Liability for Divided Performance of Process Claims After BMC Resources, Inc. v. Paymentech, L.P.

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What constitutes infringement of another's patented invention? In the United States, the law of patent infringement was originally developed by the federal courts as a matter of common law. In 1952, however, as part of a major recodification of the patent law, Congress enacted 35 U.S.C. § 271 to govern patent infringement, and this provision remains the primary statute regulating enforcement of patent rights to this day. Section 271 has been subject to many amendments since its enactment—while the original provision consisted of four relatively brief subsections, the current provision has nine subsections, some quite lengthy.

1. One patent scholar has characterized the scope of infringement as the "most important issue in intellectual property." Donald S. Chisum, The Scope of Protection for Patents After the Supreme Court's Warner-Jenkinson Decision: The Fair Protection—Certainty Conundrum, 14 SANTA CLARA COMPUTER & HIGH TECH. L.J. 1, 5 (1998) ("[G]iven that an intellectual property right exists, to what does it extend?").


3. While Congress had previously been “content” with merely governing the creation of the patent right, “the 162-year experiment of getting along without a statute covering [infringement] ha[d] not worked out very well.” Id. at 521-22. Judge Rich explains in his article that one of the primary purposes of the new § 271 was to properly balance the competing, and often conflicting, judicially-crafted doctrines of contributory infringement and patent misuse to ensure that legitimate patent rights were enforceable and the patent grant retained its power as an incentive to innovate. See id. at 522.


Congress made many of these amendments to close perceived "loopholes" in the law of infringement,\(^6\) ensuring that a patentee was not improperly deprived of the right to exclude by "artful competitor[s]" who exploited technicalities in § 271's provisions.\(^7\)

The evolution of the law of patent infringement, and possibly of § 271, is not complete. Current infringement jurisprudence fails to adequately protect the property rights of patentees whose valid process claims cover steps which can easily be divided between multiple entities or which must necessarily be performed by a group of users.\(^8\) Process claims covering computer network operations and business methods, especially those conducted over the internet, provide ready examples of potentially vulnerable patents.\(^9\) Judicial interpretations of § 271 which require that every

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\(^6\) See Microsoft Corp. v. AT & T Corp., 127 S. Ct. 1746, 1752 n.3 (2007) (citing Section-by-Section Analysis of H.R. 6286, 130 CONG. REC. 28069 (1984)).


\(^8\) See infra Part II; see also Mark A. Lemley et al., Divided Infringement Claims, 33 AIPLA Q.J. 255 (2005) (recognizing the lack of protection for "divided patent claims" but arguing against extending liability to cover divided performance of process claims by multiple entities). Courts, litigants, and commentators have used a variety of expressions to describe such situations, often resorting to the term "joint infringement." See Harold C. Wegner, E-Business Patent Infringement: Quest for a Direct Infringement Claim Model 10-13 (Nov. 21, 2001) (unpublished paper prepared for SOFTIC 2001 Symposium, Toyko, Japan), available at http://www.softic.or.jp/symposium/open_materials/10th/en/wegner-en.pdf (noting potential confusion between "joint infringement" and "partial infringement"). To avoid any confusion with existing principles of joint liability for direct and indirect infringement, this paper will use the term "divided performance" to describe situations in which multiple entities together perform all the steps of a claimed process, but each individual entity performs less than the entire process.

\(^9\) Lemley, supra note 8, at 256 (singling out the field of computer networking and citing U.S. Patent No. 6,421,726 (filed Mar. 1, 1998) as an example); Wegner, supra note 8, at 18-19 (focusing on "E-business" patents and citing U.S. Patent No. 5,960,411 (filed Sept. 12, 1997) as an example); see also
step of patented process be performed by a single actor to constitute direct infringement severely limit the enforceability of such process claims. The U.S. Court of Appeals for the Federal Circuit’s decision in *BMC Resources, Inc. v. Paymentechn, L.P.*, in particular, may threaten the value of patenting these inventions by restricting infringement liability to situations where one "mastermind" entity exercises "control or direction" over the infringement. By doing no more than agreeing to divide performance of the various claimed steps amongst themselves, multiple entities can effectively appropriate the benefits of a patented process while completely avoiding liability for infringement.

For instance, assume a patentee invents a new, useful, and

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Stephen A. Becker & John R. Fuisz, *Court Issues Key Business-Method Patent Ruling*, NAT'L L.J., Jan. 21, 2008, at S2, col. 1 (“BMC is a decision that is especially important for . . . [b]usiness methods, especially those that involve electronic commerce, [which] usually involve more than one person or entity in addition to a customer, who owns or controls the various resources needed to carry out a transaction, such as Web servers and credit clearancehouses.”). Professors Lemley and Wegner both discuss a patent prosecution strategy of drafting multiple independent claims to cover the process, each from the standpoint of a single entity involved in the transaction. See Lemley, *supra* note 8, at 271-74; Wegner, *supra* note 8, at 13-16. While an important consideration for patent prosecutors where possible, claims drafting solutions are of little or no assistance to the holder of an issued patent or an inventor whose process meets the statutory requirements of utility, novelty, and nonobviousness only when claimed in terms of the interaction of multiple entities.


11. *BMC*, 498 F.3d at 1381. Exactly what conduct falls within the boundaries of the “control or direction” standard recently announced by the Federal Circuit is somewhat unclear. Application of the standard to the facts in *BMC*, as well as several district court cases, is examined below. See *infra* Part II.C.

12. See *BMC*, 498 F.3d at 1381 (“This court acknowledges that the standard requiring control or direction for a finding of joint infringement may in some circumstances allow parties to enter into arms-length agreements to avoid infringement.”).
nonobvious method, comprising steps A, B, C, and D, and obtains a patent upon the invention, which proves to be quite profitable. As a first hypothetical, two unrelated companies, one or both presumably being competitors of the patentee, have knowledge of this patent and desire to use or sell the patented process. Rather than take licenses from the patentee or sink money into developing a design-around process, these companies could simply reach an agreement to divide performance of the steps of the claimed method. The first company might perform steps A and B, while the second company might perform steps C and D. By so doing, these companies can obtain the entire commercial benefit of the patent. So long as the companies maintain a truly arms-length relationship and neither acts merely as an agent of the other, the companies would likely face no liability under the current law of infringement.

A second hypothetical which this paper will consider is that of a single entity who seeks to obtain the commercial benefit of the


14. Concerning knowledge of the patent, this hypothetical presumes that the companies have notice of the patent and an understanding that their aggregate actions amount to performance of each and every step of the claimed method. In this regard, the mental state of the parties would be similar to that of those guilty of inducing infringement under § 271(b). See DSU Med. Corp. v. JMS Co., 471 F.3d 1293, 1304 (Fed. Cir. 2006) (en banc in relevant part) (“The requirement that the alleged infringer knew or should have known his actions would induce actual infringement necessarily includes the requirement that he or she knew of the patent.”).

15. This agreement to divide performance may take the form of an explicit agreement, even an express contract, but might also be a tacit, unspoken, or implied agreement between the parties. See generally Halberstam v. Welch, 705 F.2d 472 (D.C. Cir. 1983) (collecting cases and discussing what satisfies the requirement of an agreement for civil conspiracy law). “[C]ourts have to infer an agreement from indirect evidence in most [] cases. . . . Factors like the relationship between the parties’ acts, the time and place of their execution, and the duration of the joint activity influence the determination.” Id. at 486. Mutual knowledge of each other’s acts would also likely be important.
patent without triggering infringement liability by performing substantially all the steps of a patented process and selling the resulting intermediate to customers who will perform the remaining step(s).\textsuperscript{16} Considering the same patent as above, a company with knowledge of the claimed method\textsuperscript{17} might perform steps A, B, and C. The company could then sell the resulting product or data, intending that the customer will perform step D on the intermediate to complete the process.\textsuperscript{18} The company might know that the customer will perform step D as a matter of course or might provide the customer with instructions on how to perform the last step.\textsuperscript{19} If the sale between the parties constitutes a discrete, arms-length transaction, the selling company will likely escape liability under existing law.

The patent system should not implicitly sanction the conduct described above by allowing such companies to avoid liability for patent infringement. Permitting patentees to be deprived of

\begin{quote}
16. Factual scenarios close to this hypothetical have also arisen in cases. \textit{See, e.g.}, Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318 (Fed. Cir. 2008) (involving divided performance between a company and its customers), \textit{reh'g en banc denied}, 2008 U.S. App. LEXIS 25099 (Sept. 25, 2008); \textit{see also} Gerdelman, \textit{supra} note 4, at 2004-06 (discussing divided performance cases involving a "Company/Customer Fact Pattern"). While this situation may seem to potentially overlap with the first hypothetical, an important distinction for analytical purposes is the state of mind of the second entity involved in each scenario. In the first hypothetical, both companies have knowledge of the patent and of the divided performance, while in the second hypothetical, only the selling company necessarily has knowledge of the patent and the parties' respective partial performance. The customer in the second hypothetical may be completely unaware of the patent or the selling company's actions.

17. Similar to the first hypothetical, the selling company here has notice of the patent and knows or reasonably should know that the aggregate actions of itself and the customer will amount to performance of each and every step of the claimed method. \textit{See supra} note 14.

18. This selling company's mental state is similar to that of one who would be guilty of inducing infringement, if the customer's actions could be deemed a direct infringement. \textit{See 35 U.S.C. § 271(b); DSU Med.}, 471 F.3d at 1304.

19. For example, step D may be performed as a matter of course where this step involves routine processing of data provided by the selling company on the customer's computer. In situations where the customer performs process step(s) as a matter of course and/or where such performance is economically inconsequential, the selling company will basically have appropriated the commercial benefit of the claimed invention.
\end{quote}
reaping the benefits of their invention will "subvert the Constitutional scheme of promoting 'the Progress of Science and useful Arts’" with respect to affected technologies. A patent system, premised on providing incentives to inventors, will ultimately fail its purpose if it cannot promise to provide adequate protection for worthy advances. As Judge Rich warned in the context of properly circumscribing the doctrine of patent misuse: "It is essential to keep in the forefront of our thinking the fact that a patent is a monopoly because its only value as an incentive depends upon securing to its owner monopoly power over the invention. . . . Weaken or destroy the monopoly and you weaken or destroy the system." Current patent infringement liability should be extended, either judicially or statutorily, to prevent an entity from avoiding infringement of a patented process by doing no more than dividing performance of the claimed steps with either another knowledgeable entity or even an unaware customer.

Part II of this paper discusses the current infringement regime, the Federal Circuit’s decision in *BMC v. Paymentech*, and why the law fails to adequately protect the holder of process claim whose steps permit or require performance by multiple entities. A comparison of the European doctrine of “partial infringement” is offered in Part III. Part IV analyzes general tort law polices and several specific tort doctrines and explains how these principles support the policy decision to extend infringement to entities who knowingly divide infringement. Finally, Part V considers whether such infringement liability might be adopted either judicially or through statutory amendment.


21. Rich, *supra* note 2, at 524. Judge Rich further described as “worst of all” the fact that certain types of patents, due to the nature of the invention, had become “incapable of enforcement” under the judicial interpretation of the patent misuse doctrine. Id. "It is fraud on the public to issue such patents and then blandly inform their owners in the midst of litigation that . . . there is no way to . . . enforce the patent." Id. at 524-25.
II. CURRENT DOCTRINES OF PATENT INFRINGEMENT

A patent is intended to give the inventor the basic right to prevent unauthorized persons from making, using, selling, offering to sell, or importing the covered invention for a period of twenty years from the date of filing the application. To understand the scope of a patent and a patentee’s right to exclude others from practicing his invention, one must understand the scope of the patent’s claims. Generally, the patentee may preclude others from obtaining the benefits of a device described by his claims or a process including the steps listed in his claims, i.e. infringing his patent rights. Furthermore, a patentee may prevent parties from inducing another to infringe the patent or contributing to another’s infringement. Despite these seemingly broad rights, these generalizations do not hold true for process claims when the claimed steps are performed by multiple, independent entities under the current patent infringement regime. While the first three subparts of § 271 provide the basic framework of patent infringement just described, these provisions cannot be fully understood apart from several important judicial interpretations of

24. Every utility patent must “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, para. 2 (2006).
26. “Whoever offers to sell or sells within the United States or imports into the United States . . . 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.” 35 U.S.C. § 271(c) (2006).
27. The “All Limitations” rule, the “Single Actor” rule, and the requirement of a direct infringer, discussed immediately below, often do not pose a problem to the patentee when multiple entities collaborate to infringe machine, article of manufacture, or composition of matter claims. As these claims typically deal with concrete objects (as opposed to process claims which cover temporal events), at some point, some party will complete the assembly of the patented device and commit an act of direct infringement.
the statute which have evolved over time: the "All Limitations" rule, the "Single Actor" rule, and the requirement of a direct infringer.

A. Judicial Interpretation of Section 271: The "All Limitations" and "Single Actor" Rules and the Requirement of Direct Infringement

The inventor of a process comprised of steps subject to divided performance may be deprived of the power to prevent multiple entities from collaborating to make, use, or sell his invention by several judicial doctrines, which can be summarized as follows: generally, no party may be held liable for infringement until the patentee demonstrates that each and every step of the claimed method was performed by one, single entity. With regard to the factual scenarios described in Part I, the patentee cannot make this showing because each company which desired to obtain the commercial benefit of the patented process has divided performance of the claimed steps, either with another company having similar motives or a customer willing to perform the omitted step(s). Although every step claimed in the patent is in fact performed, no single entity performs all the steps, and none of the parties may be held liable as a direct or an indirect infringer.

The first important judicial interpretation of § 271 is that the "patented invention" for purposes of direct infringement, and therefore for purposes of the patentee's right to exclude, is defined by the claims, specifically each and every limitation of the claim being asserted. This doctrine, which has become known

28. See supra notes 13-19 and accompanying text.
29. "[W]hoever without authority makes, uses, offers to sell, or sells any patented invention, . . . infringes the patent." § 271(a) (emphasis added).
30. See BMC Res., Inc. v. Paymentech, L.P., 498 F.3d 1373, 1378-79 (Fed. Cir. 2007) ("Direct infringement requires a party to perform or use each and every step or element of a claimed method or product."); reh'g en banc denied, 2008 U.S. App. LEXIS 4968 (Feb. 11, 2008); see also Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997) (holding that doctrine of equivalents analysis, like literal infringement, must be applied limitation-by-limitation to the claim). "Each element contained in a patent claim is deemed material to defining the scope of the patented invention." Id.
alternatively as the "All Limitations" or the "All Elements" rule,\textsuperscript{31} is often supported by the proposition that "each element of a claim is [considered] material and essential."\textsuperscript{32} Although a patentee may be provided some relief from the literal language of the claims through the judicial doctrine of equivalents, this doctrine can only be used to find that a particular step performed by an accused infringer was equivalent to the claimed step it replaced.\textsuperscript{33} Thus, under either literal infringement or the doctrine of equivalents, an entity that practices less than each and every step, or its equivalent, of a claimed method has not used the "patented invention."\textsuperscript{34}

The "All Limitations" rule serves an important purpose in patent law, closely related to the function and purpose of the claims themselves. Since the Patent Act of 1870, the first to require the patent to conclude with at least one claim, claims have served the function of property boundaries, marking off what belonged to the inventor as against the public.\textsuperscript{35} As such, claims are intended to

\textsuperscript{31} "[T]his court has moved towards the custom of referring to claim 'limitations,' reserving the word 'elements' for describing the parts of the accused device, though the court on occasion continues to use the words interchangeably." Dawn Equip. Co. v. Ky. Farms Inc., 140 F.3d 1009, 1015 n.1 (Fed. Cir. 1998).

\textsuperscript{32} Pennwalt Corp. v. Durand-Wayland, Inc., 833 F.2d 931, 935 (Fed. Cir. 1987) (en banc) overruled in part by Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83. "[T]he plaintiff must show the presence of every element or its substantial equivalent in the accused device." \textit{Id}.

\textsuperscript{33} "[T]he doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole." \textit{Warner-Jenkinson}, 520 U.S. at 29.

\textsuperscript{34} "The law of this circuit is axiomatic that a method claim is directly infringed only if each step of the claimed method is performed." Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1328 (Fed. Cir. 2008) (citing \textit{BMC}, 498 F.3d at 1378-79), \textit{reh'g en banc denied}, 2008 U.S. App. LEXIS 25099 (Sept. 25, 2008). "It is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized." NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1318 (Fed. Cir. 2005) (quoting Roberts Dairy Co. v. United States, 530 F.2d 1342, 1354 (Ct. Cl. 1976)).

\textsuperscript{35} See Chisum, \textit{supra} note 1, at 6 ("[N]othing can be more just and fair both to the patentee and to the public, than that the former should understand and correctly describe just what he has invented and for what he claims a patent." (quoting Merrill v. Yeomans, 94 U.S. 568 (1877))); see also Rich, \textit{supra} note 2, at 526-27 ("[T]he claim . . . has to define the scope of the patent monopoly so that others may guess at what will or will not be considered an infringement with some degree of accuracy.").
provide clear notice to competitors of the scope of a patentee’s right to exclude. The “All Limitations” rule, by requiring that each limitation or its equivalent be present in the accused process or device, helps to maintain a higher degree of certainty in the boundaries of a patentee’s right. While the doctrine of equivalents provides some relief from the constraints of describing an invention using written language, allowing infringement liability based on “equivalence” with the invention as a whole would sufficiently breakdown the notice function of claims.

The second important judicial interpretation of § 271 is that “whoever,” for purposes of direct infringement, refers to only a single, individual entity. This “Single Actor” rule can be thought of as a corollary to the “All-Limitations” rule: each and every step of the claimed process must be performed by a single party. In BMC v. Paymentech, the Federal Circuit applied this rule and refused to aggregate the actions of multiple entities to consider whether each and every step of the patented process had been


37. In Warner-Jenkinson, the Supreme Court agreed with Judge Nies’ dissent in the Federal Circuit opinion that the application of an “All Limitations” rule would properly balance the competing interests present in infringement analysis. Warner-Jenkinson, 520 U.S. at 28-29 (“We do, however, share the concern of the dissenters below that . . . . the doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement.”).

38. Professor Chisum referred to the “All Limitations” rule as the Court’s solution to the “Fair Protection-Certainty Conundrum” that results from requiring a patentee to claim his invention in writing. Chisum, supra note 1, at 6-7.


41. Id. at 1379 (“For process patent or method patent claims, [direct] infringement occurs when a party performs all of the steps of the process.” (citing Joy Techs., Inc. v. Flakt, Inc., 6 F.3d 770, 773 (Fed. Cir. 1993)) (emphasis added)).
performed by a group of entities.\textsuperscript{42} Under the combined effect of the "All Limitations" and "Single Actor" rules, when companies divide performance of a method claim as described above,\textsuperscript{43} no individual entity meets the definition of a direct infringer.

The final important judicial interpretation of § 271 involves the provisions covering the forms of indirect infringement: inducement and contributory infringement.\textsuperscript{44} These doctrines of indirect infringement often impose liability against the "true culprit" in patent cases, despite that party not fulfilling the tests of direct infringement, such as the "All Limitations" rule.\textsuperscript{45} The caveat is as follows: "[i]ndirect infringement requires, as a predicate, a finding that some party amongst the accused actors has committed the entire act of direct infringement."\textsuperscript{46} Thus, under both hypothetical fact patterns from Part I,\textsuperscript{47} not only has each entity escaped liability as a direct infringer, but due to that fact, none of them may be held responsible as an indirect infringer. Although the companies possess the knowledge and intent which normally leads to liability for inducing infringement, they are able to reap the commercial benefits of the patented process without repercussion.

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\textsuperscript{42} Id. at 1382 ("Paymentech did not perform or cause to be performed each and every element of the claims. In this situation, neither the financial institutions, the debit networks, nor the payment services provider, Paymentech, bears responsibility for the actions of the other.").

\textsuperscript{43} See supra notes 13-19 and accompanying text.

\textsuperscript{44} See 35 U.S.C. § 271(b)-(c) (2006).

\textsuperscript{45} The "true culprit" being the party who seeks to facilitate infringement and thereby profit from the invention, while avoiding liability as a direct infringer. See Rich, supra note 2, at 527 (discussing the origins of indirect infringement as the courts' response to "overly smart people [who] thought they saw a way to steal inventions and avoid infringement" by selling less than the entire invention to customers who would complete the device).

\textsuperscript{46} BMC, 498 F.3d at 1379 (citing Dynacore Holdings Corp. v. U.S. Philips Corp., 363 F.3d 1263, 1272 (Fed. Cir. 2004)).

\textsuperscript{47} See supra notes 13-19 and accompanying text.
B. Incorporation of Vicarious Responsibility: The "Principal-Agent" and "Some Connection" Exceptions to the "Single Actor" Rule

Federal courts have provided some relief from a strict application of the "Single Actor" rule which would bar infringement claims against any form of divided performance of process claims. To avoid such harsh results, courts have adapted common law tort principles of vicarious liability, specifically the concept that a principal bears responsibility for the acts of his agents. Under this "Principal-Agent" exception to the "Single Actor" rule, a court will attribute the conduct of the agent(s) to the principal, in a sense aggregating performance of the process steps in the principal, and thereby permitting a finding of direct infringement. Courts applying this exception have focused on the degree of control exercised by the party asserted to be the principal and direct infringer. In BMC v. Paymentech, the Federal Circuit affirmed this theory of liability for principals who

48. See supra notes 39-42 and accompanying text.
49. See BMC, 498 F.3d at 1379 (noting that, while judicial interpretations of § 271 “might seem to provide a loophole for a party to escape infringement by having a third party carry out one or more of the claimed steps on its behalf,” courts have applied principles of agency law to find liability in some cases); see generally Donald S. Chisum, CHISUM ON PATENTS, § 16.06 (discussing application of agency law by courts to attempts by principals to avoid infringement liability by delegating performance of certain process steps to an agent); Sriranga Veeraraghavan, Comment, Joint Infringement of Patent Claims: Advice for Patentees, 23 SANTA CLARA COMPUTER & HIGH TECH. L.J. 211 (2006) (discussing origins and development of the “agency” theory). The older, more traditional terminology was that of “master” and “servant.” See RESTATEMENT (SECOND) OF AGENCY § 220 (1958).
51. This focus is appropriate “[g]iven that the hallmark of an agency relationship is ‘control or [ ] the right of control.’” Veeraraghavan, supra note 49, at 214 (second alteration in original); but cf. Mobil Oil Corp. v. W.R. Grace Co., 367 F. Supp. 207, 253 (D. Conn 1973) (finding customers to be “agents” for purposes of the exception because defendant knew the customers would complete the final process step). The Federal Circuit in BMC v. Paymentech did not discuss the continuing vitality of the district court’s holding in Mobil Oil or how that holding might be reconciled with the “control or direction” standard now required for vicarious responsibility.
"mastermind" infringement. While this exception gives relief in some, specific factual situations, a strict application focusing on the right to control is likely to be unavailing to the patentee holding claims subject to divided performance between two unrelated companies or between a seller and a buyer in a discrete transaction. In either scenario, no one party exercises control over the other, and most courts would not consider either party to be an agent of the other.

Is any broader theory of relationship between the parties, beyond that of master-servant, a permissible basis to aggregate their actions and impose liability for direct infringement? In recent years the answer appeared to be "yes." In several cases, sympathetic district courts had begun to expand beyond agency principles, allowing aggregation of divided performance where "some connection" existed between the parties. Though the exact criteria for a sufficient "connection" had not been worked out, cases contemplated that "work[ing] in concert . . . to complete the process" and "direct contact" would support liability. The hopes of plaintiffs holding patents with divided claims were also inflated by a statement of the Federal Circuit in On Demand Machine Corp. v. Ingram Industries, Inc., that it found "no flaw in this [jury] instruction as a statement of law":

52. BMC, 498 F.3d at 1381 ("A party cannot avoid infringement, however, simply by contracting out steps of a patented process to another entity. In those cases, the party in control would be liable for direct infringement." (emphasis added)).

53. See Veeraraghavan, supra note 49, at 222-32 (discussing origins and development of a broader "some connection" theory); Gerdelman, supra note 4, at 2007-11 (same).


It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. 57

While approval of this instruction was far from conclusive of what relationship was required before multiple parties' actions could be aggregated to find direct infringement, the statement could also be read broadly to encompass the district courts' newer test. Nevertheless, the Federal Circuit recently rejected any such "Some Connection" exception to the "Single Actor" rule in *BMC v. Paymentech* and dismissed *On Demand*’s approval of the jury instruction as dicta. 58

**C. The Cabining of Vicarious Responsibility in BMC v. Paymentech**

In *BMC v. Paymentech*, the plaintiff, BMC Resources, Inc. ("BMC"), asserted two method claims 59 against one of its competitors, Paymentech, L.P. ("Paymentech"). 60 BMC’s patents

57. *Id.* at 1344-45.


covered methods for processing debit transactions between a merchant and a customer using a touch-tone telephone, without a personal identification number or PIN.61 Both method claims in suit required the combined actions of three entities: a company offering the PIN-less debit payment service (such as BMC or Paymentech), a debit network (such as an ATM network), and the financial institution which had issued the debit card. 62 For purposes of summary judgment, the parties agreed both that each step of the claimed method was in fact performed and that at least three steps were performed not by Paymentech, but by its affiliated debit networks and financial institutions. 63 The district court granted Paymentech’s motion for summary judgment of non-infringement, finding that BMC had not shown either that any entity “directed or controlled” the others or even “sufficient evidence of a connection between Paymentech and the financial institutions.” 64

On appeal, the Federal Circuit affirmed the district court’s grant of summary judgment to Paymentech and took the opportunity to clarify the “proper standard for joint infringement by multiple parties of a single claim.” 65 After reviewing the “All Limitations” rule, the “Single Actor” rule, and the requirement of a direct infringer, the court noted that the law also imposed vicarious responsibility for the acts of another where “the liable party controlled the conduct of the acting party.” 66 The court went on to

61. BMC, 498 F.3d at 1375.

62. Id.

63. The magistrate found that entities other than Paymentech performed the following steps of the method: “(1) determining whether sufficient funds exist in the PINless credit or debit card account, (2) charging the payment amount against the account, and (3) adding the payment amount to the merchant's account.” BMC, 2006 U.S. Dist. LEXIS 37746 at *12.

64. Id. at *22. In a “surfeit of care,” the district court considered BMC’s evidence under both exceptions to the “Single Actor” rule, even though it determined that “control or direction” was the proper legal standard. BMC, 498 F.3d at 1378.

65. BMC, 498 F.3d at 1375, 1378.

66. Id. at 1379 (citing Engle v. Dinehart, 213 F.3d 639, 2000 WL 554942, at *9 (5th Cir. 2000) (Dennis, J., dissenting in relevant part) (unpublished opinion)) (emphasis added). At the portion of Engle cited by the Federal Circuit, Judge Dennis noted that “[t]he most frequently proffered justification for imposing [vicarious] liability is that the master has the control or right to
reject aggregation of multiple entities’ divided performance under any broader theory of connection between the entities, observing that courts had “generally refused to find liability where one party did not control or direct each step of the patented process.” The Federal Circuit also frankly acknowledged that its restriction of vicarious responsibility to situations of control by one party might allow companies to avoid infringement liability through the use of arms-length agreements, but found that policy concerns weighed against expanding liability. In applying these legal standards to the facts, the court concluded that BMC had failed to show that Paymentech controlled or directed the activity of its business affiliates: first, Paymentech did not instruct the debit networks on how to use the data it provided them; second, Paymentech had little or no connection with the financial institutions who dealt primarily with the debit networks.

While the result in *BMC v. Paymentech* was arguably correct, control the physical conduct of the servant in the performance of the services or work.” *Engle*, 2000 WL 554942, at *9 (emphasis added).

67. *BMC*, 498 F.3d at 1380 (emphasis added). As support for this assertion, however, the court only noted two of its precedents (neither of which had squarely considered the issue), dictum from a Ninth Circuit opinion, and two district court decisions (one being the opinion below and the other being the case which coined the broader “Some Connection” exception). See id. (citing *Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005) (dealing with an apparatus claim); *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1568 (Fed. Cir. 1983) (remanding on issue of infringement after reversing claim construction); *Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291-92 (9th Cir. 1974) (finding one claimed step was performed by no party); *BMC*, 2006 U.S. Dist. LEXIS 4961 (N.D. Tex. Feb. 9, 2006); *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, No. 97-20010 SW, 1999 U.S. Dist. LEXIS 22987 (N.D. Cal. Feb. 24, 1999)). The Federal Circuit did not address any of the other district court cases which arguably relied on a broader theory of “connection” between the entities. See *Veeraraghavan*, *supra* note 49, at 222-32; *Gerdelman*, *supra* note 4, at 2007-11.

68. *BMC*, 498 F.3d at 1381; see also infra Part IV.D (discussing and refuting policy concerns which led the court to reject any broader theory of vicarious responsibility).

69. *BMC*, 498 F.3d at 1381-82 (“Without this direction or control of both the debit networks and the financial institutions, Paymentech did not perform or cause to be performed each and every element of the claims.”).

70. BMC offered no evidence regarding any express or implied agreement between the entities which divided performance of the method claims in suit or
the more important issue, looking forward, will be the parameters of the test which the court annunciated. In the recent case of Muniauction, Inc. v. Thomson Corp., the Federal Circuit reiterated the “All Limitations” and “Single Actor” rules and applied the holding of BMC v. Paymentech to determine that the acts of the defendant, Thomson, and its customers could not be aggregated to find a direct infringement. The Muniauction court stated that the “control or direction” standard would be satisfied “in situations where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by [the additional parties].” The court concluded that controlling access to its online bidding system and instructing customers on its use was insufficient to impose vicarious liability, and thus liability for direct infringement, on Thomson. To date, nine lower courts have also had occasion to consider application of the “control or direction” standard. The vast majority of these decisions have the mental state of Defendant Paymentech. Without other facts, Paymentech and its affiliates would not fit within the hypothetical scenarios posed by this paper.

71. Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1328-30 (Fed. Cir. 2008), reh’g en banc denied, 2008 U.S. App. LEXIS 25099 (Sept. 25, 2008). Plaintiff Muniauction’s asserted patents covered “electronic methods for conducting ‘original issuer auctions of financial instruments.’” Id. at 1321. As the parties agreed that no single party performed each and every step of the asserted claims, the sole infringement issue was whether the actions of Defendant Thomson and its customers could be combined to find a “joint infringement.” Id. at 1328-29.

72. Id. at 1330.

73. Id. at 1330 (“Muniauction has identified no legal theory under which Thomson might be vicariously liable for the actions of the bidders. Therefore, Thomson does not infringe the asserted claims as a matter of law.”).

focused on common law agency principles and the element of control or the right to control by one party, which the Federal Circuit so heavily emphasized.\textsuperscript{75}

So long as the courts continue to stress a requirement that one party control or direct the others, or "mastermind" the infringement, liability will not be imposed in either of the factual scenarios posed in Part I.\textsuperscript{76} With regard to the first hypothetical of two companies reaching an agreement to divide performance of a claimed method, the relationship of these entities resembles that of a joint venture or a conspiracy,\textsuperscript{77} but not the common law

\textsuperscript{75} See Emtel, 2008 U.S. Dist. LEXIS 77597, at *38-82 (relying heavily on the RESTATEMENT (SECOND) OF AGENCY and case law to find that physicians could not be considered agents of the primary defendant); Fisher-Barton Blades, 2008 U.S. Dist. LEXIS 92372, at *36-40 (noting that defendant hired third party to manufacture blades to certain specifications); Rowe Int'l, 2008 U.S. Dist. LEXIS 75327, at *10-15 (noting that Ecast acted as a "mastermind" in controlling the other defendants' manufacturing of jukebox hardware); Global Patent Holdings, 2008 U.S. Dist. LEXIS 61697, at *10-11 ("Defendant may give home users the keys to the truck, but home users have no obligation to use those keys to start the truck and drive away."); Alloc, 2008 U.S. Dist. LEXIS 35944, at *28-29 (finding reasonable basis for jury verdict that providing instructions to users did not amount to "control"); Privasys, 2007 U.S. Dist. LEXIS 86838, at *9 (N.D. Cal. Nov. 14, 2007) (allowing plaintiff to amend complaint with evidence of control or direction); TGIP, Inc. v. AT&T Corp., 527 F. Supp. 2d 561, 575 (E.D. Tex. 2007) (denying defendant's JMOL motion on the issue of infringement); Gammino v. Cellco P'Ship, 527 F. Supp. 2d 395, 399 (E.D. Pa. 2007) (granting summary judgment of non-infringement).

\textsuperscript{76} See supra notes 13-19 and accompanying text.

\textsuperscript{77} While this relationship of joint venturers or co-conspirators ought to provide an adequate legal basis for aggregating the actions of the entities and
principal-agent relationship emphasized in *BMC v. Paymentech*. A finding of control or direction also seems unlikely between a selling company and its customers in most circumstances, particularly after the Federal Circuit’s holding in *Muniauction v. Thomson* that controlling access to an online system and instructing customers on its use was insufficient for direct infringement.\(^7\) If liability should be imposed upon entities who seek to reap the commercial benefit of another’s patented process and avoid liability simply by exploiting the technicalities of infringement jurisprudence, an approach broader than the “control or direction” standard of *BMC v. Paymentech* is needed.

### III. The European Approach to “Partial Infringement”

When considering infringement liability for entities which individually practice less than each and every step of a claimed method, one might examine the approaches of other patent systems. In contrast to the United States’ requirements for direct infringement, many foreign patent systems, notably several member countries of the European Patent Convention (“EPC”), allow patentees to recover against entities who practice less than the entire patented claims, but nevertheless appropriate the commercial benefit of the invention.\(^7\)\(^9\) These systems refer to imposing infringement liability, as argued below, *see infra* Part IV, the basis for imposing vicarious responsibility is distinct from that of common law agency. *See, e.g.*, NLRB v. Sheet Metal Workers’ Int’l Ass’n, Local Union No. 19, 154 F.3d 137, 143 n.9 (3d Cir. 1998) (noting that although several entities could be considered joint venturers under partnership jurisprudence, “they were not agents pursuant to common law principles of agency law”). Given *BMC v. Paymentech*’s emphasis on “control,” the hallmark of common law agency, it cannot be assumed that the decision would also cover vicarious responsibility based on joint venture or conspiracy law.

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

these theories generally as "partial infringement," and impose liability where the accused entity has "employed the substance of the patentee's technological advance, even though one or more of the elements nominally stated in the claim has been omitted." Application of such a theory to the posed hypothetical scenarios could be used to hold one of the companies liable as a direct infringer if that company's partial performance amounted to an appropriation of the "substance" of the patented process. While possibly attractive on the surface, reliance on European partial infringement theories would sufficiently erode the notice function of patent claims protected by the "All Limitations" rule and, ultimately, is unneeded to address the problem of entities who divide infringement.

Theories of partial infringement abroad revolve around a starkly different application of the doctrines of equivalents. While recognition of non-literal infringement is driven by very similar concerns to those United States law, EPC countries look to "equivalence" between the accused device or process and the claimed invention, as a whole: "Protection is to be granted, if at least a majority of the essential features are reproduced in a way that the inventive result as disclosed in the patent is still being achieved." This "inventive result" concept is reminiscent of looking to the "heart" or "gist" of an invention, a concept which has long been disavowed in U.S. patent law. This discrepancy in

80. In the French patent law, it is called "contrefaçon partielle." Pagenburg, supra note 79, at 314. In the German patent law, it is known as "Teilschutz." (partial protection). Id. at 333.

81. MOY, supra note 79.

82. In addition, once a "direct infringer" was found, the other participating party could be held liable as an indirect infringer, where appropriate based on the facts.

83. See supra notes 35-38 and accompanying text. The Doctrine of Equivalents and the "All Limitations" rule balance the ideas of giving "fair protection" to the patentee and providing the public with fair notice of the patentee's property rights. Chisum, supra note 1, at 6-7.

84. Pagenberg discusses a similar tension between the notice function of claims and equitable treatment of the patentee: the answer, "Bad claim drafting, that's your problem," to the patentee seeking protection provides clarity, but is not fair or just. Pagenburg, supra note 79, at 332-33.

85. Id. at 335.

86. See Aro Mfg. Co. v. Convertible Top Replacement Co., 365 U.S.
non-literal infringement theories can be traced to the historical practice of central claiming\textsuperscript{87} in many European countries, while the United States has for more than a century employed a system of peripheral claiming,\textsuperscript{88} which lent itself to development of the "All Limitations" rule to protect the notice function of claims.

In light of the fundamental differences between these approaches, incorporation of some version of partial infringement as practiced by several EPC countries would be problematic because it would require an abandonment of the "All Limitations" rule. Furthermore, partial infringement and reliance on a concept such as the "heart" of the invention is not needed to hold parties who divide performance of a patented process jointly liable for infringement. Rather, retaining the "All Limitations" rule but relaxing the "Single Actor" rule, as courts have already done in the principal-agent context,\textsuperscript{89} would provide the better solution for U.S. patent law. Aggregating the actions of entities who divide performance of a patented process, in appropriate circumstances, would provide a basis for imposing liability without eroding the notice function of claims.


[T]his Court has made it clear in the two Mercoid cases that there is no legally recognizable or protected "essential" element, "gist" or "heart" of the invention in a combination patent. . . . "The patent is for a combination only. Since none of the separate elements of the combination is claimed as the invention, none of them when dealt with separately is protected by the patent monopoly."

\textit{Id.} at 345 (quoting Mercoid Corp. v. Mid-Continent Co., 320 U.S. 661, 667 (1944)).

87. "Central claiming" typically employs one claim which references the specification and claims the invention "constructed and arranged substantially in the manner and for the purposes set forth." \textit{See Janice M. Mueller, An Introduction to Patent Law} 54 (2d ed. 2006).

88. "Peripheral claiming" sets forth the "metes and bounds" of the claimed invention, similar to boundaries in a deed to real property. \textit{Id.}

89. \textit{See supra} notes 48-52 and accompanying text.
IV. TORT LAW THEORIES WHICH FAVOR LIABILITY FOR DIVIDED PERFORMANCE

Infringement of a patent has long been considered a form or species of tort.90 The peripheral claims of a patent can be conceptualized as marking of the boundaries of the inventor’s property91—as such, infringement can be roughly analogized to interference with or a taking of that property.92 That an infringement action has other features generally applicable to torts is confirmed by the existence of indirect infringement, which is “an expression of the old common law doctrine of joint tortfeasors.”93 Concepts and policies from the larger body of tort law thus lend themselves as naturally to be examined when considering liability for multiple entities whose combined actions appropriate the benefit of a patentee’s claimed invention. General tort law policies,94 which focus on harm to the plaintiff, as well as the tort law concepts of civil conspiracy95 and combined nuisance,96 support the imposition of liability on an entity who

90. See Zoltek Corp. v. United States, 442 F.3d 1345, 1362 (Fed. Cir. 2006) (Garjasa, J., concurring) (recognizing infringement as a tort, albeit a unique tort defined by statutory provisions). “[P]atent infringement claims may be viewed as species of tort claims . . . .” Id.
91. See supra note 88.
92. See Thomson-Houston Elec. Co. v. Ohio Brass Co., 80 F. 712, 721 (6th Cir. 1897) (“An infringement of a patent is a tort analogous to trespass or trespass on the case. From the earliest times, all 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. . . . 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.”).
93. Rich, supra note 2, at 525. See also Aro Mfg. Co. v. Convertible Top Replacement Co., 377 U.S. 476, 500 (“It is true that 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.”). The term “joint tort” had its origin in Sir John Heydon’s Case, (1612) 11 Coke 5 (Eng.), and was used to describe “the situation where two or more defendants acted in concert for the accomplishment of a common design.” Roy D. Jackson, Jr., Joint Torts and Several Liability, 17 TEX. L. REV. 399, 403 (1939).
94. See infra Part IV.A.
95. See infra Part IV.B.
96. See infra Part IV.C.
seeks to exploit the technicalities of infringement jurisprudence by dividing performance of a claimed method with another entity or customer. The ultimate question of patent law policy ought to be balanced in favor of protecting patentees in such situations.

A. General Tort Law Policies and the "Prima Facie Tort" Doctrine

The primary functions of tort law—compensating victims who have been harmed and deterring undesirable conduct—is support a finding of infringement liability for entities who divide performance, such as those described in Part I’s hypothetical scenarios. Between two inventors whose patents both contain valid method claims, the inventor holding claims whose performance may be easily divided or whose performance necessarily requires a multitude of actors, should have no less of a right to exclude others from practicing his invention than the inventor holding claims which would be enforceable under the current judicial interpretations of § 271. From another perspective, a patentee holding valid process claims is no less harmed when multiple, unauthorized entities divide performance of the claimed steps and reap the economic benefits of the invention than when a single direct infringer uses the patented process without permission. Tort law’s focus on harm done to victims would encourage redress to the patentee regardless of whether one or multiple entities performed the steps of the claimed method.

Tort law’s emphasis on deterring intentional infliction of harm also responds the argument that entities who seek to exploit “loopholes” in the current infringement regime by dividing performance should not held liable because they have only engaged in conduct implicitly sanctioned by the patent law. An influential theory of tort law is the “prima facie tort” doctrine: regardless of recognized causes of action, “intentionally to do that


98. See supra notes 13-19 and accompanying text.
which is calculated in the ordinary course of events to damage, and which does, in fact, damage another in that person's property or trade, is actionable if done without just cause or excuse." 99 This doctrine has been used to provide remedies where none would otherwise exist and functions as a unifying principle of tort law. 100 The companies of the introductory hypotheticals who seek to exploit a patentee's claimed method but avoid infringement through divided performance should not escape liability for intentionally taking the property claimed in the patent. Under the prima facie tort doctrine, the damage done to the patentee's property and trade should be actionable.

B. The Tort Law Concept of Civil Conspiracy

Although a great deal of disagreement exists on whether the tort law concept civil conspiracy functions as a stand-alone substantive tort or merely as a doctrine of joint and several liability, 101 the concept in either form supports imposing liability on the companies of the first hypothetical 102 who agree to divide performance of a patented process in an attempt to avoid infringement. The Restatement (Second) of Torts states that "one is subject to liability if he does a tortious act in concert with

100. See id. ("Some authorities . . . have argued that any intentional infliction of harm should subject the actor to liability if he cannot justify his conduct.") (citing Robert L. Hale, Prima Facie Torts, Combination, and Non-Feasance, 46 COLUM. L. REV. 196, 210 (1946); Oliver W. Holmes, Privilege, Malice, and Intent, 8 HARV. L. REV. 1, 8-9 (1894)).
101. Id. at 921 ("Whether conspiracy should exist as an independent tort is a question which has caused considerable confusion during this century, inspiring one commentator to call the subject 'one of the most elusive concepts in American tort law . . . .'") (quoting BOSTON COLLEGE COLLEGE OF LAW, 1954 ANNUAL SURVEY OF MASSACHUSETTS LAW 39, 40 (William J. Curran ed., 1955)).
102. See supra notes 13-15 and accompanying text. The tort law concept of civil conspiracy would not be applicable to the second hypothetical, see supra notes 16-19 and accompanying text, as no agreement is formed between the selling company and its customer(s).
[another] or pursuant to a common design with him." 103 In summarizing the law of civil conspiracy, a distinguished panel of the Court of Appeals for the District of Columbia described its elements as follows:

(1) an agreement between two or more persons; (2) to participate in an unlawful act, or a lawful act in an unlawful manner; (3) an injury caused by an unlawful overt act performed by one of the parties to the agreement; (4) which overt act was done pursuant to and in furtherance of the common scheme. 104

While an agreement is an essential element of any conspiracy, 105 the law of criminal conspiracy, which punishes the mere agreement to attempt a crime, can be contrasted with civil conspiracy, which focuses on whether damage is in fact done to the plaintiff. 106 In the posed hypothetical, the patentee has suffered the requisite damage when the companies, pursuant to their "common design," perform each and every step of his claimed method. 107

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

104. Halberstam v. Welch, 705 F.2d 472, 477 (D.C. Cir. 1983) (Wald, Bork, and Scalia, JJ.). The odd phrasing of element (2) is sometimes thought to represent the two different forms of the doctrine. Conspiracy to "participate in an unlawful act" being the joint liability rule, and conspiracy "to participate in.. . a lawful act in an unlawful manner" being the substantive tort. See Thomas J. Leach, Civil Conspiracy: What's the Use?, 54 U. MIAMI L. REV. 1 (1999).

105. While the element of an agreement is "key," it need not be shown that the agreement was explicit: "[p]roof of a tacit, as opposed to explicit, understanding is sufficient to show agreement." Halberstam, 705 F.2d at 477 (citing WILLIAM L. PROSSER, HANDBOOK OF THE LAW OF TORTS 292 (4th ed. 1971); 16 AM. JUR. 2D Conspiracy § 68 (1979)) (finding tacit agreement between the defendants based on circumstantial evidence).

106. See Whitson, supra note 99, at 924. Whitson explains that while criminal conspiracy allows for punishment based on the agreement itself, even if the crime is uncompleted, civil conspiracy is only actionable if the plaintiff suffers damage as a result of the defendants' agreement and actions, following the general tort law policy of redressing actual harms done. Id.

107. See supra Part IV.A.
The difference between the two views of civil conspiracy is whether the overt act done in furtherance of the conspiracy must itself constitute an independent tort. \(^{108}\) If so, civil conspiracy functions primarily as a rule of joint and several liability—the person who committed the overt act would otherwise be liable in tort, but his act is attributed to all co-conspirators, creating joint liability. \(^{109}\) If the overt act need not be independently tortious, but merely serves an evidentiary purpose, then civil conspiracy may act as a substantive tort, creating liability for harms done to a plaintiff, even where the individual actions of the co-conspirators would not give rise to individual liability. \(^{110}\)

1. The Narrower Theory: A Joint Liability Rule

While civil conspiracy developed more readily as a substantive tort in England, many American courts initially accepted it only as a rule of joint liability. \(^{111}\) At first blush, this narrower view of civil conspiracy, requiring commission of a tort by one of the co-conspirators might not seem to favor infringement liability for entities who agree to divide performance of a patent’s claimed steps—in the first hypothetical, neither company individually

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108. Thus, while the elements of civil conspiracy remain the basically the same in each view, different jurisdictions take different view on whether element (3) of the Halberstam court’s definition must be an act which would independently subject the actor to tort liability.

109. Comment b to the Restatement provision takes this position. "The mere common plan, design or even express agreement is not enough for liability in itself, and there must be acts of a tortious character in carrying it into execution." RESTATEMENT (SECOND) OF TORTS § 876(a), cmt. B (1979).

110. Several courts take this approach and commentators have argued strongly that civil conspiracy ought to be a substantive tort. See generally Leach, supra note 104 (arguing that view of civil conspiracy only as a rule of joint liability is not meaningfully reasoned but rather based on a string of cases reaching back to dicta from a 1698 English case); Whitson, supra note 99. "[A] stand-alone action for civil conspiracy ought to be considered as a means of sanctioning and preventing types of anti-social behavior that are not sufficiently addressed by other tort causes of action or statutory schemes." Leach, supra note 104, at 2-3.

111. Whitson, supra note 99, at 926. The American courts held that "mere numbers" could not transfer lawful acts into unlawful acts. However, most of these cases also considered the "goal" of the conspiracy to be lawful itself. Id.
commits direct infringement. However, the concerns of the majority of cases that take this narrower view focus on the fact the defendants had united to achieve what might be considered a socially improper but otherwise lawful purpose, such as refusing to deal with a particular business. In the case of entities agreeing to divide performance of a patented process, the ultimate goal is not merely improper, but one which would be unlawful if performed by a single actor.

Moreover, application of the theoretical principle underlying the rule of joint liability—that the acts of each co-conspirator are attributable to the other co-conspirators—that would aggregate performance of every claimed step in each company that participated in the common design, allowing each entity to be found liable as a direct infringer. This principle of vicarious responsibility for the acts of co-conspirators would fit comfortably alongside the already judicially accepted “Principal-Agent” exception to the “Single Actor” rule. Just as principles of vicarious liability from agency law have been adapted as part of the judicial interpretation of § 271, so could principles of vicarious liability from civil conspiracy law be used to “find” direct infringers who attempt to avoid liability by working in tandem with other entities.

2. The Broader Theory: A Substantive Tort

The broader view of civil conspiracy as a substantive tort, which originated in England and is now recognized by several American

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112. See id. at 938.
113. Martin H. Pritikin, Toward Coherence in Civil Conspiracy Law: A Proposal to Abolish the Agent’s Immunity Rule, 84 Neb. L. Rev. 1, 9 (2005) (“The acts of any one co-conspirator are deemed the acts of all.”).
jurisdictions, even more strongly supports a finding of liability for entities who agree to divide performance of patented process in an effort to avoid infringement. The substantive tort of civil conspiracy finds liability where defendants act according to a common design or agreement to harm the plaintiff, regardless of whether their individual actions would be tortious. "A conspiracy to injure might give rise to civil liability even though the end was brought about by conduct and acts which by themselves and apart from the element of combination or concerted action could not be regarded as a legal wrong."

Even if companies who agree to divide performance of a claimed method attempt to fall back on the argument that their individual actions are not against the letter of the law as no direct infringer can be identified, civil conspiracy as stand-alone tort still squarely supports imposing liability based on the agreement and aggregate actions of the parties. The goal of the companies' agreement in the first hypothetical is to deprive the patentee of the right to exclude them from practicing the invention. If they succeed, the patentee has been harmed, to the same degree as if the invention had been practiced by a single actor. The substantive tort of civil conspiracy, which looks to the effect of the defendants' actions in the aggregate, not individually, should be used analogously in patent law to impose liability for divided performance.

C. The Tort Law Concept of Combined Nuisance

Cases that find liability for "combined nuisances," or what Dean Prosser referred to as "[a]cts innocent in themselves which together cause damage," also support liability for the companies
in either of the introductory hypotheticals\textsuperscript{119} who knowingly divide performance of the patented process. A rough analogy can be made between nuisance law and patent law—nuisance law draws a boundary between neighbors’ uses of their respective property to ensure each can enjoy his own; similarly, the claims of a patent and the scope of enforcement rights draw a boundary between the inventor’s property and the public domain. In the combined nuisance cases, while a single defendant’s conduct alone would not have interfered with the plaintiff’s property, the combined effect of multiple defendants’ actions harmed the plaintiff and gave rise to joint liability against each defendant who possessed knowledge of the other defendant’s conduct.\textsuperscript{120}

As an example, Dean Prosser cites the case of \textit{Blair v. Deakin},\textsuperscript{121} wherein two manufacturers each discharged a chemical into a water source upstream from the plaintiff.\textsuperscript{122} While each chemical was “harmless” in itself, the combination of the two caused pollution of the water and interfered with the plaintiff’s enjoyment of his property.\textsuperscript{123} In light of the fact that each defendant knew what the other was doing, each was liable for creating the nuisance.\textsuperscript{124} Similar reasoning, when applied to the divide infringement context, supports liability against entities who knowingly participate in a scheme to appropriate the commercial benefit of a patented process. In the first posed hypothetical, both companies have knowledge of each other’s partial performance of the claimed method based upon their agreement to divide performance. In the second hypothetical, liability as an infringer would also be proper for the selling company who knew that its customers would complete the remaining steps of the claimed property).

\textsuperscript{119} See \textit{supra} notes 13-19 and accompanying text.
\textsuperscript{120} Prosser, \textit{supra} note 118, at 439-41. “The problem is really one of whether the privilege to make use of property, or to carry on activities, is absolute or relative.” \textit{Id.} at 441. Courts imposing liability find that a party is limited to “reasonable use,” which is adjusted based upon the actions of other neighboring parties. \textit{Id.}
\textsuperscript{121} 57 L.T. (N.S.) 522 (1887).
\textsuperscript{122} Prosser, \textit{supra} note 118, at 440-41.
\textsuperscript{123} \textit{Id.}
\textsuperscript{124} \textit{Id.} at 441.
D. The Patent Law Policy Decision Regarding Divided Performance

Ultimately, the question of whether to impose liability for parties who seek to avoid infringement liability merely by dividing performance of a patented process is a policy decision regarding the proper scope of patent protection, and the policies at issue weigh in favor of protecting the rights of patentees in such a situation. The Federal Circuit itself in BMC v. Paymentech recognized that it was making a policy decision or, at the least, that it was balancing various policy “concerns.” Unfortunately, the court erred in this balancing, allowing a misplaced concern over “subvert[ing] the statutory scheme for indirect infringement” to outweigh an undervalued concern for the enforceability of valid process claims.

Adequately protecting the exclusive rights granted by valid patents is vital to providing the incentives designed within the patent system. To echo Judge Rich: “Weaken or destroy the monopoly and you weaken or destroy the system.” While the scope of patent rights should be clear and not overly broad, in order to foster progress of the useful arts, allowing an entity to escape liability simply by dividing performance in an “arms-length agreement” with others or by expecting their customers to perform the final claimed step as a matter of course does not serve the purposes of the patent law. While the patent system seeks to spur inventive creativity and motivate competitors to “design-around” patented inventions, finding “loopholes” in the infringement scheme is surely not the creativity the Framers or the drafters of the Patent Acts hoped to promote.

125. Liability should not be imposed, however, against a customer who did not know or should not reasonably have known of the selling company’s attempt to avoid infringement liability through divided performance.

126. See Bargren, supra note 97, at 454 (noting that questions of joint liability ultimately boil down to the policy question, “who pays?”).


128. Id.

129. Rich, supra note 2, at 524.
The Federal Circuit dismissed the weakening of process patent rights by stating that the danger could "usually be offset by proper claims drafting."\textsuperscript{130} Clever claims drafting, however, will not be able to solve all the problems presented by the nature of the technologies affected by divided claims.\textsuperscript{131} Furthermore, claims drafting is of no use to an inventor whose patent is more than two years old and ineligible for a broadening reissue.\textsuperscript{132} The essence of the court's response to BMC in this regard seemed to be: "You drafted the claims; it's your problem."\textsuperscript{133} However, in light of the existence of non-literal infringement theories, such as the doctrine of equivalents and even contributory infringement,\textsuperscript{134} whose purpose is to help the patentee overcome the difficulty of describing a novel invention in written language, a statement that the court will always construe claims against the patentee rings a bit hollow.

Finally, the Federal Circuit overestimated the danger to § 271's statutory scheme that would accompany expanding liability to some cases of divided performance beyond those covered by the common law principal-agent scenario of control by one party. Applying the tort law principles discussed above\textsuperscript{135} to the hypotheticals from Part I\textsuperscript{136} would allow courts to aggregate the

\textsuperscript{130} BMC, 498 F.3d at 1381.

\textsuperscript{131} The Court admits as much in its use of the word "usually." Id. See also, Plaintiff-Appellant’s Petition for Rehearing en banc at 15, BMC Res., Inc. v. Paymentech, L.P., 2008 U.S. App. LEXIS 4968 (Fed. Cir. Feb. 11, 2008) (No. 2006-1503) (suggesting that claims focusing on one party would be unworkable for serial processes involving acts by three or more entities).

\textsuperscript{132} See Lemley, \textit{supra} note 8, at 278-279 (noting that, although an issue of first impression, altering claims from "divided" to "unitary" likely qualifies as a broadening reissue under 35 U.S.C. § 251 (2006)).

\textsuperscript{133} "[T]his court will not unilaterally restructure the claim or the standards for joint infringement to remedy these ill-conceived claims." BMC, 498 F.3d at 1381.

\textsuperscript{134} Rich, \textit{supra} note 2, at 527-28. Judge Rich describes the first known contributory infringement case of Wallace v. Holmes, 29 Fed. Cas. 74, 100 (C.C.D. Conn. 1871) (No. 17), wherein the patent "monopoly was not extended beyond the invention, though it was extended beyond the strict verbal limitations of the claim, as it had to be in order to protect the invention." Rich, \textit{supra} note 2, at 528.

\textsuperscript{135} See \textit{supra} Part IV.A-C.

\textsuperscript{136} See \textit{supra} notes 13-19 and accompanying text.
actions of several entities to find that each and every step of the claimed method had, in fact, been performed and to hold the culpable companies liable for direct infringement. Applying such rules of vicarious responsibility for the acts of others in these circumstances would no more subvert the indirect infringement provisions than current application of the "Principal-Agent" exception to the "Single Actor" rule does. Rather, allowing broader exceptions to the "Single Actor" rule, where appropriate, would serve merely to create direct infringement liability where none currently exists; indirect infringement could still play a proper role. Where a patentee holds a valid patent, but one with claims covering a process performed by multiple entities, the law ought to afford a remedy against entities who seek to practice the invention but avoid liability by simply dividing performance.

V. SOLUTIONS TO THE PROBLEM OF DIVIDED PERFORMANCE

Providing adequate protection to inventors of processes which, despite being patentable, are subject to divided performance and thereby often rendered unenforceable by the current law of patent infringement must occur to protect the incentives the patent system was designed to implement. Recognition of liability for entities who divide performance could be implemented either by the courts or by Congress. Initially, the Federal Circuit, in appropriate cases, might reconsider its relatively strict application of "Single Actor" rule in *BMC v. Paymentech* and reshape infringement jurisprudence to ensure the continued promotion of businesses holding or seeking process patents potentially rendered valueless by divided performance. Alternatively, Congress may be best equipped to provide a clear solution which appropriately balances competing policies through statutory amendment.

If the courts desire to close the "loophole" afforded to artful competitors by the current infringement regime and to protect the rights of patentees holding valid process claims, the Federal Circuit might still do so. Although the most natural reading of *BMC v. Paymentech* is that common law principal-agent

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137. Of course, the Supreme Court might also view liability for divided performance by multiple entities differently than the Federal Circuit did in *BMC v. Paymentech*, if certiorari were granted in an appropriate case.
relationships or situations where one “mastermind” party controls
the infringement provide the only proper exception to the “Single
Actor” rule, the court in future cases could engage in a more
liberal reading of the case and decide that other, broader
exceptions covering divided performance were not foreclosed.
Alternatively, as the court’s discussion of the “proper standard for
joint infringement by multiple parties of a single claim” was
arguably unneeded to decide the case since, according to the
district court, BMC had not sufficiently shown a “connection”
between Paymentech and some of its affiliates, the Federal
Circuit, in a future case presenting a divided performance issue,
might limit the holding of BMC v. Paymentech to its facts and
distinguish the case.

However the Federal Circuit deals with the BMC v. Paymentech
precedent, when next presented with a case where an entity has
divided performance in a manner similar to either of the
hypothetical scenarios from Part I, the court should take the
opportunity to recognize that aggregating the actions of the parties
is appropriate to impose liability for direct infringement and
prevent the culpable entity or entities from using the patented
process without repercussion. The courts have already recognized
that imposing liability for direct infringement on an entity who
performed less than the entire claimed method is appropriate based
on vicarious responsibility where the parties have a principal-agent
relationship. General principles of tort law also support
vicarious responsibility for the acts of others in broader contexts,
and the Federal Circuit could readily acknowledge broader

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138. See supra Part II.C.
139. The Federal Circuit’s analysis in Muniauction generally equating the
control or direction standard with traditional vicarious liability principles may
provide a platform for an appropriate future case to take a more expansive view
of liability for divided performance. See Muniauction, Inc. v. Thomson Corp.,
532 F.3d 1318, 1330 (Fed. Cir. 2008), reh’g en banc denied, 2008 U.S. App.
LEXIS 25099 (Sept. 25, 2008).
140. BMC, 498 F.3d at 1375, 1378.
141. See supra note 64 and accompanying text; see also Veeraraghavan,
supra note 49, at 231-32.
142. See supra notes 13-19 and accompanying text.
143. See supra Part II.B.
144. See supra Part IV.A-C.
exceptions to the "Single Actor" rule.

While the federal courts have occasionally expanded the scope of protection beyond the express terms of a statute where necessary to properly protect the holder of an intellectual property right, they have also sometimes hesitated to read the infringement provisions of the Patent Act broadly in fear of judicially expanding liability under § 271 farther than Congress actually intended. In the context of exporting components of a patented machine, this caution can be observed in Deepsouth Packing Co. v. Laitram Corp. and, more recently, Microsoft Corp. v. AT&T Corp. It is a fair presumption that this concern of the federal courts generally, and the Supreme Court particularly, influenced the decision of the Federal Circuit in BMC v. Paymentech not to take a more expansive view of direct infringement which would cover divided performance of a process by multiple entities. In light of this reality, Congress may need to provide protection against divided performance through statutory amendment.

If the decision to promote protection of patented processes and to impose liability upon entities who seek to avoid infringement by simply dividing performance is ultimately a policy choice, Congress may be best equipped to make such a legislative decision. Congress could intervene, as it has done in the past for other forms of infringement, and amend the Patent Act to expressly provide direct infringement liability based on aggregate

145. Examples include the judicial developments of the doctrine of equivalents and of indirect infringement. See generally Chisum, supra note 1; Rich, supra note 2; see also Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 545 U.S. 913 (2005) (discussing non-statutory liability for indirect infringement of copyright).

146. 406 U.S. 518, 530 (1972) ("[T]he sign of how far Congress has chosen to go can come only from Congress."). "We would require a clear and certain signal from Congress before approving the position of a litigant who... argues that the beachhead of privilege is wider, and the area of public use narrower, than courts had previously thought." Id. at 531.

147. 127 S. Ct. 1746, 1759 (2007) ("[W]e are not persuaded that dynamic judicial interpretation of § 271(f) is in order [to close a potential 'loophole']. The 'loophole,' in our judgment, is properly left for Congress to consider, and to close if it finds such action warranted.").

148. See supra notes 4-7 and accompanying text.
performance of an entire claimed method for entities such as the companies described in the introductory hypotheticals.\textsuperscript{149} While passing a statutory amendment through Congress is no small feat, § 271 has already been amended many times in the past 25 years.\textsuperscript{150} If the impact of weakened protection for process patents covering computer network operations or e-business methods turns out to be significant,\textsuperscript{151} several major players from those industries may desire to help "shepherd" such an amendment through Congress. In the end, statutory amendment may provide the clearest approach if the courts remain hesitant to judicially expand liability.

VI. CONCLUSION

A patentee who has invested time, effort, and money into developing and patenting a useful, novel, and nonobvious process deserves more than a worthless piece of paper with claims effectively unenforceable in court—this is the promise of the U.S. patent system. Yet, for method claims comprised of steps which encompass the actions of multiple entities or whose performance is easily divisible between multiple entities, a piece of paper is all the inventor will be left with under the current law of infringement when artful competitors divide performance of the process. Liability ought to be imposed against such defendants, and the state of the law after \textit{BMC v. Paymentech} needs to be reconsidered. General tort law policies of protecting property owners against intentional infliction of harm, as well as specific tort doctrines of vicarious responsibility for the acts of others strongly support imposition of liability. Finally, patent law policies favor protecting valid process patents and preventing entities from exploiting technicalities in the law to deprive the patentee of the commercial benefit of his invention.

—Joshua P. Larsen \textsuperscript{152}

\textsuperscript{149} See supra notes 13-19 and accompanying text.  
\textsuperscript{150} See Gerdelman, supra note 4, at 1993-2003.  
\textsuperscript{151} See supra note 9 (discussing the impact of divided performance and the \textit{BMC v. Paymentech} decision on these industries).  
\textsuperscript{152} Juris Doctor, 2008, DePaul University College of Law. The author
would like to thank both Professor Miriam Bitton for all of her advice and assistance in drafting this article and his family, Paige, Paul, Diane, Jessica, and Caleb, for all of their love and support. The opinions expressed in this paper are solely those of the author.