

Induced Patent Infringement
Akamai v. Limelight & McKesson v. Epic Systems

by Edward H. Green, III¹

I. Introduction

On August 31, 2012, the U.S. Court of Appeals for the Federal Circuit (CAFC) issued an *en banc* decision in a consolidated review of two cases dealing with infringement of process, or method, claims (collectively, *Akamai II*).² In a surprising and controversial opinion, the CAFC held that a plaintiff can show induced infringement under 35 U.S.C. § 271(b) where there is no liability for direct infringement due to the “single entity rule” not being satisfied. That is, liability for induced infringement may lie where no one entity performs all claimed method steps.

The Patent Act of 1952 divides patent infringement into three categories, direct infringement, induced infringement, and contributory infringement.³ Section 271(a) of the Patent Act state that “whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.”⁴ Although not mandated by the plain language of § 271(a), courts have held that direct infringement requires that a “single entity” perform all of the steps of a method claim.⁵ The court has recognized joint infringement as an exception to the “single-entity” rule where an agency relationship exists, such that there would

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² *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301 (Fed. Cir. 2012) (*en banc*) (*Akamai II*).

³ 35 U.S.C. § 271(a), et. seq. (2010).

⁴ 35 U.S.C. § 271(a) (2010).

⁵ W. Keith Robinson, *No "Direction" Home: An Alternative Approach to Joint Infringement*, 62 AM. U. L. REV. 59, 84 (2012).

be vicarious liability under common-law tort theory, or where a contractual relationship exists that obligates one party to participate in the infringement.⁶

The other two categories of infringement are collectively known as indirect infringement. Section 271(b) states, “whoever actively induces infringement of a patent shall be liable as an infringer.”⁷ Unlike direct infringement, the courts require a showing that the inducing party has knowledge of the patent to find active inducement.⁸ Additionally the courts have heretofore required a finding of an underlying direct infringement.⁹ In *Akamai II*, the court overturned previous cases to find that the underlying infringement does not need to meet the same “single-entity” test as direct infringement.

Section 271(c) of the Patent Act defines contributory negligence as selling or offering to sell a part of an invention where the part sold has no substantial non-infringing use.¹⁰ Contributory infringement relates to apparatus claims, which are infringed by tangible goods, and is therefore is not relevant to infringement of method claims.

II. Background

Direct Infringement – The Single Entity Test

The Patent Act finds liability for direct infringement against “whoever without authority makes, uses, offers to sell, or sells any patented invention.”¹¹ In order to make, use, offer to sell, sell (collectively, “practice”) a patented invention, a defendant must practice each and every

⁶ *Id.* at 92.

⁷ 35 U.S.C. § 271(b) (2010).

⁸ Robinson, *supra* note 6, at 76.

⁹ *Id.* at 69.

¹⁰ 35 U.S.C. § 271(c) (2010).

¹¹ 35 U.S.C. § 271(a) (2010).

element of the claimed invention.¹² For method patents, this means that there is no infringement liability if a defendant has not performed every step of the claimed method. A party who participates in the infringement, but does not directly infringe, may be liable under indirect infringement, but indirect infringement requires that another party must have directly infringed the claim.¹³ A problem arises where two or more parties collectively perform the steps of a method claim, but neither party performs every step.¹⁴ Neither party is liable for direct infringement since neither has performed every step. Neither is liable for indirect infringement since there is no underlying direct infringement. Courts have tried to fill this hole through various forms of joint infringement.¹⁵

Joint Infringement – The Control or Direction Test

Courts have found liability for direct infringement when one party tries to avoid infringement by having another party perform one of the steps.¹⁶ In *Shield v. Halliburton Co.*, Halliburton applied grout to an underwater oil rig using a patented method which included introducing pressurized air to remove water from the leg while the grout was applied.¹⁷ While Halliburton applied the grout, they collaborated with co-defendant Brown & Root, Inc. to apply the pressurized air.¹⁸ Although neither had performed all of the steps of the claimed method, the court found that because of the level of collaboration they had “singularly and jointly” infringed Shield’s patent.¹⁹

¹² Mark A. Lemley, David O’Brien, Ryan M. Kent, Asshok Ramani, Robert Van Nest, *Divided Infringement Claims*, 33 AIPLA Q.J. 255, 257 (2005).

¹³ *Id.*

¹⁴ *Id.* at 258.

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Shields v. Halliburton Co.*, 493 F. Supp. 1376, 1380 (W.D. La. 1981)

¹⁸ *Id.* at 1388.

¹⁹ *Id.* at 1389.

BMC

In *BMC v. Paymentech*, the CAFC established the “direction or control” test as a threshold for when the relationship between parties warrants finding direct infringement where multiple parties combine to perform the steps of a method claim.²⁰ BMC owned two patents with method claims directed to processing debit transactions without the use of a personal identification number, by using a touch-tone telephone.²¹ In the patented method, a customer initiates a transaction by connecting over the phone to an interactive voice response unit (IVR) which requests that the user enter the transaction information by pressing the numbers on the touch-tone phone. The IVR completes the transaction by passing the information over an ATM network to the bank.²² Thus the actions of the customer, IVR, ATM network, and bank combine to complete the steps of the patented method even though each is typically a separate entity.

Paymentech, a company which operated a pin-less debit transaction service using an IVR phone system, was sued by BMC for infringing the two patents. The court stated that “for method or process claims, infringement occurs when a party performs all of the steps of the process”²³ and that “indirect infringement requires, as a predicate, a finding that some party amongst the accused actors has committed the entire act of direct infringement.”²⁴ Since this method required the actions of multiple parties, the court found the issue to be whether Paymentech could be found vicariously liable for the actions of the other parties. The court declined to find liability “where one party did not control or direct each step of the patented

²⁰ *BMC Resources, Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1375 (Fed. Cir. 2007).

²¹ U.S. Patent Nos. 5,718,298 and 5,870,456.

²² *Id.*

²³ *Id.* at 1379.

²⁴ *Id.*

process.”²⁵ Finding insufficient evidence of “direction or control,” the court affirmed the lower court’s summary judgment in favor of the defendant.²⁶ Restated, the rule from *BMC* is that joint infringement of method patents is found through direct infringement where one party is shown to have “direction or control” over all of the steps of the patented claim.

Muniauction

The CAFC modified the “direction or control” test one year later in *Muniauction v. Thompson*.²⁷ Muniauction, Inc. owns a patent claiming a method for conducting an auction for the sale of municipal bonds over the internet.²⁸ The steps of the patented claims require input from the user, computation of the data, and transmission of the data across the internet.²⁹ Thompson operated an allegedly infringing internet auction system for municipal bonds.³⁰ Both parties agreed that no single entity performed every step of the patented method since the user was required to input data and the computation was handled by the auctioneer’s system.³¹ The court therefore turned to the “direction or control” test from *BMC* to determine if Thompson was the “mastermind” of the entire process and thus could be found liable for the actions of the bidder.³² The court found that although “Thompson controls access to its system and instruct bidders on its use,” this is not sufficient to meet the “direction or control” test required to hold Thompson liable for steps performed by the bidder.³³ The court concluded that “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

²⁵ *Id.* at 1381.

²⁶ *Id.*

²⁷ *Muniauction, Inc. v. Thompson Corp.*, 532 F.3d 1318, 1321-22 (Fed. Cir. 2008).

²⁸ U.S. Patent No. 6,161,099.

²⁹ *Id.*

³⁰ *Muniauction v. Thompson*, at 1323.

³¹ *Id.* at 1328-29.

³² *Id.* at 1329.

³³ *Id.* at 1330.

party that are required to complete performance of a claimed method.”³⁴ Therefore, the court in *Muniauction* clarified the “direction or control” test from *BMC* to require that the other party perform the steps on behalf of the accused party.

III. The Cases: *Akamai I* and *McKesson*

In 2011, the CAFC granted *en banc* review of two cases which questioned the standard used for joint infringement. Both cases involved disputes over internet technologies where it was uncontested that all of the elements of the claimed invention had been performed. In *Akamai v. Limelight (Akamai I)*, the issue was whether there can be liability for infringement where the accused infringer performs some of the steps and then induces one or more other parties to perform the remaining steps of the claimed invention.³⁵ In *McKesson v. Epic Systems (McKesson)*, the issue was whether there can be liability for infringement where the accused infringer performs none of the steps but induces multiple third parties to perform the remaining steps of the claimed invention.³⁶

Akamai I

Akamai Technologies, Inc. and the Massachusetts Institute of Technology (collectively, “Akamai”) owned a patent covering a computer system for hosting one or more multimedia portions of a website to one or more Content Delivery Networks (CDNs) located on another internet domain.³⁷ Claims 19 and 34 recite:

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;

³⁴ *Id.*

³⁵ *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 629 F.3d 1311 (Fed. Cir. 2010) (*Akamai I*).

³⁶ *McKesson Technologies, Inc., v. Epic Systems Corp.*, 98 U.S.P.Q.2d 1281 (Fed. Cir. 2011).

³⁷ U.S. Patent No. 6,108,703.

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 do-main instead of from the content provider domain.

34. A content delivery method, comprising:
distributing a set of page objects across a network of content servers
managed by a domain other than a content provider domain, wherein
the network of content servers are organized into a set of regions;
for a given page normally served from the content provider domain,
tagging at least some of the embedded objects of the page so that
requests for the objects resolve to the domain instead of the content
provider domain;
in response to a client request for an embedded object of the page:
resolving the client request as a function of a location of the client machine
making the request and current Internet traffic conditions to identify
a given region; and
returning to the client an IP address of a given one of the content servers
within the given region that is likely to host the embedded object
and that is not overloaded.

Limelight Networks, Inc. (Limelight) hosted an implementation of a CDN service on the internet but required that its subscribers perform the “tagging” step recited in claims 19 and 34.³⁸ Limelight argued that the facts of this case were indistinguishable from *Muniauction* in that the customer performed some of the steps of the claimed invention.³⁹ Akamai argued that Limelight did more than Thompson in that Limelight provided instructions and technical support to assist the subscriber in performing the tagging and serving step.⁴⁰

Whereas the court in *Muniauction* diminished the importance of the relationship between the parties, the court in *Akamai I* focused exclusively on this relationship. The court held that “there can only be joint infringement when there is an agency relationship between the parties

³⁸ Akamai I, at 1317.

³⁹ *Id.*, at 1318.

⁴⁰ *Id.*

who perform the method steps or when one party is contractually obligated to the other to perform the steps.”⁴¹ The court found neither, since “Limelight’s customers acted principally for their own benefit and under their own control.”⁴²

McKesson

McKesson Technologies, Inc. (McKesson) owns a patent claiming a method for sharing medical information between patient and healthcare provider over the internet.⁴³ Using the system, patients may access personalized web pages to view records and submit appointment or prescription refill requests online. The doctors may access the system to respond to the requests.

Claim 1 recites:

1. A method of automatically and electronically communicating between at least one health-care provider and a plurality of users serviced by the health-care provider, said method comprising the steps of:
initiating a communication by one of the plurality of users to the provider for information, wherein the provider has established a preexisting medical record for each user;
enabling communication by transporting the communication through a provider/patient interface over an electronic communication network to a Web site which is unique to the provider, whereupon the communication is automatically reformatted and processed or stored on a central server, said Web site supported by or in communication with the central server through a provider-patient interface service center;
electronically comparing content of the communication with mapped content, which has been previously provided by the provider to the central server, to formulate a response as a static or dynamic object, or a combined static and dynamic object; and
returning the response to the communication automatically to the user’s computer, whereupon the response is read by the user or stored on the user’s computers
said provider/patient interface providing a fully automated mechanism for generating a personalized page or area within the provider’s Web site for each user serviced by the provider; and

⁴¹ *Id.* at 1320.

⁴² *Id.* at 1321.

⁴³ U.S. Patent No. 6,757,898.

said patient-provider interface service center for dynamically assembling and delivering custom content to said user.

Epic Systems Corp. (Epic) is the author of the “MyChart” software system which allows healthcare providers to offer customized web pages for their patients.⁴⁴ Rather than directly operating the software system, Epic licenses the software to the healthcare providers. McKesson sued Epic for inducing infringement of the claimed method by providing the software to the healthcare providers. Both parties agree that Epic’s customers do not perform the step of “initiating a communication by one of the plurality of user;” rather, that step is performed (as the claim recites) by users.⁴⁵

In applying the “direction or control” test as modified by *Muniauction*, the court found that the issue of the case was whether the relationship between the healthcare providers and the patients was sufficient to attribute to the healthcare providers the steps performed by the patients.⁴⁶ Citing the holding in *Akamai I*, the court looked to see whether an agency or contractual relationship existed. The court found that a doctor-patient relationship does not create an agency relationship and that the patients were not contractually bound to initiate the communication.⁴⁷ Without an agency or contractual relationship, the court found that no single entity directly infringed the claim. Without an underlying direct infringement, the court could not hold Epic liable for inducing infringement.⁴⁸

In *McKesson*, one judge wrote a lengthy dissenting opinion arguing that induced infringement does not need to meet the same “single entity” standard as direct infringement and that the holding in this case does not provide adequate protection for internet based method

⁴⁴ McKesson v. Epic, at 1282.

⁴⁵ *Id.*

⁴⁶ *Id.* at 1283.

⁴⁷ *Id.* at 1284.

⁴⁸ *Id.*

patents.⁴⁹ Another judge concurred with the holding based upon the precedent of *BMC* and *Muniauction* but called for an *en banc* review to determine if those holdings were correct.⁵⁰ One month later, the CAFC granted *en banc* review for both *Akamai I* and *McKesson*.

***En banc* Review (*Akamai II*)**

The court phrased the *en banc* question to be decided as: “If separate entities each perform separate steps of a method claim, under what circumstances would that claim be directly infringed and to what extent would each of the parties be liable?”⁵¹ In granting review of *McKesson*, the court asked the additional *en banc* question, “Does the nature of the relationship between the relevant actors – *e.g.*, service provider/user; doctor/patient – affect the question of direct or indirect infringement liability?”⁵²

In the majority opinion⁵³ the court declined to address the first issue – direct infringement involving multiple actors – and thus ignored half of the *en banc* question. The court reiterated the requirement for an agency relationship but declined to further elaborate. The court instead focused on induced infringement, and held that the acts relating to an underlying direct infringement, required for liability under induced infringement, do not require a single entity to perform all of the steps, and reversed the holdings in both cases.⁵⁴

In order to reach the conclusion that a single entity was not required, the court reinterpreted the requirements for induced infringement.⁵⁵ The holdings in *Akamai I* and *McKesson* both relied on the precedent set forth in *BMC*. In *Akamai II*, the court agreed with the principles, as stated in *BMC*, “that (1) liability for induced infringement requires proof of direct

⁴⁹ *Id.* at 1285-90.

⁵⁰ *Id.* at 1285.

⁵¹ *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 419 Fed. Appx. 989 (Fed. Cir. 2011).

⁵² *McKesson Technologies, Inc., v. Epic Systems Corp.*, 463 Fed.Appx. 906, 907 (Fed. Cir. 2011).

⁵³ *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301 (Fed. Cir. 2012) (*Akamai II*)

⁵⁴ *Id.* at 1318-19.

⁵⁵ *Id.* at 1308-09.

infringement and (2) liability for direct infringement requires that a single party commit all the acts necessary to constitute infringement.”⁵⁶ The court held that when multiple parties combine to perform the steps of a patented method, their acts may be combined to provide proof of a direct infringement even though no party may be held *liable* for direct infringement. The court distinguished the use of the word “infringement” in section 271(b) from the liability for infringement (requiring a single actor) as defined in section 271(a). Under their analysis, “infringement,” as the term is used in section 271(b), occurs whenever all of the steps of the patented method have been performed. Therefore, a party may be held liable for induced infringement where that party has actively induced the performance of all of the steps of the patented method even if no single entity has individually performed all of the required steps and without requiring an agency relationship. The rationale behind this holding is that a party should not be able to avoid liability for infringement by dividing the performance among several actors. Where a party induces the practice of a patented method, the owner of the patent has been equally harmed whether the steps were performed by one party or divided among several.⁵⁷

Direct infringement, a strict liability tort, does not require the infringing party to have knowledge of the patent. However, induced infringement “requires that the accused inducer act with knowledge that the induced acts constitute patent infringement.”⁵⁸ Therefore to find liability for joint infringement of a patented method, the court requires a showing that 1) the accused party has knowledge of the patent, 2) that all of the steps of the method have been performed, and 3) that the accused party actively induced the performance of the steps.⁵⁹

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.* at 1308.

⁵⁹ *Id.* at 1318.

Dissents

Judge Linn led four judges in a dissent which directly addressed the *en banc* question, supporting the single entity rule for direct infringement, and requiring underlying direct infringement as a prerequisite to induced infringement liability. This dissent criticized the majority for attempting to rewrite §§ 271(a) and (b), and disregarding Supreme Court precedent that “if there is no direct infringement of a patent there can be no contributory infringement.”⁶⁰ Indeed, Judge Linn characterized the majority’s rewrite of § 271(a) as “Whoever actively induces infringement of [*or induces two or more separate parties to take actions that, had they been performed by one person, would infringe*] a patent shall be liable as an infringer.”⁶¹

Judge Newman wrote a separate dissent, criticizing both the majority and minority opinions. Judge Newman noted that the issue of liability through induced infringement (§ 271(b)) was briefed by neither the parties nor any of the numerous *amici curiae* (of which there were nearly 50).⁶² Judge Newman would discard the “single entity” rule.

The court should simply acknowledge that a broad, all-purpose single-entity requirement is flawed, and restore infringement to its status as occurring when all of the claimed steps are performed, whether by a single entity or more than one entity, whether by direction or control, or jointly, or in collaboration or interaction.⁶³

Judge Newman would, however, retain the rule that inducement to infringe under § 271(b) requires direct infringement under § 271(a). “I need not belabor the quandary of how there can be direct infringement but no direct infringers.”⁶⁴ Judge Newman noted that the majority opinion offers no guidance on apportioning damages, and suggest that “[r]emedies for infringement may

⁶⁰ *Id.* at 1337, quoting *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 341 (1961).

⁶¹ *Id.* at 1339 (emphasis in original).

⁶² *Id.* at 1320 (see note 1 for a list of *amici curiae*).

⁶³ *Id.*, at 1326.

⁶⁴ *Id.*, at 1328.

be apportioned on such traditional tort factors as the relative contribution to the injury to the patentee, the economic benefit received by the tortfeasor, and the knowledge and culpability of the actor,” citing the Restatement of the Law of Torts.⁶⁵

IV. Conclusion

Liability for divided infringement of method claims has evolved rapidly, and will most likely remain in flux, given that method claims dominate software and Internet patents. In the ongoing attempt to define liability for joint infringement of method claims, the court has balanced the interests of the patent holder against the interests of innocent parties that happen to combine to perform the steps of a patented method claim. The court struggled to soften, without obviating, the “single entity” rule by adding requirements such as direction, control, or agency relationship, to hold multiple parties liable for direct infringement while protecting innocent parties from the harshness of strict liability. Faced with the increasing economic value of method claims, however, the court sought to further shift that balance to provide greater remedy to patent owners. By focusing on the party inducing infringement, rather than direct infringers, the court has struck a new balance – requiring only knowledge of the patent and inducement to infringe to hold a party liable, while still shielding those who directly practice only part of a method claim.

In less than a decade, the law of joint infringement of method patents has shifted from the “single entity” test to the “direction or control” test to agency principles and now to induced infringement that side-steps the “single entity” question. With an almost evenly divided court, the law may change again in the future – either by the Supreme Court or Congress.

⁶⁵ Id., at 1331.

In the face of such uncertainty, patent claim drafters must carefully consider the question, “who’s the infringer?” when crafting method claims. Ideally, method claims should include only steps that are necessarily performed by a single entity. The claims at issue in this case are instructive in this regard. For example, the claims in *Akamai I* could have been written to omit the step of tagging embedded objects in web pages. Rather, the method could include a step such as “receiving web pages included tagged embedded objects . . .” which would be performed by the web page hosting service regardless of what entity performed the step of embedding the tags. Similarly, the claims in *McKesson* could have avoided the step of a user initiating a communication, by rephrasing the step as “receiving a communication initiated by one of the plurality of users . . .” This would result in all method steps being performed by the health care provider system.⁶⁶ Since the law in this area is likely to further evolve, the best protection for patent owners is for claim drafters to operate as if the “single entity” rule remains in force, and without reliance on induced infringement.

⁶⁶ Although the court did not note it, *McKesson*’s patent also included the step “enabling communication by transporting the communication through a provider/patient interface over an electronic communication network . . .”, a step also not performed by the health care provider. This limitation could also be phrased as “receiving, over an electronic communication network, the communication . . .”