ 424 F.3d 1293, 1312–13 (Fed. Cir. 2005).

¹³⁵ *Id.* at 1310–11.

¹³⁶ *Id.* at 1312–13.

¹³⁷ *BMC*, 498 F.3d at 1381.

patents.¹³⁸ The *BMC* court was referring only to method patents, but it cited no authority in support of this claim.¹³⁹

2. *Muniauction and the Case It Cites: NTP*

The *Muniauction* court fared no better. *Muniauction* cited just one other case besides *BMC* when it stated the single-entity rule:¹⁴⁰ *NTP, Inc. v. Research In Motion*, which decided claims related to both system and method patents.¹⁴¹ In *NTP*, the court held that Research In Motion (“RIM”) was not liable for contributory infringement because *its customers* were not liable for direct infringement since some of the steps of the patented method, which RIM performed, occurred outside the United States.¹⁴² The holding thus rested entirely on the geographical requirement of Section 271(a),¹⁴³ not on the definition of “use.” The *NTP* court did not actually question whether RIM’s customers *could* directly infringe a method patent by completing the final step because RIM did not contest the issue.¹⁴⁴

NTP is also a questionable case to cite for the same reason that *Cross Medical Products* was a questionable cite for the *BMC* court: There is direct infringement by a third party for “completing” a system patent. The *NTP* court, before issuing its geographic-based holding on the method patents, held that RIM was liable for contributory infringement of the system patents at issue.¹⁴⁵ The court determined that RIM’s customers directly infringed those patents by completing the final step

¹³⁸ See *Akamai*, 692 F.3d at 1305–06 (“The problem of divided infringement in induced infringement cases typically arises only with respect to method patents. When claims are directed to a product or apparatus, direct infringement is always present, because the entity that installs the final part and thereby completes the claimed invention is a direct infringer.”).

¹³⁹ *BMC*, 498 F.3d at 1381.

¹⁴⁰ See *Muniauction*, 532 F.3d at 1329 (“The [*BMC*] court’s analysis was founded on the proposition that direct infringement requires a single party to perform every step of a claimed method.”).

¹⁴¹ 418 F.3d 1282, 1317 (Fed. Cir. 2005). As discussed in Section IV.A, *NTP* is also a bad cite that errs and yet still allows for a conclusion contrary to both *Muniauction* and *BMC*.

¹⁴² *Id.* at 1318 (“[W]e agree with RIM that a finding of direct infringement by RIM’s customers under section 271(a) of the method claims . . . is precluded by the location of RIM’s Relay in Canada. As a consequence, RIM cannot be liable for induced or contributory infringement of the asserted method claims, as a matter of law.”).

¹⁴³ A party only directly infringes a patent if he “uses” the patent “within the United States.” 35 U.S.C. § 271(a) (2012) (emphasis added).

¹⁴⁴ *NTP*, 418 F.3d at 1314.

¹⁴⁵ *Id.* at 1317.

and “using” the system.¹⁴⁶ That is, the customers “used” the patented system even though they only sent and received messages and even though RIM “control[led] the accused systems and [was] necessary for the other components of the system to function properly.”¹⁴⁷ *NTP* provides no support for the idea that a method cannot be “used” unless one party completes all the steps.

C. The Real Issue: The Meaning of “Use”

As the previous two Sections establish, the single-entity rule is the result of a misreading of precedent. Every case the Federal Circuit has cited in the line of cases involving joint, direct infringement has its origins in missing-element cases, not single-entity cases. Absent a basis in precedent, the question then becomes whether the single-entity rule has its roots in the text of the statute, which says nothing more than that “whoever without authority . . . uses . . . any patented invention during the term of the patent therefor, infringes the patent.”¹⁴⁸ In only one case has the Federal Circuit held that the word “use” requires the single-entity rule: *Monsanto Co. v. Syngenta Seeds*.¹⁴⁹

In *Monsanto*, the plaintiff-patentee argued that the defendant infringed its method patent by completing only the fourth and final step of the claimed method.¹⁵⁰ The plaintiff company completed the first three steps itself and did so before the patent’s issuance.¹⁵¹ The defendant later completed the fourth and final step after the plaintiff had received a patent for its method.¹⁵² The court found no infringement for two reasons: not all of the steps occurred within the patent term, and not all of the steps were “unauthorized” as required by Section 271(a).¹⁵³ But the court cited no sources for this construction, considering it obvious that “us[ing] ‘without authority’ . . . during the patent term” required that *each step* of the process occur, without authorization, during the patent term.¹⁵⁴

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ 35 U.S.C. § 271(a).

¹⁴⁹ 503 F.3d 1352 (Fed. Cir. 2007).

¹⁵⁰ *Id.* at 1359.

¹⁵¹ *Id.* at 1360.

¹⁵² *Id.* at 1359–60.

¹⁵³ *Id.* at 1360.

¹⁵⁴ *Id.*

There is nothing obvious about this interpretation. The court undermined congressional intent, as discussed in Section IV.B, by limiting patent protection without relying on any precedent and applying only conclusory reasoning. The plaintiff presented an alternative interpretation, proposing that a party “us[es]” a process once “the last step is performed and the entire claimed process is completed.”¹⁵⁵ The court provided no explanation for why this approach was incompatible with the Patent Act other than to say that the “argument is . . . inconsistent with the basic rule for infringement.”¹⁵⁶ Nothing in the statute, however, requires that *each* step of a method or process occur during the patent term or that only one party perform every step. The real question is whether the party who performs only the last step during the patent term “uses” the patent.¹⁵⁷ The court glossed over that question.

IV. AN ALTERNATIVE APPROACH: LIABILITY FOR THE LAST STEP

Setting aside the single-entity rule does not itself answer the joint infringement question. Instead, it requires an analysis that starts from scratch. This Part seeks to do just that. Interpreting the text of the statute, examining Congress’s intent when it passed the Patent Act, and drawing comparisons to other, similar patents all lead to the same conclusion. The party who completes the last step of a method patent, achieves the result of the method, and would not have achieved that result but for each prior step of the method having been completed (by any party), “uses” the patent and is therefore liable for direct infringement under Section 271(a).¹⁵⁸ Any party who induced or contributed to that

¹⁵⁵ Reply Brief of Plaintiffs-Appellants at 9, *Monsanto Co. v. Syngenta Seeds*, 503 F.3d 1352 (Fed. Cir. 2007) (No. 06-01472), 2006 WL 3846608.

¹⁵⁶ *Monsanto*, 503 F.3d at 1359.

¹⁵⁷ See 35 U.S.C. § 271(a) (2012).

¹⁵⁸ This Note will frequently refer to this proposed test as the “last-step approach,” “last-step liability,” or other, similar shorthand phrases. In all instances, however, this Note assumes that merely practicing the final step is not, by itself, enough to constitute direct infringement. A patent holder would still need to prove that the defendant achieved the result that the patent holder designed the method to accomplish, and that such a result would be not have occurred but for each prior step having already been completed.

The causation element of this proposed rule (“but for each prior step of the method having been completed”) is notable for its passive voice. It is worth noting, however, just how necessary the passive voice is to the rule. The mistake of prior decisions that led to the single-entity rule was to identify an unnecessary subject who must complete all the steps of a method. It was that very move that transformed the missing-elements rule into the single-

infringement with the requisite scienter is liable under Section 271(b) or 271(c).

A. Construing the Text: The Meaning of “Use”

Any explanation of how a party directly infringes a patent must start with the text of the statute.¹⁵⁹ Section 271(a) of the Patent Act provides, in relevant part, that “whoever without authority . . . uses . . . any patented invention during the term of the patent therefor, infringes the patent.”¹⁶⁰ As the House Committee Report on the Patent Act noted, however, Section 271(a) “is not actually necessary because the granting clause [35 U.S.C. § 154] creates certain exclusive rights and infringement would be any violation of those rights.”¹⁶¹ Section 154, in turn, provides in relevant part that “[e]very patent shall . . . grant to the patentee . . . the right to exclude others from . . . using . . . the invention throughout the United States.”¹⁶² In the joint infringement context, the only ambiguity in the statutory text is the meaning of the word “use” and its derivatives.¹⁶³ Thus, if the party who completes the last step of the method “uses” the method, that party undeniably “infringes the patent” under Section 271(a).

entity rule. See *supra* Section III.B. Thus, it is critical to keep the causal link in the proposed rule in the passive voice and avoid identifying a subject who must practice the prior steps.

¹⁵⁹ See, e.g., *Landreth Timber Co. v. Landreth*, 471 U.S. 681, 685 (1985) (“It is axiomatic that ‘[t]he starting point in every case involving construction of a statute is the language itself.’”) (quoting *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723, 756 (1975) (Powell, J., concurring)).

¹⁶⁰ 35 U.S.C. § 271(a).

¹⁶¹ H.R. Rep. No. 82-1923, at 9 (1952).

¹⁶² 35 U.S.C. § 154(a)(1). The language above does not include other actions, included in both statutes, that might constitute infringement in other contexts because in method patent cases, “Congress has consistently expressed the view that it understands infringement of method claims under section 271(a) to be limited to use.” *NTP, Inc. v. Research In Motion*, 418 F.3d 1282, 1319 (Fed. Cir. 2005); see also S. Rep. No. 100-83, at 30 (1987) (“Under our current patent laws, a patent on a process gives the patentholder the right to exclude others from using that process in the United States without authorization from the patentholder. The other two standard aspects of the patent right—the exclusive right to make or sell the invention—are not directly applicable to a patented process.”).

¹⁶³ None of the other elements necessary to prove infringement are at stake in these cases. The impending analysis assumes that the patent is valid, that the defendant did not have the patentee’s authority to use it, and that the use took place within the United States and during the patent term.

The Supreme Court has previously defined “use” in the patent context as meaning “put into service.”¹⁶⁴ The question, then, is whether a party who completes only step D of a claimed method that involves steps A, B, C, and D “puts into service” the method. To put it in tangible terms, consider one of the claimed methods in *Akamai*:

A content delivery service, comprising: *replicating* a set of page objects across a wide area network of content servers managed by a domain other than a content provider domain; for a given page normally served from the content provider domain, *tagging* the embedded objects of the page so that requests for the page objects resolve to the domain instead of the content provider domain; responsive to a request for the given page received at the content provider domain, *serv[ing]* the given page from the content provider domain; and *serv[ing]* at least one embedded object of the given page from a given content server in the domain instead of from the content provider domain.¹⁶⁵

This method involved four steps. Limelight had customers perform the second of these steps by “tagging the embedded objects.”¹⁶⁶ The question for last-step liability purposes, however, is whether Limelight “put into use” the method when it performed the fourth and final step so that it accomplished the desired result (“a content delivery service”) only because each prior step of the method had been completed.

There is no obvious reason why the answer to that question would be “no.” Limelight would not be able to “serv[e] at least one embedded object of the given page from a given content server in the domain instead of from the content provider domain” but for the fact that each previous step was already completed. If the page objects were not already “replicat[ed],” the objects not already “tagg[ed],” and the page from the content provider domain not already “serv[ed],” the method would fail to “serv[e]” the embedded objects as described in the fourth and final step, which would make the method useless. Limelight’s method for delivering content is entirely contingent on the completion of each of these steps. Limelight’s customers could now benefit from a

¹⁶⁴ See, e.g., *Bauer & Cie v. O’Donnell*, 229 U.S. 1, 10–11 (1913) (“The right to use is a comprehensive term and embraces within its meaning the right to put into service any given invention.”).

¹⁶⁵ U.S. Patent No. 6,108,703 col.19 (filed May 19, 1999) (emphasis added).

¹⁶⁶ *Akamai*, 692 F.3d at 1334 (Newman, J., dissenting).

faster, more efficient method of delivering content to their sites' visitors, and Limelight could profit from the use of that method. But Limelight did not invent that method. Akamai's founders did.

A broader definition of the word "use" provides further support for the last-step approach. A number of dictionaries employ an expansive definition of "use" and note a connection between "use" and a result. The Oxford English Dictionary, for instance, defines "use" as "[t]he act of employing a thing *for any . . . purpose*; the fact, state, or condition of being so employed; utilization or employment for or *with some aim or purpose*, application or conversion *to some . . . end*."¹⁶⁷ And Webster's Third New International Dictionary notes that "use" and its synonyms "have in common a sense of a useful or valuable end, result, or purpose" and that "use stresses the practicality of the *end, result, or purpose* for which something is employed."¹⁶⁸ These definitions—recognizing that to "use" something indicates a desire to employ something for a specific reason—support a reading of "use" in the Patent Act that would assign liability to a party who completes the final step.¹⁶⁹

A method is patented because it describes an efficient or original way of arriving at a desired result; a party who achieves that result only because each step has been completed "uses" that method and should thus be liable under Section 271(a).

Admittedly, relying on dictionary definitions of "use" does not unambiguously resolve the issue. One could reasonably argue that a method is not "put into service" by a party unless that party performs each and every step. But given the choice between adopting a narrow definition of "use" or a broader one, courts (including the Supreme Court) have consistently opted for the latter in both patent cases¹⁷⁰ and statutory interpretation cases arising from a variety of other areas of

¹⁶⁷ The Oxford English Dictionary 350 (J.A. Simpson & E.S.C. Weiner eds., 2d ed. 1989) (emphasis added).

¹⁶⁸ Webster's Third New International Dictionary of the English Language Unabridged 2523 (Philip Babcock Gove ed., 1993) (emphasis added).

¹⁶⁹ Notably, definitions of "use" that include reference to a specific purpose date back to at least 1920, thus covering the time period during which Congress wrote and codified the Patent Act. See, e.g., Laird & Lee's Webster's New Standard Dictionary of the English Language 418 (E.T. Roe ed., 1920), available at <http://tinyurl.com/n8l5cdo>.

¹⁷⁰ *Bauer & CIE v. O'Donnell*, 229 U.S. 1, 10–11 (1913) ("The right to use is a comprehensive term . . ."); see also *NTP, Inc. v. Research In Motion*, 418 F.3d 1282, 1316 (Fed. Cir. 2005) ("In terms of the infringing act of 'use,' courts have interpreted the term 'use' broadly.").

substantive law.¹⁷¹ Relying on a broad but reasonable interpretation of the word “use” would indicate not just that liability *can* attach to the party who performs the last step of a method patent but also that it *should*.

B. The Congressional Intent of the Patent Act

Eliminating the single-entity rule and assigning liability to the party who completes the last step and “uses” the method also fits most closely with Congress’s intent to encourage innovation and to codify protection from contributory infringement by passing the Patent Act.¹⁷² While a number of large corporations (including Google) and the United States argued as amici in *Limelight Networks v. Akamai Technologies* that only Congress can solve the joint infringement riddle,¹⁷³ that step is unnecessary when the language Congress has provided already offers a solution. The Supreme Court has previously noted that:

Congress has performed its constitutional role in defining patentable subject matter in § 101;¹⁷⁴ we perform ours in construing the language Congress has employed. In so doing, our obligation is to take statutes as we find them, guided, if ambiguity appears, by the legislative history and statutory purpose. . . . The subject-matter provisions of the patent law have been cast in broad terms to fulfill the constitutional and statutory goal of promoting “the Progress of Science and the useful Arts” with all that means for the social and economic benefits

¹⁷¹ See, e.g., *Smith v. United States*, 508 U.S. 223, 229–30 (1993) (rejecting the dissent’s argument for a narrow definition of “uses” in 18 U.S.C. § 924(c)(1) and instead holding that because “one example of ‘use’ is the first to come to mind when the phrase ‘uses . . . a firearm’ is uttered does not preclude us from recognizing that there are other ‘uses’ that qualify as well”); see also *United States v. Hoechst Celanese Corp.*, 128 F.3d 216, 223 n.4 (4th Cir. 1997) (rejecting the defendant-appellee’s argument for a narrow definition of “use”); *Palm Bay Int’l v. Marchesi Di Barolo S.P.A.*, 285 F.R.D. 225, 235–36 (E.D.N.Y. 2012) (applying a “broad meaning of the word ‘use’” in a tax case (quoting *Manzo v. Sovereign Motor Cars*, No. 08-CV-1229 (JG)(SMG), 2010 WL 1930237, at *10 n.18 (E.D.N.Y. May 11, 2010))).

¹⁷² See, e.g., *Ultramercial, Inc. v. Hulu, LLC*, 722 F.3d 1335, 1341 (Fed. Cir. 2013) (“[T]he purpose of the Patent Act is to encourage innovation . . .”).

¹⁷³ See sources cited supra note 102.

¹⁷⁴ 35 U.S.C. § 101 (2012) provides, in relevant part, that “[w]hoever invents or discovers any new and useful process . . . may obtain a patent therefor, subject to the conditions and requirements of this title.”

envisioned by Jefferson. Broad general language is not necessarily ambiguous when congressional objectives require broad terms.¹⁷⁵

Though the Court in that context was considering whether the invention at issue was patentable at all (as opposed to whether the defendant infringed the patent), the same considerations weigh in favor of the last-step approach. Limiting liability only to single entities who perform every step of a patented method undercuts Congress's goal of encouraging innovation by creating a system that lends itself to easy and sometimes explicit circumvention by competitors. The single-entity rule also takes "broad general language" and interprets it narrowly to contradict congressional objectives.

Congress has demonstrated its intent to provide broad protection in response to narrow interpretations of the Patent Act before. In *Deepsouth Packing Co. v. Laitram Corp.*,¹⁷⁶ the Court held that a defendant who shipped the parts of a patented shrimp deveining machine overseas before assembling the invention did not "make" the machine under Section 271(a) and therefore did not infringe the patent.¹⁷⁷ The case created a loophole in patent law. Competitors were now free to gather and assemble all the parts of a patented invention, save for one, send it overseas, and make use of the invention free from liability upon combining the final part. In direct response to this holding, Congress enacted Section 271(f), which closed the loophole.¹⁷⁸

While some argue that Congress's response to *Deepsouth* with Section 271(f) is further evidence of why courts should leave joint infringement for Congress to solve,¹⁷⁹ such an abdication is unnecessary when the statute's text already offers a solution. An alternative interpretation of the congressional response to *Deepsouth* is that Congress was further evincing its belief that Section 271 should—and does—provide broad protection to patent holders. Indeed, the "congressional fix" solution applies regardless of the approach courts take to joint infringement. If courts were to adopt the last-step approach but Congress believed it gave patent holders too much protection, Congress could amend the statute and codify the single-entity rule. In

¹⁷⁵ *Diamond v. Chakrabarty*, 447 U.S. 303, 315 (1980).

¹⁷⁶ 406 U.S. 518, 532 (1972).

¹⁷⁷ *Id.* at 527–32.

¹⁷⁸ See *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 444 n.3 (2007) (noting that 35 U.S.C. § 271(f) (2012) was a direct response to *Deepsouth*).

¹⁷⁹ See *Akamai*, 692 F.3d at 1343 (Linn, J., dissenting).

the meantime, without congressional action, courts should apply the interpretation of the statute most consistent with the text, congressional intent, and sound patent policy—liability for the last step.

C. Comparison to System Patents

Identifying “use” at the last step is especially appropriate given similar practices in closely analogous, non-method patent cases involving system patents. There is established Federal Circuit precedent for assigning liability for direct infringement to the party who performs only the final step of a system patent. The comparison is apt in part because both method patents and system patents fall into the general category of “utility patents.”¹⁸⁰ There is no language in the statute, the legislative history, or Supreme Court precedent that suggests that the rule for how a party “uses” a patent should be different for various subtypes of this broad category. If anything, these cases suggest an opposite conclusion.¹⁸¹ Applying the same rule to method patents that is used in other, analogous patent cases resolves this issue with clarity and ease.

The Federal Circuit has encountered no trouble applying principles similar to the last-step approach to system patents. In both *NTP, Inc. v. Research In Motion*,¹⁸² and *Cross Medical Products v. Medtronic Sofamor Danek*,¹⁸³ the Federal Circuit held that non-sophisticated end-users could be held liable for direct infringement for completing just the final step of a patented system.¹⁸⁴ *NTP* is particularly similar to a method patent case. One of the patents at issue in that case was a system that:

[U]ses ‘push’ email technology to route messages to the user’s handheld device without a user-initiated connection When new mail is detected . . . [software] is notified and retrieves the message

¹⁸⁰ See Types of Patents, U.S. Patent & Trademark Office, <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/patdesc.htm> (last visited Apr. 7, 2013).

¹⁸¹ See, e.g., 1948 Hearings, *supra* note 53, at 5 (discussing the similar principles and problems that apply to both combination and process patents); see also 35 U.S.C. § 101 (2012) (allowing an inventor to obtain a patent for a new and useful “process, machine, manufacture, or composition of matter” and not distinguishing the protection afforded among them); *Quanta Computer v. LG Elecs.*, 553 U.S. 617, 628–29 (2008) (“Our precedents do not differentiate transactions involving embodiments of patented methods or processes from those involving patented apparatuses or materials.”).

¹⁸² 418 F.3d 1282 (Fed. Cir. 2005).

¹⁸³ 424 F.3d 1293 (Fed. Cir. 2005).

¹⁸⁴ *NTP*, 418 F.3d at 1316–17; *Cross Med. Prods.*, 424 F.3d at 1311–14.

from the mail server. It then copies, encrypts, and routes the message to the BlackBerry ‘Relay’ component of RIM’s wireless network, which is located in Canada.¹⁸⁵

Yet the Federal Circuit held that when end-users performed the simple task of “manipulating the handheld devices,” they “used”—and therefore directly infringed—the patented system.¹⁸⁶ The court’s holding relied, in part, on its recognition that the Supreme Court has construed the word “use” broadly in patent cases.¹⁸⁷ Thus, users who performed the innocuous task of using a phone that received email were technically infringing a patent that made use of a complex system that rerouted digital data internationally. The only distinction between this claim and method claims is the nature of the patent itself.

NTP and *Cross Medical Products* also provide examples of how litigation on a last-step liability theory would likely proceed. The target, in both cases, was not the end-user customers—it was a corporate defendant who provided the customers with the components necessary to infringe the patent. As with users of combination patents, the customers who “used” a patented system, regardless of who assembled all the various parts of the system, were technically liable for direct infringement. Both courts agreed, however, that the defendant companies could (depending on further fact finding on remand) be liable for indirect infringement under Section 271(b) or (c). No court has yet sufficiently articulated why a different rule should apply to method patents than applies to system or combination patents.

V. IMPLICATIONS AND CONCLUSION

The last-step liability approach admittedly raises concerns about expanding patent liability and creating a rule that would result in people infringing patents without notice. But, for several reasons, these concerns should not prevent courts from adopting the rule. First, the Patent Act’s damages scheme makes it unlikely that individual customers will actually face liability. Similarly, the scienter requirements of Sections 271(b) and (c) will mute the expansion effect, as will the inefficiency of pursuing the individual, non-willful direct infringers. Second, to the degree that lack of notice is a concern, that is

¹⁸⁵ *NTP*, 418 F.3d at 1289–90.

¹⁸⁶ *Id.* at 1316–17.

¹⁸⁷ *Id.*

the result of the strict liability Congress imposed for direct infringement of a patent, and similar results occur in cases involving other, non-method patents. Finally, this approach fits most directly with the text of the Patent Act. It is cleaner and clearer than any theory that fits within the context of the single-entity rule. Imposing liability at the last step, if the defendant could not have completed the process but for each prior step having been completed, allows courts to assign liability based on Congress's words as opposed to awkward, imperfect theories borrowed from other doctrines.

A. Patent Liability Expansion

One potential concern with the last-step solution is that it would expand patent liability. At the very least, some party would be liable in *BMC*, *Muniauction*, and *Golden Hour*, whether it was the defendants themselves or their customers. And admittedly, applying the last-step approach would open the door to claims that the single-entity rule previously barred. The first response to this concern is that policy concerns should not trump statutory text. Unlike any of the proposed solutions to joint infringement discussed in Part II, the last-step approach is merely an interpretation of the words Congress provided.

And even ignoring that the last-step approach is the best interpretation of the statute, as this Note argues, there is still no reason for distress about expanded liability. The expansion would be controlled in part by the inefficiency of pursuing individual infringers and in large part by the scienter requirements of Sections 271(b) and 271(c). It is also not clear that this approach would expand liability any further than the Federal Circuit already had with *Akamai*. And finally, to the extent that expanded liability allows innovative companies to prevent others from intentionally copying a patented method, it is not an ill to avoid.

The final-step approach may create some fear that customers would be unwittingly liable for direct infringement. This is inescapable, but it is also the necessary result of a strict liability statute. Congress could have, after all, included a knowledge requirement in Section 271(a) but chose not to. Customers are similarly liable for direct infringement when they push a button that triggers a patented system or drive a car off the lot that contains a patented combination. In both of those cases, whether they involved a combination patent¹⁸⁸ or a

¹⁸⁸ See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 483–84 (1964).

system patent,¹⁸⁹ customers inadvertently “used,” and therefore directly infringed, a patent without knowledge. They also did not have any notice beyond the theoretical but impractical possibility that they might take apart their car’s roof to discover how the parts were combined and compare that combination to patents on file at the patent office, or somehow discover the complex international relay system that delivered email straight to their phones and then compare that system to registered patents. Imposing liability on customers who use a method by completing the last step is fully aligned with how courts assign liability to infringers of other patents.

This was also Congress’s intent. Patent infringement, unlike copyright, leads only to actual damages.¹⁹⁰ It would be fruitless for patent holders to sue customer after customer for damages that are less than the cost of litigation (in the cases of some software, likely less than the cost of court-filing fees). Assigning liability to customers, however, allows inventors to pursue injunctions against the large companies that are contributing to or inducing the customers’ infringement.

Damages are another matter. While a lawsuit serves as sufficient notice to an infringing company that it will have to cease its conduct, damages will not result unless the plaintiff-patentee can prove the scienter that induced or contributory infringement requires.¹⁹¹ These statutes protect innocent competitors who are unaware of their infringing conduct. But companies who *are* aware of their competitor’s patent and are trying to circumvent the statute would certainly face damages. That is the exact result the statute was designed to produce. The initial House bill that became Section 271 of the Patent Act was titled, “A [b]ill to provide for the protection of patent rights where enforcement against direct infringers is impracticable, to define ‘contributory infringement’, and for other purposes.”¹⁹²

Finally, there should be no concern that businesses have relied on the absence of a last-step rule and that this change will therefore create enormous consequences overnight. The Federal Circuit has only used

¹⁸⁹ See *NTP*, 418 F.3d at 1316–17.

¹⁹⁰ Compare 35 U.S.C. § 284 (2012) (providing compensatory damages for patent infringement), with 17 U.S.C. § 504 (2012) (providing statutory damages for copyright infringement).

¹⁹¹ See *supra* note 88.

¹⁹² H.R. 5988, 80th Cong. (1948) (enacted).

the single-entity rule to decide cases for less than a decade.¹⁹³ The last-step approach would not be unraveling decades of precedent. Additionally, law firms had already begun advising their clients of potential increased liability for infringement in the wake of *Akamai*'s new, muddled theory of induced infringement without direct infringement.¹⁹⁴ The last-step approach would replace uncertainty and imprecision with predictability and clarity.

B. A Clean, Clear Approach

The utility of this approach is clear when applied to the facts of *Akamai*. Limelight would be liable for direct infringement based on this approach, assuming that *Akamai* could show: (1) Limelight completed the final step of the patented method; (2) it achieved the result the method was designed to achieve; and (3) it would not have achieved that result but for each previous step in the method having already been completed. Limelight's customers completed an intermediate step and would thus escape liability altogether because they did not "use" the patent.¹⁹⁵

In a more typical case, where the customer might complete the final step of a method patent, that customer would technically be liable for direct infringement if the plaintiff-patentee could make the three-part showing described in the previous paragraph. But once again, the negligible damages make it impracticable for the patentee to file an action against the customer. Instead, the patentee could use that predicate act of direct infringement to pursue a judgment against the company attempting to profit by inducing or contributing to that direct

¹⁹³ See supra Section III.B for a history of the single-entity rule and the cases that have relied on it.

¹⁹⁴ See, e.g., Michelle Jacobson, Baker Botts, *Divided Infringement Post-Akamai/McKesson: A Looser Standard for Proving Induced Infringement of Method Claims* (Oct. 2012), http://www.bakerbotts.com/file_upload/IPReport201210-DividedInfringementPost-AkamaiMcKesson.htm; Stephen R. Schaefer, Fish & Richardson, *Update on Divided and Inducing Infringement: The Federal Circuit's Akamai and McKesson Cases (en banc)* (May 2013), <http://www.fr.com/files/Uploads/Documents/7-Schaefer-Divided-InducingInfringement.pdf>.

¹⁹⁵ If *Akamai* could prove the customers were complicit in assisting Limelight's infringement, they could, theoretically, pursue a claim for induced or contributory infringement against the customers if they could show the requisite scienter. That would be highly unusual in a case involving customers, like *Akamai*, but might be more useful in a case like *Golden Hour* where two sophisticated companies contracted to infringe a patented method. See supra Section I.A.

infringement. None of these cases or their closely-related kin requires any theory of joint liability or imputation of the actions of one party onto another. Instead, courts could assign liability based on the text that Congress provided.

C. Concluding Thoughts

It is important to point out what this Note does *not* argue or address. First, it takes no stance on the importance or value of method patents. Instead, it assumes that if a party holds a patent, that patent deserves the protection that the Patent Act provides. Thus, when this Note has argued that a proposed approach to joint infringement cases does not provide an adequate solution, it assumed, for the sake of argument, that there was indeed a problem that required a solution in the first place. Whether the methods at issue in any of the cases this Note discusses were valuable or should have been patentable is outside of this Note's scope.

Secondly, this Note takes no stance on whether patent holders could avoid joint infringement litigation through better claim drafting, as one prominent scholar has argued.¹⁹⁶ Though at least some judges on the Federal Circuit have voiced receptiveness to this argument,¹⁹⁷ others, with whom at least one commenter has agreed, have expressed skepticism that claim drafting can solve all joint infringement cases.¹⁹⁸ This Note leaves that debate to those more experienced in the field.

Finally, and most critically, this Note does *not* argue that courts should impose liability on the party who completes the final step of a method patent simply because method patent holders in joint infringement cases need protection. The last-step approach is not intended to raise a policy argument, nor is it an attempt to offer an additional, possible way for courts to resolve joint infringement cases just because those cases expose a loophole in the Patent Act.

Instead, this Note argues that no loophole exists. The reason this Note urges an approach that would impose liability at the last step is because the party who completes the last step and achieves a result that would not be achievable but for each prior step having been completed "uses" the patent in violation of Section 271(a)'s text. While other proffered solutions, such as attributing one party's actions to another through

¹⁹⁶ See Lemley et al., *supra* note 30, at 272–75.

¹⁹⁷ See *BMC Res. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007).

¹⁹⁸ See *Akamai*, 692 F.3d at 1325 (Newman, J., dissenting); Larsen, *supra* note 80, at 71.

vicarious liability, joint enterprise, or civil conspiracy, borrow tort concepts to give meaning to Congress's statute, the last-step approach relies only on statutory construction.

Those qualifiers hopefully focus what this Note does argue. First, it argues that there are holes in the previous attempts to solve the joint infringement issue. Relying on tort doctrines inevitably requires assuming the element—a single party has caused harm—that the proposed solutions seek to prove. Moreover, by applying concepts generally used in negligence torts to a strict liability offense, courts would be expanding liability to parties beyond those to whom the common law would assign liability using the same concepts.

Because no proposed solution provides an adequate answer to how multiple parties can jointly infringe a patent, this Note next examines the premise that requires that inquiry. It concludes that the single-entity rule, which gives rise to the joint infringement line of cases, has no basis in the text of the Patent Act or in precedent. The Federal Circuit created the rule after mistaking missing-element cases for joint infringement cases. As a result, this Note argues that the Federal Circuit (or the Supreme Court) should eliminate the single-entity rule.

Finally, this Note seeks to address the best approach to joint infringement of method patent cases if the single-entity rule were indeed not relevant to the inquiry. It concludes, based on the text of the statute, congressional intent, and the approaches used in other, similar patent cases, that liability attaches to the party who completes the final step of a patented method, assuming that the party achieves the desired result and would have been unable to do so but for each prior step having been completed. This approach provides a clear, manageable rule for courts to administer, protection for innovators who design new and efficient methods, and certainty for parties in litigation. To the extent that it expands liability or raises notice concerns, those apprehensions are both likely overstated and the result of a strict liability offense that Congress is free to amend.