Finding the Patent Infringement Mastermind: The Control or Direction Standard for Joint Infringement

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FINDING THE PATENT INFRINGEMENT
"MASTERMIND":

THE “CONTROL OR DIRECTION” STANDARD FOR “JOINT” INFRINGEMENT

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Abstract

In its 2007 decision in BMC Resources, Inc. v. Paymentech, L.P., the Federal Circuit attempted to clarify the law regarding liability for direct patent infringement under § 271(a) where the steps of a patent claim are performed by more than one party. Specifically, the Federal Circuit held that a defendant is not responsible for steps in a patent claim performed by a third party, and consequently is not liable for direct patent infringement where the defendant did not “control or direct each step of the patented process.” However, the Federal Circuit provided only limited guidance regarding how to determine whether a defendant has exerted sufficient control or direction over a third party such that the defendant could be liable for the acts of the third party.

In 2008 in Muniauction, Inc. v. Thomson Corporation, the Federal Circuit may have introduced some unintended confusion into the joint infringement analysis by stating that the plaintiff had failed to identify a legal theory where the defendant “might be vicariously liable for the actions of” the third parties that performed some of the steps of the patented methods. At least one district court since has read the holding of Muniauction as requiring a patentee to prove that a defendant is vicariously liable for the actions of a third party in order to satisfy the “control or direction” test.

Liability for “joint” infringement should not be limited to situations in which a plaintiff can prove that a defendant is vicariously liable for the acts of third parties, and agency law

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provides significant guidance regarding situations in which "control or direction" should be found. This article suggests tests for simplifying the determination as to whether a defendant has satisfied the "control or direction" test. Cases involving acts performed by a defendant's customers should be viewed differently from cases involving other business relationships, such as those between a defendant and suppliers, subcontractors, or other vendors. Rarely will a defendant be found to assert sufficient "control or direction" over its customers such that steps performed by customers will support an infringement claim against the defendant. For other types of business relationships, a test consisting of two questions would help courts and practitioners determine whether there is sufficient control or direction over the third party's performance of a step in a patent claim such that the alleged infringer should be responsible for the third party's acts:

Does the defendant's alleged "control or direction" relate to the specific technology accused of infringement?

If so, did the defendant require the third party to perform the relevant limitations of the claim in the manner provided for in those limitations?

If the answer to both of these questions is "yes," then the alleged infringer should be held liable for steps performed by third parties. Applying this test would greatly simplify the "control or direction" inquiry and lead to more consistent results in cases involving joint infringement.

I. INTRODUCTION

Under 35 U.S.C. § 271(a), "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."¹ Usually, the "whoever" accused of directly infringing a patent is a single individual or entity accused of performing all of the steps of a patented method or making, using, or selling a product with all of the elements of a patented apparatus.² However, when a patent has network-related claims, such as business method patents covering

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². See, e.g., BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1378, 1380 (Fed. Cir. 2007) ("Direct infringement requires a party to perform or use each and every step or element of a claimed method or product." (citing Warner-Jenkinson Co., v. Hilton Davis Corp., 520 U.S. 17 (1997))).
ways of conducting business over the internet, there can be multiple actors that potentially perform steps of a patented method or control parts of a patented system: consumers who use their home computers to access the internet, internet service providers who give consumers access to the internet, and content providers who provide information or services to internet users. Until recently, courts have varied greatly in how they analyze patent infringement claims when multiple entities are alleged to have performed the steps of a patent claim.  

In *BMC Resources, Inc., v. Paymentech, L.P.*, the Federal Circuit attempted to clarify the law regarding liability for direct patent infringement under section 271(a) where the steps of a patent claim are performed by more than one party. As the court pointed out, "Direct infringement is a strict-liability offense, but it is limited to those who practice each and every element of the claimed invention." The *BMC Resources* court held that a defendant is not responsible for steps in a patent claim performed by a third party, and consequently is not liable for direct patent infringement, where the defendant did not "control or direct each step of the patented process." However, the Federal Circuit provided only limited guidance regarding how to determine whether a defendant has exerted sufficient control or direction over a third party such that the defendant could be liable for the acts of the third party.

Shortly after its *BMC Resources* decision, the Federal Circuit may have introduced some unintended confusion into the joint infringement analysis in *Muniauction, Inc. v. Thomson Corporation*, by stating that the plaintiff had failed to identify a legal theory where the defendant "might be vicariously liable for the actions of" the third parties that performed some of the steps of the patented methods. At least one court since has read the holding of *Muniauction* as requiring

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5. *Id.* at 1381 ("By contrast, indirect liability requires evidence of 'specific intent' to induce infringement. Another form of indirect infringement, contributory infringement under § 271(c), also requires a mens rea (knowledge) and is limited to sales of components or materials without substantial noninfringing uses.").
6. *Id.* at 1380. Although most "joint" or "divided" infringement cases have involved method claims, some have involved system or product claims in which multiple parties control one or more components of the accused system or multiple parties participating in the manufacture of a product. See, e.g., *Fisher-Barton Blades, Inc. v. Blount, Inc.*, 584 F. Supp. 2d 1126 (E.D. Wisc. 2008); *Rowe Int'l Corp. v. Ecast, Inc*, 586 F. Supp. 2d 924 (N.D. Ill. 2008), discussed infra notes 160-171 and accompanying text.
a patentee to prove that a defendant is vicariously liable for the actions of a third party in order to satisfy the "control or direction" test.\(^8\)

This article discusses the state of the law of "joint" infringement prior to the *BMC Resources* and *Muniauction* decisions and those decisions themselves, as well as district court cases that have attempted to apply the "control or direction" standard to a myriad of business relationships. Specifically, this article analyzes the requirement that where multiple actors perform the steps of a patent claim, one party must be the "mastermind" of the patent infringement. This article also examines a range of business arrangements that have been found to be sufficient to show "control or direction" of one actor by another, in contrast to other relationships, such as where the defendant's customer is the third party that allegedly performed one or more steps of the claim, which do not involve sufficient control or direction to support direct patent infringement claims.

Lastly, this article suggests that cases involving acts performed by a defendant's customers should be viewed differently from cases involving other business relationships, such as those between a defendant and suppliers, subcontractors, or other vendors. Rarely will a defendant be found to assert sufficient "control or direction" over its customers such that steps performed by customers will support an infringement claim against the defendant. Section 271(b) and (c) provide for liability for patent infringement by entities that induce or contribute to the infringement of their customers, and allowing a *direct* infringement claim to be based in part on the actions of a party's customers would subvert the statutory scheme and *mens rea* requirements for induced and contributory infringement.\(^9\)

For other types of business relationships, this article suggests a two-part test, consistent with agency law, for determining whether there is sufficient control or direction over the third party's performance of a step in a patent claim such that the alleged infringer should be responsible for the third party's acts. Finding a defendant liable for direct infringement based on the steps performed by third parties would be appropriate in the case of affirmative answers to the following questions:

Does the defendant's alleged "control or direction" relate to the specific technology accused of infringement?

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9. See *BMC Resources*, 498 F.3d at 1381.
If so, did the defendant require the third party to perform the relevant limitations of the claim in the manner provided for in those limitations?

Applying this test would simplify the joint infringement inquiry that has long proven difficult for courts and practitioners, even after the BMC Resources and Muniauction decisions.

II. "JOINT" INFRINGEMENT BEFORE BMC RESOURCES

Prior to the BMC Resources decision in 2007, there was disagreement among courts about whether the actions of multiple parties taken together could support a finding of direct patent infringement under 35 U.S.C. § 271(a). Several cases, for instance, had held that where multiple parties combined to perform all of the steps of a patented method that all of the parties would be jointly and severally liable for patent infringement, while others refused to find patent infringement where one entity did not perform all of the steps of a patent claim itself.

A. District Court and Regional Circuit Cases

Although "joint" infringement cases were relatively uncommon in the decades prior to the BMC Resources case, a number of district courts and courts of appeal decided cases in which the acts of multiple parties were analyzed to determine whether there was patent infringement by one or more of those parties. The standards applied varied greatly, and, indeed, several courts applied standards far more lenient than the "control or direction" standard later established by the BMC court.

1. Contracting Out Steps

Generally, courts considering situations in which a defendant contracted out the performance of one or more steps of a patented process held that the defendant would be liable for patent infringement. For instance, in Shields v. Halliburton Co., employees...
of two separate companies worked together on a number of jobs performing the steps of the patented process. In addition to stating the more general rule that "[i]nfringement of a patented process or method cannot be avoided by having another perform one step of the process or method," the Shields court held that "[w]hen infringement results from the participation and combined action of several parties, they are all joint infringers and jointly liable for patent infringement."

2. Steps Performed by Customers

Several courts found that a supplier-customer relationship could be sufficient to make a supplier responsible for the acts of its customers. For example, the court in Cordis Corp. v. Medtronic Ave, Inc., held that for "direct infringement of a process claim, either a single entity must perform every step of the method or, if two or more entities perform different steps of the method, those entities must have some connection to each other." The court had rejected a jury charge that would have required a finding that the two entities "work in concert," "work together jointly," or have an "agency" relationship. In finding that the defendant had contributed to direct infringement by doctors who used stents supplied by the defendant, the court was willing to rely upon steps actually performed by the defendant to support a finding of underlying direct infringement by the doctors because the defendant had "some connection" to the physicians using the stents. Specifically, the defendant recruited doctors to participate in clinical trials and the company and doctors regularly gave each other feedback about how to use new products and whether they worked. Therefore, the court held that acts

Metal Film Co. v. Metlon Corp., 316 F. Supp. 96, 110 n.12 (S.D.N.Y. 1970) ("That defendants choose to have [one step] . . . done by outside suppliers does not mitigate their infringement of the overall process.").

14. Id. at 1389 (citing Metal Film, 316 F. Supp. 96).
15. Id. (citing New Jersey Patent Co. v. Schaeffer, 159 F. 171 (E.D. Pa. 1908)).
16. Cordis Corp. v. Medtronic Ave, Inc., 194 F. Supp. 2d 323, 349 (D. Del. 2006) (emphasis added), rev'd on other grounds, 339 F.3d 1352 (Fed. Cir. 2003). In stating this rule, the Cordis court relied upon Faroudja Labs, Inc. v. Dwin Elecs., Inc., Civ. No. 97-20010SW, 1999 U.S. Dist. LEXIS 22987 (N.D. Cal. Feb. 24, 1999), discussed infra notes 34-40, a case that found that there was not a sufficient relationship between two parties to attribute the acts of one to the other for the purpose of patent infringement.
18. Id. at 350.
19. Id.
performed by the doctors and stent supplier could be taken together as evidence of a predicate act of direct infringement supporting a finding of contributory infringement against the stent supplier.20

In Applied Interact, LLC v. The Vermont Teddy Bear Co., Inc., the claims required certain steps to be performed by home computer users.21 The defendant argued that it was not liable for infringement because it did not perform the steps that required action by its customers.22 However, because the customers performing those steps "act in accordance with [the defendant’s] instructions," the court found that there was "some connection" between the defendant and its customers such that summary judgment in favor of the defendant was denied.23

In Mobil Oil Corp. v. W.R. Grace & Co., the court found the defendant liable for infringement of several patent claims related to catalyst preparation even though the defendant’s customers performed several steps of the patent claims.

Defendant knew at the time it sold each of its accused catalysts that its customers would place the catalysts as sold by defendant into their catalytic cracking units and that in the course of passage through the catalytic cracking units, the catalysts purchased from Grace would be subjected to the heating and calcining conditions specified in [the claims], and that consequently all of the effects of such heating or calcining would be achieved by defendant’s customers. Consequently, defendant was able to achieve all of the benefits described by the patents for heating and calcining, while at the same time foregoing the necessity of itself having to undergo the expense of carrying it out. In this respect, defendant, in effect, made each of its customers its agent in completing the infringement step, knowing full well that the infringement step would in fact be promptly and fully completed by those customers.24


22. Id. at *11.

23. Id. at *16-17.

In contrast, in *E.I. DuPont De Nemours Co. v. Monsanto Co.*, the Court refused to hold Monsanto liable where a final step of a patent process was performed by Monsanto’s customer.25 The court found that although a defendant could be liable for paying a third party to perform one step of a patented process where the defendant performed the other steps itself, none of the precedents relied upon by the plaintiff held “that the third party who performs one step of a patented process and then sells the resulting product to the direct infringer . . . is also liable as a direct infringer under § 271(a).”26

3. Case Requiring “Control”

In several other pre-BMC cases, courts required a showing of “control” over the third party performing one or more steps of the patented process that the defendant was accused of infringing. For instance in *Mobil Oil Corp. v. Filtrol Corp.*, the Ninth Circuit refused to find either of two defendants liable for patent infringement where two steps were performed by one defendant and one step was performed by another defendant.27 “We question whether a method claim can be infringed when two separate entities perform different operations and neither has control of the other’s activities.”28 Conversely, in *Free Standing Stuffer, Inc. v. Holly Development Co.*, the court found that although the three entities that performed different steps of the patented process had separate corporate forms, “[t]hey are alter egos of each other.”29 The court found that two of the entities that performed certain steps of the patented method were in reality the advertising department and sales department of the defendant.30


26. *Id.* (distinguishing *Shields*, *Crowell*, and *Metal Film*, discussed supra notes 12-15) (emphasis in original); see also *Avery Dennison Corp. v. UCB Films PLC*, No. 95 C 6351, 1997 U.S. Dist. LEXIS 16535, at *8-9 (N.D. Ill. Oct. 17, 1997) (following *E.I. DuPont* and holding that a defendant could not be liable for infringement under § 271(g) where the defendant “is alleged to have performed at most an initial step of the process patent”).

27. *Mobil Oil Corp. v. Filtrol Corp.*, 501 F.2d 282, 291 (9th Cir. 1974). The court also noted that neither defendant performed a fourth step.

28. *Id.* at 291-92. See also *Classen Immunotherapies, Inc.*, v. *King Pharms.*, Inc., 403 F. Supp. 2d 451, 455 (D. Md. 2005) (holding that ongoing royalty payments from one company to another were not sufficient to establish joint infringement by the two companies).


30. *Id.*; see also *Metal Film Co. v. Metlon Corp.*, 316 F. Supp. 96, 109 n.11 (S.D.N.Y. 1970) (treating two patent infringement defendants as one entity where the two companies were closely related and did not distinguish between the two companies in their own operations).
In *Marley Mouldings Ltd. v. Mikron Industries, Inc.*, the patent covered a method of mixing wood particles and polymer resin, and using that substance to make doors, windows, or frame molding. The defendant door and window manufacturer moved for summary judgment, claiming that it did not infringe the patent because it purchased pre-made pellets of mixed wood particles and resin from a supplier. In light of the plaintiff’s allegations that the defendant “dictates not only the ingredients and quantities of such ingredients but also the process itself,” the court determined that there were material issues of fact as to whether the defendant had control over its supplier’s activities.

In *Faroudja Laboratories, Inc. v. Dwin Electronics, Inc.*, the plaintiff argued that “third parties who perform only certain steps of a patent, where the performance of those steps follows the completion of the earlier steps of the patent, can be found to be direct infringers.” The patent in *Faroudja* covered a method for “converting film frames to television signals and improving the resulting image quality.” The plaintiff sued a company that manufactured “line doublers” that could be used in conjunction with a TV to receive a standard TV signal and output an improved TV signal. Some of the signals received by the line doublers used by the defendant’s customers likely included signals previously converted from film. In attempting to hold the defendant liable for inducing or contributing to the direct infringement of its customers, the plaintiff argued that the customers committed direct infringement, despite the fact that the step of converting film to a TV signal was performed by separate entities. The plaintiff argued that there was a sufficient connection between the defendant’s customers and the companies that converted film to TV signals “by virtue of the copyright license that exists when a person buys or rents a film that has been converted to a television signal.” However, the Court held that existence of a

32. Id. at 1702.
33. Id. at 1703.
35. Id. at *4.
36. Id. at *5-6.
37. Id. at *6-7.
38. Id. at *14-15.
39. Id. at *17.
copyright license was not the sort of relationship that would make a
customer responsible for the actions of the film conversion company.
“A copyright license concerns such rights as distribution of copies,
reproduction, preparation of derivative works, and public
performance or display of a work. Any copyright license a viewer has
with the film owner exists independently of the film-to-television
transfer.”

Thus, prior to BMC Resources, some district courts merely
required “some connection” between a defendant and a third party,
such as a supplier-customer relationship, while others required
“control” similar to that later required by BMC Resources and
Muniauction.

B. Federal Circuit Cases

Although not addressing directly the circumstances under which
a defendant might be held responsible for patent steps performed by a
third party, several Federal Circuit cases prior to BMC Resources did
address analogous issues or otherwise touch on divided infringement
issues in dicta.

Unlike the district court cases that indicated that suppliers need
only have “some connection” with their customers for a plaintiff to
base a direct infringement claim on the acts of both, the pre-BMC
Resources Federal Circuit authority suggested a higher standard. For
instance, in Fromson v. Advance Offset Plate, Inc., the Federal Circuit
held that where the patent claims covered a photograph printing plate
including a diazo coating, because the defendant’s customers, and not
the defendant, applied the coating, the defendant “cannot be liable for
direct infringement with respect to those plates but could be liable for
contributory infringement.”

In International Rectifier Corp. v. Samsung Electronics Co.,
Ltd., the defendant was accused of contempt for violating a permanent
injunction barring it from making, using, offering for sale, selling, or
importing products covered by a U.S. patent. The motion for

40. Id. at *17-18 (distinguishing E.I. Dupont, Shields, Free Standing Stuffer and Metal
Film, discussed supra notes 12-15, 25-26, 29-30 and accompanying text); see also id. at *15 (“It
is true that several district courts have found a party liable for direct infringement of a process
patent even where the various steps included in the patent are performed by distinct entities.
However, these cases indicate that some connection between the different entities justified that
finding.”).


42. Int’l Rectifier Corp. v. Samsung Electronics Co., Ltd., 361 F.3d 1355, 1357 (Fed. Cir.
2004).
contempt was a result of Samsung’s manufacturing the accused product abroad and selling it to a company, IXYS, which ultimately imported them into the United States. Although there was a fabrication agreement between Samsung and the importer, there was “no evidence that Samsung exercises any control over IXYS or participates in any activities of IXYS following delivery of [the products] to IXYS in Germany. It is undisputed that Samsung and IXYS are separate, unaffiliated companies, and that IXYS acts independently of Samsung.” Thus, the Federal Circuit held that there was no basis for attributing the acts of IXYS to Samsung and no basis for finding Samsung liable for contempt for acts it performed abroad.

Similarly, in Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc., the Federal Circuit refused to attribute actions of doctors who used orthopedic surgical implants to the manufacturer of those implants. The claims required a “lower bone interface operatively joined to [a] bone segment,” something that only occurred when the devices were implanted by doctors. The plaintiff argued that the manufacturer’s “representatives appear in the operating room, identify instruments used by surgeons, and thus in effect ‘join’ the anchor seat to the bone.” Thus, according to the plaintiff, the case was analogous to cases, such as Shields v. Halliburton Co., where the court had found a party directly infringed a method claim where one of the steps was performed at the direction of that party. However, the Federal Circuit rejected that argument and held that if anyone made the infringing apparatus by attaching it to the bone “it is the surgeons, who are, as far as we can tell, not agents of Medtronic,” and thus, there was no direct infringement by the device manufacturer.

In its Fromson, International Rectifier, and Cross Medical opinions, the Federal Circuit seemed relatively clear that the acts of a
third party could only be attributed to a defendant for purposes of finding direct infringement in very limited circumstances. However, any such clarity was clouded by the Federal Circuit's opinion in On Demand Machine Corp. v. Ingram Industries, Inc. The claims at issue covered a method of printing single copies of books that were ordered by consumers and a book printer was accused of infringing the patent where certain steps were allegedly performed by Amazon.com when customers ordered books. Although the On Demand case focused primarily on reversing the district court's claim construction and the jury's finding of patent infringement based on that construction, in the course of its opinion, the Federal Circuit considered the district court's jury instruction regarding "joint infringement":

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

The Federal Circuit stated: "We discern no flaw in this instruction as a statement of law." Nonetheless, the jury instruction's characterization of the law related to "joint" infringement was not determinative because the Federal Circuit concluded that even Amazon and the printer's actions taken together did not infringe the patent at issue. While the Federal Circuit approval of the jury instruction was arguably dicta, at least one district court relied upon the Federal Circuit's tacit approval of a broader joint infringement standard in On Demand to allow a direct infringement claim based on the actions of multiple actors to proceed past the summary judgment stage.

53. On Demand Machine Corp. v. Ingram Indus., Inc., 442 F.3d 1331 (Fed. Cir. 2006).
54. Id. at 1334-36.
55. Id. at 1344-45.
56. Id. at 1345.
57. Id.
58. See Collegenet, Inc. v. XAP Corp., 442 F. Supp. 2d 1036, 1055-56 (D. Or. 2006). See also the reliance upon On Demand by the district court from Muniauction in giving its jury instruction regarding joint infringement, infra notes 97-98 and accompanying text.
III. BMC Resources, Inc. v. Paymentech, L.P.

In the wake of On Demand's seeming approval of broad joint infringement theories came the Federal Circuit's BMC Resources, Inc. v. Paymentech, L.P. opinion. The claims at issue in BMC Resources covered a "method for processing debit transactions without a personal identification number (PIN)." BMC accused Paymentech of infringing the claims by performing services in which it would route debit transactions from merchants to a variety of financial institutions. The claims required certain steps to be performed by the entity that provided the payment system at a retail location, and other steps to be performed by debit networks and financial institutions. BMC argued to the district court "that On Demand changed the law governing joint infringement by multiple parties." However the district court determined that the approval of the jury instruction in On Demand was dicta, and relying on other district courts' opinions, it held that the defendant would only be liable if "it
directed or controlled the behavior of the financial institutions that performed those claimed method steps that Paymentech did not perform.” Finding no evidence of control or direction, the district court granted summary judgment for the defendant.

On appeal, the Federal Circuit considered “the proper standard for joint infringement by multiple parties of a single claim,” noting the general rule that “[d]irect infringement requires a party to perform or use each and every step or element of a claimed method or product.” BMC argued that the Federal Circuit’s opinion in On Demand “sanctioned a finding of infringement by a party who performs some steps of a claim in cases where a patent claims a new and useful invention that cannot be performed by one person.” BMC also argued that On Demand, in approving of the jury instruction at issue, adopted a “‘participation and combined action’ standard as the type of ‘connection’ a plaintiff must show to prove joint infringement.”

The Federal Circuit rejected these arguments and agreed with the district court that the On Demand court’s statements regarding joint infringement were dictum, holding that “On Demand did not change this court’s precedent with regard to joint infringement.” The court observed that both Fromson v. Advance Offset Plate, Inc., and Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc., found that a party could not be liable for direct infringement because it did not perform all the steps of a claim. The Federal Circuit went on to observe that “[c]ourts faced with a divided infringement theory have also generally refused to find liability where one party did not control

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65. 498 F.3d at 1378.
66. Id.
67. Id.
68. Id. at 1379.
69. Id. at 1380.
70. Id.
71. Fromson, 720 F.2d 1565, 1568 (Fed.Cir.1983) (finding no direct infringement by manufacturer who performed the first step of a process claim even where its customer performed the other step of the claim), discussed supra note 41 and accompanying text.
72. Cross Med. Prods., 424 F.3d at 1311 (rejecting patentee’s efforts to combine the acts of surgeons with those of a medical device manufacturer to find direct infringement of an apparatus claim), discussed supra notes 46-52 and accompanying text.
73. BMC Resources, 498 F.3d at 1380. Earlier in the opinion, the Court observed that in Cross Med. Prods., 424 F.3d at 1311, “this court refused to attribute the acts of surgeons in making the claimed apparatus to the medical device manufacturer because the medical device manufacturer representative, who appeared in the operating room and identified instruments for the surgeons, did not direct the surgeons’ actions.” 498 F.3d at 1379.
or direct each step of the patented process." However, control could be exercised contractually:

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. It would be unfair indeed for the mastermind in such situations to escape liability. District courts in those cases have held a party liable for infringement. Nonetheless, the court made it clear that the standards for finding a defendant liable for the actions of a third party would be relatively stringent, and found such stringency necessary in light of the statutory scheme for patent infringement:

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. Nonetheless, this concern does not outweigh concerns over expanding the rules governing direct infringement. For example, expanding the rules governing direct infringement to reach independent conduct of multiple actors would subvert the statutory scheme for indirect infringement. Direct infringement is a strict-liability offense, but it is limited to those who practice each and every element of the claimed invention. By contrast, indirect liability requires evidence of "specific intent" to induce infringement. Another form of indirect infringement, contributory infringement under § 271(c), also requires a mens rea (knowledge) and is limited to sales of components or materials without substantial noninfringing uses. Under BMC's proposed approach, a patentee would rarely, if ever, need to bring a claim for indirect infringement.

The Federal Circuit recognized that parties could try to cooperate to avoid direct patent infringement by dividing the activities covered by a claim, but explained that these potential problems could be avoided by patentees through careful claim drafting:


75. Id. at 1381(citing Shields v. Halliburton Co., 493 F. Supp. 1376, 1389 (W.D. La. 1980)).

76. Id.
A patentee can usually structure a claim to capture infringement by a single party. In this case, for example, BMC could have drafted its claims to focus on one entity. The steps of the claim might have featured references to a single party's supplying or receiving each element of the claimed process. However, BMC chose instead to have four different parties perform different acts within one claim. BMC correctly notes the difficulty of proving infringement of this claim format. Nonetheless, this court will not unilaterally restructure the claim or the standards for joint infringement to remedy these ill-conceived claims.  

Applying its standards for divided infringement, the Federal Circuit affirmed the finding of no infringement because BMC failed to produce any sufficient evidence that Paymentech directed or controlled the debit networks or financial institutions that performed several steps of the claims.  

Although BMC's evidence showed that Paymentech provided data to the debit networks, there was no evidence that Paymentech also provided instructions or directions regarding the use of that data. While BMC argued that instruction or directions could be inferred or that "the data themselves provide instructions or directions," BMC had not provided any evidence to support either theory. There was even less evidence of control or direction over the financial networks, where there was not even a contract between Paymentech and the financial networks. In the absence of control or direction over either the debit networks or the financial institutions, the Federal Circuit found that Paymentech "did not perform or cause to be performed each and every element of the claims," and thus summary judgment of non-infringement was affirmed.  

IV. MUNIAUCTION, INC. V. THOMSON CORPORATION  

Less than a year after the BMC Resources decision, the Federal Circuit had the opportunity to apply its BMC Resources holding in Muniauction, Inc. v. Thomson Corporation. The claims in

77. Id. (citing Lemley, supra note 3, at 272-75 and Sage Prods. Inc. v. Devon Indus. Inc., 126 F.3d 1420, 1425 (Fed. Cir. 1997)).  
78. Id. at 1381.  
79. Id.  
80. Id. at 1381-82.  
81. Id. at 1382.  
82. Id.  
Muniauction covered a method of auctioning fixed income financial instruments over the internet, where one of the steps required "inputting data associated with at least one bid for at least one fixed income financial instrument into [a] bidder's computer via [an] input device."\textsuperscript{84} Muniauction asserted its patent claims against Thomson's BidComp/Parity system, which allowed home and business users at remote locations to bid on municipal bonds and other securities.\textsuperscript{85} The jury found that Thomson infringed Muniauction's patent and awarded over $38 million in damages, which the district court enhanced to nearly $77 million based on the jury's finding of willful infringement.\textsuperscript{86} The district court denied Thomson's motion for judgment as a matter of law, in which Thomson argued, \textit{inter alia}, that it did not infringe the claims under the proper standard for joint infringement.\textsuperscript{87} Thomson appealed, and while the appeal was pending, the Federal Circuit issued its \textit{BMC Resources} opinion.\textsuperscript{88}

In reviewing the infringement finding, the Federal Circuit noted that "the only theory of infringement presented by Muniauction is that of so-called joint infringement."\textsuperscript{89} The parties agreed that no single entity performed all of the steps of the asserted methods; for instance, the inputting step of the claims was completed by the bidder, whereas most or all of the remaining steps were performed by the auctioneer's system such as Thomson's BidComp/Parity system.\textsuperscript{90} "The issue is thus whether the actions of at least the bidder and the auctioneer may be combined under the law so as to give rise to a finding of direct infringement by the auctioneer."\textsuperscript{91}

The Federal Circuit observed that its holding in \textit{BMC Resources} "was founded on the proposition that direct infringement requires a single party to perform every step of a claimed method,"\textsuperscript{92} but that the \textit{BMC Resources} opinion also "recognized a tension between this proposition and the well-settled rule that a defendant cannot thus

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\textsuperscript{84.} Id. at 1322.
\textsuperscript{85.} Id. at 1323.
\textsuperscript{86.} Id.
\textsuperscript{87.} Id.
\textsuperscript{88.} Id.
\textsuperscript{89.} Id. at 1328.
\textsuperscript{90.} Id. at 1328-29.
\textsuperscript{91.} Id. at 1329.
\textsuperscript{92.} Id. (citing BMC Resources, Inc., v. Paymentech, L.P., 498 F.3d 1373, 1378-79 (Fed. Cir. 2007)). The Muniauction court also relied upon the Federal Circuit's decision in \textit{NTP, Inc. v. Research in Motion, Ltd.}, 418 F.3d 1282, 1317-18 (Fed. Cir. 2005) (holding that users of accused Blackberry system could not infringe method claims in the United States because one step of the method was performed in Canada).
avoid liability for direct infringement by having someone else carry out one or more of the claimed steps on its behalf."93 Accordingly, the Muniauction court reaffirmed that "where the actions of multiple parties combine to perform every step of a claimed method, the claim is directly infringed only if one party exercises 'control or direction' over the entire process such that every step is attributable to the controlling party, i.e., the 'mastermind.'"94 In contrast, "[a]t the other end of this multi-party spectrum, mere 'arms-length cooperation' will not give rise to direct infringement by any party."95

Turning to the case before it, the Federal Circuit considered whether Thomson sufficiently "controls or directs" bidders "such that Thomson itself can be said to have performed every step of the asserted claims."96 The district court had relied on the Federal Circuit's apparent approval of the jury charge in On Demand Machine Corp. v. Ingram Industries, Inc.97 in finding that joint infringement required a connection less that direct control, giving a jury instruction that read as follows:

Consider whether the parties are acting jointly or together in relation to the electronic auction process. Are they aware of each other's existence and interacting with each other in relation to the electronic auction process? Is there one party teaching, instructing, or facilitating the other party's participation in the electronic auction process? These are the types of questions that you should ask in making your decision on this issue. If you find that there is a sufficient connection between Thomson and the bidders and the issuers that used Thomson's process, then you could find Thomson liable for direct infringement.98

The Federal Circuit held that the reliance on On Demand was erroneous in light of the fact that the finding of no infringement in On Demand was not based on the relationship between the parties.99 "Moreover, none of the questions identified by the jury instruction are relevant to whether Thomson satisfies the 'control or direction' standard of BMC Resources. That Thomson controls access to its

93. Id. (quoting BMC Resources, 498 F.3d at 1379).
94. Id. (quoting BMC Resources, 498 F.3d at 1380-81).
95. Id. (quoting BMC Resources, 498 F.3d at 1371).
96. Id.
97. On Demand Machine Corp. v. Ingram Indus., Inc., 442 F.3d 1331 (Fed. Cir. 2006), discussed supra notes 53-57 and accompanying text.
98. Muniauction, 532 F.3d at 1329.
99. Id. (quoting BMC Resources, Inc., v. Paymentech, L.P., 498 F.3d 1373, 1380 (Fed. Cir. 2007)).
system and instructs bidders on its use is not sufficient to incur liability for direct infringement.” 100 “Under BMC Resources, the control or direction standard is satisfied in situations where the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party that are required to complete performance of a claimed method.” 101 Because “Thomson neither performed every step of the claimed methods nor had another party perform steps on its behalf, and Muniauction has identified no legal theory under which Thomson might be vicariously liable for the actions of the bidders,” the Federal Circuit held that Thomson did not infringe the claims as a matter of law and vacated the verdict against it. 102

V. DISTRICT COURT CASES APPLYING BMC RESOURCES AND MUNIAUCTION

Since the BMC Resources decision, the rate at which district courts have decided issues related to “joint” or “divided” infringement has increased significantly. District courts have considered whether a principal exerted sufficient “control or direction” over two primary kinds of third parties: (1) customers, and (2) vendors, subcontractors, or other business partners. With respect to customers, courts have rarely found that the principal had control or direction over its customers sufficient to make the principal responsible for steps in a patent claim performed by those customers. 103 Only in the case of a software program that automatically caused a customers’ computer to perform a step of a patent claim has a principal been found potentially responsible for steps performed by its customers. 104 With respect to vendors and other business partners, courts have required that one party be identified as the “mastermind” of the patent infringement and that the principal be vicariously liable for or have contractual control over the vendor’s performance of the steps that the principal does not perform.

100. Id. at 1330.
101. Id. (citing BMC Resources, 498 F.3d at 1379). The Federal Circuit also cited Int’l Rectifier v. Samsung Elecs. Co., Ltd., 361 F.3d 1355, 1361 (Fed. Cir. 2004) (“reversing district court’s ruling that Samsung violated a permanent injunction prohibiting infringement in the United States on the grounds that Samsung did not control or participate in the extraterritorial activities of a third party such that the acts of the third party were not attributable to Samsung”), discussed supra notes 42-45 and accompanying text.
102. Id.
103. See infra notes 107-138 and accompanying text.
104. See infra notes 139-152 and accompanying text.
itself. Some courts have applied a standard of “control or direction” that likely was more stringent than the Federal Circuit had contemplated in BMC Resources or Muniauction, by holding that vicarious liability is the only way in which a defendant can be found to have sufficient “control or direction” over a third party.

A. Customers

1. Insufficient Control or Direction Over Customers

Like the Federal Circuit in Muniauction, most district courts considering claims of direct infringement have determined that operators of accused systems are not responsible for the steps of claimed methods that are performed by users of that system.

In Global Patent Holdings, LLC v. Panthers BRHC LLC, the patent at issue covered a method of downloading data from a remote server in response to a query entered by a remote computer user. The parties agreed that the claims required steps to be taken by both a website operator and a remote computer user. The first step of the claim required a remote computer user to enter a query into their computer. The Patentee argued that this action was “controlled” by the accused website operator because it “put[ ] Javascript programs on the remote user’s computer to allow the process to begin.” However, the district court concluded that this was insufficient to show “control or direction” over the system under the BMC Resources and Muniauction standards:

Plaintiff has, in no way, alleged that remote users are contractually bound to visit the website, it has not alleged that the remote users are Defendant’s agents who visit the website within the scope of their agency relationship nor has it alleged any facts which would render Defendant otherwise vicariously liable for the acts of the remote user. Using Plaintiff’s analogy, 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.

105. See infra notes 153-218 and accompanying text.
108. Id. at 1335.
109. Id. at 1332 n.1.
110. Id. at 1335.
111. Id.
Accordingly, the defendant's motion to dismiss was granted. 112

In Keithley v. The Homestore.com, Inc., the claims covered an internet-based system for accessing real estate information. 113 In addition to having a number of steps performed by the entity receiving and storing real estate related information, the claim at issue also required end users to access data files through a series of inquiries. 114 The patentee accused the operator of real estate related websites such as www.realtor.com and www.homebuilder.com of infringing the claims, and the defendant moved for summary judgment. 115 The patentee claimed that the website operator directed and controlled users by including terms and conditions on its website that were characterized as a “binding contract,” limiting and controlling access to certain features, and monitoring users’ actions to track which files were accessed by users of the website. 116 The district court found that this was insufficient to show “control or direction,” observing that although the website operator “allows users access to its websites, [it] does not cause those users to access any particular information.” 117 Because the patentee did not show that the website operator had another party perform steps on its behalf or otherwise show that the operator was vicariously liable for the actions of the website users, the defendant’s motion for summary judgment was granted. 118

In Desenberg v. Google, Inc., the patent at issue covered a method of linking service providers (such as contractors) and clients

114. Id. at 980.
115. Id. at 979.
116. Id. at 984.
117. Id. at 985.
118. Id. at 995. See also PA Advisors, LLC v. Google, Inc., Case No. 2:07-cv-480 (RRR), 2010 U.S. Dist. LEXIS 28500 (E.D. Tex. Mar. 11, 2010), in which the patent covered various methods of generating internet search results. Id. at * 5. Judge Rader of the Federal Circuit, sitting by designation, granted summary judgment of non-infringement in favor of Yahoo! and Google where one of the limitations of the asserted claim required the user of a home computer to initiate a search request. Id. at *25-26. Judge Rader rejected the plaintiff’s argument that Google and Yahoo! performed this step by offering suggestions and spelling changes after a home user made a request. Id. at * 27. “[E]ven where search suggestions or spelling changes are provided by the system, the user is still first required to initiate a search request” and “continues to choose the course of the search without the ‘control or direction’ of the accused search engines.” Id.
in real-time based on project and price criteria.\textsuperscript{119} Desenberg, proceeding \textit{pro se}, accused Google's AdWords system of infringing the patent.\textsuperscript{120} The district court determined that the claims at issue required "a series of interactions, transmissions and communications between 'users' and 'providers,' similar to the multi-step patent process involving merchants and customers in \textit{BMC Resources}."\textsuperscript{121} "Google argued that its interactions with users and AdWords advertisers [were] arms-length transactions, and that Desenberg had not alleged that Google acted as a 'mastermind'" over the process.\textsuperscript{122} The court agreed, noting that Desenberg "has failed to properly allege that Google exercises even a modicum of control over Google AdWords users to satisfy the Federal Circuit's joint infringement standard" and granted Google's motion to dismiss.\textsuperscript{123}

In \textit{Advanced Software Design Corporation v. Fiserv, Inc.}, the claims covered a process for validating a check that involved printing an encrypted code on the check and subsequently decrypting the information so that the check validator could decide whether the check was genuine and should be honored.\textsuperscript{124} The patentee asserted that the claims were infringed by Fiserv's "Secure Seal" system for printing a graphical "seal" on checks that could only be decoded by someone with the proper key for decrypting it.\textsuperscript{125} Fiserv sold its systems to banks, some of whom used the system to print and validate checks.\textsuperscript{126} Other banks provided the software to their account holders to print checks that were subsequently decrypted and validated by the bank.\textsuperscript{127} In some circumstances, Fiserv acted as a check validator for its bank customers, in which case Fiserv would decrypt the seals on checks printed using its system.\textsuperscript{128} The district court concluded that the patentee could not prove that Fiserv directly infringed the claims because Fiserv did not print checks or encrypt check data.\textsuperscript{129} The court held that the patentee "failed to show that Fiserv participates in

\begin{footnotesize}
\begin{enumerate}
\setcounter{enumi}{118}
\item \textsuperscript{120} \textit{Id.} at *1.
\item \textsuperscript{121} \textit{Id.} at *19.
\item \textsuperscript{122} \textit{Id.} at *23-24.
\item \textsuperscript{123} \textit{Id.} at *24.
\item \textsuperscript{125} \textit{Id.} at 925-26.
\item \textsuperscript{126} \textit{Id.} at 926.
\item \textsuperscript{127} \textit{Id.}
\item \textsuperscript{128} \textit{Id.}
\item \textsuperscript{129} \textit{Id.} at 930.
\end{enumerate}
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any scheme to print checks with encrypted control codes. At most, Fiserv sells software that enables its customers to encrypt and print checks. But this fact alone is not sufficient to establish that Fiserv is a direct infringer.”130 Accordingly, Fiserv’s motion for summary judgment of non-infringement was granted.131

Under the “control or direction” standard established by BMC Resources and Muniauction, it is likely that cases with fact scenarios similar to those in the pre-BMC Resources cases Cordis Corp. v. Medtronic Ave., Inc.,132 Applied Interact, LLC v. The Vermont Teddy Bear Co., Inc.,133 and Mobil Oil Corp. v. W.R. Grace & Co.134 would have been decided differently. The Cordis court had required only “some connection” between the defendant and its physician customers.135 The Applied Interact court found that there was some connection between the defendant and its customers because the customers “act[ed] in accordance with [the defendant’s] instructions.”136 In Mobil Oil Corp. v. W.R. Grace & Co., the court found the defendant liable for direct infringement even though the defendant’s customers performed several steps of the patent claims, simply because the defendant knew “full well that the infringement step would in fact be promptly and fully completed by those customers.”137 In short, merely enabling, instructing, or encouraging customers to perform steps of a patented method, or even knowing that those steps would be performed, is not sufficient under the BMC Resources standard to show that an accused infringer has exerted “control or direction” over those customers.138 Something more is needed.

130. Id. (citing Joy Tech., Inc. v. Flakt, Inc., 6 F.3d 770, 773 (Fed. Cir. 1993) (“holding that the sale of an apparatus” to perform a patented process “is not direct infringement because a method or process claim is directly infringed only when the process is performed”).
131. Id. at 931.
138. See also Medtronic, Inc. v. AGA Med. Corp., No. C-07-0567 MMC, 2009 U.S. Dist. LEXIS 36168, at *3-4 (N.D. Cal. Apr. 28, 2009) (holding that evidence that the defendant “instructs and trains physicians on the use of the accused products” was insufficient to raise a triable issues as to whether the defendant had sufficient “control or direction” over its physician customers such that the defendant could be liable for direct infringement); Alloc, Inc. v. Pergo, Inc., Case No. 02-C-736, 2008 U.S. Dist LEXIS 35944, at *27-28 (E.D. Wis. May 1, 2008)
2. Customer Control through Computers

That "something more" could, in certain circumstances, be triggered by computer software. In BMC Resources, the Federal Circuit indicated, without explicitly deciding, that software provided by a system operator that caused a user of the system to perform a patent step might be sufficient to make the provider responsible for the actions of the user.\textsuperscript{139} BMC argued that the data it provided to debit network "provide instructions or directions" to the debit networks, and rather than rejecting this as a possible source of "control or direction," the Federal Circuit found that BMC had presented no evidence to support that theory.\textsuperscript{140}

It is possible that satisfying the "control or direction" standard is not even necessary if the system designer retains sufficient control over its software distributed to remote locations such that it could be treated as performing steps of the claimed method itself. For example, in American Patent Development Corporation, LLC v. Movielink, LLC, the claims covered a method of limiting the number of times a computer user could view a downloaded video program.\textsuperscript{141} The claims at issue included steps for storing video at a user site, decoding data establishing a number limit for authorized viewing at the remote site, and blocking access to the video product once the use limitations for the video are exceeded.\textsuperscript{142} Movielink was accused of infringing the patent, and it was undisputed that these steps of the patent were performed by the Movielink Manager software at user sites.\textsuperscript{143} The patentee alleged that the software was "part of a 'unitary' Movielink system that is controlled or directed by a Movielink 'mastermind."\textsuperscript{144} The court distinguished the patent at issue from that in Global Patent Holdings v. Panthers BRHC LLC,\textsuperscript{145} finding that the patent at issue includes no step (such as a step where a user requests a video product) that must unequivocally be performed by a remote

\textsuperscript{139.} BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007).
\textsuperscript{140.} Id.
\textsuperscript{142.} Id.
\textsuperscript{143.} Id. at 236.
\textsuperscript{144.} Id.
computer user. Rather [it] merely requires the operation of components at both a “central station” and a “user site.” Although this fact is suggestive of two distinct entities performing the steps of Claim 1, this is not required.¹⁴⁶

The American Patent court noted that its analysis was nonetheless complicated by the fact that the “user site” consisted of a computer owned and operated by an individual other than Movielink.¹⁴⁷ Movielink argued “that it ‘did not control its customers’ computers, or the software running on them,’” and Movielink’s expert argued that “the plain meaning of ‘control’ must include the ability to fundamentally manage or influence the functioning of the thing allegedly being controlled.”¹⁴⁸ However, in light of Movielink documents describing the Movielink Manager as being highly integrated with software on Movielink’s server and testimony regarding Movielink’s continuing capacity to revoke customer licenses, the court concluded that there were genuine issues of fact regarding whether Movielink exercised continuing control over the Movielink software on users’ computer.¹⁴⁹ “Put another way, the Court cannot conclude that there is no genuine issue of material fact as to whether the Movielink Manager software running on customers’ computers is simply one component in a distributed—but centrally controlled—Movielink system.”¹⁵⁰ The court rejected Movielink’s argument that the patentee had not pleaded a joint infringement theory, concluding that the patentee would not “be required to invoke joint infringement to the extent they are proceeding on a theory that the Movielink service is a single, delocalized system.”¹⁵¹ Movielink’s motion for partial summary judgment of non-infringement was granted.¹⁵²

¹⁴⁷ Id.
¹⁴⁸ Id.
¹⁴⁹ Id. at 237.
¹⁵⁰ Id. Movielink also argued that certain steps of the claim were carried out by Microsoft DRM software, but a Movielink employee had testified that Movielink employed and relied upon the DRM software to make the Movielink Manager software function. Id.
¹⁵¹ Id.
¹⁵² Id. at 238; see also Uniloc USA, Inc. v. Microsoft Corp., 640 F. Supp. 2d 150, 162 (D.R.I. 2009) (granting judgment as a matter of law to Microsoft, but rejecting argument that Microsoft could not infringe patent claims requiring remote users where “there can be little doubt Microsoft makes, uses and controls the Clearinghouse server and is the ‘mastermind’ of the software, causing each local and remote component to (arguably) complete ‘infringement’ by the entire system”); Girafa.com, Inc. v. IAC Search & Media, Inc., Civ. No. 07-787-SLR, 2009 U.S. Dist. LEXIS 88796, at *8 (D. Del. Sept. 25, 2009) (holding that where claims required “displaying” of a “thumbnail video image,” software products that cause a preview
Thus, computer software may provide patentees with two means of avoiding dismissal under the “control or direction” test: By enabling patentees to argue that steps performed at user locations are actually performed by the system owner through their continuing control over the software, and by enabling the patentees to argue that the software itself enables the system owner to direct and control the actions of the user.

B. Vendors, Subcontractors, and Other Business Partners

When the third party alleged to have performed one or more steps of a patented method is not a customer, but rather a business partner, such as a supplier or subcontractor, deciding whether there is sufficient “control or direction” over the third party can be more challenging. The question, as summarized by the Muniauction court, is where on the “multi-party spectrum” the amount of control exerted by the defendant over the third party lies. At least one court has found that unless the defendant is vicariously liable for the actions of the third party, there is not sufficient “control or direction” over the third party such that steps performed by the third party are attributable to the defendant.

Notwithstanding the relative stringency of the “control or direction” test, a number of relationships between principals and their business partners have been found to involve sufficient control or direction such that the principal is liable for the actions of their business partner in a direct infringement claim.

1. Cases Finding Evidence of Sufficient Control or Direction

In TGIP, Inc. v. AT&T Corp., the claims involved a prepaid calling card system in which the calling cards would be activated or re-charged when consumers paid for them, which was accomplished...
by using an on-site activation terminal to contact a central server through a telephone network to obtain a stored security number.\textsuperscript{155} In its motion for judgment as a matter of law after a jury verdict finding that it infringed the claims, AT&T asserted that it did not directly infringe the patent through its system for activating calling cards.\textsuperscript{156} AT&T claimed that other companies provided the activation platforms and the data terminals, located at places such as Wal-Mart.\textsuperscript{157} However, AT&T's corporate representative testified that the activation platform company "acted on behalf of AT&T," and AT&T required the information received from Wal-Mart in connection with the activation for the cards to be in a specific format.\textsuperscript{158} Accordingly, the district court denied AT&T's motion for judgment as a matter of law because there was no evidence of joint infringement.\textsuperscript{159}

In Fisher-Barton Blades, Inc. v. Blount, Inc., the claims covered a method of making rotary cutting blades that included heat-treating the blades to elevate the hardness to a specified hardness level.\textsuperscript{160} It was undisputed that an independent entity, Superior, neither owned nor controlled by the defendant, performed the heat treating step.\textsuperscript{161} The defendant moved for summary judgment arguing that it did not "direct or control" the heat treating, but its evidence established only that Superior was a separate legal entity, not that the defendants did not "direct or control the heat-treating process."\textsuperscript{162} In light of evidence that the defendant "directs that the blades meet a certain hardness and Superior hardens them to meet that specification," the district court denied the defendant's motion for summary judgment.\textsuperscript{163}

In Rowe International Corp. v. Ecast, Inc., the claims at issue covered a computer jukebox that could download music from a central server.\textsuperscript{164} In responding to the plaintiff's motion for summary judgment of infringement, the defendant Ecast relied upon Cross Medical Products v. Medtronic Sofamor Danek,\textsuperscript{165} arguing that Ecast

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\item\textsuperscript{155} TGIP, Inc. v. AT&T Corp., 527 F. Supp. 2d 561, 568-69 (E.D. Tex. 2007).
\item\textsuperscript{156} Id. at 567.
\item\textsuperscript{157} Id. at 577.
\item\textsuperscript{158} Id. at 578.
\item\textsuperscript{159} Id.
\item\textsuperscript{160} Fisher-Barton Blades, Inc. v. Blount, Inc., 584 F. Supp. 2d 1126, 1132-33 (E.D. Wis. 2008).
\item\textsuperscript{161} Id. at 1134.
\item\textsuperscript{162} Id. at 1143.
\item\textsuperscript{163} Id. at 1143, 1152.
\item\textsuperscript{164} Rowe Int'l Corp. v. Ecast, Inc., 586 F. Supp. 2d 924, 930 (N.D. Ill. 2008).
\item\textsuperscript{165} Cross Med. Prods., Inc. v. Medtronic Sofamor Danek, 424 F.3d 1293 (Fed. Cir. 2005) (holding that implant manufacturer was not liable for direct infringement where device was not
\end{thebibliography}
only made the memory that allowed jukeboxes to download songs, that separate companies made the jukeboxes, and that the systems only became infringing when they were assembled by businesses using the jukeboxes. The record indicated that Ecast itself marketed complete jukebox and memory systems. Alternatively, the court concluded that even if Ecast did not market complete jukebox systems, there was evidence that it asserted control or direction over the jukebox companies’ manufacturing activities. Specifically, Ecast regarded the jukebox manufacturers as “partners” who made jukeboxes “for us” pursuant to specific technical specifications. “There is no suggestion that these firms were independently making jukeboxes that would work with the Ecast system. On the contrary, at least under the original contract with Ecast, [one jukebox manufacturer] was required to obtain Ecast’s permission to manufacture jukeboxes for the Ecast network.” Accordingly, the court found that Ecast’s arguments regarding the lack of control or direction were not a basis for denying the plaintiff’s summary judgment motion.

In Ormco Corp. v. Align Technology, Inc., the patent covered a method of automatically designing and manufacturing orthodontic appliances based on a scan of a patient’s teeth. Most of the claims covered scanning a mold of the patient’s teeth, but one claim covered scanning the patient’s teeth in their mouth, a step necessarily performed by dentists. Align was accused of infringement and argued that there was no showing that it exerted control or direction over the dentist’s scanning of teeth. However, the district court held that “Ormco’s identification of specific orthodontists who have provided Align with data from direct scans of patients teeth, as well as communications about Align’s work with scanner manufacturers to develop more efficient scanning techniques” was sufficient to raise a
material issue of fact regarding Align’s control or direction of the dentists. 175

In In re Katz Interactive Call Processing Patent Litigation, the patent claims at issue covered methods of processing information from interactive phone calls. 176 The patentee accused DirecTV of infringing the claims through its Interactive Voice Response ("IVR") systems at DirecTV’s customer call center, which allowed customers to order sports and adult programming and to receive other customer service without speaking with a live operator. 177 The parties agreed that West Interactive Corp. provided a substantial portion of each of the services accused of infringement. 178 DirecTV argued that it did not direct or control West. 179 Specifically, DirecTV argued that (1) its contracts with West provided that each party was a principal, and neither was the agent of the other; (2) West was an independent contractor; and (3) DirecTV did not control the architecture of West’s proprietary software that operated the IVR system. 180 "In sum, DIRECTV concludes that West was independently responsible for the design, development, programming and implementation of West’s IVR and for their ‘day to day operation.’" 181 In response, the patentee argued that DirecTV asserted direction and control over West, pointing out that: (1) DirecTV provided West with statements of work regarding the necessary functionality of the IVR, and West coded the IVR applications accordingly; (2) West would not change the IVR applications without a Statement of Work from DirecTV; (3) West would perform business reviews and testing of all IVR applications before implementing them; and (4) DirecTV provided West with necessary information from DirecTV’s customer database. 182 However, the court found the parties’ arguments about different types of control failed to focus on the claimed invention. 183

According to the Court:

175. Id. This reliance on the minimal link between the dentists and Align seems to have been closer to the “some connection” standard applied by some courts before BMC Resources. See supra notes 16-26 and accompanying text.
177. Id. at *43.
178. Id. at *43, *62.
179. Id. at *63.
180. Id.
181. Id.
182. Id. at *63-64.
183. Id. at *64-65.
Although the parties appear to disagree about the amount of control and direction DirecTV exerts over West, the Court notes that they are discussing two different issues. DirecTV points out that West controlled the underlying architecture and proprietary software. Katz points out that DirecTV directed the specific implementation of the IVR applications. Thus, it appears that DirecTV had control over the IVR applications that used hardware and software controlled by West. However, neither party attempts to link what DirecTV does or does not control/direct with the specific technology accused of infringement. To the extent that DirecTV directs or controls the accused West technology, DirecTV can be liable for infringement even if West has an arms length relationship with DirecTV.\(^\text{184}\)

Accordingly, the court found that there was a factual dispute regarding “whether DirecTV directed or controlled the specific West components/steps that are accused of infringement.”\(^\text{185}\)

### 2. Cases Finding Insufficient Control or Direction

Other courts have found that various business relationships did not involve sufficient “control or direction” such that a defendant could not be found to be responsible for steps performed by a third party.

In *Gammino v. Cellco Partnership*, the claims at issue covered processes and apparatuses for preventing telephones from making international calls.\(^\text{186}\) The defendant owned and operated pay telephones and purchased telephone services from various local providers, some of which included international call blocking.\(^\text{187}\) Because there was no evidence that the defendant performed the call blocking steps of the patents (or even knew how those steps were

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184. *Id.* (emphasis added).

185. *Id.* at *65. *But see* Phoenix Solutions, Inc. v. DirecTV Group, Inc., Case No. CV 08-984 MRP (SSx), 2009 U.S. Dist. LEXIS 114977, at *36-40 (C.D. Cal. Nov. 23, 2009) (granting DirecTV’s motion for summary judgment of non-infringement of claims covering particular parts of a voice recognition service where West, not DirecTV, controlled the allegedly infringing elements). For an additional case finding factual issues regarding the existence of sufficient direction of control, see Privasys, Inc. v. Visa Int’l, No. C 07-03257 S1, 2007 U.S. Dist. LEXIS 86838, at *8-9 (N.D. Cal. Nov. 14, 2007) (granting motion for leave to amend complaint where plaintiff, who did not perform all of the steps of the claimed method, had indicated it could show that Visa “provides instructions or direction regarding the use of its payWave card to merchants and banks involved in the process” and has “contractual relationships” with “the financial institutions”).


187. *Id.* at 397.
performed) or directed another party to perform those steps, the court
granted the defendant’s motion for summary judgment.\textsuperscript{188}

In \textit{epicRealm Licensing, LP v. Franklin Covey Co.}, the claims
covered a method of responding to requests for web pages in which a
web server would route requests for web pages with dynamic content
to a “page server.”\textsuperscript{189} The page server would process those requests,
thus releasing the web server to concurrently handle other incoming
requests for web pages.\textsuperscript{190} The plaintiff sued Herbalife, alleging that
its website infringed the patent.\textsuperscript{191} Herbalife claimed that its website
was “owned, selected, controlled, and operated exclusively
by an
independent hosting company.”\textsuperscript{192} Although Herbalife controlled the
content on the website and provided data used to respond to requests
made by users of the website, the court found that “[n]one of these
activities constitute control by Herbalife over how [the hosting
company] managed dynamic data requests,” which was the conduct
accused of infringing the claimed methods.\textsuperscript{193} Accordingly, the Court
recommended that Herbalife’s motion for partial summary judgment
on the patentee’s claim for “joint” direct infringement be granted.\textsuperscript{194}

In \textit{Golden Hour Data Systems, Inc. v. emsCharts, Inc.},\textsuperscript{195} the
claims covered an integrated medical database that included modules
for dispatching emergency medical teams, tracking their movement to
and from an accident scene, and managing the diagnosis, treatment,
and billing of the patient. The patentee sued two companies,
emsCharts and Softech, that provided software that covered billing
and EMS dispatching respectively, and the jury found that they jointly
infringed the asserted claims.\textsuperscript{196} In considering emsCharts’ motion for
judgment as a matter of law, the court observed that although
emsCharts had been a distributor of Softech’s dispatching software
for a year, the agreement between the two companies defined the
relationship as not creating any agency or partnership.\textsuperscript{197} Moreover,
emsCharts did not receive any rights to the software other than the right to promote it to potential users.\textsuperscript{198} Although the parties had submitted a joint bid to at least one customer, “emsCharts did not \textit{direct} Softtech submit the bid. The two companies discussed and \textit{agreed} to submit the bid.”\textsuperscript{199} The court concluded that “[t]here was no evidence at trial to show that the Distributorship Agreement imposed the types of duties or responsibilities upon Softtech that would support a finding of direction or control by emsCharts” and granted emsCharts’ motion for judgment as a matter of law.\textsuperscript{200}

In \textit{The Friday Group v. Ticketmaster}, the claims covered a method of offering a ticket purchaser the opportunity to purchase a recording of a concert when they purchased tickets to the concert and distributing copies of the recording to the purchaser after the concert.\textsuperscript{201} The patentee sued Ticketmaster and a number of concert promoters, accusing them of jointly infringing the patent.\textsuperscript{202} Although the plaintiff alleged that “‘direction or control’ is exercised over the practice of the steps of one or more claims of the patent,” the plaintiff did not give “any indication as to which defendant exercised this direction or control.”\textsuperscript{203} Because the plaintiff failed to allege “that a single defendant practiced each and every element or that any defendant would be liable for joint infringement” the court granted the defendants’ joint motion to dismiss.\textsuperscript{204}

The court in \textit{Emtel, Inc. v. Lipidlabs, Inc.},\textsuperscript{205} gave the “control or direction” test a particularly narrow reading. The patent at issue claimed a method for delivering medical services in which a physician located at a central video-conferencing station would diagnose and recommend a treatment for patients located at remote

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{198} \textit{Id.}
\item \textsuperscript{199} \textit{Id.}
\item \textsuperscript{200} \textit{Id. at 1569.}
\item \textsuperscript{201} \textit{Friday Group v. Ticketmaster, Case No. 4:08CV01203 JCH, 2008 U.S. Dist. LEXIS 100529, at *2-3 (E.D. Mo. December 12, 2008).}
\item \textsuperscript{202} \textit{Id. at *3.}
\item \textsuperscript{203} \textit{Id. at *12-13.}
\item \textsuperscript{205} \textit{Emtel, Inc. v. Lipidlabs, Inc., 583 F. Supp. 2d 811 (S.D. Tex. 2008).}
\end{itemize}
\end{footnotesize}
206 The claims of the patent required several specific steps to be performed by the doctors located at the central video-conferencing station, including “diagnosing a medical condition” of a patient at a remote site and “providing instructions via said video-conferencing system” to the doctor at the remote site to treat the patient at the remote site. 207 The accused telemedicine company provided videoconferencing network links between physicians in which the operators of those systems “enter into contracts with physicians or physician groups who agree to work as independent contractors in providing diagnostic and treatment services.” 208 The contracts specifically provided for the doctors to be available to provide care to a certain number of patients or on a certain schedule and to provide care for a specified rate. 209 However, the contract also identified the physicians as “independent contractors who exercise independent judgment and maintain discretion over the medical care they provide to the patients.” 210

In analyzing the law of joint infringement, the *Emtel* court read *BMC Resources* and *Muniauction* as teaching that when the actions of multiple parties combine to perform the steps of a claimed method, direct infringement requires that the “mastermind,” the controlling party, exercise such direction or control over the entire process that it is vicariously liable for the actions of the other parties in performing the steps of that process. 211

The court concluded that the contractual provisions between the network providers and the doctors “only set basic parameters for the physicians to follow that do not affect, much less control, how they exercise their judgment in performing the medical work that is required” by the claims of the patents. 212 In other words, according to the court: “The degree of control must be such that the defendant could be vicariously liable for the third party’s performance.” 213 Finding a lack of control sufficient to make the operators vicariously

206. *Id.* at 815-16.
207. *Id.*
208. *Id.* at 817.
209. *Id.*
210. *Id.*
211. *Id.* at 831 (emphasis added). *But see* Akamai Techs., Inc. v. Limelight Networks, Inc., 614 F. Supp. 2d 90, 120 (D. Mass 2009), discussed *infra* notes 230-234 and accompanying text.
213. *Id.* at 839.
liable for the actions of the doctors, the court granted summary judgment of non-infringement.  

In imposing a stringent requirement that only by proving vicarious liability could a plaintiff prove that a defendant had sufficient "control or direction" over a third party, the Emtel court likely was too restrictive in its application of the rule, and read "direction" out of the "control or direction" test. Even though the operators caused the doctors to perform diagnoses and suggest courses of treatments over the operators' video conferencing systems, and indeed required the doctors to perform those steps at certain times and a minimum number of times, the Emtel court's reading of Muniauction would require the operators to be vicariously liable for all actions of the doctors.

But the issue was not, for example, whether the operators could be vicariously liable for the malpractice of a doctor, but whether there was sufficient control or direction over the performance of the steps of the patented method such that the operators could be liable for patent infringement. The claims of the patent do not require the diagnosis or recommendation of a course of treatment to be performed in a certain way, such that the physician's judgment or discretion would determine whether or not the claims were infringed. Instead, the claims required that a diagnosis be performed and a treatment be recommended over a video-conferencing system, a step caused by the operators' contractual requirement that the physicians appear for a certain number of consultations. The steps were not performed at the whim of the physicians, but indeed, were performed because of the operators, and would not have been performed over a

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214. Id. at 840.
215. It is unclear whether the Federal Circuit anticipated that there could be a situation where a defendant did not have "control" over a third party, but nonetheless had sufficient "direction" over the third party such that the defendant would be liable for those third parties' performance of steps of a patent claim. Definitions of "direct" and "direction" are very similar to "control," and indeed use "control" or similar terms in their definitions. See, e.g., BLACK'S LAW DICTIONARY 491 (8th ed. 2004) (direct: "1. To aim (something or someone). 2. To cause (something or someone) to move on a particular course. 3 To guide (something or someone); to govern. 4. To instruct (someone) with authority. 5. To address (something or someone)"); WEBSTER'S NEW UNIVERSAL UNABRIDGED DICTIONARY 517 (Deluxe 2nd ed.1983) (Direction: "1. a directing, management, control . . . . 3. instruction for doing, operating, using, preparing, etc. 4. an order; command."). However, given that the Federal Circuit did not simply say that a defendant must have "control," over a third party, courts should consider whether a defendant who is not necessarily vicariously liable for the actions of a third party nonetheless sufficiently directed the actions of that third party such that the third party's actions should be attributable to the defendant for direct patent infringement purposes.
216. Emtel, 583 F. Supp. 2d at 815-17.
video conferencing system as the claims require but for the actions of the operators.

As the court in In re Katz recognized, the question should be whether the defendant "does or does not control/direct" conduct related to "the specific technology accused of infringement." In the Emtel case, the "control or direction" asserted by the operators related directly to the performance of the claim limitations at issue and should have been sufficient to avoid summary judgment in favor of the defendants.

VI. LESSONS IN DRAFTING: THE LIMELIGHT NETWORKS CASES

In BMC Resources, the Federal Circuit observed that many of these problems-of-proof involving claims that required actions by multiple actors could "usually be offset by proper claim drafting." Specifically, "[a] patentee can usually structure a claim to capture infringement by a single party." The difference that drafting can make to the viability of an infringement claim is made clear by two cases involving patents covering similar technologies that were brought against the same defendant: Level 3 Communications, LLC v. Limelight Networks, Inc. and Akamai Technologies, Inc. v. Limelight Networks, Inc. In the Level 3 case, the defendant's motion for summary judgment of non-infringement was denied because the claims only required the performance of steps by a single party. In the Akamai case, the claims required steps to be performed by Limelight's customers, and because the plaintiff failed to prove Limelight exerted the required control or direction over its

217. In re Katz Interactive Call Processing Patent Litigation, Case No. 07-CV-2322-RGK (FFMx), 2009 U.S. Dist. LEXIS 72134, at *64 (C.D. Cal. May 1, 2009), discussed supra notes 176-185 and accompanying text.


220. Id. (citing Lemley, supra note 3, at 272-75). See also Emtel, 583 F. Supp. 2d at 840 (The claims could have avoided the "joint" infringement issue by being written to cover "the telemedicine videoconferencing system provider receiving in a central medical videoconferencing station a physician's diagnosis of a medical condition of a patient in a satellite medical care facility, transmitting that diagnosis to the satellite medical care facility, receiving instructions provided by the physician to treat a patient at the satellite facility; and transmitting those instructions to the satellite medical facility.").


223. Level 3, 603 F. Supp. 2d at 659-60.
customers, Limelight’s motion for judgment as a matter of law of non-infringement was granted.\footnote{224}{\textit{Akamai}, 614 F. Supp. 2d at 122-23.}

The differences in claims between the \textit{Level 3} case and the \textit{Akami} case are instructive. Both cases generally involved methods of using server networks that could respond to data requests to high volume websites by placing servers throughout the country that could provide data to web users, instead of providing data solely from a single, central server. In the \textit{Level 3} case, a representative claim covered:

12. A method, in a system which includes (a) a repeater server network including a plurality of repeater servers, (b) a plurality of subscribers to the repeater server network, wherein the plurality of subscribers are entities that publish resources via at least one origin server, and wherein the at least one origin server is distinct from the plurality of repeater servers, (c) a repeater selector mechanism constructed and adapted to identify, for a particular request, a repeater server to handle the request, and (d) a subscriber verifying mechanism constructed and adapted to verify whether an entity is an one of the plurality of subscribers to the repeater server network, the method comprising:

- on at least some of the repeater servers [sic] in the repeater server network, replicating some or all of the \textit{information available on the at least one origin server};
- upon receipt of a \textit{client request for information}, the \textit{client request being for a resource which is embedded in another document}, determining, using at least the subscriber verifying mechanism, whether the client request is for information from a known entity that publishes resources to the repeater server network; and
- serving the information, from the repeater server identified by the repeater selector mechanism, when the client request is determined to be for information from one of the plurality of subscribers being an entity that publishes resources to the repeater server network.\footnote{225}{U.S. Patent No. 6,654,807 col.29 ll.11-37 (filed Dec. 6, 2001) (emphasis added); see \textit{Level 3}, 630 F. Supp. 2d at 657-58 n.2 (listing asserted claims).}

The limitations in the \textit{Level 3} case made numerous references to “subscribers” (content providers) and “clients” that would likely be different than the owner of the system with multiple repeater servers. However the steps to be performed under the claim—replicating
information, using a subscriber verifying mechanism, and serving information from the repeater servers—would all be performed by the system owner.

In Akamai, however, the claims included steps to be performed by content provider customers of Limelight. In Akamai, a representative claim covered:

19. A content delivery service, comprising:

- replicating a set of page objects across a wide area network of content servers managed by a domain other than a content provider domain;

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

- responsive to a request for the given page received at the content provider domain, serving the given page from the content provider domain;

- and serving at least one embedded object of the given page from a given content server in the domain instead of from the content provider domain.\(^{226}\)

Thus, as indicated by the highlighted text, the “tagging of embedded objects” of a requested page and “serving the given page from the content provider domain” would be performed by the content provider customer, rather than by Limelight itself.

In Level 3, Limelight argued that “a finding of infringement is precluded because subscriber content always originates at subscribers’ own servers, and Defendants cannot be held liable for the actions or devices of its subscribers.”\(^{227}\) The court conceded that “[t]he claims undeniably describe, by way of preamble, a system that assumes the existence of external elements such as origin servers, clients, client requests, and subscriber content . . . . However, the steps comprising the methods implemented in the . . . system do not themselves appear to involve multiple parties.”\(^{228}\) Accordingly, the court distinguished the facts of the case from Muniauction and BMC, and did not even need to consider whether Limelight’s relationship

\(^{226}\) U.S. Patent No. 6,108,703 col.19 ll.6-20 (filed May 19, 1999) (emphasis added); see Akamai, 614 F. Supp. 2d at 100.

\(^{227}\) Level 3, 630 F. Supp. 2d at 659.

\(^{228}\) Id.
with its clients met the "control or direction" standard of those cases. 229

In contrast, in the Akamai case, defendant Limelight was more successful in its reliance upon Muniauction and BMC Resources in light of the form of the claims. In Akamai, the jury had found that Limelight infringed the claims at issue, and awarded $45.5 million in damages. 230 After initially denying a motion for judgment as a matter of law of non-infringement, the district court reconsidered its ruling in light of the Muniauction decision. 231

The Akamai court had read the BMC Resources case as leaving "open the possibility that direction or control adequate for a finding of direct infringement might exist where an accused infringer provided data to another entity along with instructions regarding use of that data" and suggesting "that the existence of a contractual relationship between the accused infringer and the entity performing other steps of the accused method was a significant consideration." 232 In considering the impact of the Muniauction decision, the Akamai court asked: "[I]s vicarious liability a necessary condition to satisfy BMC Resources' control or direction standard, as Limelight asserts, or is it merely a condition sufficient to find infringement within the spectrum of possible interactions ranging from an arms-length agreement to 'contracting out steps of a patented process to another entity?'" 233 The court concluded that vicarious liability was not an absolute requirement, but one way in which a defendant could be liable for the acts of others, along with "having 'another party perform steps on its behalf.'" 234 Thus, unlike the Emtel court, the Akamai court did not find that vicarious liability was a requirement for a finding of sufficient control or direction. 235

229. Id. at 659-60. See also Yangaroo Inc. v. Destiny Media Techs. Inc., Case No. 09-C-462, 2009 U.S. Dist. LEXIS 82052, at *6-7 (E.D. Wis. Aug. 31, 2009) (denying motion for summary judgment of non-infringement despite plaintiff's failure to plead "control or direction" where the court had not yet determined through claim construction whether the claims required actions by multiple parties).


231. Id. at 96, 119.

232. Id. at 117-18.

233. Id. at 120 (quoting BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007)).

234. Id. (quoting Muniauction, Inc. v. Thomson Corp., 532 F.3d 1318, 1330 (Fed. Cir. 2008)).

However, the Akamai court did find that Muniauction established “a new data point on the continuum between an arms-length relationship and vicarious liability for determining direction or control.”\textsuperscript{236} The court found that “Muniauction establishes that direction or control requires something more than merely a contractual agreement to pay for a defendant’s services and instructions or directions on how to utilize those services.”\textsuperscript{237} Accordingly, the court found that Limelight did not assert sufficient direction or control over its customer’s performance of the “tagging” or “serving the given page from the content provider domain” steps:

There is no suggestion that the agreements between Limelight and its customers for content delivery services were other than the result of an arms-length contract negotiation. Akamai has identified no legal theory under which Limelight might be vicariously liable for the actions of the content providers. The first step of claim 19 of the ‘703 patent, serving the initial web page from the content provider’s domain, is performed by the content provider whether it subscribes to Limelight’s services or not. Limelight’s customers, following Limelight’s instructions, do modify the embedded objects of their web pages or alter their DNS records so that requests for the objects resolve to the content delivery service domain, rather than the content provider domain, in order to take advantage of Limelight’s service. However, this step is performed by Limelight’s customers not because they are contractually obligated to do so; rather they do so because they wish to avail themselves of Limelight’s service. Under Muniauction, this is insufficient to establish the requisite direction or control by Limelight of its customers necessary to find it liable for direct infringement.\textsuperscript{238}

Thus, Limelight’s motion for judgment as a matter of law was granted.\textsuperscript{239} In large part because its claims had been drafted to require actions by multiple actors, Akamai’s claims failed while Level 3’s, which had no such requirements, lived on to fight another day.

VII. PROPOSED TESTS FOR “CONTROL OR DIRECTION”

Short of simply deciding on a case-by-case basis where a specific fact scenario falls along the “control or direction” continuum, a process likely to lead to inconsistent results and a lack of

\textsuperscript{236} Akamai, 614 F. Supp. 2d at 120.
\textsuperscript{237} Id. at 121.
\textsuperscript{238} Id. at 122.
\textsuperscript{239} Id. at 123.
predictability for litigants, how can practitioners and courts determine whether an accused “mastermind” exerts sufficient “control or direction” over third parties to make them liable for those third parties actions in a direct infringement claim? Some basic guidelines, supported by the law of agency, would simplify cases involving “joint” or “divided” infringement.

Before jumping into the “control or direction” inquiry, lawyers and courts should determine whether the claims even require steps to be performed by multiple actors. As suggested by Level 3 and Emtel, claims may require the existence of third party actors as part of a claimed system, and even include claims that cover the principal’s receipt of information or materials from, or sending information or materials, to those third parties, as long as the claim limitations themselves require action by only one entity. With such claims, there is no joint or divided infringement, and thus no need to inquire whether the defendant exerts “control or direction” over the third party.

If the alleged infringement does require steps to be performed by multiple parties, courts and lawyers should ask whether the third party whose actions are sought to be attributed to the accused defendant is a customer of the accused, or is a supplier, vendor, or in some other business relationship with the accused. If the former, only in very rare circumstances will there be sufficient “control or direction” over the customer such that actions of those customers may be attributed to the accused. If the latter, it should be determined whether the alleged “control or direction” relate to the specific technology accused of infringement and whether the accused party requires the third party to perform steps of the claim in the manner claimed by those steps.

A. Customers

Supplier-customer relationships are usually the epitome of “arms-length” transactions. A customer buys a product from a

240. See Level 3 Commc’ns, LLC v. Limelight Networks, Inc., 630 F. Supp. 2d 654, 659 (E.D. Va. 2008)(“The claims undeniably describe, by way of preamble, a system that assumes the existence of external elements such as origin servers, clients, client requests, and subscriber content . . . however, the steps comprising the methods implemented in the . . . system do not themselves appear to involve actions by multiple parties.”); Emtel, 583 F. Supp. 2d at 840 (The claims could have avoided the “joint” infringement issue by being written to cover “the telemedicine videoconferencing system provider receiving in a central medical videoconferencing station a physician’s diagnosis of a medical condition of a patient in a satellite medical care facility, transmitting that diagnosis to the satellite medical care facility, receiving instructions provided by the physician to treat a patient at the satellite facility; and transmitting those instructions to the satellite medical facility.”).
supplier is usually free to do with that product as it wishes.\textsuperscript{241} In the rare cases that a customer is restricted in the use of a product, it would likely be unusual for a supplier to \textit{require} a customer to perform a particular process with or on the product purchased. Thus, it is unlikely that a customer would be contractually required to perform a step of a process covered by a patent method claim so that the supplier could be found to have sufficient control or direction over the customer for the purpose of a direct infringement claim.

As recognized by the \textit{BMC Resources} court, the statutory provision covering induced infringement and contributory infringement, 35 U.S.C. § 271(b) & (c) provide for remedies against suppliers who sell products with the intent to actively induce infringement or without substantial non-infringing uses.\textsuperscript{242} Liability under these provisions requires specific intent on the part of the supplier, and liberally allowing claims against suppliers based on the actions of their customers that were not contractually compelled by the suppliers would “subvert the statutory scheme for indirect infringement.”\textsuperscript{243} With a loose standard of “control or direction” covering most supplier-customer relationships, “a patentee would rarely, if ever, need to bring a claim for indirect infringement.”\textsuperscript{244} Of course, in light of the requirement that there be direct infringement in order for there to be indirect infringement, patentees with only method claims requiring actions by multiple actors could likely not resort to an indirect infringement theory if multiple actors performed the steps of an accused claim but there was no mastermind that directed or controlled all of the steps.\textsuperscript{245} However, just as careful

\textsuperscript{241} In the case of software licensees, the licensee may be prohibited from using the software in certain manners, such as making copies or using the software for illegal purposes, but would generally not be affirmatively required to use the software in a certain manner, such as using certain functionality of the software or using the software for a particular type of business. Thus, while a software licensor may restrict the rights to the use of the software that a licensee has, such restrictions should not constitute sufficient “control or direction” to make the licensor responsible for the acts of the licensee software user.

\textsuperscript{242} BMC Resources, Inc. v. Paymentechn, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007).

\textsuperscript{243} \textit{Id.}; see also supra note 76 and accompanying text.

\textsuperscript{244} \textit{Id.}

\textsuperscript{245} \textit{Id.} at 1379 (“Indirect infringement requires, as a predicate, a finding that some party amongst the accused actors has committed the entire act of direct infringement.”). At least one commentator considering the issue of divided infringement has suggested that \textit{BMC Resources} “control or direction” standard is too narrow, and has proposed that tort theories such as the “\textit{prima facie tort}” doctrine, civil conspiracy, and combined nuisance could be used to find liability for direct patent infringement where more than one actor performs the steps of a patent claim. \textit{See} Joshua P. Larsen, \textit{Liability for Divided Performance of Process Claims After BMC Resources, Inc. v. Paymentechn, L.P.}, 19 DEPAUL J. ART, TECH. & INTELL. PROP. L. 41 (2008).
drafting can avoid method claims requiring multiple actors, so too can
most patents supporting method claims also support product claims
that would be amenable to indirect infringement claims under
appropriate circumstances.

Beyond contractual compulsion, one other situation in which the
actions of a customer could be attributable to the supplier is where
software provided to the customer automatically causes the customer
to perform the step of a method. As discussed in American Patent
Development Corporation, LLC v. Movielink, LLC, if the accused
maintains sufficient control over the software itself, notwithstanding
its locations on a remote user's computer, any steps performed by the
software would actually be performed by the accused, making an
inquiry into the "control or direction" over the customer unnecessary.
However, even if the software itself is not controlled by the accused,
if the system operates such that the software automatically performs
steps in response to actions taken by the accused and does not require
any discretion or action by the remote user, it could be argued that the
accused actually "controls" the performance of the step through its
software. In such situations, because the principal is either
performing the step itself or ensuring that it is performed through
computer code, finding direct infringement on the part of the principal
would be appropriate.

B. Vendors & Other Business Relationships

When the third party allegedly performing one or more steps of
an accused method (or making one or more components of an accused
system) is a vendor, a subcontractor, or in another business
relationship other than that of a customer, proving "control or
direction" over that third party should not be so presumptively
difficult. Such relationships often involve contractual relationships in
which the vendor or other business partner is contractually required to
perform in a certain manner. Moreover, these types of relationships
are not already specifically addressed by 35 U.S.C. § 271(c), covering
contributory infringement where a defendant has sold a product with

Del. 2009), discussed supra at notes 141-152. But see Note, Alice Juwon Ahn, Finding
Vicarious Liability in U.S. Patent Law: The "Control or Direction" Standard for Joint
Infringement, 24 BERKELEY TECH. L.J. 149, 174 (2009) (arguing that accused direct infringers
should be vicariously liable for the actions of third parties where they "(1) have taught or
instructed the other party, and (2) derived an obvious and direct financial benefit").

247. Cf BMC Resources, 498 F.3d at 1381 (dismissing BMC's argument that "the data
themselves provide instructions or directions" but dismissing that theory for lack of evidence).
no non-infringing use, and thus are not as likely to conflict with the statutory scheme for indirect infringement. 248

Whether a defendant to a direct infringement claim is liable for steps performed by a third party should depend on the answer to two questions:

Does the defendant’s alleged “control or direction” relate to the specific technology accused of infringement?

If so, did the defendant require the third party to perform the relevant limitations of the claim in the manner provided for in those limitations?

If the answer to both of these questions is “yes,” then there is sufficient control or direction over the third party.

In re Katz suggested the first part of this test. 249 The court in In re Katz recognized that there could be many different types of control and independence in the relationship between DirecTV and West, but what mattered was the extent to which DirecTV controlled West’s conduct related to the interactive phone systems accused of infringement. 250 The court recognized that if there was evidence that DirecTV controlled West’s conduct related to the interactive phone system, then there was an issue of fact regarding whether DirecTV was simply “contracting out steps of a patented process to another entity,” 251 such that it could be found to have controlled or directed the actions of West. 252 Simply put, courts should analyze whether the defendant’s alleged control related to the steps allegedly performed by third parties.

The second part of the test—did the defendant require the third party to perform the relevant limitations of the claim in the manner provided for in those limitations—is suggested by Fisher-Barton Blades, Inc. v. Blount, Inc. 253 and Rowe International Corp. v. Ecast, Inc. 254 In Fisher-Barton, the claims covered blades that were heat treated to achieve a certain hardness, and the evidence showed that the party that performed the heat treating was directed by the

248. Discussed supra notes 76, 242-245 and accompanying text.
250. Id.
251. Id. at *62 (quoting BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373, 1381 (Fed. Cir. 2007).
252. Id. at *65.
defendant to heat treat the blades such that they achieved a certain hardness.\textsuperscript{255} Had the claims in \textit{Fisher-Barton} required a specific type of heat-treatment with specific process conditions, and had the third party been left with the discretion to perform the heat treatment in any manner it saw fit, a different result would have been appropriate.

In \textit{Rowe}, the defendant had required the jukebox manufacturers to manufacture jukeboxes according to certain specifications that fell within the limitations of the patent claims related to a system for connecting jukeboxes to the internet.\textsuperscript{256} In contrast, in \textit{Gammino v. Cellco Partnership}\textsuperscript{257} and \textit{epicRealm Licensing, LP v. Franklin Covey Co.},\textsuperscript{258} the defendants merely paid for services and did not require those services to be provided in a specific manner, and thus there was not sufficient "control or direction." Thus, without explicitly asking whether the defendant required the third party to perform the relevant limitations of the claim in the manner provided for in those limitations, many of the cases decided since \textit{BMC Resources} and \textit{Muniauction} have based their decisions on similar rationales.

This two part test is consistent with the Restatement (Third) of Agency. According to the Restatement:

A principal is subject to liability to a third party harmed by an agent's conduct when the agent's conduct is within the scope of the agent's actual authority or ratified by the principal; and

(1) the agent's conduct is tortious, or

(2) the agent's conduct, if that of the principal, would subject the principal to tort liability.\textsuperscript{259}

Even if a principal does not have such complete control over a third party such that the principal would be vicariously liable for all of the third parties' actions, if the principal requires the third party to perform actions in a certain manner that fall within the limitations of a patent claim, holding the principal responsible for the steps performed by the third party, and ultimately for patent infringement, is consistent with the Restatement. According to section 2.01 of the Restatement: "An agent acts with actual authority when, at the time of taking action that has legal consequences for the principal, the agent reasonably believes, in accordance with the principal's manifestations to the

\textsuperscript{255} \textit{Fisher-Barton}, 584 F. Supp. 2d at 1143.

\textsuperscript{256} \textit{Rowe}, 586 F. Supp. 2d at 933.


\textsuperscript{258} \textit{epicRealm Licensing, LP v. Franklin Covey Co.}, 644 F. Supp. 2d 806, 816, 823 (E.D. Tex. 2008).

\textsuperscript{259} \textit{RESTATEMENT (THIRD) OF AGENCY} § 7.04 (2006) (emphasis added).
agent, that the principal wishes the agent so to act."\(^{260}\) "Actual authority, as defined in § 2.01, is created by a principal's manifestation to an agent that, as reasonably understood by the agent, expresses the principal's assent that the agent take action on the principal's behalf."\(^{261}\) A contract requiring a third party to perform certain steps of a process in a certain manner would create actual authority for the third party to act on behalf of the principal, at least with respect to the performance of those steps in the manner required. Thus, the author's proposed test, and finding "control or direction" in the absence of vicarious liability for all of the actions of third party, is consistent with the Restatement of Agency.\(^{262}\)

The proposed two part test would lead to a different result under the facts of *Emtel, Inc. v. Lipidlabs, Inc.*\(^{263}\) The claims in *Emtel* required "diagnosing a medical condition" of a patient at a remote site and "providing instructions via said video-conferencing system."\(^{264}\) Other than requiring that a diagnosis of a patient be made at a remote site and that a course of treatment be conveyed over a video conferencing system, the claims did not require that a diagnosis be performed in a specific manner. The court in *Emtel* focused on the discretion that the third party doctors had in the way in which a diagnosis was performed.\(^{265}\) But in one important sense, the doctors did not have discretion: a certain number of times they were required to diagnosis patients over a video-conferencing system.\(^{266}\) The system

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260. *Id.* § 2.01.
261. *Id.* § 3.01.

262. Arguably, the Restatement (Third) of Agency would support finding a defendant liable for steps performed by third parties in some situations where the performance of the steps in the manner covered by the claims were not mandated by the defendant. According to the Restatement, "An agent has actual authority to take action designated or implied in the principal's manifestations to the agent and acts necessary or incidental to achieving the principal's objectives, as the agent reasonably understands the principal's manifestations and objectives when the agent determines how to act." *Id.* § 2.02(1). Following this provision, even if a defendant did not require a third party to perform certain steps in the manner provided in patent claim limitations, if the third party performed steps in the manner provided for in the claims and those action were "necessary or incidental to achieving the principal's objectives," the defendant would the liable for the third parties' actions.


264. *Id.* at 815-16.

265. *Id.* at 838 (The court observed that in a hospital-doctor relationship, "[b]ecause a hospital is 'interested in only the results, and the contracting party independently determines the details of the method by which the desired results are attained, an independent contractor relationship exists and the doctrine of respondeat superior has no application.") (quoting *Berel v. HCA Health Servs. Of Tex.*, Inc., 881 S.W.2d 21, 24 (Tex. App. 1994)).

266. The *Emtel* court observed that the Court in *Rowe Int'l Corp. v. Ecast, Inc.*, 586 F. Supp. 2d 924, 933 (N.D. Ill. 2008), "relied on the fact that the contract imposed specific
operator's control over the doctors related to the remote diagnosis network accused of infringement and the system operator controlled the manner in which the step was performed. Specifically, they required that each doctor participating in the system performed a certain number of diagnoses and recommendations of courses of treatment over the network, and that was all that was required of the claim limitation at issue. Accordingly, the patentee should have been permitted to proceed with its infringement claim in Emtel.

The two-part test proposed herein should simplify the inquiry by lawyers and courts examining whether a defendant has "control or direction" over a third party, and minimize the extent to which it is necessary to consider where specific cases might fall along the control or direction continuum.

C. Remaining Loopholes

Even with the above standard for "control or direction" imposing liability on defendants who contract with third parties and require them to perform a step in a specific manner covered by method claims, a potentially giant loophole would remain: parties could contract with third parties in foreign jurisdictions to perform one or more steps of an accused method, and thus avoid infringement. As the Federal Circuit held in NTP, Inc. v. Research in Motion, Ltd., "a process cannot be used 'within' the United States as required by section 271(a) unless each of the steps is performed within the country." Accordingly, even if a defendant outsources the performance of steps of a patented method and required those steps to be performed in a manner that correlates precisely with the limitations of a claim, if that third party were located outside the United States, the proposed, or any, "control or direction" standard would not aid the patentee. This potential loophole further reinforces the importance of drafting to avoid claims that require actions by multiple actors.

instructions and requirements on how the third party is to perform the steps necessary for infringement." Emtel, 583 F. Supp. 2d at 839.
268. Id. The Emtel court observed that "a contracting party is not vicariously liable for the actions of an independent contractor unless that party controls the details of the independent contractor's work to such an extent that the contractor cannot perform the work as he chooses." Id. at 837. Even if Muniauction could be read to require vicarious liability in order to find "control or direction," because the defendant in Emtel did control the doctor's diagnoses in one relevant detail - it required that such diagnoses be given over the video-conferencing system - the test should have been satisfied in Emtel given the correlation between the defendant's control and the claim limitation at issue.
269. NTP, Inc. v. Research In Motion, Ltd., 418 F.3d 1282, 1318 (Fed. Cir. 2005).
It could also be argued that the proposed test would allow principals to easily avoid infringement by simply having a third party perform a step of a claimed method but giving an “off-the-record” indication to the third party about the manner in which the step should be performed.\textsuperscript{270} While this could be a practical issue of proof, the risk of missing some cases of patent infringement in which a principal avoids being found liable for such infringement because of clever deception is not grounds for imposing infringement liability on parties who do not actually direct or control third parties who perform steps as a part of arms-length relationships. Given the general rule that “[d]irect infringement requires a party to perform or use each and every step or element of a claimed method or product,”\textsuperscript{271} the situations in which direct patent infringement can be based on the actions of multiple parties should be relatively few.

VIII. CONCLUSION

Since \textit{BMC Resources}, there has been uncertainty about how to prove “control or direction” over a third party by a “mastermind” sufficient to hold the mastermind liable for steps performed by the third party and liable for direct infringement. Defendants rarely should be found to exert sufficient control over their customers such that they could be held liable for direct infringement based on those customers’ actions. For vendors, subcontractors, or agents, the two-part test advanced in this article should simplify the determination of whether sufficient “control or direction” exists.

\textsuperscript{270} Under §§ 2.01 and 3.01 of the Restatement (Third) of Agency, any “manifestations to the agent” that the “principal wishes the agent to act” are sufficient to prove actual agency. See supra notes 260-261 and accompanying text. Accordingly, provided a patentee could prove that a defendant required a third party to act in a certain way, no formal written agreement with such a requirement should be necessary for the defendant to be liable for the third party’s actions.
