

NO “DIRECTION” HOME: AN ALTERNATIVE APPROACH TO JOINT INFRINGEMENT

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Software startups in the United States continue to create new technologies that provide a high degree of interactivity among consumer devices such as mobile phones. To protect their innovations, many companies acquire patents that contain method claims covering interactive technology. These claims may require more than a single party to perform all the required steps. To successfully enforce a patent when more than one party performs all of the steps of a claimed method, the Federal Circuit recently held that the patentee must show that one of the alleged infringers induced the infringement of the other party. As a result, where inducement is not present, parties can use and benefit from new interactive technologies without liability for patent infringement. Several commentators have suggested that patentees can avoid this fate by drafting better claims. Unfortunately, given today’s advances in technology, even expert claim drafting cannot protect patentees from an unauthorized use of their innovative method. Accordingly, this loophole in the law should be closed.

This Article analyzes the development of joint infringement theory, including the Federal Circuit’s recent rehearing of its own decisions, in conjunction with advancements in technology. This Article argues that the law should not focus solely on inducement. Instead, this Article suggests an alternative approach that relies on practical considerations that the law traditionally considered in contributory infringement analysis. The goal of

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this approach is to increase the likelihood that the law will protect deserving interactive methods from infringement while balancing concerns that a broader policy will ensnare innocent actors.

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INTRODUCTION

Imagine that you have developed a new social media service. You are the first to offer this type of experience on the Internet.¹ Early adopters proclaim that your service is the next Facebook, and the business becomes successful.² You file a patent application on your invention that includes claims directed to the method of providing your social media service. Years later, the United States Patent and Trademark Office (USPTO) grants your patent, giving you the right to exclude others from making, using, or selling the method of providing your service.³

Independently, Facebook decides to provide a similar media service. Facebook hosts the software that provides the service on its servers and disseminates to its business partners instructions on how to use the software. This arrangement allows Facebook and its partners to perform some of the steps of your claimed method separately without any one actor performing every step.⁴

Armed with a patent, you sue Facebook for patent infringement. After a grueling jury trial, the jury awards you millions of dollars in damages for lost profits.⁵ In addition, the judge grants a permanent injunction prohibiting Facebook from using your online service.⁶ Unfortunately, on appeal you lose.⁷ Since you cannot provide any

1. For one example of such a service, see Daniel Casciato, *Grant Street Co. Gets \$84.6 Million Award*, LEGAL INTELLIGENCER (ONLINE) (Aug. 1, 2007), available at <http://www.danielcasciato.com/portfolio/documents/GrantStreetCo.pdf> (stating that Muniauction conducted the first online auction in 1997, having patented Internet bidding for municipal bonds).

2. Meaning the inventor has come up with an Internet-based service that seems destined to generate consumer excitement. See, e.g., Christina Amoroso, *Pinterest Is the New Facebook*, N.Y. POST (Mar. 19, 2012, 11:53 AM), http://www.nypost.com/p/entertainment/pinterest_is_the_new_facebook_LfoXecLYOLBVwunF1bht6M (describing the rise in popularity of the social media service Pinterest as “one of the world’s most-visited Websites”).

3. See 35 U.S.C. § 271(a) (2006) (“[W]hoever without authority makes, uses, offers to sell, or sells any patented invention . . . infringes the patent.”).

4. From the consumer/user perspective the hypothetical service created by Facebook would perform similarly, if not identically, to the claimed service.

5. Muniauction, introduced at the beginning of this thought experiment, received just such a verdict. See Casciato, *supra* note 1 (discussing Grant Street Group’s \$84.6 million damage award after a federal jury found that Thomson Corp. and iDeal willfully infringed a patent for auctioning municipal bonds over the Internet).

6. See *id.* (reporting that Judge Gary Lancaster granted a permanent injunction prohibiting the future use and sale of the defendants’ electronic bid submission system).

7. See *Thomson Wins Appeal of \$77M Verdict in Suit on Bond Auction Patent*, ANDREWS COMPUTER & INTERNET LITIG. REP., July 23, 2008, at 9 (characterizing the patent at issue as “a prime example of the types . . . that have bedeviled the courts” while reporting the Federal Circuit’s decision in favor of the defendant in *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318 (Fed. Cir. 2008), *overruled by*

evidence that Facebook induced its partners to perform some of the claimed method steps, the court holds that Facebook and its partners are not liable for patent infringement.⁸ Accordingly, because performance of your method is split among various actors, Facebook benefits from your innovation for free, essentially rendering your patent worthless.⁹

The above scenario is fictional. Unfortunately for some patentees, similar events have been occurring in the United States for at least the last five years.¹⁰ It could happen to any startup, not just the next Internet mogul. For example, researchers at the University of Washington have developed a contact lens with integrated optoelectronic components such as control circuits, communication circuits, and antennas.¹¹ The scientists believe the technology, although still in the early stages of development, will have hundreds of useful medical applications, including the ability to measure levels of cholesterol, potassium, and sodium in the body, as well as report those results, via a wireless transmitter, to a doctor or nurse.¹² This

Akamai Techs., Inc. v. Limelight Networks, Inc., 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

8. See Akamai Techs., Inc. v. Limelight Networks, Inc. (*Akamai II*), 692 F.3d 1301, 1306 (Fed. Cir. 2012) (en banc) (per curiam) (holding that there can be liability for induced infringement where all the steps are not performed by a single entity).

9. As Judge Newman remarked in her dissent from *McKesson Technologies Inc. v. Epic Systems Corp.*, “[a] patent that cannot be enforced on any theory of infringement, is not a statutory patent right. It is a cynical, and expensive, delusion to encourage innovators to develop new interactive procedures, only to find that the courts will not recognize the patent because the participants are independent entities.” 98 U.S.P.Q.2d (BNA) 1281, 1291 (Fed. Cir. 2011) (Newman, J., dissenting), *rev’d sub nom. Akamai II*, 692 F.3d 1301.

10. See, e.g., *id.* at 1285 (majority opinion) (reminding the plaintiff that the “court has time and again rejected liability” absent agency or contract); Akamai Techs., Inc. v. Limelight Networks, Inc. (*Akamai I*), 629 F.3d 1311, 1318–19 (Fed. Cir. 2010) (characterizing the requirement that a single party to perform every step in order to find infringement as “well settled,” and continuing to require direction or control over third parties), *rev’d en banc, per curiam*, 692 F.3d 1301; Golden Hour Data Sys., Inc. v. emsCharts, Inc., 614 F.3d 1367, 1381 (Fed. Cir. 2010) (agreeing with the lower court’s finding of no joint infringement); *Muniauction*, 532 F.3d at 1330 (relying on *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373 (Fed. Cir. 2007), to reverse judgment in favor of the defendant without a showing of control or direction), *overruled by Akamai II*, 692 F.3d 1301; *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1375 (Fed. Cir. 2007) (requiring evidence that the defendant was “vicariously responsible for the actions of the unrelated parties”), *overruled by Akamai II*, 692 F.3d 1301.

11. See Babak A. Parviz, *Augmented Reality in a Contact Lens*, IEEE SPECTRUM, (Sept. 2009), <http://spectrum.ieee.org/biomedical/bionics/augmented-reality-in-a-contact-lens/0> (overviewing technological add-ons to conventional polymer lenses).

12. See *id.* (contextualizing the research, which “barely hints at” near-future possibilities).

medical technology is most likely patentable.¹³ However, multiple parties could divide the performance of the steps of any claimed method for using the contact lens system to benefit from its innovations and avoid patent infringement.¹⁴

This type of legal gamesmanship can occur under what is known as the “single entity” doctrine, where a single party must perform or use every step of the claimed method to be liable for direct infringement.¹⁵ While the theory of joint infringement provides for an alternative method of enforcement, the circumstances necessary to find joint liability for patent infringement when multiple parties perform every step of a method claim but no single party performs all of them have continued to change over the last five years.¹⁶

In the last five years, the U.S. Court of Appeals for the Federal Circuit has issued several opinions in joint infringement cases.¹⁷ In *BMC Resources, Inc. v. Paymentech, L.P.*,¹⁸ the court affirmed that, where multiple parties perform steps of a method claim, the entire method must be performed at the control or direction of the alleged direct infringer.¹⁹ Approximately one year later, in *Muniauction, Inc. v. Thomson Corp.*,²⁰ the Federal Circuit reversed the lower court, finding that “the control or direction standard is satisfied in situations where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method.”²¹

13. See 35 U.S.C. § 101 (2006) (stating that patentable subject matter includes the discovery or invention of “any new and useful process, machine, manufacture, or composition of matter”).

14. See *BMC*, 498 F.3d at 1381 (“This court acknowledges that the standard requiring control or direction for a finding of joint infringement may in some circumstances allow parties to enter into arms-length agreements to avoid infringement.”).

15. See *id.* at 1378–79 (raising and rejecting the possibility that such a requirement “provide[s] a loophole for a party to escape infringement”).

16. See *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam) (reversing prior Federal Circuit decisions in *BMC* and *Muniauction*).

17. See, e.g., *McKesson Techs. Inc. v. Epic Sys. Corp.*, 98 U.S.P.Q.2d (BNA) 1281, 1282–83 (Fed. Cir. 2011) (reviewing de novo and affirming judgment granted for the defendant as a matter of law on the question of joint infringement), *rev’d sub nom. Akamai II*, 692 F.3d 1301; *Akamai I*, 629 F.3d 1311, 1322 (Fed. Cir. 2010) (same), *rev’d, Akamai II*, 692 F.3d 1301; *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1380–81 (Fed. Cir. 2010) (same); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329–30 (Fed. Cir. 2008) (brushing aside the parties’ relationships as irrelevant), *overruled by Akamai II*, 692 F.3d 1301; *BMC*, 498 F.3d at 1378 (considering the proper standard for joint infringement).

18. 498 F.3d 1373 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301.

19. See *id.* at 1380–81 (conceding that the requirement sometimes allows arms-length parties to avoid infringement, but nevertheless concluding that such concerns do not outweigh those of expanding direct infringement).

20. 532 F.3d 1318 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301.

21. *Id.* at 1330.

The Federal Circuit's most recent decisions are the most controversial. In *Akamai Technologies, Inc. v. Limelight Networks, Inc.* (*Akamai I*),²² the Federal Circuit elaborated on the holdings in *BMC* and *Muniauction*, stating that the patentee must either prove that a mastermind is vicariously liable for the actions of the other party under traditional agency principles or that the other party is contractually obligated to the mastermind to perform the claimed step.²³ In *McKesson Technologies Inc. v. Epic Systems Corp.*,²⁴ the Federal Circuit closely followed the holding in *Akamai I*.²⁵

In her dissent in *McKesson*, Judge Newman highlighted inconsistencies in the court's prior rulings and suggested that it had created further confusion by applying the single entity rule differently for system claims.²⁶ Moreover, Judge Newman seemed to caution that the unintended consequence of the court's prior joint infringement holdings was to devalue the advances in computer-based technology that have enabled interactive methods.²⁷ Approximately one week later, the Federal Circuit vacated *Akamai I* and granted requests to rehear *McKesson* and *Akamai* en banc.²⁸ Almost a year later, a six judge majority for the Federal Circuit reversed its decisions in *BMC* and *Muniauction* and held that both joint infringement cases could be resolved through the application of the doctrine of induced infringement, leaving several important questions unanswered.²⁹

It is no accident that the Federal Circuit's attention has been diverted to issues surrounding interactive methods over the past

22. 629 F.3d 1311 (Fed. Cir. 2010), *rev'd*, 692 F.3d 1301.

23. *See id.* at 1319 (making explicit the implications of prior holdings that joint infringement could be perpetrated through an agency or contractual relationship).

24. 98 U.S.P.Q.2d (BNA) 1281 (Fed. Cir. 2011), *rev'd sub nom. Akamai II*, 692 F.3d 1301.

25. *See id.* at 1284–85 (drawing multiple parallels with *Akamai* and ultimately holding in favor of the alleged infringer).

26. *Id.* at 1290 (Newman, J., dissenting). An interactive system arises when different users, for example, physically control different interactive elements—a difficult distinction to make between interactive methods. *See id.* at 1290 (summarizing the distinction, contrasting the technical requirements of performance—where a single entity must control or direct every step—with the reality that a single entity can still cause and benefit from the process without much control (citing *Centillion Data Sys., LLC v. Qwest Commc'ns Int'l, Inc.*, 631 F.3d 1279, 1285 (Fed. Cir. 2011))).

27. *See id.* at 1291 (understating the net effect as “curious” because “the burgeoning body of interactive computer-managed advances” no longer qualifies for patent protection).

28. *McKesson Techs. Inc. v. Epic Sys. Corp.*, 463 F. App'x 906, 907 (Fed. Cir. 2011); *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 419 F. App'x 989, 989 (Fed. Cir. 2011).

29. *See Akamai II*, 692 F.3d at 1305–07.

several years. Facebook and Twitter were launched in 2004 and 2006 respectively.³⁰ A paradigm shift has occurred in the way humans work, play, and design technology: everything is connected.³¹ In the wake of this technological paradigm shift, it is the unenviable job of the Federal Circuit to apply laws crafted in consideration of 1950’s technology to the cutting edge innovations of today.³²

Several commentators have suggested that patentees can avoid having to assert joint infringement by drafting better claims.³³ Unfortunately, given today’s advances in technology, even expert claim drafting cannot protect patentees from an unauthorized use of their innovative method. Further, the Federal Circuit’s focus on the nature of the relationship between relevant actors ignores other practical factors that should be considered in determining liability for a joint infringement claim.³⁴ Accordingly, the law should prescribe a more flexible procedure to analyze joint infringement liability.

The proposed approach suggests that the law impose a two-prong test for method claim infringement when separate entities each

30. See Facebook, Inc., Current Report (Form 8-K) 4 (July 26, 2012); Nicholas Carlson, *The Real History of Twitter*, BUS. INSIDER, (Apr. 13, 2011), http://articles.businessinsider.com/2011-04-13/tech/29957143_1_jack-dorsey-twitter-podcasting (reporting Twitter’s launch in fall of 2006).

31. In his book, *The Structure of Scientific Revolutions*, Thomas Kuhn argued that scientific advancement, in one reviewer’s evocative words, “is a series of peaceful interludes punctuated by intellectually violent revolutions” where one worldview replaces another. Nicholas Wade, *Thomas S. Kuhn: Revolutionary Theorist of Science*, 197 SCIENCE 143, 144 (1977). The recent rise and popularity of social media technologies exhibit this pattern. Social media technologies (e.g., Twitter, Facebook, Google+) are Internet-based systems for the exchange of information between multiple users. In addition, social media employ software programs (applications or “apps”) that facilitate interaction between software and users. In sum, the very nature of social media and the benefits of its applications rely on the participation of multiple parties.

32. See Patent Act of 1952, Pub. L. No. 82-593, 66 Stat. 792 (codified as amended in scattered sections of 35 U.S.C.) (defining patentable subjects).

33. See, e.g., Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 256 (2005) (highlighting the commonality of distributed claims in computer networking and warning that patent owners will lack a remedy without careful drafting); Harold C. Wegner, *Wordsmithing, Akamai and the “All Elements” Rule*, GRAY ON CLAIMS 4 (Nov. 20, 2011), http://www.grayonclaims.com/storage/WordsmithingNov20_Version4.pdf (proposing the need for formal drafting licensure to “protect . . . America’s precious intellectual property”).

34. See, e.g., *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1382–83 (Fed. Cir. 2010) (Newman, J., dissenting) (commenting that the majority’s holding incorrectly dismisses the defendants’ “strategic partnership” to sell software in divided units); *Thomson-Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712, 723 (6th Cir. 1897) (considering the “certain inference” that the use of the defendant’s product would infringe the plaintiff’s patent); *Wallace v. Holmes*, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871) (No. 17,100) (granting an injunction for the plaintiff because “the actual concert with others is a certain inference” even without “an actual pre-arrangement with any particular person”).

perform separate steps of a method claim.³⁵ The first prong of the test applies to (1) claims directed to a single entity or (2) claims that do not require participation of multiple entities.³⁶ For these claims, in addition to the relationship between relevant actors, the law should consider and weigh several factors such as concerted action, commercial benefit, intent, and the nature of the activity performed.³⁷ The second prong applies to claims that explicitly require participation of multiple entities.³⁸ Here, the law should only consider the factors listed above if the patented claim intrinsically requires interactivity.³⁹ If no nexus exists between the patentability of the claim and its claimed interactivity, then liability should depend solely on the nature of the relationship between relevant actors.⁴⁰

This Article does not suggest whether Congress, the courts, or both should enact this change. Regardless of the source, the result—addressing the peculiarities associated with joint infringement—will be the same. The approach outlined above will prevent the misappropriation of patented technology, promote the public-notice function served by well-crafted claims, and shield innocent actors from strict liability.

This Article contributes to the joint infringement literature in several ways. First, it highlights that focusing on inducement or the relationships between entities ignores other practical factors that the law should consider in determining liability for joint infringement.⁴¹ Second, it acknowledges that joint infringement can occur multiple

35. See discussion *infra* Part III.A.

36. See discussion *infra* Part III.B.

37. See *Golden Hour*, 614 F.3d at 1382 (Newman, J., dissenting) (discussing joint infringement in the context of extremely close collaboration); *Thomson-Houston Elec.*, 80 F. at 723–24 (rejecting contributory infringement and inferences basing judgment on the limited uses for the final product, i.e., its patented combination); *Wallace*, 29 F. Cas. at 80 (concluding the patent did not protect the patentee if two manufacturers operated in parallel for the common purpose of avoiding infringement).

38. See discussion *infra* Part III.C.

39. See Nari Lee, *Fragmented Infringement of Computer Program Patents in the Global Economy*, 48 IDEA 345, 349 (2008) (contrasting Internet-based patents whose value “likely . . . lies in the combinations of steps” against machines or processes merely connected to a network and arguing that expanding protection of the latter would be “over-reaching”).

40. See generally *Muniauction, Inc. v. Thomson Corp.* 532 F.3d 1318 (Fed. Cir. 2008) (relying on the control-or-direction standard for joint infringement claims), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam); *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373 (Fed. Cir. 2007) (focusing on vicarious liability to find non-infringement), *overruled by Akamai II*, 692 F.3d 1301.

41. See, e.g., *Golden Hour*, 614 F.3d at 1382–83 (Newman, J., dissenting) (criticizing control or direction as too narrow a standard for joint infringement); *Thomson-Houston Elec.*, 80 F. at 723–24 (focusing on actual concert of infringers); *Wallace*, 29 F. Cas. at 80 (same).

ways and suggests that the rules for determining liability be flexible enough to take into account different possibilities.⁴² Third, this Article suggests a flexible approach for enforcing interactive method claims that are truly innovative while protecting innocent actors from infringement liability and placing a premium on well-crafted claims.⁴³

Part I of this Article discusses how the doctrine of joint infringement evolved from the common law. In addition, Part I discusses the most recent developments concerning the doctrine of joint infringement. Part II highlights certain factors that suggest that a more flexible approach to joint infringement is necessary. Finally, Part III outlines the suggested approach to determine if a method claim is infringed when separate entities each perform separate steps of the method claim.

I. BACKGROUND

In the last five years, the Federal Circuit has struggled with the doctrine of joint infringement.⁴⁴ In *Akamai I*, the Federal Circuit requested that both parties address (1) the circumstances under which a method claim would be directly infringed when separate entities each perform separate steps of the method claim and (2) the extent to which each of the parties would be liable.⁴⁵ In *McKesson*, the Federal Circuit asked the parties to address two questions: (1) In which circumstances, if any, would an entity or third party be liable for inducing infringement or contributory infringement having separately performed the steps of a method claim, and (2) “[d]oes the nature of the relationship between the relevant actors—e.g., service provider/user; doctor/patient—affect the question of direct or indirect infringement liability?”⁴⁶ Thus, the fundamental question before the Federal Circuit was under what circumstances

42. See discussion *infra* Part III.

43. See discussion *infra* Part III.

44. The evolution of the doctrine proceeded from *BMC*, where the Federal Circuit considered the question of the proper standard for joint infringement, having already phrased the district court’s perspective of “[f]inding no law on point.” 498 F.3d at 1378. In turn, *Muniauction*, relied on *BMC* for an “axiomatic” statement of the law regarding infringement. 532 F.3d at 1328. *Golden Hour* cited both *Muniauction* and *BMC* for joint infringement doctrine, 614 F.3d at 1380, as did *Akamai I*, adding that “*BMC Resources* established a foundational basis” to determine joint infringement liability, 629 F.3d 1311, 1318–19 (Fed. Cir. 2010), *rev’d*, 692 F.3d 1301 (Fed. Cir. 2012). Finally, *McKesson* incorporated *Akamai*’s holding with respect to agency relationships. 98 U.S.P.Q.2d (BNA) 1281, 1283–84 (Fed. Cir. 2011), *rev’d sub nom. Akamai II*, 692 F.3d 1301.

45. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 419 F. App’x 989, 989 (Fed. Cir. 2011) (per curiam).

46. *McKesson Techs. Inc. v. Epic Sys. Corp.*, 463 F. App’x 906, 907 (Fed. Cir. 2011) (per curiam).

infringement liability exists when separate entities each perform separate steps of a method claim.⁴⁷

Surprisingly, in the majority's per curiam opinion, issued on August 31, 2012, the Federal Circuit failed to answer most of these questions.⁴⁸ Instead, the court explained that the cases could be resolved through application of the doctrine of induced infringement and declined to address when direct infringement could be found or opine on the "single entity" doctrine.⁴⁹ By reframing the issue, the majority sidestepped the main controversy that gave rise to the appeal. Thus, fundamental questions remain unanswered.

The joint infringement doctrine was a judicially created exception rooted in the theory of common law contributory infringement. In order to place the doctrine in proper context for analysis, this Part briefly reviews the evolution of the doctrine of contributory infringement from common law to its codification in the Patent Act of 1952.⁵⁰ Next, this Part explains the establishment and application of the Federal Circuit's joint infringement standard. Finally, this Part concludes with a review of the demise of the doctrine of joint infringement and an introduction of the new inducement-only standard.

A. *Early Law Concerning Patent Infringement*

The idea of joint infringement is derived from the doctrine of indirect infringement.⁵¹ Today, indirect infringement generally refers to the acts defined under 35 U.S.C. § 271(b), inducing direct infringement, and 35 U.S.C. § 271(c), contributing to direct infringement.⁵² Both provisions impose liability upon parties that aid

47. See *McKesson*, 98 U.S.P.Q.2d (BNA) at 1291 (Newman, J., dissenting) (distilling the question as "identifying the circumstances in which it is just to hold one individual accountable for the actions of another" (quoting *Sony Corp. of Am. v. Universal City Studios, Inc.*, 464 U.S. 417, 435 (1984)) (internal quotation marks omitted)).

48. See *Akamai II*, 692 F.3d 1301, 1306 (Fed. Cir. 2012) (en banc) (per curiam). The Federal Circuit decided the *Akamai* and *McKesson* rehearings collectively as *Akamai II*. *Id.* at 1305–06.

49. See *id.* at 1306.

50. Pub. L. No. 593, 66 Stat. 792 (codified as amended in scattered sections of 35 U.S.C.).

51. See *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007) (summarizing that a participant in infringement does so either directly or indirectly), *overruled by Akamai II*, 692 F.3d 1301.

52. See 5 DONALD S. CHISUM, CHISUM ON PATENTS: A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 17.01, at 17-2 (2011) (overviewing types of infringement in relation to U.S. Code provisions); see also *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1274 (Fed. Cir. 2004) (predicating

or abet direct infringement by another party.⁵³ Historically, the common law referred to both types of indirect infringement simply as “contributory infringement.”⁵⁴

Common law contributory infringement was codified by Congress in the Patent Act of 1952 to address legal issues arising from a common yet, particular set of facts.⁵⁵ Specifically, early contributory infringement cases dealt mostly with fact patterns that involved the sale of an unpatented component in an infringing combination.⁵⁶ Cases were common where one party sold an item that enabled another party to make or use a patented machine, process, or combination.⁵⁷ Therefore, a review of the development of common law contributory infringement will place the doctrine of joint infringement in its proper context.

1. *Common law contributory infringement*

Before the Patent Act of 1952, courts categorized patent infringement as (1) direct infringement or (2) contributory infringement under a theory of joint tortfeasance.⁵⁸ Although the law now distinguishes between inducement and contributory infringement, the two were once the same concept—contributory infringement.⁵⁹ Under this early formulation of contributory infringement, “one who intentionally caused, or aided and abetted, the commission of a tort by another was jointly and severally liable with the primary tortfeasor.”⁶⁰ As illustrated below, factors that assisted early courts in determining contributory infringement were

indirect infringement on *initially* finding direct infringement). The plaintiff’s “failure to prove direct infringement . . . necessarily doom[ed] its allegations of indirect infringement.” *Dynacore Holdings*, 363 F.3d at 1277.

53. CHISUM, *supra* note 52, § 17.01, at 17-2.

54. *See id.* § 17.02, at 17-3 & n.1 (recounting joint tortfeasance and its relation to 35 U.S.C. § 271(b)–(d)).

55. *See id.* § 17.02[6], at 17-24 (emphasizing that Congress viewed the judicial doctrine of contributory infringement as an important innovation when it enacted the Patent Act of 1952).

56. *See, e.g., id.* § 17.02, at 17-3 (labeling *Wallace v. Holmes* as the “leading case” regarding unpatented components assembled into infringing combinations).

57. *See Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2066 (2011) (tracing the dearth of clear case law to the early lack of distinction between such cases and the less common inducement cases); *see also Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990) (highlighting the most common scenario involving the 1952 component cases).

58. *See Hewlett-Packard*, 909 F.2d at 1469.

59. *See Global-Tech*, 131 S. Ct. at 2066 (“Before 1952, both the conduct now covered by § 271 (b) (induced infringement) and the conduct now addressed by § 271 (c) (sale of a component of a patented invention) were viewed as falling within the overarching concept of ‘contributory infringement.’”).

60. *Hewlett-Packard*, 909 F.2d at 1469.

concerted action, intent, and the nature of the relationship between the parties.⁶¹

a. Concerted action

Before the Patent Act of 1952, most courts adhered to the principles that (1) whoever uses a patent without permission is an infringer and (2) whoever contributes to such use is also an infringer.⁶² *Wallace v. Holmes*⁶³ is a notable case that applies common law principles of joint tortfeasance in the context of patent infringement.⁶⁴ The plaintiff in *Wallace* alleged that the defendants infringed a patent for an improvement of a lamp.⁶⁵ The patent claimed a burner and a chimney that were combined to form the improved lamp.⁶⁶ The defendants asserted that they did not infringe any of the claims of the patent on the grounds that they only made and sold some of the parts of the lamp.⁶⁷ Specifically, the defendants manufactured the lamp burner and left it to the purchasers of the burner to supply the chimney.⁶⁸ The defendants argued that “where a patent is for a combination merely, it is not infringed by one who uses one or more of the parts, but not all, to produce the same results, either by themselves, or by the aid of other devices.”⁶⁹

The court acknowledged that the rule articulated by the defendants was well settled.⁷⁰ However, the court rejected application of the rule to the facts at issue.⁷¹ Instead, the court stated that if, in concert, the defendant made the burner and a third party provided the chimney then both parties must be deemed joint infringers.⁷² The court noted that while there was no evidence that the defendants prearranged with a third party to combine its burner with a chimney, every sale of the burner made by the defendant was a proposal to the purchaser to supply the chimney.⁷³ In turn, the purchaser, by

61. See discussion *infra* Part I.A.1.a–c.

62. See CHISUM, *supra* note 52, § 17.02[2], at 17-11 (noting that the Supreme Court distinguished between “impermissible ‘reconstruction’ rather than ‘repair’” (quoting *Leeds & Catlin Co. v. Victor Talking Mach. Co.*, 213 U.S. 325, 333 (1909))).

63. 29 F. Cas. 74 (C.C.D. Conn. 1871) (No. 17,100).

64. See CHISUM, *supra* note 52, § 17.02, at 17-3 (chronicling the evolution of contributory infringement, starting with *Wallace*).

65. *Wallace*, 29 F. Cas. at 77.

66. *Id.* at 78–79.

67. *Id.*

68. *Id.* at 79–80.

69. *Id.* at 80.

70. *Id.*

71. *Id.*

72. *Id.* (emphasizing the codependence of the parts and their usefulness only when sold together).

73. *Id.* (recognizing that a burner was of little value without a chimney).

purchasing the burner, consented to supplying or causing the chimney to be supplied to the burner.⁷⁴ Thus, based solely on their actions, the court concluded that the manufacturer of the burner and the customer purchasing the burner for combination with a chimney were “active parties to the whole infringement.”⁷⁵

b. Intent

Alternatively, in other early contributory infringement cases, courts considered the intent of the relevant actors.⁷⁶ Generally, these cases concerned the sale of generic components for use in a patented article.⁷⁷ One early case dealing with contributory infringement held that there must be some intent (inferred or otherwise) on the part of a seller to have the sold article used in an infringing way.⁷⁸ Subsequent cases found no liability where a component sold by an alleged infringer had other uses in addition to being used in a patented combination.⁷⁹

However, this principle was limited by the Sixth Circuit in *Thomson-Houston Electric Co. v. Ohio Brass Co.*⁸⁰ The court stated that liability could be found if the plaintiff affirmatively showed that the defendant-seller intended to assist in the infringement.⁸¹ The court explained that intent could be shown by knowledge or indifference of the defendant as to the consequences of its act.⁸² Later decisions found contributory infringement where the sale of components was accompanied by active inducement in the form of instructions,

74. *Id.*

75. *Id.*

76. *See, e.g.,* *Henry v. A.B. Dick Co.*, 224 U.S. 1, 31–32 (1912) (explaining that while certain generic items can be manufactured, they may not be sold with the intent to infringe a patent), *overruled by* *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917).

77. *See id.* at 11 (evaluating the sale of ink used in a mimeograph); *Thomson-Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712, 723 (6th Cir. 1897) (explaining that the products sold had no innocent use); *see also* CHISUM, *supra* note 52, § 17.02[1], at 17-6 (distinguishing innocent use of items from infringing use directed via advertisement or instruction).

78. *See Henry*, 224 U.S. at 48 (requiring intent and purpose of use); *see also Thomson-Houston*, 80 F. at 723 (determining that it is the duty of a defendant to ensure that combinations of product used to intentionally infringe be limited to what is “lawfully organized”); CHISUM, *supra* note 52, § 17.02[1], at 17-4 to -5 (explaining that knowledge of infringing use is not required if intent to infringe is present).

79. *See* CHISUM, *supra* note 52, § 17.02[1], at 17-4 to -5 (distinguishing those products that had an innocent use as well as an infringing use).

80. 80 F. 712 (6th Cir. 1897).

81. *Id.* at 723–24 (drawing an inference of intention where the article could only be used in patented combination).

82. *See id.* at 723 (giving a defendant a duty of investigation and inability to be indifferent as to whether a product will be used in an infringing manner).

advertising, or other steps indicating the intent of the defendant that the component be used in an infringing fashion.⁸³

c. The relationship between the parties

As early as 1825, the Supreme Court recognized that the relationship between alleged joint tortfeasors was a factor in determining infringement liability. In *Keplinger v. De Young*,⁸⁴ the Court agreed with a lower court's instruction that the defendant did not infringe because the defendant had no connection with a user of the patented machine other than a purchase contract.⁸⁵ However, the Court acknowledged the possibility that the defendant might be liable if the claimant could offer evidence of a connection in addition to the purchase contract or a transaction intended to evade the law.⁸⁶ Thus, by inquiring into whether the parties attempted to evade the law, the Supreme Court suggested it would consider other factors related to how or why infringement occurred in addition to the relationship between relevant actors.⁸⁷

In sum, early courts considered the actions of the parties, intent of the parties, and the nature of the relationship between the parties when determining whether more than one party infringed a patent. Congress codified the common law in the Patent Act of 1952.⁸⁸ While some of the general principles established by the courts remained, Congress narrowed their application to specific situations.⁸⁹

2. The Patent Act of 1952

The Patent Act of 1952 maintained the common law category of direct infringement and contributory infringement, and clarified

83. See *Weed Chain Tire Grip Co. v. Cleveland Chain & Mfg. Co.*, 196 F. 213, 215 (C.C.N.D. Ohio 1910) (holding the defendant liable for infringement when he sold products with attached tag including instructions); *Holly v. Vergennes Mach. Co.*, 4 F. 74, 82 (C.C.D. Vt. 1880) (concluding that providing a patented product for an infringing purpose made defendants liable as infringers); CHISUM, *supra* note 52, § 17.02[1], at 17-6 & n.8 (specifying cases in which patented articles sold alongside instructions were found to be active inducement).

84. 23 U.S. (10 Wheat.) 358 (1825).

85. See *id.* at 365 (pivoting the decision on the contractual relationship between the plaintiff and defendant).

86. See *id.* at 366 (emphasizing that the jury had sufficient latitude as instructed to find infringement if more nefarious circumstances had manifested).

87. See *id.* (declining to investigate such questions because they were not before the Court).

88. Pub. L. No. 82-593, 66 Stat. 792 (codified as amended in scattered sections of 35 U.S.C.); see CHISUM, *supra* note 52, § 17.02[6], at 17-24 (clarifying that the purpose of codification was to eliminate doubt and confusion).

89. See 35 U.S.C. § 271(b)–(c) (2006) (limiting the scope of the section by using the words “knowing” and “actively”).

their definitions. The Patent Act defines direct infringement as the unauthorized making, using, or selling of the patented invention.⁹⁰ Contributory infringement was originally defined judicially as any activity other than direct infringement where the defendant “displayed sufficient culpability to be held liable as an infringer.”⁹¹ Section 271(b)–(d) of the Patent Act is directed to contributory infringement.⁹² Section 271 separates common law contributory infringement into two categories, one covered by § 271(b) and the other covered by § 271(c).⁹³

Section 271(a)–(c), as it is currently written, reads as follows:

(a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

(b) Whoever actively induces infringement of a patent shall be liable as an infringer.

(c) Whoever offers to sell or sells within the United States or imports into the United States a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an infringement of such patent, and not a staple article or commodity of commerce suitable for substantial noninfringing use, shall be liable as a contributory infringer.⁹⁴

The remainder of this Part will focus on § 271(b) and (c).

a. Inducement

Section 271(b) states that “[w]hoever actively induces infringement of a patent shall be liable as an infringer.”⁹⁵ Section 271(b) codifies the case law developed prior to 1952 on contributory infringement other than infringement caused by the sale of a

90. *Id.* § 271(a) (“Except as otherwise provided in this title, whoever without authority makes, uses, offers, to sell, or sells any patented invention . . .”).

91. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990) (outlining the history of direct and indirect infringement).

92. 35 U.S.C. § 271(b)–(d).

93. *Id.* § 271(b)–(c); *see also* *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2067 (2011) (highlighting that both actively inducing infringement and importing or offering to sell a component of a patented device with the knowledge that such a component is not a commerce commodity will constitute contributory infringement).

94. 35 U.S.C. § 271(a)–(c).

95. *Id.* § 271(b).

component especially adapted for infringing use.⁹⁶ Under this provision, liability exists if an inducer specifically intends to cause, urge, encourage or aid another to infringe a patent.⁹⁷ Broadly speaking, Congress intended for § 271(b) to impose infringement liability on anyone who aids or abets infringement.⁹⁸ In subsequent cases under § 271(b), courts enforced but did not expand “the judge-made doctrine of contributory infringement under which a person who knowingly aids, encourages or abets the direct infringement of a patent is to be held liable as a contributory infringer.”⁹⁹

b. Contributory infringement

Section 271(c) concerns the sale or importation into the United States of “a component of a patented machine, manufacture, combination or composition, or a material or apparatus for use in practicing a patented process, constituting a material part of the invention.”¹⁰⁰ Here, if the seller knows that the component is “especially made or especially adapted for use in an infringement of such patent” and the component is “not a staple article or commodity of commerce suitable for substantial non-infringing use” then the seller is liable as a contributory infringer.¹⁰¹

Section 271(c) concerns, what was at the time, the most common form of contributory infringement.¹⁰² That is, Congress intended for § 271(c) to apply to parties who sold a component of a patented invention for use in that invention. If the alleged defendant did not sell the component then § 271(c) does not apply.¹⁰³ In its application, courts held suppliers of replacement parts, designed for use in repairing infringing articles, liable for contributory infringement.¹⁰⁴

96. See CHISUM, *supra* note 52, § 17.02[6], at 17-24 (clarifying that the purpose of codification was to eliminate doubt and confusion).

97. *Id.* § 17.01, at 17-2.

98. See S. REP. NO. 82-1979, at 28 (1952) (declaring the purpose of the 1952 amendment).

99. See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 348 (1961) (Black, J., concurring) (reviewing the legislative history in its application of indirect infringement).

100. 35 U.S.C. § 271(c).

101. *Id.*; CHISUM, *supra* note 52, § 17.01, at 17-2.

102. See S. Rep. No. 82-1979, at 28 (characterizing § 271(c) as applying to “one who sells a component part of a patented invention or material or apparatus for use therein”).

103. See *Jones v. Radio Corp. of Am.*, 131 F. Supp. 82, 83-84 (S.D.N.Y. 1955) (explaining that in light of the legislative history of the 1952 Act, § 271(c) does not apply if the defendant did not sell a component of the patented combination).

104. See *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 485-86 (1964) (stressing that such instances exemplified the types of case law results that § 271(c) was intended to codify); *Union Tool Co. v. Wilson*, 259 U.S. 107, 113-14

Thus, § 271(c) codified the law concerning the common, pre-1952 contributory infringement case where “a seller would sell a component which was not itself technically covered by the claims of a product or process patent but had no other use except with the claimed product or process.”¹⁰⁵

c. Judicially created doctrines and clarifications

Through the process of applying § 271, the courts established several judicially created doctrines. For example, the “all limitations” or “all elements” rule states that the patented invention is defined by each and every limitation of the claim being asserted.¹⁰⁶ Courts established that the initial question regarding the issue of infringement is whether the accused device or method falls within the literal scope of the language of the claims.¹⁰⁷ A device “literally infringes” a claim when every limitation of the claim can be found in the accused device.¹⁰⁸ If literal infringement is established, that is normally the end of the inquiry.¹⁰⁹

A second doctrine the courts established was the doctrine of equivalents. The doctrine of equivalents provides that an infringer may not pirate an invention simply by avoiding the literal language of a claim.¹¹⁰ To infringe under the doctrine of equivalents, an accused method or device must include each and every step or element of a

(1922) (holding that the sale of spare parts for use in patented machines was an infringing use).

105. *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469 (Fed. Cir. 1990).

106. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378–79 (Fed. Cir. 2007) (“Direct infringement requires a party to perform or use each and every step or element of a claimed method or product.”), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam); *Canton Bio-Med., Inc. v. Integrated Liner Techs., Inc.*, 216 F.3d 1367, 1370 (Fed. Cir. 2000) (“Infringement of process inventions is subject to the ‘all-elements rule’ whereby each of the claimed steps of a patented process must be performed in an infringing process, literally or by an equivalent of that step, with due attention to the role of each step in the context of the patented invention.”).

107. *See Canton Bio-Med.*, 216 F.3d at 1370 (explaining that infringement of a method can occur by a literally infringing process, or by an equivalent of the claimed steps).

108. *Lantech, Inc. v. Keip Mach. Co.*, 32 F.3d 542, 546–47 (Fed. Cir. 1994).

109. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950) (articulating that the first step in assessing the validity of a patent infringement claim is to look to the actual words of the claim and assess whether the accused device or component clearly falls within the claim).

110. *See id.* (explaining that the doctrine of equivalents must be applied to individual elements of the claim rather than to the invention as a whole, thus ensuring proper patent protection).

claim or its equivalent.¹¹¹ These doctrines work together. For example, under both literal infringement and the doctrine of equivalents, the “all elements” rule still requires that for there to be use of a patented invention, an entity must practice each and every step, or its equivalent, of a claimed method.¹¹²

Recently, the Supreme Court clarified that § 271(b) and (c) require an accused infringer to have knowledge of the infringed patent in *Global-Tech Appliances, Inc. v. SEB S.A.*¹¹³ In *Global-Tech*, the Supreme Court explained that § 271(b) and (c) have the same knowledge requirement: That the accused have knowledge of the patent’s existence.¹¹⁴ That is, both subsections require that the defendant knew that the induced acts would constitute patent infringement.¹¹⁵ In addition to clarifying the knowledge requirement, the Court also determined that § 271(b) required the alleged infringer to take affirmative steps to lead, prevail, move by persuasion, or influence another to infringe a patent.¹¹⁶

d. Summary

Section 271(b) and (c) were codified to cover specific examples of contributory infringement. Since 1952, the courts have created doctrines within the scope of § 271,¹¹⁷ and Congress has amended the section to close loopholes in the law.¹¹⁸ However, neither § 271 nor

111. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997) (stating that “[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim”). “[T]he doctrine of equivalents is not a license to ignore or ‘erase . . . structural and functional limitations of the claim,’ limitations ‘on which the public is entitled to rely in avoiding infringement.’” *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573, 1582 (Fed. Cir. 1996) (quoting *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532 (Fed. Cir. 1987)). Thus, if a claim element is completely missing from an accused device (that is, the claim element is not literally present in the device, and the equivalent to the claim element is not present), then there can be no infringement under the doctrine of equivalents as a matter of law. *Warner-Jenkinson*, 520 U.S. at 40. This is the so-called “all elements” rule.

112. *See Muniuction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328 (Fed. Cir. 2008) (restating the “all elements” rule as laid out in *BMC*), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

113. 131 S. Ct. 2060 (2011).

114. *Id.* at 2068 (“In light of the ‘special force’ of the doctrine of stare decisis with regard to questions of statutory interpretation, we proceed on the premise that § 271(c) requires knowledge of the existence of the patent that is infringed. Based on this premise, it follows that the same knowledge is needed for induced infringement under § 271(b).” (citation omitted)).

115. *Id.* at 2068.

116. *Id.* at 2065 (interpreting § 271(b) despite absence of an explicit “intent” requirement but rather an “induce” requirement).

117. *See* discussion *infra* Part II.B.

118. For example, § 271(f) was created to cover infringement by exporting the

the judicial doctrines that fall within its framework are fully comprehensive. This has become clearer as courts struggle to apply § 271 in recent cases involving interactive methods.

B. Joint Infringement

In 2007, the Federal Circuit had its first opportunity to hear a case in which the patentee asserted infringement based on a theory of joint infringement in *BMC*.¹¹⁹ Although the Federal Circuit affirmed the lower court’s finding of non-infringement, it used the occasion to establish the “control or direction” test.¹²⁰ A year later, the Federal Circuit further clarified this joint infringement standard in *Muniauction* by finding that no infringement occurred where the actions of the secondary actor were not done on behalf of the primary actor.¹²¹ In the years following *BMC* and *Muniauction*, district courts struggled to apply the direction or control test in various factual scenarios.¹²² Finally, on August 31, 2012, a fractured Federal Circuit overruled *BMC* and *Muniauction*, holding that there can be liability for induced infringement where all the steps are not performed by a single entity.¹²³

1. The genesis of the joint infringement doctrine

In *BMC*, the U.S. Court of Appeals for the Federal Circuit sought to clarify “the proper standard for whether a method claim is directly infringed by the combined actions of multiple parties.”¹²⁴ In this infringement action, *BMC* asserted two patents that disclosed a method requiring the combined action of several distinct participants.¹²⁵ The patents claimed a method for providing an interface between a standard touch-tone telephone and a debit card network in order to process debit transactions without using a PIN

components of a patented invention and assembling them abroad. 35 U.S.C. § 271(f) 2006).

119. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378 (Fed. Cir. 2007), overruled by *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

120. *Id.* at 1380–81 (acknowledging that a standard possibly resulting in arms-length agreements to avoid infringement did not outweigh concerns over expanding the law surrounding direct infringement).

121. *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1330 (Fed. Cir. 2008), overruled by *Akamai II*, 692 F.3d 1301.

122. See generally Alice Juwon Ahn, *Finding Vicarious Liability in U.S. Patent Law: The “Control or Direction” Standard for Joint Infringement*, 24 BERKELEY TECH. L.J. 149 (2009) (discussing that the amount of control or direction necessary to trigger liability is still unclear and reviewing district court decisions attempting to apply the test).

123. *Akamai II*, 692 F.3d at 1306.

124. *Muniauction*, 532 F.3d at 1329 (reviewing the analysis in *BMC*).

125. *BMC*, 498 F.3d at 1375.

number.¹²⁶ To carry out the transaction, the patented method required participation from a customer, debit network, and financial institution.¹²⁷

The accused infringer, Paymentech, provided financial transaction processing services to its merchant clients who collected payment information from customers and sent it to Paymentech.¹²⁸ Paymentech sent that information to a participating debit network who forwarded the information to an affiliated financial institution.¹²⁹ The financial institution authorized or declined the transaction and sent transaction status information back to Paymentech via the debit network.¹³⁰

BMC demanded that Paymentech obtain a license to use its patented technology when it learned of Paymentech's plans to provide services to BMC's clients.¹³¹ As a result, Paymentech filed suit in federal district court seeking a declaration of non-infringement with respect to the BMC patents.¹³² BMC counterclaimed and alleged that Paymentech directly infringed one method claim in each of U.S. Patent Numbers 5,718,298 (the '298 patent) and 5,870,456 (the '456 patent).¹³³

In support of its motion for summary judgment, Paymentech argued that it did not perform all of the steps of the patented method alone or in concert with its customers.¹³⁴ In response, BMC argued that under the Federal Circuit's decision in *On Demand Machine Corp. v. Ingram Industries, Inc.*,¹³⁵ a plaintiff must show "participation and combined action" on the part of the alleged infringer as the type of "connection" needed to prove joint infringement.¹³⁶ BMC concluded that Paymentech infringed the asserted claims under the "participation and combined action" standard.¹³⁷

The district court disagreed with BMC and found that Paymentech would only infringe the claims if the record showed that it directed or controlled the behavior of the financial institutions that performed

126. *Id.*

127. *Id.* at 1375–76.

128. *Id.* at 1375.

129. *Id.* at 1376.

130. *Id.*

131. *Id.*

132. *Id.*

133. *Id.* at 1375–76.

134. *Id.* at 1377.

135. 442 F.3d 1331 (Fed. Cir. 2006).

136. *BMC*, 498 F.3d at 1380 (quoting *On Demand*, 442 F.3d at 1331) (internal quotation marks omitted).

137. *See id.* at 1380 (arguing that *On Demand* had changed the law for joint infringement and that Paymentech's actions thus qualified as infringement).

those claimed method steps that Paymentech itself did not perform.¹³⁸ Since the record did not contain any evidence of direction or control, the district court granted Paymentech’s motion for summary judgment.¹³⁹

On appeal, the Federal Circuit also rejected BMC’s argument regarding joint infringement.¹⁴⁰ Instead, the Federal Circuit stated that “[w]hen a defendant . . . does not directly infringe a patent, the normal recourse under the law is for the court to apply the standards for liability under indirect infringement.”¹⁴¹ The court went on to explain that a finding of indirect infringement requires that a party amongst the accused actors has committed the entire act of direct infringement.¹⁴²

Relying on the past decisions of other courts, the Federal Circuit refused to find joint liability where one party did not control or direct each step of the patented process.¹⁴³ However, in cases where a mastermind had a third party carry out one or more steps of a claim, the court stated that the party in control would be liable for direct infringement.¹⁴⁴

In its opinion, the Federal Circuit refused to expand the doctrine of joint infringement to cover the independent conduct of multiple actors and acknowledged that this created a loophole where parties could enter into arms-length agreements to avoid infringement under the control or direction standard.¹⁴⁵ Instead of judicially closing this loophole, the court suggested that this concern could be addressed by patentees drafting method claims capturing the infringement of a single entity.¹⁴⁶

The Federal Circuit concluded that Paymentech did not infringe under its newly minted control or direction standard.¹⁴⁷ The court

138. *See id.* at 1378 (rejecting the *On Demand* language as dicta and finding no other district court decisions that followed a changed rule for joint infringement).

139. *See id.* (finding that even under a looser standard, Paymentech would still not infringe the patent claims according to the facts in the record).

140. *See id.* at 1380 (concluding that *On Demand* did not change the standard for joint infringement).

141. *Id.* at 1379.

142. *Id.*

143. *See id.* at 1380 (citing district court decisions that did not find infringement in arms-length agreements and divided performance situations).

144. *See id.* at 1381 (arguing that contracting out steps to specifically avoid infringement would still result in liability for the mastermind).

145. *See id.* (noting that expanding the standard to avoid the arms-length agreement loophole would not outweigh concerns over expanding the rule beyond the statutory language).

146. *See id.* (arguing that BMC could have avoided the claim by drafting its patent so that each step did not require a different actor).

147. *See id.*

noted that (1) there was no evidence that Paymentech provided its customers or financial institutions with instructions or directions for the use of the data it provided,¹⁴⁸ and (2) the record contained no evidence of a contractual relationship between Paymentech and the financial institutions.¹⁴⁹ Thus, without evidence of direction or control of both the debit networks and the financial institutions, the Federal Circuit concluded that Paymentech did not perform or cause to be performed each and every element of the claims.¹⁵⁰

2. *The multi-party spectrum defined*

One year later in *Muniauction*, the Federal Circuit modified the direction or control standard to an “on behalf of” standard.¹⁵¹ In *Muniauction*, the patentee asserted that the defendant, Thomson, infringed its patent under a theory of joint infringement.¹⁵² The patent claimed a method for conducting an auction of financial instruments over a network using a web browser.¹⁵³ Thomson owned the accused process, which allowed users to issue bids over a network using a web browser.¹⁵⁴ A jury found that Thomson willfully infringed *Muniauction*’s claims.¹⁵⁵ On appeal, the Federal Circuit addressed whether the action of the bidder and auctioneer could be combined to give rise to a finding of direct infringement by the auctioneer.¹⁵⁶

The Federal Circuit described the fact scenarios under which joint infringement had been asserted as a “multi-party spectrum.”¹⁵⁷ At one end of the spectrum, a claim is directly infringed “if one party exercises ‘control or direction’ over the entire process such that every step is attributable to the controlling party, i.e., the ‘mastermind.’”¹⁵⁸ At the other end of the spectrum, a claim would not be directly

148. *See id.* at 1381–82 (rejecting BMC’s argument that the instructions could be inferred from the data provision).

149. *See id.* at 1382.

150. *See id.*

151. *See* *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1330 (Fed. Cir. 2008) (building on the direction or control standard articulated in *BMC*, namely that the control of access to a system is not sufficient to incur liability), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam); *see also* Ken Hobday, Comment, *The Incredibly Ever-Shrinking Theory of Joint Infringement: Multi-Actor Method Claims*, 38 CAP. U. L. REV. 137, 140–41 (2009) (arguing that the “on behalf of” standard goes unnecessarily beyond the *BMC* standard).

152. *Muniauction*, 532 F.3d at 1323.

153. *Id.* at 1321–23 (explaining that the patent was for a process whereby the municipality offered bonds to underwriters who then bid on and purchased the offering and resold the individual bonds to the public).

154. *Id.* at 1323.

155. *Id.*

156. *Id.* at 1328–29.

157. *Id.* at 1329.

158. *Id.*

infringed if there was only evidence of “mere ‘arms-length cooperation’” between multiple parties that in combination performed every step of a claimed method.¹⁵⁹

Having set forth these boundaries, the court opined that one factual scenario¹⁶⁰ in which the control or direction standard would be satisfied is “where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method.”¹⁶¹ Under this framework, the court decided that Thomson did not infringe the asserted claims since Thomson did not have another party perform steps of the method claim on its behalf.¹⁶² Furthermore, the Federal Circuit stated that evidence that Thomson controlled access to the system and instructed bidders on its use was insufficient to incur liability for direct infringement.¹⁶³ Thus, in *Muniauction*, the Federal Circuit narrowed the joint infringement doctrine articulated in *BMC*.¹⁶⁴

3. Application of the direction or control test

Following *BMC* and *Muniauction*, several district courts applied the direction or control test to various factual scenarios with generally predictable results.¹⁶⁵ In evaluating the relationships between the

159. *Id.*

160. Presumably the court left the door open for other scenarios.

161. *Muniauction*, 532 F.3d at 1330.

162. *Id.*

163. *See id.* (finding the evidence insufficient under the *BMC* “control or direction” standard).

164. *See* Hobday, *supra* note 151, at 140–41 (arguing that *Muniauction*’s added requirement that the alleged infringer’s actions must violate traditional requirements for vicarious liability narrows the *BMC* standard).

165. *See, e.g.*, *Am. Patent Dev. Corp. v. Movielink, LLC*, 637 F. Supp. 2d 224, 237 (D. Del. 2009) (denying a motion for summary judgment because there was a question of material fact as to Movielink’s control over its downloaded movie programs); *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 614 F. Supp. 2d 90, 122–23 (D. Mass. 2009) (ruling that Limelight did not infringe upon Akamai’s content delivery process because the customer was required to perform a step of Limelight’s process and that step was not a contractual obligation for using Limelight’s services), *aff’d*, 629 F.3d 1311 (Fed. Cir. 2010), *rev’d en banc, per curiam*, 692 F.3d 1301 (Fed. Cir. 2012); *Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811, 838 (S.D. Tex. 2008) (holding that contracts requiring physicians performing remote diagnoses as part of a patented “telemedicine” system to get insurance, follow professional standards, and schedule on-call times merely set basic parameters and were insufficient to prove control); *Global Patent Holdings, LLC v. Panthers BRHC LLC*, 586 F. Supp. 2d 1331, 1332–33, 1335 (S.D. Fla. 2008) (finding no infringement when remote users of Global Patent’s Remote Query Communication System downloaded files from the system because Global Patent could not prove the users were directed or controlled by Panthers even though the downloaded material was used to render material for Panthers’ website), *aff’d per curiam*, 318 F. App’x 908 (Fed. Cir. 2009). *See generally* W. Keith Robinson, *Ramifications of Joint Infringement Theory on Emerging Technology*

parties involved, most courts found that the factual situations with which they were presented did not satisfy the control or direction standard.¹⁶⁶ It is unclear whether the outcome of these cases would change under the newly minted inducement-only rule. However, the lack of fact patterns that satisfied the control or direction test most likely played a part in its demise.¹⁶⁷

For example, evidence of mere guidance or instruction is insufficient to satisfy the direction or control standard.¹⁶⁸ In *Global Patent Holdings, LLC v. Panthers BHRC LLC*,¹⁶⁹ the U.S. District Court for the Southern District of Florida stated that the Federal Circuit did not intend for evidence of mere guiding or instructing conduct in some of the steps of a method claim to satisfy the direction or control standard.¹⁷⁰ Instead, the district court stated that a contractual obligation or other relationship that gave rise to vicarious liability must exist to warrant a finding of joint infringement.¹⁷¹ Similarly, other courts have found that “[g]iving instructions or prompts to the third party in its performance of the steps necessary to complete infringement, or facilitating or arranging for the third-party’s involvement in the alleged infringement, are not sufficient” evidence of “direction or control.”¹⁷²

In applying the control or direction test, other courts have explained that a contract, by itself, is still not sufficient for a finding of direction or control. Generally, district courts have found that evidence of a contract for services between a content provider and a customer and instructions on how to use those services is not sufficient evidence of direction or control.¹⁷³ Instead, even where a

Patents, 18 TEX. INTELL. PROP. L.J. 335 (2010) (discussing in-depth how courts have applied *BMC* and *Muniauction*).

166. See, e.g., *Global Patent*, 586 F. Supp. 2d at 1335 (“[T]he court indicated that the third party must perform the steps of the patented process by virtue of a contractual obligation or other relationship that gives rise to vicarious liability in order for a court to find ‘direction or control.’”).

167. *Akamai II*, 692 F.3d at 1307.

168. See *id.*

169. 586 F. Supp. 2d 1331 (S.D. Fla. 2008), *aff’d per curiam*, 318 F. App’x 908 (Fed. Cir. 2009).

170. See *id.* at 1335 (citing *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301).

171. *Id.*

172. *Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811, 834 (S.D. Tex. 2008) (finding that video conferencing network link providers did not infringe on a patent for “telemedicine” services because the physicians remotely linked to the remote patient had to perform the medical diagnoses and care instructions, thereby removing one step of the process from the network providers).

173. See, e.g., *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 614 F. Supp. 2d 90, 121 (D. Mass. 2009) (explaining that *Muniauction* requires evidence beyond an arms-length agreement to show direction and control), *aff’d*, 629 F.3d 1311 (Fed. Cir.

contract may exist, courts have indicated that evidence that the accused party directed or controlled how a third party performed the steps of a method claim may also be required for a finding of direction and control.¹⁷⁴

In contrast, the court in *American Patent Development Corp. v. Movielink, LLC*,¹⁷⁵ stated that evidence of software running on a third party system that was continuously controlled by an accused infringer may be sufficient to support a claim for infringement under a joint infringement theory.¹⁷⁶ Here, one of the asserted patents was directed to a system for limiting the use of a downloaded video program purchased by a customer from a “central station” that transmits a “video product” to a customer at a “user site.”¹⁷⁷ The claims at issue were methods for limiting the customer’s access to the video programming based on predetermined viewing limits.¹⁷⁸

American Patent Development Corporation (“APDC”) asserted, under a joint infringement theory, that Movielink infringed its claims.¹⁷⁹ APDC noted that in order to use the accused Movielink service, a customer must have Movielink Manager software installed on the computer.¹⁸⁰ In response, Movielink argued that it “did not control its customers’ computers, or the software running on them.”¹⁸¹ In response, the district court rejected Movielink’s arguments. The court noted that in Movielink’s product documentation, the Movielink Manager was described as being tightly integrated with its server software, and was repeatedly depicted as a component in a larger Movielink product offering.¹⁸² Further, the court noted that Movielink had the capacity to revoke customer

2010), *rev’d*, 692 F.3d 1301; *Gammino v. Cellco P’ship*, 527 F. Supp. 2d 395, 398 (E.D. Pa. 2007) (noting that parties cannot contract around steps to avoid infringement charges but finding insufficient evidence of control because the contracting party did not know how the third party performed the step).

174. *See Emtel*, 583 F. Supp. 2d at 833 (noting that district courts after *Muniauction* specifically require evidence of performance according to the defendant’s instructions and not merely performance “prompted or facilitated” by the defendant).

175. 637 F. Supp. 2d 224 (D. Del. 2009).

176. *See id.* at 236 (denying summary judgment due to the sufficient evidence in the record suggesting continuing control).

177. *Id.* at 227.

178. *Id.*

179. *Id.*

180. *Id.*

181. *Id.* at 236 (emphasizing Movielink’s attempt to demonstrate that control required a showing of ability “to fundamentally manage or influence the functioning of the thing allegedly being controlled”).

182. *See id.* at 237 (noting that these characteristics influenced the court’s interpretation of the level of control).

licenses through use of the Movielink Manager.¹⁸³ Thus, the court concluded that there was a genuine issue of material fact as to whether Movielink exercised continuing control over the software running on the customers' computer.¹⁸⁴

In addition, district courts have found that evidence that an alleged infringer caused third parties to perform in accordance with specific instructions and requirements may be sufficient to support a claim for joint infringement. In *Emtel, Inc. v. Lipidlabs, Inc.*,¹⁸⁵ the court reviewed several district court cases heard after *BMC* and *Muniauction* for guidance.¹⁸⁶ The court noted that in several cases, the alleged infringer provided precise specifications or requirements for performing steps of the claimed method.¹⁸⁷ In these cases, the court granted summary judgment under a theory of joint infringement where there was insufficient evidence of specific instruction to control third party performance.¹⁸⁸

In sum, the initial standard for joint infringement was set forth in *BMC* and *Muniauction*. In most cases, courts applying *BMC* or *Muniauction* did not find that there was evidence of direction or control or an agency relationship between potential infringing parties. A handful of districts found otherwise; however, these rulings would later be called into question by the Federal Circuit's application of the "single entity" rule.¹⁸⁹

4. The "single entity" rule

The "single entity" rule states that direct infringement under § 271(a) requires a showing that a single party practiced each and every element of the claimed invention.¹⁹⁰ The single entity rule is

183. *See id.* (identifying the ability to revoke licenses as the "most compelling" evidence of control).

184. *See id.* at 237 (denying Movielink's motion for summary judgment).

185. 583 F. Supp. 2d 811 (S.D. Tex. 2008).

186. *See id.* at 833-34 (reviewing *Global Patent Holdings, LLC v. Panthers BRHC LLC*, 586 F. Supp. 2d 1331 (S.D. Fla. 2008), *aff'd per curiam*, 318 F. App'x 908 (Fed. Cir. 2009), and *Rowe Int'l Corp. v. Ecast, Inc.*, 586 F. Supp. 2d 924 (N.D. Ill. 2008)).

187. *See id.* (highlighting the defendant's supply of "javascript programs and html-based web material" in *Global Patent* and the technical requirements for jukebox hardware manufacturers specific to the plaintiff's jukebox system in *Rowe* as the alleged specific instructions).

188. *See id.* at 834 (contrasting the granting of summary judgment in *Global Patent*, where there was no contractual obligation for the third party to perform, with the jury finding of direction and control in *Rowe*, where the plaintiff provided specific technical requirements and directions for performance).

189. *See infra* Part I.B.4.

190. *See BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007) ("Infringement requires, as it always has, a showing that a defendant has practiced each and every element of the claimed invention."), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

closely related to the “all limitations” rule and is used in direct infringement determinations.¹⁹¹ One commentator has asserted that the “single entity” or “single actor” rule is a corollary to the “all limitations” rule and that the “whoever” in the language of § 271 refers to only a single, individual entity.¹⁹² Thus, under the “single entity” rule, “whoever” refers to only a single, individual entity for the purposes of direct infringement.

Direct infringement requires a party to perform or use each and every step or element of a claimed method or product.¹⁹³ Since direct infringement is a strict liability offense, a showing of intent or knowledge of the patent is not required.¹⁹⁴ That is, under direct infringement, independent creation is not a defense and the infringement may be unintentional and inadvertent.¹⁹⁵

BMC held that indirect infringement (inducement and contributory infringement) requires a finding that a party amongst the accused actors has committed the entire act of direct infringement.¹⁹⁶ Further, to succeed in an action for inducement or contributory infringement, *BMC* held that a plaintiff must first show that direct infringement under § 271(a) has occurred.¹⁹⁷ In *Akamai II*

191. See Joshua P. Larsen, Seminar Article, *Liability for Divided Performance of Process Claims After BMC Resources, Inc. v. Paymentech, L.P.*, 19 DEPAUL J. ART TECH. & INTELL. PROP. L. 41, 49–50 (2008) (examining the importance of the “all limitations” rule, which defined the scope of a patent by requiring the performance of each step to prove infringement).

192. See *id.* at 50–51 (arguing that the “single actor” and “all limitations” rules act as corollaries for direct infringement cases); see also 35 U.S.C. § 271(a) (2006) (“[W]hoever without authority makes, uses, offers to sell, or sells any patented invention, . . . infringes the patent.”); *BMC*, 498 F.3d at 1378–79 (“Direct infringement requires a party to perform or use each and every step or element of a claimed method or product. For process patent or method patent claims, infringement occurs when a party performs all of the steps of the process.” (citations omitted)).

193. See *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997) (requiring an “objective inquiry on an element-by-element basis”); *Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 773 (Fed. Cir. 1993) (finding that merely selling the equipment to perform the step in a process is insufficient to prove infringement and requiring the infringer to perform the process as well).

194. See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1519 (Fed. Cir. 1995) (en banc) (per curiam), *rev’d on other grounds*, 520 U.S. 17. The infringer does not even have to know of the existence of the patent. See *id.* (noting that knowledge may be considered as part of damages but not liability for infringement).

195. See *Blair v. Westinghouse Elec. Corp.*, 291 F. Supp. 664, 670 (D.D.C. 1968) (emphasizing that independent design elements or modifications may show the infringer intended to avoid liability), *aff’d per curiam sub nom. Blair v. Dowd’s, Inc.* 438 F.2d 136 (D.C. Cir. 1970).

196. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1379 (Fed. Cir. 2007) (citing *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004)), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

197. *Id.* at 1380.

the Federal Circuit overruled the portion of *BMC* that applied the “single entity” rule to the determination of infringement based on an inducement theory.¹⁹⁸ However, it is important to note that the Federal Circuit’s decision in *Akamai II* seems to have left the single entity rule intact with respect to direct infringement.¹⁹⁹

In formulating the “single entity” rule, the court in *BMC* relied on language in several cases that was not necessarily applicable to identifying a single infringer.²⁰⁰ For example, *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*²⁰¹ stands for the proposition that the doctrine of equivalents, like literal infringement, must be tested element by element.²⁰² Courts have repeatedly held that a process claim is directly infringed when the process is performed.²⁰³ In *Dennison Manufacturing Co. v. Ben Clements & Sons, Inc.*,²⁰⁴ the court stated that the test of infringement is whether the claimed process is utilized by the infringer.²⁰⁵ Accordingly, none of these cases explicitly state that “a single entity” must perform each and every step of a claimed method to be a direct infringer.

Further, in an attempt to weaken the “single entity” rule, one amici curiae in *Akamai II* asserted that the word “whoever” in § 271 can mean more than one person.²⁰⁶ Statutory interpretation may indirectly support this definition. Specifically, “whoever invents” refers to more than one inventor.²⁰⁷ Further, 1 U.S.C. § 1 states that words importing the singular include and apply to several persons,

198. *Akamai II*, 692 F.3d at 1306.

199. *Id.* (stating that there can be liability for induced infringement where all the steps are not performed by a single entity).

200. *See BMC*, 498 F.3d at 1378 (evaluating the facts under a looser standard and coming to the same conclusion).

201. 520 U.S. 17 (1997).

202. *Id.* at 40 (“The determination of equivalence should be applied as an objective inquiry on an element-by-element basis.”).

203. *Dennison Mfg. Co. v. Ben Clements & Sons, Inc.*, 467 F. Supp. 391 (S.D.N.Y. 1979); *see Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 773 (Fed. Cir. 1993) (“The sale of the apparatus in *Standard Havens* was not a direct infringement because a method or process claim is directly infringed only when the process is performed.”); *see also Atl. Thermoplastics Co. v. Faytex Corp.*, 970 F.2d 834, 836 (Fed. Cir. 1992) (holding that a defendant who did not manufacture a product could not infringe a product-by-process claim).

204. 467 F. Supp. 391 (S.D.N.Y. 1979).

205. *Id.* at 427 (“To be a direct infringer of the method claims, defendant must be found to have used the attachments in question in the manner prescribed in the method claims.”).

206. Brief of Amicus Curiae Pharmaceutical Research and Manufacturers of America on Rehearing En Banc in Support of Neither Party, *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam) (No. 2010-1291), 2011 WL 3101831, at *18–19 [hereinafter Amicus Brief for Neither Party] (arguing that “whoever” in § 271(a) must be able to mean more than one person).

207. *See id.* (asserting that 1 U.S.C. § 1 and common dictionary definitions strongly suggest that “whoever” must have a possible plural interpretation).

parties, or things.²⁰⁸ Accordingly, one could conclude that the word “whoever” should not be limited to mean a single entity.²⁰⁹

Despite the “all elements” and “single entity” rules seemingly requiring the identification of a single infringer for direct infringement, courts have recognized that some form of joint infringement may occur and therefore joint liability should be assigned. For example, the court in *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*²¹⁰ stated that when patent infringement is brought about by a “concert of action,” all parties engaged directly and intentionally are joint infringers.²¹¹ In addition, several courts have recognized that joint liability may be imposed when infringement is the result of the participation and combined actions of defendants.²¹² Moreover, courts have held that infringement of a patented method cannot be avoided by defendants that have another party perform a step of the method.²¹³

C. *An Attempt at Clarification Leads to Confusion*

Only a few years after *Muniauction*, the Federal Circuit heard two additional joint infringement cases. In *Akamai I*, the Federal Circuit reasoned that the “direction or control” test must be read in the context of traditional agency law²¹⁴ and that “direction, no matter how explicit,” is not an indicator of an agency relationship.²¹⁵ The

208. 1 U.S.C. § 1 (2006).

209. Amicus Brief for Neither Party, *supra* note 206, at *18 (“On its face, this statutory prohibition is directed to ‘whoever’ has engaged in infringing conduct and says nothing about whether such conduct is to be carried out by a single entity or a group of entities acting in concert with one another.”). *But see Akamai II*, 692 F.3d at 1347–48 (Linn, J., dissenting) (arguing that the use of the word “whoever” in the plural simply indicates that “[m]ore than one entity can be independently liable for direct patent infringement”).

210. 77 F. 288 (6th Cir. 1896).

211. *Id.* at 297.

212. *See, e.g., Mahurkar v. C.R. Bard Inc.*, 75 U.S.P.Q.2d (BNA) 1125, 1129 (N.D. Ill. 2003) (agreeing that the joint infringer theory is viable under § 271(a); *McDermott v. Omid Int’l*, 723 F. Supp. 1228, 1236 (S.D. Ohio 1988) (holding that the defendants are jointly liable when the infringement was the result of the “participation and combined actions of the defendants”), *aff’d per curiam sub nom. McDermott v. Omid Int’l & Oriental Rug Supply House*, Nos. 88-1592, 88-1593, 1989 WL 72920 (Fed. Cir. July 6, 1989).

213. *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980), *aff’d*, 667 F.2d 1232 (5th Cir. 1982); *see also Crowell v. Baker Oil Tools, Inc.*, 143 F.2d 1003, 1004 (9th Cir. 1944) (“It is obvious that one may infringe a patent if he employ an agent for that purpose or have the offending articles manufactured for him by an independent contractor.”); *Metal Film Co. v. Metlon Corp.*, 316 F. Supp. 96, 110 n.12 (S.D.N.Y. 1970) (“That defendants choose to have the vacuum metallizing, which was a conventional step . . . done by outside suppliers does not mitigate their infringement of the overall process.”).

214. *Akamai I*, 629 F.3d 1311, 1320 (Fed. Cir. 2010), *rev’d*, 692 F.3d 1301.

215. *Id.* at 1321.

Federal Circuit held in *McKesson* that the actions of one party could not be attributed to the accused infringer in the absence of an agency relationship or contractual obligation.²¹⁶ However, a vigorous dissent in *McKesson* by Judge Newman was followed by the Federal Circuit granting a rehearing en banc in both cases. The rehearing resulted in an opinion from a fractured Federal Circuit that did little to resolve some of the key issues and set up a potential review by the Supreme Court.²¹⁷

I. Akamai I

In June 2006, Akamai Technologies, Inc. and the Massachusetts Institute of Technology (collectively, “Akamai”) sued Limelight Networks, Inc. (Limelight) in the United States District Court for the District of Massachusetts for allegedly infringing three patents directed to Akamai’s content delivery network service.²¹⁸ The district court granted judgment as a matter of law (JMOL), overturning a jury verdict of infringement by Limelight on claims 19-21 and 34 of U.S. Patent No. 6,108,703 (the “703 patent”) and Akamai appealed to the Federal Circuit.²¹⁹

The technology central to the dispute involved a Content Delivery Network (“CDN”) made up of several computer systems.²²⁰ Both Akamai and Limelight offer CDN services to its customers.²²¹ In addition, Akamai owns three patents disclosing a CDN system for allowing a content provider to outsource the storage and delivery of portions of its website content.²²²

As described in the patents, the system delivers information over the Internet by placing its components in optimal geographic locations.²²³ The prior art systems store several copies of an entire website across different computers.²²⁴ In contrast, Akamai’s content delivery service replicates just the embedded objects of a website.²²⁵ Akamai’s content delivery service separates the storage of these

216. *McKesson Techs. Inc. v. Epic Sys. Corp.*, 98 U.S.P.Q.2d (BNA) 1281, 1284 (Fed. Cir. 2011), *rev’d sub nom. Akamai II*, 692 F.3d 1301.

217. *See Akamai II*, 692 F.3d at 1305–07. A six judge majority issued a per curiam opinion while five judges dissented. Even the dissenters were split four to one, which resulted in Judge Newman separately writing another vigorous dissent.

218. *Akamai I*, 629 F.3d at 1316.

219. *Id.* at 1314.

220. *Id.* at 1315.

221. *Id.* at 1316.

222. *Id.* at 1315.

223. *Id.* at 1315–16.

224. *Id.*

225. *Id.*

embedded objects for a single website over several devices.²²⁶ A content provider’s computer stores the base document while a CDN stores individual embedded objects of the website.²²⁷ In order for a user to access the embedded objects, the URL of the embedded object must point to a CDN.²²⁸ Accordingly, the URL of the embedded objects must be modified by a “tagging” process so that it can be served by global hosting servers.²²⁹

The Federal Circuit summarized Limelight’s implementation of its CDN service as follows:

Limelight’s accused service delivers content providers’ embedded objects from its CDN. According to Limelight’s contracts with its content provider customers, to use Limelight’s CDN service, the content provider must perform several steps. First, the content provider must choose which embedded objects, if any, it would like to be served from Limelight’s CDN. The content provider must then tag the URL of each chosen object as instructed by Limelight. Limelight then replicates the properly tagged objects on some or all of its servers and directs a user’s request for one of these objects to an appropriate Limelight server.²³⁰

The two independent method claims asserted by Akamai at trial require “tagging” at least some embedded objects in a content provider’s web page such that requests for those objects resolve to a domain name other than the content provider’s domain name.²³¹ Claims 19 and 34 are reproduced below with emphasis on the “tagging” step:

19. 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, serving the given page from the content provider domain; and

226. *Id.*

227. *Id.* at 1315.

228. *Id.* at 1316.

229. *Id.*

230. *Id.*

231. *Id.*

serving at least one embedded object of the given page from a given content server in the domain instead of from the content provider domain.²³²

34. A content delivery method, comprising:

distributing a set of page objects across a network of content servers managed by a domain other than a content provider domain, wherein the network of content servers are organized into a set of regions;

for a given page normally served from the content provider domain, tagging at least some of the embedded objects of the page so that requests for the objects resolve to the domain instead of the content provider domain;

in response to a client request for an embedded object of the page: resolving the client request as a function of a location of the client machine making the request and current Internet traffic conditions to identify a given region; and

returning to the client an IP address of a given one of the content servers within the given region that is likely to host the embedded object and that is not overloaded.²³³

An important point, which was not in dispute by the parties, was that Limelight did not perform every step of claims 19 or 34.²³⁴ That is, Limelight did not perform the emphasized tagging steps.²³⁵ Instead, Limelight provided the information necessary to its customers (content providers) so that they could perform the tagging steps themselves.²³⁶

At trial, Akamai relied on a theory of joint liability and asserted that Limelight directed or controlled its customers to perform the “tagging” step in both method claims.²³⁷ After a finding of infringement, Limelight moved for a JMOL that it did not infringe the asserted method claims.²³⁸ Relying on the decision in *Muniauction*, the district court granted the JMOL on the grounds that there was “no material difference between Limelight’s interaction with its customers and that of Thompson [sic] in *Muniauction*.”²³⁹ On appeal, Akamai argued that the evidence presented at trial supported

232. U.S. Patent No. 6,108,703 col. 19 ll. 6–20 (filed May 19, 1999) (emphasis added).

233. *Id.* col. 20 ll. 32–52 (emphasis added).

234. *Akamai I*, 629 F.3d at 1317.

235. *Id.*

236. *Id.*

237. *Id.*

238. *Id.* at 1318.

239. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 614 F. Supp. 2d 90, 122–23 (D. Mass. 2009), *aff’d*, 629 F.3d 1311, *rev’d en banc, per curiam*, 692 F.3d 1301 (Fed. Cir. 2012).

a jury determination that Limelight exercises control or direction over the claimed methods.²⁴⁰

The Federal Circuit summarized Akamai’s arguments as follows:

Limelight: (1) creates and assigns a unique hostname for the content provider; (2) provides explicit step-by-step instructions to perform the tagging and serving claim steps; (3) offers technical assistance to help content providers with their performance of the claim steps; and (4) contractually requires content providers to perform the tagging and serving claim steps if they utilize the Limelight service.²⁴¹

In response, Limelight argued that these facts were “indistinguishable” from those found in *Muniauction* and that the JMOL should be affirmed.²⁴²

In *Akamai I*, the Federal Circuit began its analysis by summarizing its findings in *BMC* and *Muniauction*.²⁴³ The court stated that “direct infringement requires a single party to perform every step of a claimed method.”²⁴⁴ If more than one party is required to perform the claimed method, there is “no infringement unless ‘one party exercises “control or direction” over the entire process such that every step is attributable to the controlling party.’”²⁴⁵ The Federal Circuit explained that its holding in *Muniauction* clarified that “the requisite level of control or direction over the acts committed by a third party is met in circumstances in which ‘the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party.’”²⁴⁶

Here, the Federal Circuit went on to explain that it is essential to determine whether the acts of one party may be attributed to the other.²⁴⁷ The court clarified that “the performance of a method step may be attributed to an accused infringer when the relationship between the accused infringer and another party performing a method step is that of principal and agent,” or “that joint infringement occurs when a party is contractually obligated to the

240. *Akamai I*, 629 F.3d at 1318.

241. *Id.*

242. *Id.*

243. *Id.* at 1318–19.

244. *Id.* at 1318 (citing *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1378–79 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301).

245. *Id.* at 1318–19 (quoting *Muniauction, Inc v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301).

246. *Id.* at 1319 (quoting *Muniauction*, 532 F.3d at 1330) (explaining that in *Muniauction*, the instructions given by the defendant to its product users were not sufficient to meet the “control or direction” test).

247. *Id.*

accused infringer to perform a method step.”²⁴⁸ Accordingly, the Federal Circuit held that there could only be joint infringement in two cases: (1) “when there is an agency relationship between the parties who perform the method steps,” or (2) “when one party is contractually obligated to the other to perform the steps.”²⁴⁹ Analyzing the facts, the Federal Circuit stated that there were neither facts that indicated Limelight’s customers performed the steps of the claimed method as Limelight’s agents nor a contractual obligation to perform the method steps.²⁵⁰

In response to Akamai’s argument that the word “direct” in the “direction or control” test must mean something other than “control,” the court stated that the “direction or control” test “must be read in the context of traditional agency law.”²⁵¹ Based on that pronouncement, the court then stated that “there is no indication that an agency relationship arises when one party simply provides direction, no matter how explicit, to another party.”²⁵²

The court also decided that the facts were insufficient to find that Limelight’s customers were contractually obligated to Limelight.²⁵³ Limelight’s form contract with its customers does not obligate them to perform any of the method steps; instead it simply explains what the customers must do to take advantage of Limelight’s services.²⁵⁴ Accordingly, because Limelight did not perform the “tag” step of the asserted method claims and the record contained no evidence that Limelight controlled its customers’ “tagging” the content, the Federal Circuit affirmed the finding of non-infringement.²⁵⁵

On April 20, 2011, the Federal Circuit decided that *Akamai I* warranted en banc reconsideration.²⁵⁶ Both parties were requested to file briefs addressing the following issue: “If separate entities each perform separate steps of a method claim, under what circumstances would that claim be directly infringed and to what extent would each of the parties be liable?”²⁵⁷ The Federal Circuit would follow a similar path in *McKesson*.

248. *Id.*

249. *Id.* at 1320.

250. *See id.* at 1320–21 (holding that Limelight’s control over customers was similar to the relationship in *Muniauction* and that therefore there was no agency).

251. *Id.* at 1320.

252. *Id.* at 1321.

253. *Id.*

254. *Id.*

255. *Id.* at 1314, 1322.

256. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 419 F. App’x 989, 989 (Fed. Cir. 2011).

257. *Id.*

2. McKesson

The technology at issue in *McKesson* was also Internet-based.²⁵⁸ Specifically, the patent-in-suit, U.S. Patent No. 6,757,898 or “the ‘898 patent,” relates to a method for a patient and healthcare provider to share information with each other via the Internet.²⁵⁹

Epic Systems Corporation (Epic), a software development company, licensed its “MyChart” software to healthcare providers.²⁶⁰ In turn, healthcare providers provided MyChart software to their patients as an option.²⁶¹ The MyChart software allows healthcare providers to associate medical records with a patient webpage.²⁶² In addition, patients can use MyChart to communicate with healthcare providers online.²⁶³ In order for a patient to use the MyChart software, the patient must “initiate a communication” to the provider, i.e., log on to a healthcare provider’s MyChart page.²⁶⁴

McKesson, the owner of the ‘898 patent, sued Epic in the United States District Court for the Northern District of Georgia, alleging that Epic induced infringement of the ‘898 patent by licensing its MyChart software to healthcare providers.²⁶⁵

Claim 1 of the ‘898 patent is representative of the claims asserted against Epic. The initiating step, performed by the patient is highlighted below:

1. A method of automatically and electronically communicating between at least one health-care provider and a plurality of users serviced by the health-care provider, said method comprising the steps of:

initiating a communication by one of the plurality of users to the provider for information, wherein the provider has established a preexisting medical record for each user;

enabling communication by transporting the communication through a provider/patient interface. . .;

electronically comparing content of the communication . . .;

258. *McKesson Info. Solutions LLC v. Epic Sys. Corp.*, No. 1:06-CV-2965-JTC, 2009 WL 2915778, at *1–2 (N.D. Ga. Sept. 6, 2009), *aff’d sub nom. McKesson Techs. Inc. v. Epic Sys. Corp.* 98 U.S.P.Q.2d (BNA) 1281 (Fed. Cir. 2011), *rev’d en banc, per curiam sub nom. Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012).

259. *Id.* at *1.

260. *McKesson*, 98 U.S.P.Q.2d (BNA) at 1282.

261. *Id.*

262. *Id.*

263. *Id.*

264. *Id.*

265. *McKesson Info. Solutions LLC v. Epic Sys. Corp.*, No. 1:06-CV-2965-JTC, 2009 WL 2915778, at *1–2 (N.D. Ga. Sept. 6, 2009), *aff’d sub nom. McKesson Techs. Inc. v. Epic Sys. Corp.* 98 U.S.P.Q.2d (BNA) 1281, *rev’d en banc, per curiam sub nom. Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012).

returning the response to the communication automatically . . . ;
said provider/patient interface providing a fully automated
mechanism for generating a personalized page or area within
the provider's Web site for each user serviced by the provider;
and
said patient-provider interface service center for dynamically
assembling and delivering customer content to said user.²⁶⁶

Similar to *Akamai I*, the parties did not dispute that Epic's MyChart software did not perform each step of the method.²⁶⁷ Accordingly, on the issue of joint infringement, Epic argued in a motion for summary judgment and a renewed motion for summary judgment that Epic's customer's (the healthcare providers) neither performed the "initiating a communication" step nor exercised "direction or control" over the party that performs the "initiating" step.²⁶⁸ The district court agreed with Epic and granted its renewed motion for summary judgment.²⁶⁹

McKesson appealed the decision to the Federal Circuit.²⁷⁰ On appeal, the court noted that McKesson alleged induced infringement, which, according to the court at that time required a showing that a single entity committed the act of infringement.²⁷¹ The Federal Circuit framed the issue as "whether the relationship between Epic's customers (MyChart providers) and the MyChart users is such that performance of the 'initiating a communication' step may be attributed to the MyChart providers."²⁷²

The court summarized its previous decisions in *BMC* and *Muniauction* and further elaborated on its decision in *Akamai I*.²⁷³ Accordingly, *McKesson* summarizes the Federal Circuit's previous holdings concerning joint infringement as follows: (1) "where the actions of multiple parties combine to perform every step of a claimed method, the claim is directly infringed only if one party exercises 'control or direction' over the entire process such that every step is attributable to the controlling party,"²⁷⁴ (2) "[t]he 'control or

266. U.S. Patent No. 6,757,898 col. 44 l. 60–col. 45 l. 24 (filed Jan. 18, 2000) (emphasis added).

267. *McKesson*, 98 U.S.P.Q.2d (BNA) at 1282.

268. *Id.* at 1283.

269. *Id.*

270. *Id.*

271. *Id.*; see discussion *supra* Part I.B.4

272. *McKesson*, 98 U.S.P.Q.2d (BNA) at 1283.

273. *Id.* at 1283–84.

274. *Id.* at 1283 (quoting *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam)).

direction’ standard is satisfied in situations where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method,”²⁷⁵ and (3) “there can only be joint infringement when there is an agency relationship between the parties who perform the method steps or when one party is contractually obligated to the other to perform the steps.”²⁷⁶

The parties and the court focused their arguments on the relationship between the doctors and patients using the MyChart software.²⁷⁷ McKesson essentially argued that a relationship less than agency would satisfy the “direction or control” test by arguing that a doctor–patient relationship was sufficient for a finding of attribution.²⁷⁸ In response, applying the test under *Akamai I*, the Federal Circuit found that a doctor-patient relationship was not an agency relationship or a contractual obligation.²⁷⁹ The court concluded that the actions of MyChart users could not be attributed to Epic’s customers (the healthcare providers) without an agency relationship or contractual obligation, and thus, McKesson failed to demonstrate that a single party directly infringed the ‘898 patent.²⁸⁰

In response to McKesson’s arguments, the court repeated its statement in *BMC* that “expanding the rules governing direct infringement to reach independent conduct of multiple actors would subvert the statutory scheme for indirect infringement.”²⁸¹ The court elaborated that the “single harm” of direct patent infringement was limited to those who practiced each and every element of the invention and that absent direct infringement, the patentee has not suffered compensable harm.²⁸²

275. *Id.* at 1283 (quoting *Muniauction*, 532 F.3d at 1330).

276. *Id.* at 1283–84 (quoting *Akamai I*, 629 F.3d 1311, 1320 (Fed. Cir. 2010), *rev’d*, 692 F.3d 1301).

277. *See id.* at 1284 (discussing whether a doctor-patient relationship alone gives rise to either an agency relationship between the parties or a contractual obligation on the patients).

278. *See id.* (explaining that McKesson argued that the doctor-patient relationship is more than a mere arms-length relationship, and instead is more analogous to an agency relationship because “[t]he phrase ‘doctor’s orders’ says it all” and because of “doctor-patient privilege”).

279. *See id.* (opining that MyChart users only acted for their own benefit and were not under the MyChart providers’ control).

280. *Id.*

281. *Id.* (quoting *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301).

282. *Id.* at 1285; *cf.* *Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd.*, 545 U.S. 913, 930 (2005) (stating “[o]ne infringes contributorily by intentionally inducing or encouraging direct infringement, and infringes vicariously by profiting from direct infringement while declining to exercise a right to stop or limit it” (citation omitted)).

Judge Bryson concurred with the decision based on the precedents set forth in *BMC* and *Akamai I* but suggested en banc review.²⁸³ Conversely, Judge Newman issued a vigorous dissent and framed the decision as an attack on all interactive methods and their underlying technologies.²⁸⁴ Soon thereafter, the Federal Circuit decided that *McKesson* warranted an en banc rehearing.²⁸⁵

3. *McKesson dissent and questions posed by the Federal Circuit*

Judge Newman's dissent in *McKesson* highlights two issues with the majority opinion. First, Judge Newman asserts that the decision in *McKesson* does not follow earlier panel precedent.²⁸⁶ Judge Newman categorizes the rulings in several previous joint infringement cases as inconsistent, stating that “[p]anel[s] of this court distinguishing between practice of an element of a system, and practice of an element of a method, does not add clarity or predictability to patent law.”²⁸⁷ Further, Judge Newman notes that previous panels of the Federal Circuit and the Supreme Court have held that there can be infringement liability when steps of a claimed method are performed by different entities.²⁸⁸ With respect to the agency or contractual obligation test set forth in *Akamai I*, Judge Newman asserts that there is no such rule of law.²⁸⁹

Judge Newman argues that by upholding the notion that “neither collaboration nor joint action nor facilitation nor authorization nor invitation can overcome the immutable barrier to infringement when all of the participating entities are not under the ‘control or direction’ of a mastermind infringer,” the court eliminates the patent incentive for interactive procedures and “disserves commerce, fairness, and the innovation incentive.”²⁹⁰ Thus, Judge Newman

283. *McKesson*, 98 U.S.P.Q.2d (BNA) at 1285 (Bryson, J., concurring).

284. *See id.* at 1291 (Newman, J., dissenting) (affirming that this case was not an effort to broaden the scope of patent rights, and claiming that the majority's decision removes all interactive methods from patent eligibility).

285. *See McKesson Techs. Inc. v. Epic Sys. Corp.*, 463 F. App'x 906 (Fed. Cir. 2011) (per curiam) (granting *McKesson*'s petition for rehearing en banc).

286. *See McKesson*, 98 U.S.P.Q.2d (BNA) at 1288–89 (Newman, J., dissenting) (questioning the Federal Circuit's interpretation of precedent, which resulted in the “single-entity rule” of infringement being held as an absolute rule of law).

287. *Id.* at 1290.

288. *Id.* at 1286.

289. *See id.* at 1290 (describing the *Akamai* rule as a version of “aberrant holdings”).

290. *See id.* at 1285–86 (stating that the decision, therefore, leaves interactive methods more susceptible to infringement).

concludes that a patent that cannot be infringed does not provide the patentee with a right to exclude and therefore is not a patent at all.²⁹¹

4. Akamai II

The Federal Circuit issued its opinion in *Akamai II* on August 31, 2012. The opinion failed to answer many of the questions the Federal Circuit asked the parties to brief. In issuing its opinion, the majority acknowledged that doctrinal problems arise “when the acts necessary to give rise to liability for direct infringement are shared between two or more actors.”²⁹² However, the majority passed on the opportunity to clarify the law of joint infringement as it applied to liability for direct infringement under § 271(a).²⁹³ Instead, the court overruled its decisions in *BMC* and *Muniauction* and established a new test under inducement for when more than one party performs steps in a method claim.²⁹⁴ Judges in the minority issued two dissenting opinions. In one dissent, Judge Newman, writing for herself, argued that there should be liability for infringement whenever one or more parties perform the steps of a claimed method.²⁹⁵ In the second dissent, Judge Linn, joined by three other judges, argued for the preservation of the direction or control test and asserted that the test provides for a finding of liability where there is a joint enterprise.²⁹⁶

The majority held that there can be liability for induced infringement where all the steps are not performed by a single entity.²⁹⁷ Because inducement does not require the induced party to be an agent of the inducer or under the direction or control of the inducer, the effect of the majority’s opinion is to eliminate the “control or direction” test established and elaborated upon in *BMC* and *Muniauction*. Relying on the House Report on the 1952 Act, the majority reasoned that inducement applies to joint infringement cases because one who aids or abets infringement is “likewise an infringer.”²⁹⁸ In support of its inducement only rule, the majority also explained that an inducer has the same impact on the patentee whether he induces one party or multiple parties to infringe.²⁹⁹

In contrast, Judge Linn’s dissent argued that inducement of a

291. *See id.* at 1291 (“A patent that cannot be enforced on any theory of infringement, is not a statutory patent right.”).

292. *Akamai II*, 692 F.3d 1301, 1305 (Fed. Cir. 2012) (en banc) (per curiam).

293. *Id.* at 1305–06.

294. *Id.* at 1306.

295. *Id.* at 1336 (Newman, J., dissenting).

296. *Id.* at 1350 (Linn, J., dissenting).

297. *Id.* at 1306 (majority opinion).

298. *Id.* at 1309 (quoting H.R. REP. NO. 82-1923, at 9 (1952)).

299. *Id.* at 1308–09.

partial act that is not itself infringement is not inducement of any prohibited conduct under the act.³⁰⁰ Instead, the dissent relied on the Supreme Court's statement in *Aro Manufacturing Co. v. Convertible Top Replacement Co.*³⁰¹ that, "it is settled that if there is no direct infringement of a patent there can be no contributory infringement" to reject the majority's new position.³⁰² Thus, in addition to upholding the "control or direction" test, the dissent would have also expanded it to hold:

"[D]irect infringement is required to support infringement under § 271(b) or § 271(c) and properly exists only where one party performs each and every claim limitation or is vicariously liable for the acts of others in completing any steps of a method claim, such as when one party directs or controls another in a principal-agent relationship or like contractual relationship, or *participates in a joint enterprise to practice each and every limitation of the claim.*"³⁰³

The dissent explained that a joint enterprise exists when there is:

(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."³⁰⁴

The dissent's expansion of the "control or direction" test to include a joint enterprise leads to a curious result. Based on this approach, the dissent claims that the decision in *Golden Hour*, where two parties each performed separate steps of a claimed method for their mutual benefit, should be overturned.³⁰⁵ However, the dissent would affirm both decisions in *Akamai I* and *McKesson* because even under its new joint enterprise theory, the customer in both cases would not be considered to be in a joint enterprise with the service or product provider.³⁰⁶ Finally, the dissent also reiterated arguments from *BMC* and other commentators that proper claim drafting can

300. *Id.* at 1346–47 (Linn, J., dissenting).

301. 365 U.S. 336, 341 (1961).

302. *Akamai II*, 692 F.3d at 1340 (Linn, J., dissenting) (quoting *Aro*, 365 U.S. at 341).

303. *Id.* at 1350 (emphasis added).

304. *Id.* at 1349 (quoting RESTATEMENT (SECOND) TORTS § 491 cmt. c. (1965)).

305. *Id.*; see *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1382 (Fed. Cir. 2010) (Newman, J., dissenting) (reiterating that, at trial, the jury found that two companies, emsCharts and Softech enabled their respective programs to work together such that their combined system, which they sold as a package, met all the limitations of several of the asserted claims).

306. *Akamai II*, 692 F.3d at 1350–51 (Linn, J., dissenting).

usually be used to avoid the issue of joint infringement and capture infringement by a single party.³⁰⁷

In her dissent, Judge Newman argued that the majority’s new rule creates new problems for enforcement and compensation as well as “new opportunities for gamesmanship and abuse and inequity.”³⁰⁸ For example, Judge Newman argued that the court shifted the sole focus to that of the alleged inducer who would be solely liable if all the elements of inducement were proven.³⁰⁹ Finally, instead of inducement-only or the “control or direction” test, Judge Newman argued that infringement occurs when all of the claimed steps are performed without regard to how many parties are involved or their relationship.³¹⁰

In sum, both dissents harshly criticize the majority for making new policy and being a product of spontaneous judicial creation.³¹¹ Further, instead of addressing the issue of joint liability for direct infringement, the court replaced one narrow test with another that could create opportunities for gamesmanship and abuse.³¹²

II. RATIONALE FOR A MORE FLEXIBLE APPROACH

A. Overview

The newly minted inducement-only rule and the dissents’ proposed tests for joint infringement are unsatisfactory for a number of reasons. The Patent Act of 1952 codified the case law concerning indirect infringement.³¹³ However, most of the technology that is the subject of current joint infringement cases did not exist in 1952.³¹⁴ Accordingly, the statute does not reflect (1) an understanding of issues that might arise with new technologies and (2) the ways in

307. *Id.* at 1349.

308. *Id.* at 1320 (Newman, J., dissenting).

309. *Id.* at 1320.

310. *Id.* at 1323 (“Infringement is not a question of how many people it takes to perform a patented method.”).

311. *Id.* at 1320; *id.* at 1337 (Linn, J., dissenting).

312. *Id.* at 1320 (Newman, J., dissenting).

313. *See* 35 U.S.C. § 271(b)–(c) (2006); *see also supra* notes 55–56 and accompanying text.

314. The World Wide Web and the Internet were first proposed by Tim Berners-Lee in 1989. *See* TIM BERNERS-LEE, CERN, INFORMATION MANAGEMENT: A PROPOSAL (1989), *available at* <http://www.w3.org/History/1989/proposal.html> (introducing the concept of “linked information systems”).

which multiple entities working in concert could infringe patents to these new technologies.³¹⁵

Further, the Federal Circuit has acknowledged that a rule based solely on the relationship between relevant actors creates a legal loophole.³¹⁶ This loophole is a roadmap for perceptive entities, allowing them to reap the benefit of a patent that cannot be enforced.³¹⁷ In her dissent in *McKesson*, Judge Newman stated, “[a] patent that cannot be enforced on any theory of infringement, is not a statutory patent right.”³¹⁸ Further, Judge Newman seems to fear that rendering valid interactive method claims unenforceable will discourage “information-age” companies from seeking patent protection and as a result, stifle innovation.³¹⁹ This outcome is directly in conflict with the constitutional mandate that Congress “promote the Progress of Science and useful Arts.”³²⁰ However, Judge Newman’s proposal that direct infringement occurs when all the claimed steps are performed without regard to any circumstances surrounding the alleged infringement would ensnare innocent actors and once caught would place an undue burden on the courts to cut them free.³²¹

Accordingly, a more flexible approach must be implemented in order to produce consistent and fair legal results. In the wake of *Akamai II*, the Federal Circuit eliminated the “direction or control” test and established an inducement-only rule.³²² Nevertheless, the law should carefully expand the test for joint infringement beyond

315. See discussion *supra* Part I (describing how courts have struggled to find consensus for the novel problems presented by new technologies involving multiple actors).

316. See *infra* Part II.C.1 (suggesting that parties could enter into arms-length agreements to avoid infringement under the control or direction standard).

317. See *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (downplaying concerns over infringement-avoidance by stating that “arms-length cooperation can usually be offset by proper claim drafting”), *overruled by Akamai II*, 692 F.3d 1301.

318. *McKesson Techs. Inc. v. Epic Sys. Corp.*, 98 U.S.P.Q.2d (BNA) 1281, 1291 (Fed. Cir. 2011) (Newman, J., dissenting), *rev’d sub nom. Akamai II*, 692 F.3d 1301.

319. See *id.* at 1286 (arguing that the court’s decision “eliminates the patent incentive from such interactive procedures,” leaving these types of methods vulnerable to infringement and enlarges inconsistent precedent that could deter innovation).

320. U.S. CONST. art. I, § 8, cl. 8.

321. See *Akamai II*, 692 F.3d at 1350 (Linn, J., dissenting) (describing Judge Newman’s approach as permitting “joint actor infringement liability whenever independent parties collectively infringe a patent”).

322. See *id.* at 1306 (concluding that direction or control test interpretation of section 271(b) “is wrong as a matter of statutory construction, precedent, and sound patent policy”).

focusing solely on inducement or the relationship between relevant actors.

There are several reasons to create a flexible approach to joint infringement. Congress could not take into account existing interactive technology when it drafted the current statutory provisions concerning contributory and indirect infringement.³²³ Second, absent a showing of inducement, the current Federal Circuit test creates a loophole in the law.³²⁴ In addition, the Supreme Court has recently rejected tests established by the Federal Circuit for various reasons.³²⁵ Furthermore, laws that allow for broader enforcement of interactive method claims would place U.S. law on par with the laws in other prominent countries.³²⁶ Finally, as the world becomes increasingly interconnected, a more flexible enforcement mechanism may encourage further innovation.

B. *The Limitations of § 271*

Section 271 does not equip the judiciary to properly handle the joint infringement fact patterns of the Information Age. The Patent Act of 1952 codified the pre-1952 common law concerning indirect infringement.³²⁷ The case law recognized that an action for infringement should lie when more than one party contributed to the infringement of a patent claim.³²⁸ However, the common law was developed from cases concerning industrial age technologies.³²⁹ Thus, the interactive methods and the capability to carry out

323. The Patent Act of 1952, which codified rules on indirect infringement, was drafted prior to the creation of the Internet and its associated technologies. *See* BERNERS-LEE, *supra* note 314 (introducing the concept of the Internet in 1989). *But see Akamai II*, 692 F.3d at 1343 (Linn, J., dissenting) (arguing that Congress recently had the opportunity to modify the statute but chose not to do so).

324. *See infra* Part II.C.1 (suggesting that parties could enter into arms-length agreements to avoid infringement under the control or direction standard); *see also* BMC Res., Inc. v. Paymentech, L.P., 498 F.3d 1373, 1379 (Fed. Cir. 2007) (acknowledging that the current law creates a loophole but asserting that the law imposes vicarious liability on any party that can be shown to have controlled the actions of the infringing actor), *overruled by Akamai II*, 692 F.3d 1301.

325. *See infra* Part II.C.2 (discussing the Supreme Court’s rejection of Federal Circuit tests).

326. *See* discussion *infra* Part II.E.

327. *See* H.R. REP. NO. 82-1923, at 9 (1952) (explaining that the purpose of § 271 in the Patent Act of 1952 was to codify principles of contributory infringement and clarify its scope).

328. *See* Wallace v. Holmes, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871) (No. 17,100) (finding that the defendant was guilty of copyright infringement despite the fact that the defendant used only part of a patented system because the defendant knew third parties would provide the patented system’s additional parts and the defendant, therefore, was a joint infringer of the complainant’s patent).

329. *See, e.g., id.* at 75 (depicting the patent at issue in the case as an oil lamp).

interactive processes that are the subject of recent joint infringement cases did not exist before 1952.³³⁰

The language of the statute is additionally limited by its narrow interpretation, as reflected in the Federal Circuit's "single entity" rule.³³¹ According to the "single entity" rule, "whoever" in § 271 refers to only a single entity.³³² In contrast, one commentator has stated that the focus of direct infringement should be upon a single act, not a single actor.³³³ That is, the court should determine whether one single act of infringement has occurred when the acts of individuals are considered as a whole.³³⁴ At this stage, the single entity rule remains intact with respect to infringement under § 271(a), although there seems to be sufficient rationale to eliminate it.³³⁵ Legislative clarification would be the simplest and most desirable solution.

Unfortunately, Congress missed an excellent opportunity to clarify the law. Specifically, the America Invents Act³³⁶ did nothing to resolve the issues raised in *Akamai I* or *McKesson*.³³⁷ However, Congress did pass some provisions that indicate that it is well aware of the overall controversy surrounding method claims; for example, the

330. See BERNERS-LEE, *supra* note 314 (suggesting the idea for the World Wide Web and writing its code in 1989). But see *Akamai II*, 692 F.3d 1301, 1310–11 (Fed. Cir. 2012) (en banc) (per curiam) (explaining that Judge Giles J. Rich foreshadowed enforcement problems with method claims involving a radio transmitter and receiver).

331. *McKesson Techs. Inc. v. Epic Sys. Corp.*, 98 U.S.P.Q.2d (BNA) 1281, 1282 (Fed. Cir. 2011) (affirming the finding of "noninfringement" based on the complainant's failure to attribute the infringement to a single party), *rev'd sub nom. Akamai II*, 692 F.3d 1301.

332. See Larsen, *supra* note 191, at 50–51 (explaining that the court in *BMC* applied the "Single Actor" rule and refused to aggregate the actions of various actors).

333. See Naoki Mizutani, SOFTIC Special Researcher, Remarks at Panel on Patent Infringement Suits in Global Network Age, SOFTIC Symposium 2001: Information Distribution and Legal Protection in Cyberspace—In Search of a New System 83 (Nov. 21, 2001), available at http://www.softic.or.jp/symposium/records/SOFTIC_10%82%94h_proceedings.pdf (arguing that patent infringement can exist even when a plurality of persons is involved).

334. See *id.* (recommending that attorneys avoid the single entity rule by framing infringement claims in terms of a single infringer).

335. See discussion *supra* Part I.B.4.

336. Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (to be codified in scattered sections of 28 and 35 U.S.C.).

337. See *Akamai II*, 692 F.3d 1301, 1343 (Fed. Cir. 2012) (en banc) (per curiam) (Linn, J., dissenting) (asserting that if Congress took issue with the court's interpretation of § 271(a), (b) and (c) in *BMC* and *Muniauction*, it would have amended the statute in the Leahy-Smith America Invents Act). The Leahy-Smith America Invents Act provided major reforms to the U.S. patent system, switching the system from a "first to invent" to a "first inventor to file" and implementing myriad additional changes. Leahy-Smith America Invents Act § 3(o)–(p). The Act, however, does not address the issue of joint infringement.

“Transitional Program for Covered Business Method Patents” provides for a special procedure in which an accused infringer can challenge the validity of a business method patent covering a process related to a financial product or service.³³⁸ While this provision could increase the difficulty in obtaining a patent on business methods, it does not foreclose interactive method patents nor does it advocate for a system in which patents granted to interactive method inventions can only be enforced in an inducement context.³³⁹

C. *The Limitations of the Judiciary*

1. *A judicially created loophole*

There is no clear example of facts that would pass muster under the majority’s inducement-only test. At the district court level, only a handful of cases in which joint infringement was asserted survived summary judgment. For example, in *Movielink*, evidence that an alleged infringer exercised continuing control in a distributed system was sufficient to support a claim for infringement under the direction or control test.³⁴⁰ In another example, the court in *Emtel, Inc. v. LipidLabs, Inc.* stated that evidence of an alleged infringer causing third parties to perform in accordance with specific instructions and requirements was sufficient to support a claim for joint infringement.³⁴¹ Unfortunately, the Federal Circuit has not reviewed the aforementioned cases. Further, the Federal Circuit remanded both *Akamai II* and *McKesson* for further proceedings on the theory of induced infringement.³⁴²

In *BMC* and subsequent Federal Circuit cases, the court acknowledged that a loophole in the law exists.³⁴³ This loophole now

338. *Id.* § 18.

339. *See generally* Corrected Brief of Amici Curiae Aristocrat Technologies Australia Pty Ltd. & Aristocrat Technologies, Inc. in Support of Appellants Akamai Technologies, Inc. & the Massachusetts Institute of Technology & Supporting Reversal, *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam) (Nos. 2009-1372, -1380, -1417), 2011 WL 3101891 [hereinafter Corrected Brief of Amici Curiae].

340. *See id.* at 236 (finding that summary judgment was not warranted because the complainant was able to provide sufficient evidence to support its assertion that the respondent retains sufficient control over software running on customers’ computers so as to still be held liable as a direct infringer).

341. *See Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811, 839–40 (S.D. Tex. 2008) (granting defendant’s motion for summary judgment because the relationship between the defendant and third party was too tenuous and did not rise to the level where the defendant could be held vicariously liable for the third party’s performance).

342. *Akamai II*, 692 F.3d at 1319.

343. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (acknowledging the existence of the loophole but asserting that related concerns are

allows two or more parties to infringe method patents absent a showing that one party induced the other to infringe.³⁴⁴ Unfortunately, no patentee has had the opportunity to present evidence to successfully satisfy the Federal Circuit's new inducement-only test. While this is by no means proof of an incorrect test, it is nevertheless an important data point especially in view of recent Supreme Court decisions that have struck down Federal Circuit tests.³⁴⁵

2. *Supreme Court rejection of Federal Circuit tests*

The Supreme Court has suggested that several of the tests developed by the Federal Circuit are too restrictive.³⁴⁶ For example, in *KSR International Co. v. Teleflex Inc.*,³⁴⁷ the Supreme Court found that the Federal Circuit's "teaching, suggestion or motivation" test ("TSM") was not supported by its precedent interpreting 35 U.S.C. § 103, the statute governing obviousness.³⁴⁸ In striking down the TSM test, the Supreme Court interpreted the statutory language broadly.³⁴⁹

Similarly, in *Bilski v. Kappos*,³⁵⁰ the Supreme Court indicated that the Federal Circuit's "machine or transformation" test for patentable subject matter was useful but not dispositive as to whether an invention was patentable.³⁵¹ Instead of relying solely on the machine or transformation test to determine patent eligibility, the Court referred to its earlier precedent that interpreted the patent eligibility statute more broadly.³⁵² Accordingly, the Supreme Court made clear

less problematic than the concerns that could arise if the rules for direct infringement were broadened), *overruled by Akamai II*, 692 F.3d 1301.

344. *Id.* (stating that only a defendant who served as a "mastermind" and either controlled or directed another entity would warrant a finding of joint infringement).

345. *See infra* Part II.C.2 (discussing the Supreme Court's rejection of Federal Circuit tests).

346. *See Bilski v. Kappos*, 130 S. Ct. 3218, 3226–27 (2010); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007).

347. 550 U.S. 398 (2007).

348. *Id.* at 419 (declaring that the Federal Circuit's TSM test is inconsistent with prior Supreme Court cases because it is overly rigid).

349. *See id.* at 415 ("We begin by rejecting the rigid approach of the Court of Appeals. Throughout this Court's engagement with the question of obviousness, our cases have set forth an expansive and flexible approach inconsistent with the way the Court of Appeals applied its TSM test here.")

350. 130 S. Ct. 3218 (2010).

351. *See id.* at 3226–27 (declaring that the Court of Appeals incorrectly concluded that the Supreme Court had endorsed the machine-or-transformation test as an exclusive or exhaustive test).

352. *See id.* (recognizing precedent that held that process patents could qualify if they did not meet machine or transformation requirements for patentability (citing *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978))); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972).

in *Bilski* that method claims directed to “information age” innovations were eligible for patent protection.³⁵³

Thus, over the last several years a trend has developed where the Supreme Court strikes down rigid rules established by the Federal Circuit in favor of more open ended and flexible standards.³⁵⁴ One article has observed that the Supreme Court prefers open-ended judicial inquiries that closely adhere to the language and purpose of the statute.³⁵⁵ Further, the Supreme Court has said that when technological change has rendered the literal terms of an act ambiguous, the act should be construed in light of its basic purposes.³⁵⁶ Given that the language of the statute is not as helpful in the case of interactive methods, further consideration should be given to policy arguments in favor of enforcement of interactive method claims.³⁵⁷

D. Claim Drafting

In acknowledgement of the statutory language and judicial loophole, the Federal Circuit and several commentators have said that patentees can avoid joint infringement issues by drafting claims directed to a single infringer.³⁵⁸ Moreover, the Federal Circuit has said that it will not rewrite or correct poorly drafted claims.³⁵⁹ However, drafting so-called better claims directed to a single infringer is not a cure-all. Some patents are by their nature

353. *Id.* at 3227 (suggesting the machine or transformation test may be inappropriate in the Information Age because it would call into question the patentability of myriad high-tech products).

354. See Gregory A. Castanias et al., *2010 Patent Law Decisions of the Federal Circuit: The Advent of “The Rader Court,”* 60 AM. U. L. REV. 845, 857 (2011) (describing various examples of the dichotomy between the Supreme Court and the Federal Circuit in the patent context).

355. See *id.* at 856–57 (describing these principles as lessons that can be learned from the Supreme Court’s decision in *Bilski*).

356. See *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) (providing that the Copyright Act must be interpreted so as to retain its fundamental purpose when technological changes have “rendered its literal terms ambiguous”).

357. See *Bilski* 130 S. Ct. at 3227 (describing the problems of applying § 101’s patent eligibility principles to modern technology in the advent of the Information Age).

358. See *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (stating that “[a] patentee can usually structure a claim to capture infringement by a single party”), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam); see also Lemley et al., *supra* note 33, at 272 (“Most inventions that involve cooperation of multiple entities can be covered using claims drafted in unitary form simply by focusing on one entity and whether it supplies or receives any given element.”).

359. See *BMC*, 498 F.3d at 1381 (explaining that the plaintiff could have drafted its claims so as to focus on only one entity, but that the court will not change the claim so as to remedy the error).

interactive, and in order to properly claim the invention, the claims must be directed to or mention more than a single actor.³⁶⁰ The effect of a rigid rule that relies on the existence of inducement is that it renders many patents directed to interactive technologies unenforceable.³⁶¹ A more desirable standard for determining joint infringement liability would prevent interactive patents from being completely unenforceable and simultaneously support the Federal Circuit's position for placing the burden on the applicant to draft clearer claims.

E. International Approaches

A more flexible joint infringement standard would put the United States on par with other countries. Interactive method patents in some prominent countries enjoy a lower hurdle to enforcement than their U.S. counterparts.³⁶² This lower standard allows patentees in these countries to recover against an entity that commercially benefits from the invention without performing each step.³⁶³ Given the growing importance of international patents to the top American innovators,³⁶⁴ it is instructive to examine how other countries have addressed the problem of joint infringement.

Under a "partial infringement" theory, several European countries subject an entity to liability when that entity has practiced the substance of the invention.³⁶⁵ That is, even if the accused infringer omitted a nominal step, it may be liable for infringement.³⁶⁶

360. See Lee, *supra* note 39, at 349 (explaining that patentability of Internet patents may lie in the combination of various steps).

361. See, e.g., *BMC*, 498 F.3d at 1381 (refusing to find infringement because there was no evidence of direct control). Armed only with unenforceable patents, patentees cannot prevent others from making, using, or selling their invention. If patentees' ability to prevent others from exploiting the patentees' technology is extinguished, it is reasonable that certain business sectors may stop filing applications.

362. See Jochen Pagenberg, *The Scope of Art. 69 European Patent Convention: Should Sub-Combinations Be Protected?—A Comparative Analysis on the Basis of French and German Law*, 24 INT'L REV. INDUS. PROP. & COPYRIGHT L. 314, 315–16 (1993) (requiring infringement of the core of the invention, but not necessarily every step).

363. See Larsen, *supra* note 191, at 59–60 (construing partial infringement as allowing recovery for claims that would be otherwise barred in the United States).

364. See U.S. PATENT & TRADEMARK OFFICE, INTERNATIONAL PATENT PROTECTIONS FOR SMALL BUSINESSES 4 (2012), available at http://www.uspto.gov/aia_implementation/20120113-ipp_rpt_report.pdf (claiming that innovators in the American economy need patent protection, especially when deciding upon cross-border transactions).

365. See Convention for the European Patent for the Common Market, Dec. 30, 1989, O.J. L 401, art. 26; see also 5 R. CARL MOY, MOY'S WALKER ON PATENTS § 15:14, at 15-83 to -84 (4th ed. 2011).

366. See MOY, *supra* note 365, § 15:14, at 15-84.

Accordingly, an accused infringer could not escape liability by simply arguing that it did not perform one of several method steps. Further, the “partial infringement” theory seems to not consider any relationship with another party that may have performed some steps of the asserted method.³⁶⁷

Other foreign theories focus on the actions and roles of the multiple infringing parties. For example, British law requires a showing that the infringing acts of more than one party were carried out “pursuant to a common design.”³⁶⁸ Further, Japan adheres to an instrumentalist theory where infringement can be found if the conduct of one actor is used as an instrument by another actor.³⁶⁹ To protect innocent actors from liability in Japan, however, a consumer is not liable for infringement for private use of a claimed method or process.³⁷⁰ That is, liability will lie only when the consumer makes commercial use of the method or process.³⁷¹

While the “partial infringement” theory would be inconsistent with U.S. law, specifically the “all elements” rule,³⁷² the more important point is that there are flexible options for enforcement of interactive method patents in at least Europe and Japan. In contrast, U.S. patentees must attempt to draft claims that meet the “single entity” rule.³⁷³ Alternatively, U.S. patentees must show at trial that one actor induced another actor to infringe the patent.³⁷⁴ Consequently, Europe and Japan may be more favorable venues for claimants wishing to enforce interactive inventions.

F. Resistance To Change

One argument that was used in support of the direction or control test is that it shields innocent actors from the harsh results of strict liability for patent infringement.³⁷⁵ Commentators have warned that

367. *Id.* § 15:14, at 15-84 to -85.

368. See *Sabaf SpA v. MFI Furniture Ctrs. Ltd.*, [2004] UKHL 45, [39] (appeal taken from Eng.), available at <http://www.bailii.org/uk/cases/UKHL/2004/45.pdf>.

369. See *Electrodeposited Image Case*, 1764 HANREI JIHO 112 (Tokyo D. Ct., Sept. 20, 2001).

370. Mizutani, *supra* note 333, at 89–90 (distinguishing between private and commercial use).

371. *Id.* at 90.

372. See *Larsen*, *supra* note 191, at 60.

373. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007) (requiring the infringer to perform all steps), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

374. See *Akamai II*, 692 F.3d at 1319 (agreeing that induced infringement is a viable alternative to the use of the “single entity” rule).

375. See *Lemley*, *supra* note 33, at 262 (concluding that construing patent laws to permit individual, non-infringing acts of unrelated parties to add up to infringement renders the law meaningless).

broader rules for determining joint infringement liability will ensnare innocent actors.³⁷⁶ This is a reasonable concern as these innocent actors are generally customers of an alleged infringing service and typically perform only one step in the allegedly infringed claim.³⁷⁷

The law could easily exempt innocent actors from liability,³⁷⁸ though, innocent actors were rarely involved in the cases that have been litigated. Instead, the parties involved in the joint infringement are usually sophisticated businesses.³⁷⁹ Accordingly, a flexible test that exempts innocent actors from liability, but still prevents misappropriation of an invention by sophisticated parties, is ideal.

Finally, one argument is that proper claim drafting will alleviate many of the problems with enforcement that claims requiring the actions of multiple parties create.³⁸⁰ However, in order to accurately claim an invention, some claims cannot be written to capture a single infringer.³⁸¹ Further, technology exists that allows claims properly directed to a single infringer to be performed by more than one party.³⁸² Accordingly, while proper claim drafting may address fundamental mistakes, it is not a blanket solution.

In sum, the law should undertake a more flexible procedure for determining when a method claim is infringed by separate entities each performing separate steps of the method claim. Accordingly, instead of relying on inducement theory or focusing solely on the nature of the relationship between relevant actors, this article suggests a broader approach detailed below.³⁸³

376. *See id.* (stating that joint infringement unreasonably expands liability).

377. *See id.* at 261 (discussing cases where alleged infringers were customers of the defendant).

378. *See* 35 U.S.C. § 287(c)(1) (2006) (exempting medical practitioners and health care entities from infringement for performance of a medical activity).

379. *See, e.g.,* McKesson Techs. Inc. v. Epic Sys. Corp., 98 U.S.P.Q.2d (BNA) 1281 (Fed. Cir. 2011), *rev'd sub nom. Akamai II*, 692 F.3d 1301; *Akamai I*, 629 F.3d 1311, 1314 (Fed. Cir. 2010), *rev'd*, 692 F.3d 1301; Mumiauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1323 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301; BMC Res., Inc. v. Paymentech, L.P., 498 F.3d 1373, 1375 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301.

380. *See* Lemley et al., *supra* note 33, at 272 (proposing that drafting a unitary claim will avoid the pitfalls of attempting to prove indirect infringement).

381. *See* Lee, *supra* note 39, at 349 (“Because most Internet activities involve connecting a computer to the Internet, it is likely that the inventiveness of Internet-related patents lies in the combinations of steps and elements, and not in an individual step or element that is obvious or known.”).

382. *See* Golden Hour Data Sys., Inc. v. emsCharts, Inc., 614 F.3d 1367, 1369–71 (Fed. Cir. 2010) (describing a patented computer system integrating dispatch clinical services and billing data into one module).

383. *See* discussion *infra* Part III.

III. PROPOSALS FOR REFORM

A. Overview

The current test for joint infringement relies on an inducement theory. Further, the proposed tests for joint infringement in Judge Linn’s dissent focus solely on the nature of the relationship between relevant actors.³⁸⁴ This section identifies additional considerations that should factor into a joint infringement determination. Given these considerations, this section proposes a test for determining when a method claim is infringed if separate entities each perform separate steps of the method claim. The goal of the tests is (1) to take into account the various ways joint infringement can occur and (2) to yield fair, consistent, and predictable results upon application. How the law will apportion liability amongst two or more joint infringers is beyond the scope of this paper.³⁸⁵ Incorporating these tests into a judicial or legislative framework for reform will afford courts more flexibility in analyzing joint infringement cases. In sum, a new, more flexible standard for enforcement will encourage patentees to continue to file applications for innovative interactive method inventions.³⁸⁶

There are generally three claim scenarios in which joint infringement is asserted. In the first scenario, the patentee has poorly drafted claims directed to more than one entity, much like in *BMC*.³⁸⁷ The second scenario involves “single entity claims” where the patentee has drafted claims directed to a single infringer, but the nature of the method allows for the actors to split up performance of the steps and obtain some benefit.³⁸⁸ In the third scenario, called “interactive claims,” the method is interactive in nature, requiring the patentee to include multiple actors in the claim.³⁸⁹ *BMC* provided

384. See *Golden Hour*, 614 F.3d at 1380 (requiring proof of a mastermind’s control or direction over the entire process in a joint infringement claim); *BMC*, 498 F.3d at 1380 (finding that courts generally refuse to find liability where one party did not control or direct each step of the patented process).

385. See Corrected Brief of Amici Curiae, *supra* note 339, at *15 (“How much each party is accountable is a matter of apportionment more suitable for damages calculations rather than liability determination.”).

386. See *McKesson Techs. Inc. v. Epic Sys. Corp.*, 98 U.S.P.Q.2d (BNA) 1281, 1291 (Fed. Cir. 2011) (Newman, J., dissenting) (warning that the court has created a cynical and expensive delusion to encourage innovators to develop unenforceable patents for interactive technologies), *rev’d en banc, per curiam sub nom. Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012).

387. See *BMC*, 498 F.3d at 1375–77 (describing *BMC*’s infringement claim, which involved customer use of the patent).

388. See *Larsen*, *supra* note 191, at 63 (arguing that this type of claim should have no less of a right to exclude others).

389. See Corrected Brief of Amici Curiae, *supra* note 339, at *16 (“If the essence of

a simple solution for the first scenario: Draft better claims.³⁹⁰ However, the Federal Circuit has not distinguished between joint infringement of claims directed to a single entity and joint infringement of claims that require the participation of multiple actors.³⁹¹ What follows is a flexible proposal for addressing the second and third scenarios.

B. *Single Entity Claims*

The following approach applies to a claim in which all the steps of a method claim are directed to a single infringer or the claim does not require performance of the steps by multiple parties. These claims presumably do not have the same drafting problems as the claims in *BMC*.³⁹² Unfortunately, multiple entities may still split up the performance of these steps for their mutual benefit.³⁹³ Where insufficient evidence of the nature of the relationship between relevant actors exists, this approach recommends that the court take into account evidence of collaboration, concerted action, and the benefit realized to determine if there should be joint infringement liability.³⁹⁴ In addition, the approach suggests that factors considered traditionally at common law, the nature of the activity and intent, also be taken into account.

1. *The Golden Hour factors*

Proper claim drafting cannot solve every problem. This is especially true where all the steps of a method claim are directed to a single infringer or do not require performance of the steps by multiple parties. An example of how this type of claim might be written is included below:

15. A computerized method of generating a patient encounter record, comprising the steps of:

the invention is the interaction between users . . . the patentee should not be forced to draft claims . . . to capture a single user . . .”).

390. See *BMC*, 498 F.3d at 1381 (“A patentee can usually structure a claim to capture infringement by a single party.”).

391. See *McKesson*, 98 U.S.P.Q.2d (BNA) at 1283 (combining actions of multiple parties to perform the steps of a claim, but requiring one party—or single entity—to exercise control); *Akamai I*, 629 F.3d 1311, 1322 (Fed. Cir. 2010) (holding that the plaintiff put itself in a position where it would have to attribute actions of third parties to the defendant, culminating in a single entity claim), *rev'd*, 692 F.3d 1301.

392. See *BMC*, 498 F.3d at 1381 (“*BMC* chose . . . to have four different parties perform different acts within one claim.”).

393. See *Golden Hour Data Sys. v. emsCharts, Inc.*, 614 F.3d 1367, 1369 (Fed. Cir. 2010) (discussing a comprehensive data system where each component is capable of being used by different parties).

394. See discussion *infra* Part III.B.1.

collecting flight information relating to an emergency transport crew dispatch;

collecting patient information from a clinical encounter associated with a patient incident requiring emergency medical care by the emergency transport crew; and

integrating the patient information with the flight information to produce an encounter record indicative of the patient’s clinical encounter.³⁹⁵

Unfortunately, current technology could allow for two or more entities to split performance of these steps and still implement a beneficial and useful process. As of the writing of this paper, if more than one party performed each of the steps, under the current inducement standard, the patentee would have to prove that one of the parties induced the other in performance of the method steps.³⁹⁶ Absent this showing, two sophisticated parties could split performance of a claimed method for their mutual benefit.³⁹⁷ Relying on the facts in *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*³⁹⁸ the proposed recommendation attempts to address this scenario in a way that does not ensnare innocent actors and yet provides a consistent framework for enforcement.³⁹⁹

a. Collaboration or partnership

Where the steps of an asserted method claim are directed to a single entity or do not require performance of multiple parties and are performed by more than one party, evidence of a collaboration or partnership between the parties should weigh in favor of a finding of joint infringement. The determination of whether a collaboration or partnership exists should depend on the facts of the case. One amicus curiae has argued that there must be a legal tie between two parties in order for there to be a finding of joint infringement.⁴⁰⁰

395. U.S. Patent No. 6,117,073, at col. 21 l. 54–col. 22 l. 7 (filed Mar. 2, 1998).

396. See discussion *supra* Part II (discussing the courts’ use of the direction or control standard).

397. See *Golden Hour*, 614 F.3d at 1371 (discussing defendants’ collaboration to combine their systems into one unit).

398. 614 F.3d 1367 (Fed. Cir. 2010).

399. Softech (a company that produced computer-aided flight dispatch software) and emsCharts (a company that provided a web-based patient information and billing system) formed a partnership enabling their two programs to work together. *Id.* at 1371. This collaboration created a unit that resembled Golden Hour’s comprehensive system. See *id.* at 1369–70 (describing Golden Hour’s patent).

400. See Amici Curiae Internet Retailers’ Brief in Support of Defendant/Cross-Appellant’s En Banc Response Brief at 6, *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam) (Nos. 2009-1372, -1380, -1416, -1417), 2011 WL 3796786, at *6 (setting forth a test to determine quality of a sufficiently significant legal relationship as to whether there is a contractual obligation).

However, requiring a legal relationship leaves open the opportunity for gamesmanship of the system.⁴⁰¹ Instead, evidence such as joint sales activities, joint promotional activities, and any other joint activity with respect to the accused method should weigh in favor of a finding of joint infringement.⁴⁰² Joint activity by itself is not enough, however. The law should also take other considerations such as the action of the parties into account.

b. Concerted action

The performance of all the steps of a claimed method by the concerted action of all of the relevant actors should weigh in favor of a finding of joint infringement. In *Wallace v. Holmes* the court held that two parties jointly infringed a patent by acting in concert with each other.⁴⁰³ Further, the court in *Heaton-Peninsular Button-Fastener Co.* stated that when patent infringement is brought about by a “concert of action,” all engaged directly and intentionally are joint infringers.⁴⁰⁴ Moreover, the Second Restatement of Torts states that a party is subject to liability if he “does a tortious act in concert with the other or pursuant to a common design with him.”⁴⁰⁵

The facts in *Golden Hour* are an example of “concerted action.” At trial, the jury found that two companies, emsCharts and Softech enabled their respective programs to work together such that their combined system, which they sold as a package, met all the limitations of several of the asserted claims.⁴⁰⁶ Similar evidence of action on behalf of each party to perform claimed steps of a method would probably rise to the level of “concerted action.” Finally, whether the parties acted in concert or not, the benefit of their actions should also be examined.

c. Benefit

Evidence of either an entity obtaining a commercial (competitive or financial) benefit should weigh in favor of a finding of joint

401. See *Golden Hour Data Sys. v. emsCharts, Inc.*, 91 U.S.P.Q.2d (BNA) 1565, 1568 (E.D. Tex. 2009) (“The agreement defined the relationship as not creating ‘any agency, partnership, joint venture, or employer/employee relationship.’”), *aff’d in part, vacated in part*, 614 F.3d 1367.

402. Amicus Curiae Brief of Biotechnology Industry Organization in Support of Neither Party, *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam) (Nos. 2009-1372, -1380, -1416, -1417), 2011 WL 3101890, at *27–28.

403. *Wallace v. Holmes*, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871) (No. 17,100).

404. *Heaton-Peninsular Button-Fastener Co. v. Eureka Specialty Co.*, 77 F. 288, 297 (6th Cir. 1896).

405. RESTATEMENT (SECOND) OF TORTS § 876(a) (1979).

406. *Golden Hour*, 614 F.3d at 1383 (Newman, J., dissenting).

infringement. Patent law has created legal doctrines that prevent infringers from stealing the benefit of an invention.⁴⁰⁷ Further, courts have found parties liable for contributory infringement to prevent them from obtaining the benefit of a patent.⁴⁰⁸ In addition, European law allows patentees to recover under its own “partial infringement” theory in order to prevent infringers from appropriating the commercial benefit of the invention.⁴⁰⁹ Accordingly, an inquiry into what benefit is obtained by the relevant actors is supported by both domestic and international law and policy.

Once again, the facts in *Golden Hour* illustrate this principle. Softech and emsCharts both benefited economically and competitively by selling their combined system.⁴¹⁰ That is, in the absence of evidence that one party directed or controlled the other, emsCharts and Softech thwarted the policy of the patent system by misappropriating the benefit of an invention.⁴¹¹

2. *Other factors for consideration*

In addition to the *Golden Hour* factors enumerated above, the law should consider at least two other factors.⁴¹² The intent of the parties could be examined. In addition, the law could analyze the nature of the alleged infringing activities being performed by each party.

For example, absent a showing of direction or control, performance of a step like the “initiating step” in *McKesson* should weigh against a finding of joint infringement.⁴¹³ Such an initiating step is superfluous and is exactly the type of claim language that the Federal Circuit has said it will not rewrite.⁴¹⁴ Further, the law should

407. See *Royal Typewriter Co. v. Remington Rand, Inc.*, 168 F.2d 691, 692 (2d Cir. 1948) (describing the purpose of the doctrine of equivalents to achieve this result).

408. See *Mobil Oil Corp. v. W. R. Grace & Co.*, 367 F. Supp. 207, 212, 253 (D. Conn. 1973) (allowing plaintiff’s claim for contributory infringement where the defendant was able to achieve all benefits of its patent by making each of its customers its agents in completing the infringing step).

409. See Pagenberg, *supra* note 362, at 319–21 (discussing the French and German approaches).

410. *Golden Hour*, 614 F.3d at 1383 (Newman, J., dissenting).

411. *Id.* at 1382–83.

412. These factors are not new. They are similar to the factors courts analyzed before the 1952 Patent Act and district courts took note of after *BMC*. See discussion *supra* Part II.

413. For an example of drafting such an initiating step, see U.S. Patent No. 6,757,898, col. 44 l. 60–col. 45 l. 24 (filed Jan. 18, 2000) (describing the step of “initiating a communication by one of the plurality of users to the provider for information, wherein the provider has established a preexisting medical record for each user”).

414. The Federal Circuit has stated:

The steps of the claim might have featured references to a single party’s

discourage similar claim language that is indicative of non-commercial consumer participation.⁴¹⁵ That is, performance of a claimed step that is for that party's own private benefit or use should also weigh against a finding of joint infringement.⁴¹⁶

In contrast, a commercial step similar to the "tagging step" in *Akamai I* would weigh in favor of a finding of joint infringement.⁴¹⁷ The "tagging step" is analogous to the act of the customer who supplied the chimney in *Wallace* to complete the lamp.⁴¹⁸ That is, this step is of the character that it simply must be performed for any beneficial use of the method to be realized and could be performed by any party.

Further, similar to early contributory infringement cases, the law should also consider the intent of the parties.⁴¹⁹ Liability for direct infringement does not require a showing of intent.⁴²⁰ Accordingly, this proposal does not suggest that intent (knowledge or willful blindness) be required.⁴²¹ Instead, this recommendation suggests only that evidence of intent by one or more parties weigh in favor of a finding of joint infringement.

supplying or receiving each element of the claimed process. However, BMC chose instead to have four different parties perform different acts within one claim. BMC correctly notes the difficulty of proving infringement of this claim format. Nonetheless, this court will not unilaterally restructure the claim or the standards for joint infringement to remedy these ill-conceived claims.

BMC Res., Inc. v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam).

415. See Harold C. Wegner, E-Business Patent Infringement: Quest for a Direct Infringement Claim Model 13–15 (Nov. 21, 2001) (unpublished manuscript), available at http://www.softic.or.jp/symposium/open_materials/10th/en/wegner-en.pdf (tracing the joint infringement theory in Supreme Court and appellate case law).

416. Mizutani, *supra* note 333, at 89–90 (distinguishing the implications of consumers using patented technology for private or commercial benefits).

417. See U.S. Patent No. 6,108,703, col. 6 l. 41–46 (filed May 19, 1999) (outlining a similar commercial step); see also *Akamai I*, 629 F.3d 1311, 1314 (Fed. Cir. 2011) (describing the customer's use of the "tagging" feature), *rev'd*, 692 F.3d 1301.

418. *Wallace v. Holmes*, 29 F. Cas. 74, 79 (C.C.D. Conn. 1871) (No. 17,100).

419. See *Henry v. A.B. Dick Co.*, 224 U.S. 1, 48–49 (1912) (considering the intent and purpose of the defendant when determining whether infringement occurred), *overruled by Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502 (1917).

420. 35 U.S.C. § 271(a) (2006) (lacking intent in the statutory language dictating that "whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent").

421. See *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2066 (2011) (discussing earlier cases requiring an intention to bring about a patent's specific use). Not requiring intent distinguishes the proposed test from § 271(b) and (c), which require inducement or knowing respectively.

3. Summary

In sum, the above approach applies only to claims where all the steps of a method claim are directed to a single infringer or do not require performance of the steps by multiple parties. These claims presumably do not have the same drafting problems as the claims in *BMC*.⁴²² Unfortunately, advances in technology may nevertheless allow multiple entities to split up the claimed method steps.⁴²³ Where no evidence of direction or control, agency or a contractual obligation is present, this approach recommends that the court take into account and weigh the factors outlined above to determine if there should be joint infringement liability.

C. “Interactive Claims”

Despite the Federal Circuit’s warning concerning claim drafting, patentees have the option to draft method claims that require the actions of more than one actor.⁴²⁴ There may be many reasons patentees draft claims this way; for example, interactive claim language may be the best way to capture the interactive nature of the invention.⁴²⁵ For the purpose of this discussion, these claims will be referred to as “interactive claims.” In either case, the inducement-only rule and the direction or control test place a patentee seeking to enforce interactive claims at a severe disadvantage.⁴²⁶ As one amicus curiae explained, if the invention is interactive in nature, the patentee should not be forced to draft claims directed to single infringers so that those claims can then be enforced.⁴²⁷

The proposed approach undertakes a two-step procedure in order to determine joint infringement liability. First, it suggests that the patentee provide a rationale for an asserted claim’s interactivity.⁴²⁸

422. See *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (noting that BMC could have drafted its claim to focus on one entity instead of having four parties perform different acts within one claim in order to avoid infringement), *overruled by Akamai II*, 692 F.3d 1301.

423. See *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1380 (Fed. Cir. 2010) (involving combined actions of the patent by multiple parties).

424. See *BMC*, 498 F.3d at 1381 (highlighting that BMC chose to structure their claim to require four different actors).

425. See Corrected Brief of Amici Curiae, *supra* note 339, at *16.

426. See *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1330 (Fed. Cir. 2008) (finding no liability for direct infringement and no legal theory to support joint infringement where no evidence of direction or control was presented), *overruled by Akamai II*, 692 F.3d 1301; *BMC*, 498 F.3d at 1381–82 (stressing the importance of the direction or control test in determining whether infringement has occurred).

427. Corrected Brief of Amici Curiae, *supra* note 339, at *16.

428. See discussion *infra* Part III.C.1.

Second, the proposed standard suggests that the court apply a test for joint infringement based on the result of the interactivity inquiry.⁴²⁹ Accordingly, the proposed standard does not force a patentee to draft claims directed to a single infringer by providing a flexible alternative to the newly minted inducement-only test.

1. *Nexus between interactivity and patentability*

The proposed standard borrows loosely from the general framework set forth in *Warner-Jenkins Co. v. Hilton Davis Chemical Co.* In *Warner-Jenkins*, the Supreme Court articulated the standard for the doctrine of equivalents.⁴³⁰ Similar to the joint infringement doctrine, one of the major concerns of the court in *Warner-Jenkins* was giving proper deference to the role of claim drafting in providing public notice and defining the invention.⁴³¹ Accordingly, the proposed test is narrowly defined to avoid conflict with the public-notice function of the statutory claiming requirement.⁴³²

The proposed test recommends that the law inquire as to whether there is a nexus between the “interactivity” of a method claim (that is, the reason why the claims require more than one actor) and the patentability of the claim.⁴³³ Evidence that a proposed claim’s interactivity was a factor in its allowance may indicate that the USPTO granted the patentee a limited monopoly because the claim’s “interactivity” was at least part of what made the claim novel and nonobvious.⁴³⁴ Imposing a rigid standard for enforcement such as the inducement-only direction or control test on these types of interactive claims would severely frustrate the patentee’s ability to enforce that monopoly.⁴³⁵ If a nexus exists, then under this

429. See discussion *infra* Part III.C.2.

430. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997) (stating that the introduction of a new element does not preclude infringement by equivalents of that element).

431. *Id.* (“Mindful that claims do indeed serve both a definitional and a notice function, we think the better rule is to place the burden on the patent holder to establish the reason for an amendment required during patent prosecution.”).

432. *Id.* at 29 (quoting Judge Nies, stating that “[a] distinction can be drawn . . . between substitution of an equivalent for a component *in* an invention and enlarging the metes and bounds of the invention *beyond* what is claimed” (internal quotation marks omitted)).

433. See *supra* note 339 and accompanying text.

434. See 35 U.S.C. § 103(c) (2006) (setting forth the conditions for patentability).

435. See *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329–30 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam); *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381–82 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301. Further, it is foreseeable that a test for infringement that focuses on the type of relationship between the parties could cause a patentee to spend a great deal of time attempting to broadly claim the relationship

recommendation, the inducement-only test would not be the determinative inquiry in establishing whether the claim is jointly infringed. Instead, this proposal suggests that if there is a nexus between the interactivity of the claim and its patentability, the law should weigh the factors outlined in Part III.B. to determine joint infringement liability.⁴³⁶

Alternatively, the lack of a nexus between the interactivity of a claim and its patentability may suggest that interactivity is secondary to other limitations in the claim or that the claim could have been written so that it was directed to a single infringer.⁴³⁷ If there is no nexus between the interactivity of a claim and its patentability, then the law should focus on the nature of the relationship between the relevant actors in determining whether a claim was infringed.⁴³⁸ That is, such claims would be analyzed to determine whether one party had direction or control over another.⁴³⁹ Thus, by inquiring into the significance of the presence of multiple actors in a claim, the proposed recommendation balances the challenge of describing new inventions in words with the role of claim drafting in providing public notice and clearly defining the invention.⁴⁴⁰

2. *Proof of a nexus*

This section briefly describes how an inquiry into whether there is a nexus between the “interactivity” of a method claim and the patentability of the claim may work in practice. In order to make the evidentiary showing of a nexus, a patentee would primarily rely on intrinsic evidence.⁴⁴¹ The law would set forth what a “nexus” means in this context. For example, it could mean that the claimed interactivity is “the reason for,” “reasonably related to,” or “substantially related to” the patentability of the claim.⁴⁴² In

between different parties in the claim instead of focusing on the technical innovation of the invention.

436. See discussion *supra* Part III.B (explaining that several factors, including collaboration, concerted action, the benefit obtained, the nature of the activity being performed, and intent, should be considered in a joint infringement determination).

437. See *BMC*, 498 F.3d at 1381; Lemley et al., *supra* note 33, at 256.

438. See *Muniauction*, 532 F.3d at 1327; *BMC*, 498 F.3d at 1381–82.

439. See *BMC*, 498 F.3d 1373 at 1381–82.

440. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 (1997) (declaring that it is the burden of the patent holder to establish the reason for amending a claim during patent prosecution, and then the court would decide whether that reason was sufficient).

441. Accordingly, statements made in the specification and prosecution history would be instrumental in determining whether the interactivity of the claim was related to patentability of the claims.

442. See *Warner-Jenkinson*, 520 U.S. at 33 (requiring courts to determine on a case-by-case basis whether a claim amendment was substantially related to patentability).

implementation, a broad approach would take into account statements in the specification, the preamble, and the prosecution history. A more narrow approach would focus specifically on why the claim was allowed, relying primarily on the prosecution history. Further, to prevent future patentees from gaming the system by simply adding new elements distinguishable enough to avoid infringement under the current law, an ideal standard would emphasize the prosecution history and the examiner's reasons for allowance. To prevent further complexity, it might also be necessary to restrict the term "patentability" to novel and obviousness concerns.⁴⁴³

This recommendation accomplishes two things. First, it provides a lower hurdle of enforcement for truly innovative interactive method claims.⁴⁴⁴ Second, it protects innocent actors from being subject to liability for infringement based on poorly drafted claims.⁴⁴⁵ Critics may argue that this would lead to inconsistent results. However, while the outcome of some cases may change, a preliminary analysis of the main joint infringement cases heard by the Federal Circuit indicates that many of its decisions finding no joint infringement would be upheld under the proposed recommendation.

For example, under the proposed interactivity test outlined above, the interactive claims asserted in *BMC*, *Muniauction*, and *McKesson* would all still be subject to the direction or control test instead of the more flexible test articulated in Part III.B. The claims at issue in these cases would be subject to the direction or control test because there is little evidence of a nexus between the interactivity of the claims and their patentability.

In U.S. Patent No. 5,715,298 (asserted in *BMC*), for example, the examiner allowed the application because the prior art did not suggest using a telephone in carrying out the claimed method.⁴⁴⁶ That is, there is no indication that the claimed involvement of various actors was novel or nonobvious.⁴⁴⁷ Similarly, in *Muniauction*, the asserted claims included steps performed by the bidder and the

443. For example, the proposed "patentability" determination would ignore considerations arising under §§ 101 and 112.

444. Interactive claims with a nexus between interactivity and patentability would be subject to the tests outlined in Part III.B and would not be subject to the direction or control test.

445. Claims that lacked a nexus between interactivity and patentability would be subject to the rigid direction or control test.

446. See Notice of Allowability, App. No. 08/787981, at 3–4 (Sept. 2, 1997) (specifying that a web browser was a component excluded from the claim).

447. *Id.*

auction service provider.⁴⁴⁸ During prosecution, the patentee argued that their claims were patentable over the prior art primarily because they required the use of a web browser.⁴⁴⁹ The Examiner agreed.⁴⁵⁰ Once again, no indication is present that the claimed participation of the bidder and service provider is related to patentability of the asserted claims.⁴⁵¹ Finally, in *McKesson* one of the asserted claims required the actions of both a patient and a healthcare provider.⁴⁵² However, the claim was allowed because the prior art failed to disclose the limitation automatically generating a patient page/area within the provider’s website.⁴⁵³ That is, there is no indication that the claimed participation of the patient and healthcare provider are related to patentability of the asserted claims.⁴⁵⁴ Accordingly, while the proposed recommendation is more flexible, as seen in the examples above, it is also narrowly tailored so that it would not result in an upheaval of the status quo.

D. *Advantages of the Proposed Approach*

The proposed recommendation accomplishes two objectives. First, it permits patentees of claims directed to a single infringer the opportunity to enforce those claims against opportunistic parties.⁴⁵⁵ Second, it gives patentees of truly innovative interactive patents the ability to enforce their patents.⁴⁵⁶

Under both parts of the proposal, the goal is to craft standards that are fair and rooted in the law. For example, under certain conditions, the proposed approach recommends that a court evaluate and weigh certain factors to determine joint infringement liability.⁴⁵⁷ Some of these factors find their origin in the common law concerning contributory infringement codified by the Patent Act of 1952.⁴⁵⁸ In addition, the factors allow a court to prevent an innocent actor from being subject to joint infringement liability.⁴⁵⁹ Similarly,

448. See U.S. Patent No. 6,161,099, col. 12 l. 64–col. 20 l. 11 (filed May 29, 1998).

449. Notice of Allowability, App. No. 09/087,574, at 4 (Aug. 24, 2000).

450. *Id.*

451. *Id.* at 3–4.

452. See U.S. Patent No. 6,757,898, col. 44 l. 60–col. 45 l. 24 (filed Jan. 18, 2000).

453. See *McKesson’s* Opening Claim Construction Brief at 14, *McKesson Info. Solutions LLC v. Epic Sys. Corp.*, 495 F. Supp. 2d 1329 (N.D. Ga. 2007) (No. 1:06-CV-2965 JTC), 2007 WL 5283762.

454. *Id.*

455. See discussion *supra* Part III.B.

456. See discussion *supra* Part III.C.

457. See discussion *supra* Part III.B.

458. See discussion *supra* Part III.B.2.

459. See discussion *supra* Part III.B.2; see also Wegner, *supra* note 415, at 10–13 (describing joint infringement theory).

the proposal prevents an online service provider from being exposed to patent infringement liability by simply providing a service to its customers.⁴⁶⁰

The proposed recommendations do not attempt to resolve the issues concerning the single entity doctrine. Instead, they provide a flexible alternative. One amicus brief, arguing in favor of the single entity rule, asserted that if a person does not perform each step of a claimed method, then that person does not appropriate the full economic value of the claimed invention.⁴⁶¹ However, in *Akamai II*, the Federal Circuit opined that an inducer has the same impact on the patentee whether he induces one party or multiple parties to infringe.⁴⁶² Under this “same impact” rationale, one could argue that multiple parties, whose combined actions infringe a patent, knowingly or unknowingly, also have the same impact on the patentee. Accordingly, the proposal set forth in this article suggests that specific factors concerning the alleged infringing parties must be weighed including evidence of either party obtaining a commercial (competitive or financial) benefit.⁴⁶³

Finally, the proposed recommendation would not encourage or benefit poorly drafted claims.⁴⁶⁴ Claims of the type that the courts have typically considered poorly drafted would not be subject to a standard less rigid than direction or control unless there was evidence of a nexus between the interactivity of the claim and its patentability.⁴⁶⁵ In fact, the proposed standard may result in a more robust specification and more directed arguments during prosecution.⁴⁶⁶ Further, the nexus requirement prevents this approach from broad application, which would defeat the definitional and public notice functions of claim drafting.⁴⁶⁷

460. Brief of Amicus Curiae New York Intellectual Property Law Association in Support of Defendant-Cross Appellant on Rehearing En Banc at 5–6, *Akamai II*, 692 F.3d 1301 (Fed. Cir. 2012) (en banc) (per curiam) (Nos. 2009-1372, -1380, -1417), 2011 WL 3796788 (asserting that customers visiting a website should not expose an online retailer to patent infringement).

461. *Id.* at 4 (“[A] person who does *not* practice every step of a method claim does not appropriate the full economic value of the claimed invention . . .”).

462. *See Akamai II*, 692 F.3d at 1308.

463. *See supra* Part III.B.1.

464. *See supra* Part III.C.

465. *See supra* Part III.C.1.

466. *See supra* Part III.C.2.

467. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997) (discussing the scope of the doctrine of equivalents and stating “[t]here can be no denying that the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement”).

In sum, the proposed approach recognizes that the issue of joint infringement can arise in different ways depending upon the asserted claim. Accordingly, the proposed approach suggests that the law should address these fact patterns in a more elegant way. As a result, the proposal grants patentees a better opportunity to enforce their claims while protecting innocent actors from liability.

CONCLUSION

The Federal Circuit’s new joint infringement test focuses solely on whether an accused infringer induced a third party to perform some or all of the steps of a claimed method.⁴⁶⁸ Focusing on the inducement inquiry ignores other practical factors that should be considered in determining liability for joint infringement.⁴⁶⁹ Further, absent evidence of inducement, the Federal Circuit’s joint infringement test does nothing to close the judicial loophole.⁴⁷⁰ Accordingly, the law should undertake a more flexible procedure for determining joint infringement liability.

The proposed approach suggests that the law impose a two-part test for determining if a method claim is infringed when separate entities each perform separate steps of a method claim.⁴⁷¹ The first part of the test applies to (1) claims directed to a single entity or (2) claims that do not require participation of multiple entities.⁴⁷² For these claims, in addition to the relationship between relevant actors, the law should consider and weigh several factors such as concerted action, commercial benefit, intent, and the nature of the activity performed.⁴⁷³ The test’s second part applies to claims that specifically require participation of multiple entities.⁴⁷⁴ Here, the law should only

468. See *Akamai II*, 692 F.3d 1301, 1318 (Fed. Cir. 2012) (en banc) (per curiam) (explaining that Limelight would be liable for inducement if “(1) Limelight knew of Akamai’s patent, (2) it performed all but one of the steps of the method claim, (3) it induced [its customers] to perform the final step . . . and (4) the [customers] in fact performed that final step”).

469. See *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1382 (Fed. Cir. 2010) (Newton, J., dissenting) (suggesting the matter should be stayed until conflicting precedent regarding the factors considered is resolved); *Thomson-Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712, 723 (6th Cir. 1897) (reviewing intent of the alleged infringer); *Wallace v. Holmes*, 29 F. Cas. 74, 80 (C.C.D. Conn. 1871) (No. 17,100) (examining the useless nature of the components of the patents alone and the inference that the components would be used together).

470. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301.

471. See *supra* Part III.

472. See *supra* Part III.B.

473. See *Golden Hour*, 614 F.3d at 1382 (Newton, J., dissenting); *Thomson-Houston*, 80 F. at 723; *Wallace*, 29 F. Cas. at 80.

474. See *supra* Part III.C.

consider the factors listed above if there is a nexus between the interactivity of the claim and patentability.⁴⁷⁵ If no nexus exists, liability should be determined by ascertaining whether there was inducement or considering the nature of the relationship between relevant actors.⁴⁷⁶

The approach outlined above (1) prevents misappropriation of new Information Age technology, (2) promotes the public notice function served by well-crafted claims, and (3) shields innocent actors from strict liability. Moreover, by providing more flexibility for enforcement of interactive methods, the proposed approach encourages innovation and advances the constitutional policies underlying the Patent Act.

475. See discussion *supra* Part III.B.

476. See, e.g., *Akamai II*, 692 F.3d 1301, 1317–18 (Fed. Cir. 2012) (en banc) (per curiam); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329–30 (Fed. Cir. 2008), *overruled by Akamai II*, 692 F.3d 1301; *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381–82 (Fed. Cir. 2007), *overruled by Akamai II*, 692 F.3d 1301.