

COOPERATIVE INFRINGEMENT: I GET BY (INFRINGEMENT LAWS) WITH A LITTLE HELP FROM MY FRIENDS

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A party should not be able to avoid infringement by merely bringing in a co-conspirator. Yet under current Federal Circuit law, when two or more parties perform acts that if performed by one party would constitute infringement of patented claims, the parties are likely to avoid any liability.¹ They escape liability simply by dividing up the tasks. The Federal Circuit has held that when two or more parties cooperate and their combined acts would constitute infringement, there is no “joint infringement” unless the patent holder can “prove that one party exercised ‘control or direction’ over the entire process such that all steps of the process can be attributed to the controlling party, i.e., the ‘mastermind.’”² A recent decision explains that this requirement can be satisfied two ways: (1) by a principal-agent relationship, or (2) by a contractual obligation by one party to perform the steps not performed by the other.³ For example, under the current rule, two parties whose software programs together read on a patented claim can avoid infringement by jointly selling their programs to a third party as part of a package deal.⁴

The source of the current “control or direction” rule is *BMC Res., Inc. v. Paymentech, L.P.*,⁵ which was decided on facts where the parties’ relationship was very distant. In setting the new standard and denying infringement, the court acknowledged that the “control or direction” standard it established would allow even parties with a much closer relationship to avoid infringing

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1. *See* *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1380 (Fed. Cir. 2010).

2. *Id.* (quoting *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329 (Fed. Cir. 2008)).

3. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, No. 2009-1372, 2010 WL 5151337, *6–7 (Fed. Cir. Dec. 20, 2010).

4. This is the scenario in *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, No. 2:06 CV 381, 2009 WL 943273, at *4 (E.D. Tex. Apr. 3, 2009). *See* discussion *infra* Section II.B.

5. 498 F.3d 1373 (Fed. Cir. 2007).

by entering an “arms-length agreement.”⁶ The court noted that the problem was solvable by proper claim drafting.⁷ This Note argues that proper claim drafting cannot solve the problem of firms cooperating to evade infringement claims. Furthermore, the Federal Circuit’s current interpretation of the “control or direction” standard is unsupported by precedent and sets too high a standard for what level of cooperation constitutes joint infringement.

This Note presents three possible ways in which the Federal Circuit might address cooperative infringement. “Solution One” suggests lowering the standard to the pre-*BMC* approach taken by district courts, which encompasses arms-length agreements. Any time parties cooperate to perform the steps that constitute infringement, a joint infringement cause of action should be available.⁸

The problems with the “control or direction” standard worsen when there is evidence that the parties knew of the patent and intentionally avoided it by dividing up the claimed elements. Yet since joint infringement is a subset of direct infringement, which is a strict liability doctrine, intent is not a consideration. Thus any standard must apply equally whether or not the parties intentionally avoided a patent; to some, this supports a higher joint infringement standard. Typically, the indirect liability theories of inducement and contributory infringement (which hold one party responsible for the acts of another) cover infringement situations involving multiple parties in which there is some element of intent. This historical tendency supports addressing cooperative infringement under indirect liability doctrine rather than under joint infringement.⁹ The indirect liability doctrines, however, fail to capture the cooperative infringement scenario because they require that one of the parties practice all elements of the patented claim (i.e. they require an “underlying act” of direct infringement).¹⁰ “Solution Two” proposes eliminating this requirement.¹¹

If courts implement neither Solution One nor Two, a patent holder would be remediless against arms-length dividers of the claims. “Solution

6. *Id.* at 1381.

7. *Id.*

8. See discussion *infra* Section III.A.

9. *BMC*, 498 F.3d at 1380 (“Where a defendant participates in infringement but does not directly infringe the patent, the law provides remedies under principles of indirect infringement.”)

10. *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004).

11. See discussion *infra* Section III.B.

Three” would leave intact the current joint and indirect infringement doctrines and create a new doctrine that would require intent without requiring a single underlying infringer.¹²

Considerations of equity and fair play should lead courts to a rule under which a party cannot avoid liability merely by finding a co-conspirator. Part I of this Note explains the tort-based origins of multi-party infringement and details the case law leading up to the *BMC* decision. Part II explains the *BMC* decisions and its flaws. Part III proposes three solutions to the cooperative infringement problem.

I. HISTORICAL DEVELOPMENT OF INDIRECT LIABILITY AND JOINT INFRINGEMENT

Since the first patent act, both Congress and the courts have tried to respond to the problem of the “unscrupulous copyist”¹³—one whose actions, although not technically infringement, warrant deterrence. While the overall trend for claim validity has been to require patentees to more narrowly define their claims, the necessary counterpart has been Congress and the courts’ action to create broader infringement doctrines as situations arise that warrant deterrence. These doctrines include indirect liability and joint infringement.

A. OVERVIEW OF TRENDS IN CLAIMING REQUIREMENTS AND INFRINGEMENT LAWS

Until the Patent Act of 1836, claims were not required.¹⁴ Patentees were permitted to define their inventions broadly, so there was little need for broad infringement doctrines.¹⁵ Thus the early infringement rules were simple and narrow.¹⁶ When Congress added the claim requirement in 1836, effectively narrowing the scope of the “invention” without a counterbalance increasing the scope of what constituted infringement, it became much easier to avoid literal infringement.¹⁷

The concern that some might unfairly dodge infringement has repeatedly led courts to expand infringement laws. Courts’ creation of theories of

12. See discussion *infra* Section III.C.

13. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

14. 5 R. CARL MOY, WALKER ON PATENTS § 15:4 (4th ed. 2010).

15. *Id.*

16. See Patent Act of 1836, § 5 (“Every such patent shall . . . grant to the applicant . . . the full and exclusive right and liberty of making, using, and vending to others to be used.”) (codified as amended at 35 U.S.C. § 271 (2006)).

17. See MOY, *supra* note 14, at § 15:4.

indirect infringement,¹⁸ joint infringement,¹⁹ and the doctrine of equivalents (which expands infringing acts to include those that are close, although not identical, to what is claimed)²⁰ exemplify this effort. Congress has also played a role in expanding infringement laws where they were too narrowly interpreted.²¹ The current patent infringement statute, 35 U.S.C. § 271, reflects the trend toward broader infringement laws, stating in relevant part:

(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.²²

Of particular importance to the cooperative infringement scenario is that the statute does not define “whoever,” which has led to controversy over when liability can exist and to whom it can extend. Even for the strict-liability offense of direct infringement under § 271(a), “whoever” is not limited to a single entity.²³ This statutory leeway provides a sufficient basis

18. *See infra* Section I.B.1.

19. *See infra* Section I.B.2.

20. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607–08 (1950) (explaining that the doctrine of equivalents “evolved . . . [t]o temper unsparing logic and prevent an infringer from stealing the benefit of the invention”).

21. *E.g.*, 35 U.S.C. § 271(f), which was enacted in response to *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518 (1972). In *Deepsouth*, the Supreme Court held that it was not infringement to sell a patented machine in parts for combination abroad. *Id.* at 532. Congress responded by enacting § 271(f), which explicitly created liability for such acts. 35 U.S.C. § 271(f) (2006).

22. 35 U.S.C. § 271 (2006) (emphasis added).

23. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (discussing joint infringement and holding that “a party cannot avoid infringement, however, simply by contracting out steps of a patented process to another entity”).

for courts to fashion fair solutions that limit effective infringement by “unscrupulous copyists.”²⁴

Ensuring a balance between claim scope and infringement remains important, as the Federal Circuit has recently pushed inventors to further define the bounds of their inventions.²⁵ An inventor should not lose out to people who are able, precisely *due* to the inventor’s clear explanation of his contribution, to dodge infringement. Such a result would only promote ambiguity in describing and claiming inventions, undermining one of the main goals of the patent system—the spread of knowledge.

B. EVOLUTION OF THE PATENT INFRINGEMENT CASE LAW IN MULTI-ACTOR SCENARIOS: TORT-BASED REASONING

The origins of patent infringement are in tort law, and the origins of liability in multi-actor scenarios are in the field of joint torts.²⁶ In multi-actor settings, the tort analogy is particularly important because its flexibility allows courts to reach equitable solutions in complex situations. In those

24. See discussion of Solution One *infra* Section III.A, and Solution Two *infra* Section III.B.

25. *Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1344 (Fed. Cir. 2010) (holding that claims are invalid if they do not have explicit written description support in the specification, even if the specification enables the claim).

26. *Thomsons Houston Elec. Co. v. Ohio Brass Co.*, 80 F. 712, 721–22 (6th Cir. 1897) (“An infringement of a patent is a tort analogous to trespass or trespass on the case [A]ll who take part in a trespass, either by actual participation therein or by aiding and abetting it, have been held to be jointly and severally liable for the injury inflicted. There must be some concert of action When that is present, however, the joint liability of both the principal and the accomplice has been invariably enforced.”); see also *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 500 (“[A] contributory infringer is a species of joint-tortfeasor, who is held liable because he has contributed with another to the causing of a single harm to the plaintiff.”); *Leesona Corp. v. Cotwool Mfg. Corp.*, 201 F. Supp. 472, 474 (W.D. S. Car. 1962) (“Infringement, direct or contributory, is a tort, an invasion of a right of the patentee. Those who participate in the commission of the tort, who aid in bringing about the invasion, or who commit acts without which the tort would not have occurred are infringers.”) (citations omitted); *Stearns v. Tinker & Rasor*, 252 F.2d 589, 601 (9th Cir. 1957) (“Contributory infringement is akin to the tort doctrine of joint tortfeasors.”); MOY, *supra* note 14, at § 15:14 (“[L]iability for indirect patent infringement is based on the concept of joint tortfeasance.”); Peter S. Menell, *Unwinding Sony*, 95 CALIF. L. REV. 941 (2007) (discussing the common tort origins of patent law and copyright law and tracing tort law’s influence on indirect infringement doctrines); Edwin Thomas, *The Law of Contributory Infringement*, 21 J. Pat. Off. Soc’y 811, 811–12 (1939) (“The essence of contributory infringement lies in concerting with others in an unlawful invasion of the patentee’s rights.”); Giles Rich, *Infringement under Section 271 of the Patent Act of 1952*, 21 GEO. WASH. L. REV. 521, 525 (1953) (“Contributory infringement is an expression of the old common-law doctrine of joint tortfeasors.”).

complicated scenarios, tort law's flexibility has been instrumental in molding indirect liability rules (where the tort basis for modifying the doctrines has been explicitly stated by courts) and the more recently developed doctrine of joint infringement, a type of direct liability (where the tort rationale has not been as clearly stated). In developing both doctrines, courts appear motivated by pragmatic considerations more than formality, borrowing tort law's flexibility. This Section analyzes tort law's influence on indirect liability and then its influence on joint infringement, tracing that doctrine's development leading up to the *BMC* court's establishment of the "control or direction" standard.

1. *Development of Indirect Liability: The Focus on Concerted Action*

As shown by the seminal case of *Wallace v. Holmes*, the origin of indirect liability is in joint tort law.²⁷ The emphasis of indirect liability has always been addressing the gaming of the strict direct infringement rules. There are two types of indirect infringement, inducement and contributory infringement, and both require an underlying act of direct infringement.²⁸

Inducement liability, codified at 35 U.S.C. § 271(b), has two main elements: (1) encouragement of activities that are later found to constitute infringement, and (2) intent that the activities occur.²⁹ The existence of a third element, knowledge of the existence of a patent, is currently under review by the Supreme Court.³⁰ A simple example of inducement is where the defendant advertises his ability to supply components of a patented invention and also supplies instructions on how to achieve an embodiment of that invention. However, as one scholar observes, there are "unlimited" ways to commit inducement: "[t]he architects of a structure may be responsible, or a firm of engineers, or the vendor of a kit sold with instructions, or of a machine that can operate only to perform a patented process."³¹ Besides the requirement that an infringer take active steps to encourage the infringement, "the term is as broad as the range of actions by

27. *Wallace v. Holmes*, 29 F. Cas. 74 (C.C.D. Conn. 1871). See discussion *infra* this Section.

28. *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004).

29. MOY, *supra* note 14, at § 15:15.

30. See *SEB S.A. v. Montgomery Ward & Co.*, 594 F.3d 1360 (Fed. Cir. 2010), *cert. granted*, *Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 458 (U.S. Oct. 12, 2010) (No. 10-6).

31. Giles S. Rich, *Address of Giles S. Rich*, Nov. 6, 1952, reprinted in 75 *Journal of the Patent Office and Trademark Society* 3 (Special Issue 1993).

which one in fact causes, or urges, or encourage[s], or aids another to infringe a patent.”³²

Contributory infringement, codified at 35 U.S.C. § 271(c), generally requires several elements: that the infringer (1) sells, offers to sell, or imports a component (2) constituting a material part of the invention while (3) knowing it to be especially made for use in infringing a patent, where (4) the component is not a staple article or commodity of commerce suitable for substantial noninfringing uses, and that (5) notice of the patent in suit and (6) notice that the defendant’s activities are infringing (e.g. a cease and desist letter) are given to a defendant.³³

These indirect infringement doctrines originated in concern over the concerted actions of multiple parties. The solutions draw on tort law’s flexibility to help plaintiffs that would have otherwise been remediless. The earliest cases of indirect infringement fall under what is now known as contributory infringement. *Wallace v. Holmes* is regarded as the first example of indirect liability.³⁴ *Wallace* concerned a patent to an improved oil lamp in which the burner had spring clamps to hold the chimney in place.³⁵ The defendant only sold the burner part of the invention, while the customers were expected to combine the burner with a standard chimney, which would create the patented invention.³⁶ Under the standard rule requiring that the alleged infringer practice each element, the defendants would have escaped liability and only the customers would have been liable. However, the court found that result unreasonable:

[T]he complainants would be driven to the task of searching out the individual purchasers for use who actually place the chimney on the burner and use it—a consequence which . . . would make the complainants helpless and remediless.

If, in actual concert with a third party . . . [defendant] consented to manufacture the burner, and such other party to make the chimney, and, in such concert, they actually make and sell the burner, and he the chimney . . . each intended to be used, and actually sold to be used, with the other, it cannot be doubtful, that they must be deemed to be joint infringers of the complainants’ patent . . . [A]ll

32. *Fromberg, Inc. v. Thornhill*, 315 F.2d 407, 411 (5th Cir. 1963).

33. MOY, *supra* note 14, at § 15:21.

34. *Wallace v. Holmes*, 29 F. Cas. 74 (C.C.D. Conn. 1871).

35. *Id.* at 75.

36. *Id.* at 78–80.

are tort-feasors, engaged in a common purpose to infringe the patent.³⁷

Because it would be difficult and not cost-effective for the plaintiffs to sue the directly infringing customers, the court held the manufacturers liable for their customers' acts.³⁸ The court's concern was that the activities of two parties, the defendant and its customers, were the actual causes of harm to the plaintiff and that the defendant should not be able to escape liability by gaming the strict system of direct infringement.³⁹ The court's concern with cooperation is reflected in its finding that the offer for sale and purchase were in essence a "prearrangement"⁴⁰ to infringe, accomplished by dividing up the steps so that the customer would complete the assembly of the invention by purchasing the chimney from another source and using it in conjunction with the part sold by the defendant. When there is an *actual* agreement to divide the steps, as in the arms-length infringement scenario that is the subject of this Note, the logic used in *Wallace* is particularly applicable.

Other courts immediately adopted *Wallace* as a way to solve multi-actor problems.⁴¹ *Wallace* has stood the test of time and has been cited by the

37. *Id.* at 80 (emphasis added). Note that although the court calls the defendants "joint infringers," the common wording in today's terminology would be "contributory infringers." The idea of joint infringement as understood today is different. *See* discussion *infra* Section I.B.2.

38. *Id.*

39. *See id.*

40. *Id.*

41. *See, e.g.,* Thomson-Houston Elec. Co. v. Ohio Brass Co., 80 F. 712, 721 (6th Cir. 1897) ("[In situations like in *Wallace*] the joint liability of both the principal and the accomplice has been invariably enforced. If this healthful rule is not to apply to trespass upon patent property, then, indeed, the protection which is promised by the constitution and laws of the United States to inventors is a poor sham."); *Strobridge v. Lindsey*, 6 Fed. 510, 512 (C.C.W.D. Pa. 1881); *Schneider v. Poutney*, 21 Fed 399, 403 (C.C.D.N.J. 1884); *Barnes v. Straus*, 2 Fed. Cas. 876, 878–79 (C.C.S.D.N.Y. 1872); *Renwick v. Pond*, 20 Fed. Cas. 536, 541 (C.C.S.D.N.Y. 1872). Courts also adopted limits similar to those currently in place in order to prevent overreach of the doctrine; these limits reflect courts' concern with (1) requiring intent to contribute to infringement, and (2) prohibiting patent misuse. *See, e.g.,* *Millner v. Schofield*, 17 F. Cas. 392, 392–93 (C.C.W.D. Va. 1881) (holding that it must be shown that the parts sold were useless in any other machine); *Saxe v. Hammond*, 21 F. Cas. 593, 594–95 (C.C.D. Mass. 1875) (holding that intent is required in the *Wallace* scenario, and distinguishing the case from *Wallace* because it lacked proof or "certain inference" of intent by the defendants that their product be combined in an infringing manner); *Keystone Bridge Co v. Phoenix Iron Co.*, 14 F. Cas. 449, 450 (C.C.E.D. Pa. 1872), *aff'd sub nom.* *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 24 L. Ed. 344 (1877) (requiring that the parts not be useful in other devices, in the absence of a specific intent to aid an outright infringer).

Supreme Court, which shared the *Wallace* court's concerns with business realities.⁴² Importantly, in *Wallace*, as in all contributory infringement cases, the occurrence of harm to the patentee is necessarily dependent on a single underlying act that constitutes direct infringement: if the user does not combine the parts in an infringing manner, no harm is incurred by the patentee. As this Note will explain, when the scenario is different, i.e. when harm to the patentee can occur without an underlying direct infringement, courts should not adhere to rigid rules and instead should consider the motivations underlying cases such as *Wallace*.⁴³

2. *Development of Joint Infringement Doctrine*

Joint infringement is a form of direct infringement, but it is an exception to the general rule that under § 271(a) direct infringement requires that a single party must practice each element of a claim.⁴⁴ Like indirect infringement, the purpose of the doctrine is to capture those who otherwise avoid direct infringement by performing less than all elements of a claim and involving a third party. However, joint infringement is different from indirect infringement in a number of ways: (1) indirect infringement requires an underlying direct infringement;⁴⁵ (2) joint infringement is a strict liability offense and thus contains no intent element;⁴⁶ and (3) a joint infringer must perform at least some of the patented elements himself, unlike an inducer.⁴⁷

The rationale for joint infringement is not always clearly articulated, but generally courts focus on the unfairness of allowing a party to escape direct liability by simply having another party perform some of the patented elements.⁴⁸ Just as in indirect liability, tort-like thinking underlies courts'

42. *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 188 (1980) (noting that the protection given in *Wallace* "is of particular importance in situations . . . where enforcement against direct infringers would be difficult[] and where the technicalities of patent law make it relatively easy to profit from another's invention without risking a charge of direct infringement").

43. *See infra* Section III.B.

44. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007).

45. *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004).

46. *See BMC*, 498 F.3d at 1381.

47. There is no case finding joint infringement where a party completed none of the steps, which makes sense because that is the classic example of a pure inducer.

48. *Id.* at 1381 ("[a] party cannot avoid infringement, however, simply by contracting out steps of a patented process to another entity.") But note *BMC*'s support for this rule is *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980), *aff'd*, 667 F.2d 1232 (5th Cir. 1982) ("[i]nfringement of a patented process or method cannot be avoided by having another perform one step of the process or method."), which does not require a

decisions employing joint liability, which are overwhelmingly concerned with fairness and proscribing gaming of the system.

Before the Federal Circuit's decision in *BMC*, two lines of reasoning were used by courts in finding joint infringement, both rooted in fairness concerns: (1) joint infringement based on agency,⁴⁹ and (2) joint infringement based on a cooperation or a "some connection" theory.⁵⁰ However, the "agency" rationale has been poorly articulated and poorly reasoned. Leading up to *BMC*, the "some connection" theory was dominant.⁵¹ Nevertheless, *BMC* eventually adopted the "control or direction" standard,⁵² which has strong undercurrents of agency. Then *Muniauction* and *Golden Hour* essentially raised the bar by adopting a pure agency standard.⁵³ The recent decision in *Akamai* tempers the agency requirement, but does not go far enough toward prohibiting cooperative infringement.⁵⁴

The earliest case commonly cited when discussing joint infringement is *Crowell v. Baker Oil Tools, Inc.*,⁵⁵ which held that "[i]t 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."⁵⁶ On its face, the *Crowell* rule would seem to support either an agency or a cooperation rationale. The distinguishing characteristic of an independent contractor, as opposed to an agent, is that the former is not subject to the

contractually enforceable obligation. This distinction becomes important in the discussion of the *Akamai* case. See discussion *infra* Section II.B.

49. See *Cross Medical Prods. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005); *Mobil Oil Corp. v. W. R. Grace & Co.*, 367 F. Supp. 207, 253 (D. Conn. 1973).

50. See *Applied Interact v. Vermont Teddy Bear Co.*, No. No. 04 Civ.8713 HB, 2005 WL 2133416, at *5–6 (S.D.N.Y. Sept. 6, 2005); *Cordis Corp. v. Medtronic AVE Inc.*, 194 F. Supp. 2d 323, 349 (D. Del. 2002); *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999); *E.I. DuPont De Nemours & Co. v. Monsanto Co.*, 903 F. Supp. 680, 735 (D. Del. 1995); *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980); *Metal Film Co. v. Metlon Corp.*, 316 F. Supp. 96, 110–11 (S.D.N.Y. 1970).

51. See discussion *infra* this Section.

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

53. See *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1380 (Fed. Cir. 2010); *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1329–30 (Fed. Cir. 2008).

54. See *Akamai Techs., Inc. v. Limelight Networks, Inc.*, No. 2009-1372, 2010 WL 5151337, at *6–7 (Fed. Cir. Dec. 20, 2010).

55. 143 F.2d 1003 (9th Cir. 1944).

56. *Id.* at 1004. *But see* Mark A. Lemley et al., *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 259 (2005) (noting it was not actually a joint infringement case at all, rather a case of direct infringement by a contractor at the defendant's direction, where defendant did not participate).

control of the one by whom he is hired, unlike the latter. Thus, an independent contractor is more like a business partner—one with whom someone cooperates.

The agency rationale first clearly appeared in *Mobil Oil Corp. v. W. R. Grace & Co.*, where the court found infringement.⁵⁷ However, what the court called agency in this case is not true agency; it would fail the Federal Circuit's modern "control or direction" standard for lack of agency and lack of a contractually enforceable agreement. The asserted claim recited a method for preparation of a hydrocarbon conversion catalyst, consisting of a series of steps ending in a heating step.⁵⁸ The defendant manufactured and sold catalysts that were designed for customers to complete the last claimed step in their ordinary use of the catalysts.⁵⁹ Because no single entity directly infringed, recovery under the traditional direct infringement doctrine, as well as indirect infringement, was impossible. The court refused to let the defendants escape liability, however, holding that the "defendant, in effect, made each of its customers its agent in completing the infringing step, knowing full well that the infringement step would in fact be promptly and fully completed by [their] customers."⁶⁰

However, the relationship in *W.R. Grace* was not actually one of agency because the defendant did not control its customers in such a way that they could not perform their steps as they wished, which would typically be needed to enforce tort liability on principals.⁶¹ Moreover, while the defendants knew their customers would complete the last step, they did not direct them to do so. Thus, this case represents an expansive definition of agency to the point where it bears no relationship to traditional agency.⁶² In fact, *W.R. Grace* supports a broad infringement standard. The court's focus was purely on knowledge and intent that the infringing activities occur, a

57. *Mobil Oil Corp. v. W. R. Grace & Co.*, 367 F. Supp. 207, 253 (D. Conn. 1973).

58. U.S. Patent No. 3,140,249, col. 23, ll. 45–57; U.S. Patent No. 3,436,357, col. 21, ll. 60–70.

59. *W.R. Grace*, 367 F. Supp. at 253.

60. *Id.*

61. See RESTATEMENT (SECOND) OF AGENCY § 119 (1958) ("A master is subject to liability for the torts of his servants committed while acting in the scope of their employment."); *Id.* at § 220 ("A servant is a person employed to perform services in the affairs of another and who with respect to the physical conduct in the performance of the services is subject to the other's control or right to control."). Note that "servant" and "agent" are synonymous in this context.

62. See Long Truong, *After BMC Resources, Inc. v. Paymentech, L.P.: Conspiratorial Infringement as a Means of Holding Joint Infringers Liable*, 103 NW. U. L. REV. 1897, 1909 (2009) (agreeing that *W.R. Grace* was not a situation of true agency).

much more intuitive rationale that reflects the tort-based logic underlying indirect infringement. The court's effort to find liability despite a lack of control *or* direction shows that those elements are not essential to a common sense rule.

*Cross Medical Prods. v. Medtronic Sofamor Danek, Inc.*⁶³ is the first indication from the Federal Circuit that multi-actor direct infringement requires a showing of agency. It is also the case that most strongly supports the *BMC* standard. The patent at issue claimed a medical device “operatively joined” to bone.⁶⁴ The manufacturer created the device but did not attach it to bone; rather, doctors used the device, attaching it to bone.⁶⁵ The court held that the manufacturer was not liable for direct infringement.⁶⁶ The court addresses the issue of agency by (1) first noting that direction was present in *Shields v. Halliburton*⁶⁷ (even though the *Shields* court only mentions “assistance” by the third party, not direction by anyone), and (2) then simply stating that because the doctors were not agents of Medtronic, Medtronic was not liable as a direct infringer.⁶⁸ The court did not clarify why the alleged finding of direction in *Shields* would necessitate a finding of agency, which typically requires control far beyond direction.⁶⁹ Importantly, the court held that the doctors could be direct infringers and the manufacturer could be liable for inducement, so the plaintiffs were not entirely remediless.⁷⁰

Besides agency, the main line of reasoning for joint infringement is based on cooperation, or the existence of “some connection” between the allegedly infringing parties.⁷¹ In *Metal Film Co. v. Metlon Corp.*,⁷² Metlon infringed a method for producing filamentary metalized threads where outside suppliers performed the first step, a conventional vacuum metalizing step.⁷³ The relationship is better described as an independent contractor relationship,

63. 424 F.3d 1293 (Fed. Cir. 2005).

64. *Id.* at 1299.

65. *Id.* at 1310–11.

66. *Id.*

67. See discussion *infra* this Section.

68. *Cross Medical Prods. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005).

69. See RESTATEMENT (SECOND) OF AGENCY § 220 (1958) (“A servant is a person employed to perform services in the affairs of another and who with respect to the physical conduct in the performance of the services is subject to the other’s control or right to control.”). Note that “servant” and “agent” are synonymous in this context.

70. *Cross Medical*, 424 F.3d at 1311–14.

71. See cases cited *supra* note 50.

72. 316 F. Supp. 96, 110–11 (S.D.N.Y. 1970).

73. *Id.* at 110 n.12 (citing *Crowell* for the proposition that the fact that defendant had the step done by a contractor does not mitigate their infringement of the overall process).

rather than an agency relationship, because the metalizing step was conventional and routine, instead of an activity requiring direction, customization, or control.⁷⁴

The cooperation rationale was strongly stated in *Shields v. Halliburton Co.*, where an infringing grouting process was carried out by Halliburton while building off-shore oil rigs with the assistance of employees of two other companies.⁷⁵ The parties, all on site, performed different steps of the invention.⁷⁶ For example, in one instance, Halliburton employees pumped grout while the other companies' employees controlled and maintained air pressure, as required by the claimed method.⁷⁷ The court did not mention direction or control, rather only that the "actual grouting operation was conducted by Halliburton which was assisted by [the other companies,] Brown and Root."⁷⁸ The court held that all three companies were jointly liable because "[w]hen infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement."⁷⁹ Stated another way, "[i]nfringement of a patented process or method cannot be avoided by having another perform one step of the process or method."⁸⁰

The court in *E.I. DuPont De Nemours & Co. v. Monsanto Co.* also found joint infringement on facts similar to *Metlon*.⁸¹ All claims were to methods, most involving a three-step process.⁸² Monsanto, the supplier, completed the first step and sent the result to CaMac, who completed the last two steps and sold the result.⁸³ The court held CaMac liable as a joint infringer.⁸⁴ Although Monsanto was not held liable as joint infringer, it was held liable for inducing CaMac's direct infringement based on communications between the companies and Monsanto's indemnification of CaMac in case they were found to have infringed the DuPont patent.⁸⁵

74. *See id.*

75. *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980).

76. *Id.* at 1388.

77. *Id.*

78. *Id.*

79. *Id.* at 1389.

80. *Id.*

81. 903 F. Supp. 680, 735 (D. Del. 1995).

82. *Id.* at 720.

83. *Id.* at 733–35.

84. *Id.* at 735.

85. *Id.* at 736–37.

A slightly different standard, called the “some connection” standard, grew out of *Shields, Metlon, and DuPont*.⁸⁶ In *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, the court rejected the plaintiff’s joint infringement theory, noting that the other district courts that found joint infringement required “some connection” between the parties. The court further noted that *Dupont, Shields, and Metlon* “each demonstrate that the entities found to directly infringe patented processes worked in concert with other entities to complete the process of infringement.”⁸⁷

The court in *Applied Interact v. Vermont Teddy Bear Co.* also accepted the “some connection” standard.⁸⁸ The court held that the owners of a website infringed a claim to a method of enlisting responses to broadcast program.⁸⁹ The court identified a sufficient connection between defendants and their customers to create liability when defendants instructed the customers to “click . . . to print [a] coupon” for a free tour of their facility.⁹⁰

The court in *Cordis Corp. v. Medtronic AVE Inc.* also relied upon the “some connection” standard.⁹¹ The claim at issue was a method for implanting a balloon expandable stent prosthesis within a passageway of an artery.⁹² The court found a close enough connection between the defendant manufacturer and third-party doctors to establish liability where the manufacturer informed doctors about their stent, recruited doctors to participate in clinical trials, and solicited their feedback.⁹³ The court went so far as to reject the defendant’s argument that the parties must have “worked in concert” or “worked jointly.”⁹⁴ It held that “some connection” between the parties performing the different steps was sufficient to find liability.⁹⁵

The court in *Hill v. Amazon, Inc.*⁹⁶ echoed the *Cordis* court’s rule, holding that “a showing of ‘agency’ or ‘working in concert’ is not necessarily

86. *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999).

87. *Faroudja*, 1999 U.S. Dist. LEXIS 22987, at *6.

88. *Applied Interact v. Vermont Teddy Bear Co.*, No. 04 Civ.8173 HB, 2005 WL 2133416, at *5–6 (S.D.N.Y. Sept. 6, 2005).

89. *Id.*

90. *Id.*

91. 194 F. Supp. 2d 323, 349 (D. Del. 2002), *rev’d on other grounds*, *Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352 (Fed. Cir. 2003).

92. *Id.* at 329.

93. *Id.* at 349–50.

94. *Id.* at 349 n.19.

95. *Id.* at 349.

96. No. Civ.A.2:02-CV-186, 2006 WL 151911 (E.D. Tex. Jan. 19, 2006).

required” when “some connection” is established.⁹⁷ The claim was to a method requiring a main computer and a remote computer.⁹⁸ Defendants argued that they performed the steps on the main computer and customers did the steps on the remote computer, so they could not directly infringe.⁹⁹ The court disagreed.¹⁰⁰ In finding “some connection,” the court focused on evidence that (1) defendant controlled its users’ use of its website because defendant designed the site, and (2) defendant advised its customers to update their browsers and modify their settings.¹⁰¹

Finally, in *On Demand Machine Corp. v. Ingame Indus.*, the Federal Circuit appeared to endorse a variant of the “some connection” standard, taking language from *Shields*.¹⁰² The court discerned no flaw in the following jury instruction as a statement of law:

Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. *Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.*¹⁰³

This was the joint infringement landscape leading up to *BMC*—some decisions requiring agency and some requiring cooperation or “some connection,” with a statement by the Federal Circuit in *On Demand* indicating that “participation and combined action” was the correct standard. As explored in Section II.A, *infra*, the *BMC* court explicitly held that the “participation and combined action” standard was dicta in *On Demand* and set a much higher “control or direct” standard for joint infringement.

97. *Id.* at *2.

98. *Id.* at *1.

99. *Id.* at *2.

100. *Id.*

101. *Id.* at *2–3.

102. *On Demand Machine Corp. v. Ingame Indus.*, 442 F.3d 1331 (Fed. Cir. 2006).

103. *Id.* at 1345 (emphasis added).

II. LIMITATIONS OF THE HIGH STANDARD FOR JOINT INFRINGEMENT SET BY *BMC*, *MUNIAUCTION*, *GOLDEN HOUR*, AND *AKAMAI*

In *BMC*, the Federal Circuit resolved the uncertainty created by the district courts' conflicting standards for joint infringement, setting the "control or direction" standard.¹⁰⁴ However, in setting the new standard, the court did not adequately address the concerns of the prior district court opinions regarding the arms-length infringement scenario. It acknowledged that its rule does not capture such a scenario, but refused to expand the rule to capture it for three reasons: (1) availability of indirect infringement to capture it, (2) fear of subverting indirect infringement, and (3) availability of the solution of "proper claim drafting" for the arms-length infringement scenario.¹⁰⁵ However, indirect liability fails, the fear is unfounded, and the solution is ineffective. The numerous holes in the logic of *BMC* have been exacerbated by subsequent Federal Circuit decisions interpreting its "control or direction" standard.

A. WEAKNESSES OF *BMC*'S "CONTROL OR DIRECTION" STANDARD FOR JOINT INFRINGEMENT

BMC was the Federal Circuit's first attempt to directly and fully address the correct standard for joint infringement. The claim at issue in *BMC* concerned an automated bill pay system.¹⁰⁶ The method involved a caller placing a call to a payee, comprising steps of prompting the caller to make an entry, responding to an entry, and accessing a remote payment network, among other things.¹⁰⁷ The claims explicitly required at least two entities to perform the method: the main operator and the user.¹⁰⁸ At issue was whether the main operator could be held liable without performing all the steps of the method.¹⁰⁹ The court held that the main operator could be liable, but only if it controlled or directed the completion of all the other steps.¹¹⁰

In *BMC*, the Federal Circuit disregarded its earlier comment on the jury instruction in *On Demand* as dicta¹¹¹ and rejected its prior approval of the "some connection" reasoning and standard from cases such as *Shields* and

104. *BMC Res. v. Paymentech*, 498 F.3d 1373, 1381 (Fed. Cir. 2007).

105. *Id.*

106. *Id.* at 1375–76.

107. *Id.* at 1375–77.

108. *Id.*

109. *Id.* at 1378.

110. *Id.* at 1380–81.

111. *Id.* at 1379–80.

Faroudja.¹¹² Further, the Federal Circuit affirmed the district court holding that “control or direction” was the correct standard.¹¹³ The court cited four sources for its holding: (1) *Fromson v. Advance Offset Plate, Inc.*,¹¹⁴ (2) *Cross Medical Prods. v. Medtronic Sofamor Danek, Inc.*,¹¹⁵ (3) the *BMC* district court opinion (the only source that used the words “control or direction”),¹¹⁶ and (4) *Mobil Oil Corp. v. Filtrol Corp.*¹¹⁷

The court’s reasoning reflects fear about the overreach of the doctrine of joint infringement due to its strict liability nature. The court explicitly acknowledged “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.”¹¹⁸ Nonetheless, the court held that “this concern does not outweigh concerns over expanding the rules governing direct infringement . . . [such as] subver[sion of] the statutory scheme for indirect infringement.”¹¹⁹ This Note argues that the court too simply disregarded previous cases and their fairness concerns. As explored in this Section, *infra*, the Federal Circuit offered a solution—rewriting the claims—that might fix some aspects of the *BMC* scenario, but does not prevent all cooperative infringement.

Fromson does not appear to permit joint infringement at all. *Fromson* concerned a claim to a coated metal plate used in lithography and a process for making the plate.¹²⁰ One of the steps was to apply a diazo coating to the plate. Without discussion of any precedent or rationale, the court simply held in a single sentence that “[b]ecause the claims include the application of a diazo coating or other light sensitive layer and because [defendant’s] customers, not [defendant], applied the diazo coating, [defendant] cannot be liable for direct infringement with respect to those plates.”¹²¹ The court did

112. *Id.* at 1381.

113. *Id.*

114. *Id.* at 1380 (citing *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1568 (Fed. Cir. 1983)).

115. *Id.* (citing *Cross Medical Prods. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005)).

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

117. *Id.* (citing *Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291–92 (9th Cir. 1974) (expressing doubt over the possibility of joint infringement liability)).

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

119. *Id.*

120. *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1566–67 (Fed. Cir. 1983).

121. *Id.* at 1568.

not mention agency, control or direction, or any other rationale.¹²² This case stands in opposition to *W.R. Grace* (and to some extent, *Metlon*), but the court reached its conclusion without discussion of *W.R. Grace* or its rationale. Importantly, the patent holder was not remediless because the court held that the defendant manufacturer could be liable for contributory infringement since its customers directly infringed by completing the apparatus.¹²³

The second case cited for support of the *BMC* holding, *Cross Medical*, seems to indicate that agency is required,¹²⁴ but does so without discussion or adequate support. As noted in Section I.B.2, *supra*, the only case that the *Cross Medical* court cited for the requirement of “direction” is *Shields*. However, a close reading of *Shields* reveals that the court only required *assistance* between the parties engaged in the infringement, and did not mention agency.¹²⁵ Again, because *Fromson* and *Cross Medical* concerned apparatus claims, the ultimate user directly infringed by completing the device, allowing the manufacturer to be held indirectly liable. As discussed in Section III.A, *infra*, holders of method patents are disadvantaged because the underlying act requirement of indirect infringement often cannot be met, where it generally is for an apparatus claim.

While the Federal Circuit in *BMC* did not consider any of the district court cases mentioned in Section I.B.2, *supra*, the *BMC* district court opinion did.¹²⁶ The *BMC* district court opinion was cited by the Federal Circuit for the proposition that “[c]ourts faced with a divided infringement theory have also generally refused to find liability where one party did not control or direct each step of the patented process,” and is thus the basis for the standard.¹²⁷ The *BMC* district court collected the earlier cases, focusing on *Cordis*,¹²⁸ *Vermont Teddy Bear*,¹²⁹ and *Marley Mouldings Ltd. v. Mikron Indus., Inc.*,¹³⁰ and concluded that “control or direction” was present in each of those cases and required for joint infringement.¹³¹ However, these cases, which

122. *Id.*

123. *Id.*

124. See discussion *supra* Section I.B.2.

125. *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1388–89 (W.D. La. 1980).

126. *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2006 WL 306289, at *4–6 (N.D. Tex. Feb. 9, 2006).

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

128. See discussion *supra* Section I.B.2.

129. See *id.*

130. No. 02C 2855, 2003 U.S. Dist. LEXIS 7211, at *7–8 (N.D. Ill. Apr. 29, 2003), *rev'd on other grounds*, 417 F.3d 1356 (Fed. Cir. 2005) (finding infringement under the “some connection” standard where defendant instructed a third party how to complete its steps).

131. *BMC Res., Inc. v. Paymentech, L.P.*, 2006 WL 306289, at *6 (N.D. Tex. 2006).

establish the legal precedent for *BMC*'s adoption of the "control or direction" standard, would fail the "control or direction" test for joint infringement as currently interpreted. For example, the defendants in *Vermont Teddy Bear* merely instructed their customers to print a coupon.¹³² As explained in Section II.B., *infra*, decisions following *BMC* make it clear that this amount of instruction would be insufficient—in fact, that any amount of instruction is probably insufficient. The Federal Circuit has not stayed true to the philosophical underpinnings of the control or direction test.

The Federal Circuit made a number of problematic arguments for why the joint infringement standard should be so high. First, the court stated that when ordinary direct infringement by a single party is lacking, the usual remedy is indirect infringement.¹³³ This argument seems to ignore the reality that cooperative infringement scenarios often lack a single underlying direct infringer (which is required for indirect infringement), especially when a method claim is at issue, making indirect infringement impossible.

Second, the court opined that a low joint infringement standard would undercut the indirect infringement doctrine by essentially eliminating cases brought under it.¹³⁴ Yet even if cooperation or "some connection" was the joint infringement standard, there would still be many scenarios involving inducement and contributory infringement where no concerted action between the parties existed, or where one party purely induced or contributed without performing any of the patented elements. Therefore, despite the court's concern, the canonical examples of indirect infringement, such as distant inducement by one party of another, would only be actionable under indirect infringement, not joint infringement.

Third, the court disregarded concerns over the arms-length agreement problem by stating that "a patentee can usually structure a claim to capture infringement by a single party"¹³⁵—essentially arguing that proper claim drafting can prevent parties from using cooperative arrangements to escape infringement liability. However, while restructuring the claim would make it *possible* for it to be practiced by a single party (unlike in *BMC* where it was impossible because two parties were explicitly mentioned in the claim language), it in no way guarantees that two parties will not divide its steps to

132. *Applied Interact v. Vermont Teddy Bear Co.*, No. 04 Civ.8173 HB, 2005 WL 2133416, at *5–6 (S.D.N.Y. Sept. 6, 2005).

133. *BMC*, 498 F.3d at 1380 ("Where a defendant participates in infringement but does not directly infringe the patent, the law provides remedies under principles of indirect infringement.").

134. *Id.* at 1381.

135. *Id.* (citing Lemley, *supra* note 56, at 272–75).

avoid infringement. For example, the steps of a method for refining iron ore may be divided between two parties, avoiding infringement, even if the claims only contemplate one party doing all the refining steps.

Fourth, the Federal Circuit made vague and unfounded references to “vicarious liability.”¹³⁶ In arguing that vicarious liability eliminates the potential loophole left by ordinary direct infringement, the court noted that “the law imposes vicarious liability on a party for the acts of another in circumstances showing that the liable party controlled the conduct of the acting party.”¹³⁷ This conclusory statement simply attempts to assert a “control” standard for multi-actor conduct. Simple conclusions based on liability in general is not helpful to such a unique and developed field as patent law.¹³⁸ In summary, *BMC* provides an inadequate explanation of why joint infringement should be limited to scenarios of control or direction.

B. FURTHER ISSUES IN POST-*BMC* FEDERAL CIRCUIT AND DISTRICT COURT CASES

Following *BMC*, the Federal Circuit’s subsequent decisions concerning the standard for joint infringement have exacerbated the problems with *BMC*’s logic. Until *Akamai*, these cases had been raising the bar from its already high starting point, essentially interpreting “control or direction” to only mean “control.” *Akamai* lowered the bar by adding an alternative prong, contractually enforceable obligations, but this does not go far enough.

In *Muniauction*, the Federal Circuit affirmed *BMC* and slightly raised the joint infringement standard, holding that control over user access to a patented system and direction on how to use it is insufficient for “control or direction.”¹³⁹ The claim at issue concerned a computer system that allowed, on a central server, municipal bond issuers to initiate and monitor bond

136. *Id.* at 1379.

137. *Id.* (citing *Engle v. Dinehart*, 213 F.3d 639 (5th Cir. 2000) (unpublished decision)).

138. However, even if vicarious liability is the linchpin of all multi-actor infringement, as *BMC* holds, neither control nor agency is always required for a finding of vicarious liability. In fact, *Engle* acknowledges that “ostensible” agency, a legal fiction, can create tort liability: “Nevertheless, an employer or principal may act so as to be subjected to liability because of the conduct of a *person who is not its agent*, or who, although an agent, has acted outside the scope of his or her authority. Under the doctrine of ostensible agency, the employer or principal may be held liable under circumstances in which his own conduct should equitably prevent him from denying the existence of an agency.” *Engle*, 213 F.3d 639 at *9 (emphasis added). In addition, principals may be held vicariously liable for the acts of non-agent independent contractors in certain situations. *Majestic Realty Associates, Inc. v. Toti Contracting Co.*, 30 N.J. 425 (1959) (holding a corporation liable for the demolition work of its independent contractor because it was “inherently dangerous”).

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

auctions, and bidders to submit and monitor bids.¹⁴⁰ The claim required combined actions of a bidder and a computer system.¹⁴¹ The court held that an alleged infringer who “controls access to its system and *instructs* bidders on its use” is *not* liable for joint infringement.¹⁴² In denying infringement, the court cited *BMC* and held that one party must exhibit such direction or control that each step must be attributable to him—the “mastermind.”¹⁴³ The question, according to the court, was whether control was present to such a degree that the defendant himself “can be said to have performed every step of the asserted claims.”¹⁴⁴ The court’s interpretation of the standard reflects a trend away from “direction” and toward an exclusive control or agency standard. The court explicitly rejected the district court’s jury instruction, which focused on whether there was “one party teaching, instructing, or facilitating the other party’s participation.”¹⁴⁵

In *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, the Federal Circuit first faced a situation in which two sophisticated parties entered into a “strategic partnership” to sell software that infringed computerized method and apparatus claims,¹⁴⁶ exemplifying the arms-length agreement for cooperative infringement the *BMC* court acknowledged and accepted as a possibility.¹⁴⁷ Prior to their strategic partnership, emsCharts sold software that performed some of the steps, and Softtech sold software that performed the others.¹⁴⁸ The two entered into a contractual relationship that permitted emsCharts to distribute Softtech’s software, which it did, in combination with its own, in an infringing manner.¹⁴⁹ The parties also jointly submitted a bid for a university contract that proposed use of their software programs together,¹⁵⁰ which if done by a single party would have violated § 271’s prohibition on

140. *Id.* at 1322–23.

141. *Id.* at 1328–29 (“at least the inputting step of claim 1 is completed by the bidder, whereas at least a majority of the remaining steps are performed by the auctioneer’s system.”).

142. *Id.* at 1330 (emphasis added).

143. *Id.* at 1329.

144. *Id.*

145. *Id.* at 1329.

146. *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, 614 F.3d 1367, 1369–70 (Fed. Cir. 2010).

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

148. *Id.* at 1371.

149. *Id.* The court mentioned in dictum that this would have been enough for direct infringement by emsCharts alone, but the parties had agreed to submit only joint infringement claims to the jury. *Id.* at 1381.

150. *Golden Hour Data Sys., Inc. v. emsCharts, Inc.*, No. 2:06 CV 381, 2009 WL 943273, at *3–4 (E.D. Tex. Apr. 3, 2009).

offers to sell. However, because neither party controlled the other or directed the other to participate in the bidding—rather they merely both *agreed* to participate—the district court held infringement impossible.¹⁵¹ Thus, the district court granted the defendants’ JMOL motion after a jury verdict for the plaintiffs.¹⁵² The district court explicitly held that “[m]aking information available to the other party, promoting the other party, *instructing* the other party, or facilitating or arranging for the other party’s involvement in the alleged infringement is not sufficient to find control or direction.”¹⁵³ The Federal Circuit affirmed without much discussion.¹⁵⁴ Judge Newman, the author of the *On Demand* opinion, dissented, arguing that the control or direction standard was incorrect as a matter of law.¹⁵⁵ This case represents the first time the Federal Circuit applied the “control or direction” standard to a claim that did not explicitly require more than one party to perform the invention at issue.

After *Muniauction* and *Golden Hour*, it appeared that little remained of the direction prong of “control or direction.” Recently, the Federal Circuit confirmed that direction alone is insufficient for “control or direction”—agency is required.¹⁵⁶ In *Akamai Techs., Inc. v. Limelight Networks, Inc.*, plaintiff Akamai’s patents claimed a method of delivering web content that involved copying a web page onto a new network different from the content provider’s (i.e. customer’s) network, tagging some of the embedded objects on the page so that they are served from the new network, and, responsive to a request, serving the tagged embedded objects from the new network.¹⁵⁷ Pursuant to a form contract, Limelight’s customers were to tag the objects they wished to be served by Limelight, who gave detailed instructions on how to do the tagging.¹⁵⁸ Akamai argued that Limelight’s detailed instructions to its customers “present[ed] the ultimate in direction,” and should therefore be sufficient to fulfill the control or direction standard under *BMC*.¹⁵⁹ The

151. *Id.* at *4 (stating that “emsCharts did not *direct* Softtech [to] submit the bid,” but that rather “[t]he two companies discussed and *agreed* to submit the bid”) (emphasis in original).

152. *Golden Hour*, 614 F.3d 1367.

153. *Id.* (citing *Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811, 839 (S.D. Tex. 2008)) (emphasis added).

154. *Golden Hour*, 614 F.3d at 1381.

155. *Id.* at 1382–83.

156. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, No. 2009-1372, 2010 WL 5151337 (Fed. Cir. Dec. 20, 2010).

157. *Id.* at *7.

158. *Id.* at *11.

159. *Id.* at *15.

court responded that “the words in the *BMC Resources* test must be read in the context of traditional agency law” and, quoting the Restatement, noted that “[a]n essential element of agency is the principal’s right to control the agent’s actions.”¹⁶⁰ The court then held that the situation was no different than that in *Muniauction* with respect to whether agency was established: direction alone was insufficient without control, and so agency was lacking.¹⁶¹

But the court’s analysis did not end there. In an interesting turn of events, the *Akamai* panel, which included Chief Judge Rader who authored *BMC*, added an alternative prong to agency in the *BMC* test.¹⁶² Without overturning any of its prior decisions, the court held that a contractual obligation alone is sufficient to attribute one party’s actions to another and thus establish joint infringement.¹⁶³ The holding is groundbreaking because until *Akamai*, most district courts interpreted the *BMC* rule to mean a contractual agreement alone was insufficient to show control or direction.¹⁶⁴

160. *Id.* (quoting RESTATEMENT (THIRD) OF AGENCY § 1.01 cmt. f. (2006)).

161. *Id.* at 15–16.

162. *Id.* at 14.

163. *Id.* The court’s seemingly clear rule, however, is muddled by its analysis under the facts of the case. First, the court cited *BMC*’s rule that “mere arms-length cooperation will not give rise to direct infringement by any party.” *Id.* at *16–17. This would seem to run directly counter to the notion that contractual agreements can give rise to joint infringement liability. In addition, the court repeatedly mentioned that the agency prong, of which control is the “essential element,” is different from the contract prong. But then in finding the contract prong unsatisfied, the court explained that “none of [the contract terms] establishes either Limelight’s control over its customers or its customers’ consent to Limelight’s control.” *Id.* at *17. The contract prong actually failed because Limelight’s customers’ promises were illusory. They never promised to perform the tagging step; rather, the customers merely acknowledged that they would have to do so if they were to take advantage of Limelight’s hosting service. This lack of contractual ability to force its customers to perform the tagging step must be what the court meant regarding the customer’s non-consent to Limelight’s control, but given the context, the court should have been clearer that it was not a reference to the “control or direction” prong.

164. *See, e.g., Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811 (S.D. Tex. 2008) (holding that under a patent for a method of teleconferenced medical care in which one party set up the teleconferencing network and dealt with clients, and doctors provided diagnoses, a contract between the first party and the doctors was insufficient to show control or direction if the doctors were allowed to make the diagnoses using their own medical expertise, even though the contracts stipulated *when* the doctors should be available for consultation); *Gammino v. Celco Partnership*, 527 F. Supp. 2d 395 (E.D. Pa. 2007) (holding that a pay telephone operator who contracted to have a third party provide call-blocking services did not infringe a claim to a “process and apparatus” for call-blocking because he did not control, or even know, *how* the party performed the steps). *But cf. Travel Sentry, Inc. v. Tropp*, 736 F.Supp.2d 623, 633 (E.D.N.Y. Sept. 10, 2010) (holding that although there was an agreement whereby one party would provide the other with certain tools, and the

However, the Federal Circuit did not go far enough in resolving *BMC*'s problems—the agreement should not be required to be contractually enforceable.

The *Akamai* contract prong originates in *BMC*'s language that “[a] party cannot avoid infringement, however, simply by contracting out steps of a patented process to another entity.”¹⁶⁵ *BMC*'s support for this, however, is *Shields*, which states that “[i]nfringement of a patented process or method cannot be avoided by having another perform one step of the process or method.”¹⁶⁶ Thus *Shields* did not require that the party be able to enforce the obligation under contract, only that the original party “[had] another perform” the steps.¹⁶⁷ Similarly, *Vermont Teddy Bear*, *Cordis*, *W.R. Grace*, and *Hill* found joint infringement without a contractually enforceable obligation.¹⁶⁸ The court most likely required the agreement to be contractually enforceable because allowing a mere agreement to suffice would be inconsistent with its other holding in *Akamai*—that direction alone is insufficient—as any unenforceable agreement could be called mere direction. Yet this only shows that both holdings are wrong, and that, as explained in Section III.A, *infra*, neither agency nor an enforceable obligation should be required for joint infringement.

In conclusion, the current interpretation of the *BMC* test is far removed from the cases *used* to establish the *BMC* standard, *Vermont Teddy Bear*, *Marley Mouldings*, and *Cordis Corp.*, and earlier cases such as *Shields* and *W.R. Grace*. If these cases were reexamined, they would likely fail to meet the current joint infringement standard that they are purported to establish because, under their facts, there was no agency relationship or contractual obligation to practice the patented elements.¹⁶⁹ When combined with a fresh examination of what the standard should be, *infra* Section III.A, this logical inconsistency

latter would use them subject to some conditions, lack of an enforceable obligation meant “control or direction” was lacking).

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

166. *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1389 (W.D. La. 1980), *aff'd*, 667 F.2d 1232 (5th Cir. 1982).

167. *Id.*

168. See discussion *supra* Section I.B.2. In *Vermont Teddy Bear*, the defendants simply instructed the users to print a coupon. In *W.R. Grace*, the defendants supplied a product knowing that customers would use it in a certain way. In *Hill*, defendants instructed users how to use the website.

169. See discussion *supra* Section I.B.2 and Section II.A.

warrants overturning *BMC*, even as loosened in *Akamai*, and returning to a previous standard.¹⁷⁰

III. PROPOSED SOLUTIONS FOR FIXING THE FEDERAL CIRCUIT'S JOINT INFRINGEMENT STANDARD

The cooperative infringement scenario slips through the cracks of the currently available infringement doctrines. Joint infringement fails to address such agreements because there is no direction or control, and inducement fails because there is no underlying direct infringement. There are three solutions, described *infra*. Section III.A discusses what is probably the least disruptive solution, lowering the joint infringement standard. Section III.B proposes dealing with the issue under indirect infringement, which requires eliminating the underlying direct infringement requirement. Section III.C proposes creating an entirely new infringement doctrine.

A. SOLUTION ONE: LOWER THE JOINT INFRINGEMENT STANDARD

Any time parties cooperate to perform the steps that constitute infringement, a joint infringement cause of action should be available. Courts following *BMC*, which have developed the “control or direction” standard into one where agency and contractual obligations are the only means of proving a case of joint infringement,¹⁷¹ have exacerbated its problems. Common sense, not rigid rules, should guide infringement doctrines, especially when people might narrowly avoid them in an unfair way: if someone were to take out an ad in the paper describing a patented invention and soliciting offers to participate in arms-length infringement with him, why should the patent holder be remediless?

170. Yet there may be some hope for the *On Demand* formulation in the view of the courts. In a recent case, a jury found joint infringement between U.S. Bank and ViewPoint and U.S. Bank and The Clearing House. *Datatransaction Corp. v. Wells Fargo & Co.* NO. 2:06-CV-72 DF, slip. op. (E.D. Tex. March 12, 2010). The plaintiff argued that the situation was unlike any previously presented because ViewPoint and The Clearing House were created by banks specifically for the purpose of infringing the patents. *Id.* at *3. The plaintiff asserted, not agency-based liability, nor even “some connection” liability, but two-way liability based on a “jointly participating co-venturer” theory, i.e. that they were “more a single actor than two.” *Id.* at 3, 5–6. The court agreed with the plaintiff that summary judgment should be denied because the facts of the case might be outside the *BMC* and *Muniauction* realms, “and might justify a finding of joint and several liability, as apparently contemplated in *On Demand*.” *Id.* at 5. However, the court’s meaning was not completely clear because the court then emphasized that plaintiff alleged that the two corporations were “entangled” to a degree far *exceeding* mere direction and control. *Id.*

171. See discussion *supra* Section II.B.

The Federal Circuit's current agency-or-contract standard, laid out in *Akamai*,¹⁷² strikes the wrong balance. Agency requires that a party control *how* another does the steps that the principal does not perform himself. Yet often the key to an invention lies simply in the combination of certain unpatentable elements. In those cases, it does not matter *how* the invention is done. For example, if a claim is to a method of refining iron ore, where the real innovation is that no one had previously combined certain well-known processes back-to-back, the key is the combination. If two parties agree to split up the processes, each doing part, why should infringement require so much "control or direction" that the one party "cannot perform the work as he chooses"?¹⁷³ Cooperation should suffice. Agency should not be required. In addition, contractual enforceability of an agreement should not be required when it is clear that the parties intend the result. Instead, an informal agreement to perform the steps that together constitute infringement should suffice.

Agency should not be the standard for at least two reasons. First, agency law is a poor fit for joint liability because of the goals of the doctrines. Both are similarly concerned with giving some remedy to injured parties and preventing attempts at gaming the system to avoid liability. However, the doctrines diverge at a critical juncture in that their typical applications, and thus their limiting concerns, are entirely different.

Agency law and vicarious tort liability in the master-servant context is primarily concerned with holding a "master," who has some control over the general actions of a "servant," liable for the servant's torts performed *independently* of the master's control in that specific instance.¹⁷⁴ The canonical example is a truck driver hitting a pedestrian. Thus, although agency gives remedy for unintended torts, there arises a concern in agency that a principal might be liable for acts he has absolutely no power to prevent. This leads to two important limits on agency: only holding the principal liable for the torts (1) of an actor under his control, (2) that occurred while the latter was acting in the scope of his employment.¹⁷⁵

On the other hand, the scenario of cooperative infringement assumes that both parties have some pre-harm intent—they intend the acts to be

172. *Akamai Techs., Inc. v. Limelight Networks, Inc.*, No. 2009-1372, 2010 WL 5151337 (Fed. Cir. Dec. 20, 2010).

173. *BMC Res., Inc. v. Paymentech, L.P.*, No. 3-03-CV-1927-M, 2006 WL 306289, at *4 (N.D. Tex. Feb. 9, 2006) (quoting *Emtel, Inc. v. Lipidlabs, Inc.*, 583 F. Supp. 2d 811, 840 (S.D. Tex. 2008))

174. RESTATEMENT (SECOND) OF AGENCY § 219 cmt. a (1958).

175. *Id.* § 219(1).

conducted by the other. Parties do not accidentally agree to perform steps that constitute infringement (not knowing of a patent is irrelevant to the concept of direct infringement, which is a strict liability offense). Thus, the cooperative infringement scenario lacks the countervailing concern of holding parties responsible for acts they have no power to prevent because a cooperative infringer agreed to the acts. Similarly, a cooperative infringement standard should lack the limits on liability that are reflected in agency doctrine.¹⁷⁶

Second, the high burden of agency as a standard for cooperative infringement treats method claims more strictly than apparatus claims. Owners of patents claiming apparatuses have a much better chance than owners of method claims of obtaining some form of remedy in a cooperative infringement scenario because someone will ultimately build or sell the apparatus.¹⁷⁷ For example, an apparatus claim as in *Cross Medical* and *Fromson*, the two cases relied upon by the Federal Circuit in *BMC*,¹⁷⁸ will be directly infringed by the ultimate user; the results in those cases are therefore not as worrisome given the likelihood of redress in the form of indirect infringement by those with deep pockets (manufacturers). However, when the claim is to a pure process, ordinary direct infringement is unlikely because there is no object to assemble at the end. Under such circumstances, indirect

176. Agency can also be shown by ratification. RESTATEMENT (THIRD) OF AGENCY, §§ 4.01, 4.02 (2006). This might support requiring agency, as ratification would allow a means to show agency when a party intends the acts of another party (technically, approves of past acts by that party) instead of requiring control. However, it does not appear that this theory has ever been argued under a joint infringement claim, and in general, courts discussing joint infringement use the term “agency” to mean control.

177. A counterpoint to this concern, and thus this Note in general, may be that it is easy to rewrite method claims as apparatus claims, especially in the software and internet fields because one can simply claim a computer that performs the steps of the method. Then, as the argument might proceed, it would be simple to catch the end users on “use of an infringing apparatus” and find those that run the system liable as inducers or contributory infringers. *See* *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282 (Fed. Cir. 2005). There are two problems with that solution. First, courts are split on whether users who access a system, e.g., a website, and thus cause software to be run on the server side are “using” an infringing apparatus. *Compare* *EpicRealm Licensing LLC v. Autoflex Leasing Inc.*, 492 F. Supp. 2d 608 (E.D. Tex. 2007) (no “use”) *and* *Phoenix Solutions, Inc. v. The DirecTV Group, Inc.*, No. 08-984, 2009 U.S. Dist. LEXIS 114977 (C.D. Cal. Nov. 23, 2009) (no “use”) *with* *Renhol Inc. v. Don Best Sports*, 548 F. Supp. 2d 356, 358 (E.D. Tex. 2008) (“use” found, but requiring control and beneficial use, essentially agency) *and* *Nuance Communications Inc. v. Tellme Networks Inc.*, No. 06-105-SLR, 2010 U.S. LEXIS 39388 (D. Del. Apr. 10, 2010) (“use” found). Second, it is not always possible to rewrite method claims as apparatus claims.

178. *BMC Res. v. Paymentech*, 498 F.3d 1373, 1380 (Fed. Cir. 2007).

infringement is also unlikely because it requires an underlying direct infringement.¹⁷⁹ Thus, some valid claims to processes requiring more than one party simply cannot be infringed as a matter of law in the ordinary course of business, scenarios that often lack agency or contractual obligations between willing associates.

This imbalance may explain why the courts in *Metlon*, *W.R. Grace*, *Shields*, *DuPont*, *Vermont Teddy Bear*, and *Hill*, which all involved method claims,¹⁸⁰ used a lower standard than the courts in *Cross Medical* and *Fromson*, which involved apparatus claims. Notably, the Federal Circuit in *BMC*, *Muniauction*, and *Akamai*, which involved only method claims, did not discuss those decisions.¹⁸¹ Moving forward, there will likely be many inventors succeeding in patenting pure process claims, as the Supreme Court recently confirmed that the definition of “process” within 35 U.S.C. § 101 is quite broad, even covering business methods and software.¹⁸²

Beyond the fact that agency law does not fit cleanly in patent law and treats process claims unfairly, *BMC*’s solution to the arms-length infringement problem does not fix the deficiencies with agency. *BMC* brushed aside the serious problem of arms-length cooperation with the simple statement that the problem can be solved by “proper claim drafting.”¹⁸³ As noted in Section II.A, *supra*, that solution does not actually solve the problem of cooperative infringement.

The concept of joint inventorship also supports broad infringement rules in multi-party situations, as opposed to a narrow agency-or-contract standard. In patent law, any party that materially contributes to an invention enjoys the benefits of joint inventorship.¹⁸⁴ Fairness principles suggest the logical counterpoint that any party that materially contributes to infringement should suffer the consequences of joint infringement.

The best standard brings together the two *Akamai* prongs by broadening both of them. First, it would lower the relationship prong to something less than agency, to include parties that have “some connection” as articulated in

179. *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004)

180. See discussion *supra* Section I.B.2.

181. See discussion *supra* Sections II.A–II.B. *Golden Hour*, which concerned both method and apparatus claims, did not discuss them either. See *id.*

182. *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

183. *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (citing *Lemley*, *supra* note 56, at 272–75).

184. *MOY*, *supra* note 14, at § 10:19 (4th ed. 2010).

Faroudja.¹⁸⁵ Second, under the contract prong, it would lessen the need for actual contractual enforceability of an obligation, to include the *On Demand* standard of any “participation and combined action.” The prongs would thus merge into one requirement, making *true cooperation or participation* sufficient to show joint infringement. Of course, this is subject to a judge’s interpretation of whether cooperation or participation occurred. Knowledge of the patent would be irrelevant, keeping it a strict liability offense (and different from conspiracy, covered under Solution Three¹⁸⁶).

Under Solution One, *BMC*, *Muniauction*, *Golden Hour*, and *Akamai* would all be reversed. For example, in *Muniauction*, the relationship between those that set up the computer system and the bidders would be sufficient to indicate cooperation, regardless of a lack of direct communication between the users and the people operating the website. Although in the cases of *BMC* and *Muniauction* that would mean finding potentially unsophisticated individual end-users liable for infringement, that need not worry courts. End users are often found liable in indirect infringement cases without troublesome consequences. Individuals are not worth suing, and corporations and other sophisticated entities, such as Limelight’s customers in *Akamai*, can get indemnification if they desire.

B. SOLUTION TWO: ELIMINATE THE UNDERLYING ACT REQUIREMENT OF INDIRECT LIABILITY

If courts are hesitant to adopt Solution One, an alternative for solving the cooperative infringement problem is to eliminate the requirement of an underlying act of direct infringement from the doctrine of indirect liability. Courts could then consider cooperative infringement as a type of mutual inducement, which is the essence of an arms-length business agreement. The *BMC* court itself opined that indirect liability was the typical remedy when there is participation but not direct infringement by either party,¹⁸⁷ this solution makes sense especially when there is intent, i.e. knowledge of the patent. Yet it cannot be a viable remedy for cooperative infringement situations without eliminating the underlying act requirement. In this context requiring an underlying act does not make sense: if one can be liable for

185. *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 WL 111788, at *5 (N.D. Cal. Feb. 24, 1999).

186. See discussion *infra* Section III.C.

187. *BMC Resources, Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1380 (Fed. Cir. 2007) (“Where a defendant participates in infringement but does not directly infringe the patent, the law provides remedies under principles of indirect infringement.”).

inducing another to infringe, why should one be able to avoid liability by stepping in and doing a few of the patented steps oneself?

Sections 271(b) and (c) of the Patent Act contain no explicit requirement that a single party directly infringe, but courts have inferred that requirement.¹⁸⁸ There is no clear answer as to why courts established this underlying act condition. The best reason that emerges from the case law is that it simply made sense in the situations before the court because harm to the patentee so obviously hinged on the existence of an underlying act of direct infringement. Yet, however well-established, a judicially-created rule should not be beyond manipulation based on the circumstances of a given case.

The contributory infringement situation presents the most obvious need for an underlying act.¹⁸⁹ If the contributing infringer sells a part to be combined with others in an infringing manner, but no one combines it in that way, no harm has been done to the patentee.

Similarly, in inducement cases establishing the rule, it is obvious that requiring an underlying infringing act was fair. The underlying act requirement in inducement cases originates from a 1966 case from the Central District of California, *Aluminum Extrusion Co. v. Soule Steel Co.*¹⁹⁰ In *Aluminum Extrusion*, the court held that there was no direct infringement, and thus no inducement, when the alleged acts occurred before issuance of the patent.¹⁹¹ There, again, the requirement of underlying direct infringement was entirely fair because the harm hinged on its existence. Similarly, in the two most often cited recent cases for the underlying act requirement in inducement, *Met-Coil Sys. Corp. v. Korners Unlimited, Inc.* and *Joy Technologies, Inc. v. Flakt, Inc.*, the requirement was fair.¹⁹²

188. *Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1272 (Fed. Cir. 2004).

189. *See, e.g., Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 341 (1961) (holding that “if the purchaser and user could not be amerced as an infringer certainly one who sold to him cannot be amerced for contributing to a non-existent infringement”) (quoting *Mercoird Corp. v. Mid-Continent Investment Co.*, 1944, 320 U.S. 661, 674 (Roberts, J., dissenting)).

190. *Aluminum Extrusion Co. v. Soule Steel Co.*, 260 F. Supp. 221 (C.D.Cal., 1966).

191. *Id.*

192. *See Met-Coil Sys. Corp. v. Korners Unlimited, Inc.*, 803 F.2d 684 (Fed. Cir. 1986); *Joy Technologies, Inc. v. Flakt, Inc.*, 6 F.3d 770 (Fed. Cir. 1993). In *Met-Coil*, the court held that inducement was impossible by acts occurring after a patent was exhausted. *Met-Coil*, 803 F.2d at 687. *Joy* concerned the sale of a machine that would take such a long time to build that it could not be used until after the patent expired. *Joy*, 6 F.3d at 772. The question was whether the sale induced infringement of a patented method. *Id.* The court cited many cases

In both the contributory infringement and inducement cases where liability was denied due to lack of an underlying direct infringement, the requirement was fair; it would not have made sense to allow a remedy because there was no harm to the patentee. However, it is not a universal truth that harm only occurs if one party practices each element. By eliminating the underlying act requirement in the special case of cooperative infringement, yet maintaining it otherwise, courts can reach a fair solution without violating the statutory language. The exception would be triggered when there was “some connection” between two parties and infringement could be found based on combined actions. Cases like *Met Coil*, *Joy*, and *Aluminum Extrusion* would come out the same way, and not fall under the Solution Two exception, because the parties’ combined actions would not have constituted infringement.

C. SOLUTION THREE: IMPORT A TORT DOCTRINE

If courts are unwilling to modify those doctrines with either Solution One or Two, a new doctrine is needed to provide liability for cooperative infringement. At the same time, the doctrine must not undermine the decisions not to adopt Solution One or Two. By requiring (1) intent, (2) completion of at least some elements by each party, and (3) a certain level of relationship between the parties, the new formulation would not undermine the doctrines of joint and indirect infringement. Given the tort-based origins of all multi-actor infringement, discussed in Section I.B, *supra*, one option is to directly import a tort doctrine into patent law.

1. Which doctrine?

Within general tort law, the doctrines of civil conspiracy, contributing tortfeasors, and concerted action, which overlap heavily, seem most analogous to conspiratorial joint infringement. The Restatement (Second) of Torts covers the latter two topics in sections 875, 876, and 879,¹⁹³ which overlap with the common law doctrine of civil conspiracy.¹⁹⁴

holding that indirect infringement required underlying direct infringement, which all trace back to *Met Coil*, and held that either type of indirect liability was impossible because there was no patentee (the patentee had no right to sales of the device, only to performance of the process during his patent term). *Id.* at 776.

193. RESTATEMENT (SECOND) OF TORTS § 875 (1958) (“Each of two or more persons whose tortious conduct is a legal cause of a single and indivisible harm to the injured party is subject to liability to the injured party for the entire harm.”); *Id.* at § 876 (“For harm resulting to a third person from the tortious conduct of another, one is subject to liability . . . if he (a) does a tortious act in concert with the other or pursuant to a common design with him.”) (emphasis added); *Id.* at § 879 (“If the tortious conduct of each of two or more persons is a legal cause

These doctrines would seem to provide a perfect analogy to cooperative infringement. However, whether these doctrines require an underlying tortious act is controversial.¹⁹⁵ If they do, the doctrines might not support a conspiratorial joint infringement rule that does not require an underlying act of joint infringement.

2. *Non-Requirement of Underlying Direct Infringement*

Even if the majority approach would require an underlying act of direct infringement to be required by analogy to tort law, the particularities of the problem here require a different conclusion. Tort law is sufficiently flexible to handle the deviation. For example, there are toxic tort scenarios where market share liability has sometimes been imposed when it is unknown which company of many produced the particular pill that harmed the plaintiff.¹⁹⁶ The rationale is a re-defining of the harm caused as a creation of

of harm that cannot be apportioned, each is subject to liability for the entire harm, irrespective of whether their conduct is concurring or consecutive.”).

194. *See* Truong, *supra* note 62, at 1909 (explaining that the essential elements of civil conspiracy are (1) two or more persons, (2) an unlawful objective, (3) a meeting of the minds regarding the objective or course of action, (4) commission of an unlawful act in furtherance of the agreement, and (5) injury resulting from the conspiracy).

195. A leading treatise on tort law seems to imply that historically it was not required: “The original meaning of ‘joint tort’ was that of vicarious liability for concerted action. All persons who acted in concert to commit a trespass, in pursuance of a common design, were held liable for the entire result.” W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 46 (5th ed. 1984). A minority of jurisdictions do not require a single underlying tortious act. *See* Maleki v. Fine-Lando Clinic Chartered, S.C., 469 N.W.2d 629, 637 (Wis. 1991) (rejecting “the rule that, for a cause of action for conspiracy to lie, there must be an underlying conduct which would in itself be actionable”); LaMotte v. Punch Line of Columbia, 370 S.E.2d 711, 713 (S.C. 1988) (holding that what were otherwise lawful acts could become actionable in a conspiracy when the “object was to ruin or damage the business of another”) (citing Charles v. Tex. Co., 18 S.E.2d 719, 724 (S.C. 1942)). But the majority view is that it needs an underlying single tort. *See* Mass. Laborers’ Health and Welfare Fund v. Philip Morris, Inc., 62 F.Supp.2d 236, 245 (D. Mass. 1999) (There can be no “joint liability for a tort unless there has been a tort, so the ‘concerted action’ version [under § 876] depends on proof of underlying tortious conduct for which liability can be assigned.”); Hebron Public School Dist. No. 13 of Morton County, State of N.D. v. U.S. Gypsum, 690 F. Supp. 866, 871 (D.N.D. 1988) (“A civil conspiracy is not an independent tort, but instead is . . . a method by which multiple tortfeasors can be linked to a common underlying tort.”); *In re Asbestos Litigation*, 509 A.2d 1116 (Del. Super. Ct. 1986), judgment *aff’d*, 525 A.2d 146 (Del. 1987) (“The gravamen of an action in civil conspiracy is not the conspiracy itself but the underlying wrong which would be actionable without the conspiracy.”).

196. Market share liability demands damages contribution from market participants based on proportional presence in the market. *See, e.g.*, Hymowitz v. Eli Lilly & Co., 73 N.Y.2d 487, 502 (1989).

risk; a defendant must pay according to the risk he caused.¹⁹⁷ There are numerous other examples of situations in which tort law has adjusted to allow remedies to avoid unfairness in situations that would have barred recovery under previous, formalistic rules. The doctrine of *res ipsa loquitur* is one.¹⁹⁸ As a leading commentator notes, “[i]n so broad a field, where so many different types of individual interests are involved, and they may be invaded by so many kinds of conduct, it is not easy to find any single guiding principle which determines when such compensation is to be paid At its core, tort law seeks to impose liability on conduct that is ‘socially unreasonable.’”¹⁹⁹

Like indirect liability, it makes sense for the concerted action and civil conspiracy tort doctrines to require an underlying act, if they do, because in most cases harm hinges on the existence of a single tortious action. Examples include one person hitting a pedestrian with a car (where the court then holds liable the person who was racing with him), or one person in a robbery who actually lifted the TV and carried it out (where the lookout would be liable). Without the single act of harm, it would not make sense to hold the secondary party liable in those cases.

By contrast, in the cooperative infringement scenario, an underlying act does not exist, by definition, so an underlying act should not be required. More importantly, instead of worrying about technicalities of whether a particular actor’s actions were “tortious” within the meaning of the patent system, courts can redefine what the “tort” is. A tort is simply a breach of a duty, however defined, that is owed to the allegedly injured party. Although the Restatement sections 876 and 879 may require each defendant’s act to be tortious,²⁰⁰ that does not mean that each act has to constitute direct infringement.

3. *The New Doctrine’s Formulation: Catching Intentional Cooperative Infringers*

The main concern relating to joint infringement is that too many unknowing parties will be held liable for a strict liability crime. This fear is assuaged by an intent or knowledge requirement. The main concern relating to indirect liability, as stated in *BMC*, is that there will be no need for the doctrine if arms-length infringers are held liable. This fear is assuaged by the

197. *See id.*

198. RESTATEMENT (SECOND) OF TORTS § 328D (1965).

199. KEETON, *supra* note 195, § 46, at 6.

200. *See supra* note 195.

fact that claims can still be brought under indirect liability theories in the traditional scenarios those doctrines sought to cover, namely the distant inducer under 271(b) and the manufacturer who relies on his customers to complete the infringement under 271(c). By requiring a relationship higher than that in the typical inducement or contributory scenario, i.e. higher than distant producer-distant consumer, and requiring that each party practice at least some of the elements of the claim, the formulation can avoid encroaching on the other doctrines.

A new tort-based standard for cooperative infringement might have the following elements: (1) any agreement or mutual understanding, not requiring enforceability, to coordinate activities; (2) intent by both parties to avoid liability, requiring actual knowledge of the patent or constructive knowledge based on a high risk of infringement;²⁰¹ and (3) actual completion of all claimed elements by the parties to the agreement, where each party performed at least some of the steps. An alternative is to create a sliding scale finding infringement in cases of (1) high control and low intent or knowledge (essentially the current joint infringement standard), and (2) low control (e.g. each party does half of the steps without being controlled) and high intent or knowledge. A similar idea has some support in the academic community in relation to inducement.²⁰²

IV. CONCLUSION

The cooperative infringement problem is enhanced in the Internet Age. This era's increased ease of communication makes quick arms-length agreements easier and more likely than ever. Moreover, business method and software claims are prime targets for such agreements because their elements are easily separable. In particular, the emergence of cloud computing makes it easier than ever to separate repeated server-end tasks into two quickly-created entities or pseudo-corporations. Such cooperative infringement will be best addressed by one of three methods: (1) lowering the standard for joint infringement, (2) eliminating the underlying direct infringement requirement within indirect infringement, or (3) creating a new infringement

201. See *SEB S.A. v. Montgomery Ward & Co.*, 594 F.3d 1360 (Fed. Cir. 2010), *cert. granted*, 131 S. Ct. 458 (U.S. 2010).

202. See, e.g., Mark A. Lemley, *Inducing Patent Infringement*, 39 U.C. DAVIS L. REV. 225, 226 (2005) (arguing that, in inducement, as to the combined factors of the actual acts and the intent of the inducer, we should think “of inducement as a sliding scale inquiry in which a more specific intent to infringe is required to find liability if the defendant’s conduct is otherwise less egregious”). The “less egregious” analog in the current scenario would be where there is less control exercised or fewer steps done by a party.

doctrine. Because courts have historically considered the problem (or at least ones like it) one of joint infringement, not inducement, Solution One is the most conservative approach. Solution Two might actually prove best as it could be implemented as a very narrow exception, used in circumstances where it makes sense and probably has few adverse consequences. Solution Three is the cleanest because it can be drawn from scratch to be as narrow as desired, but would require an act of Congress. Whichever approach courts and legislators pursue, a party should not be able to avoid infringement liability by bringing in a co-conspirator.

