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## Cloud Computing Patent Law: Always and Never The Same

2014 Emerging Issues 7269

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Cloud computing typically refers to the use of economies of scale to provide large-scale distributed computing systems wherein clusters of remote servers provide centralized processing and data storage. Using the networks provided by the internet, cloud computing allows many users to share remote resources and services, thus reducing the upfront investment and costs for the user, who might otherwise have to invest in their own technology and upkeep.

Conceptually, cloud computing isn't new. It has been around for decades, in some examples going back to mainframe technologies that were accessible to individual users or institutions via simple terminals that could use allotments of time on the mainframe, or shared allotments of time to minimize downtime on the mainframes. Nevertheless it has enjoyed a resurgence of interest with impressive growth rates.<sup>1</sup>

More specifically, according the National Institute of Standards and Technology, part of the U.S. Department of Commerce,<sup>2</sup> there are at least 5 essential defining characteristics of cloud computing, these include:

- 1) **On-demand self-service.** A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.
- 2) **Broad network access.** Capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous thin or thick client platforms (e.g., mobile phones, tablets, laptops, and workstations).
- 3) **Resource pooling.** The provider's computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand.
- 4) **Rapid elasticity.** Capabilities can be elastically provisioned and released, in some cases automatically, to scale rapidly outward and inward commensurate with demand. To the consumer, the capabilities available for provisioning often appear unlimited and can be appropriated in any quantity at any time.
- 5) **Measured service.** Cloud systems automatically control and optimize resource use by leveraging a metering capability at some level of abstraction appropriate to the type of service (e.g., storage, processing, bandwidth, and active user accounts). Resource usage can be monitored, controlled, and reported, providing transparency for both the provider and consumer of the utilized service.

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[http://www.fsn.co.uk/channel\\_outsourcing/the\\_economy\\_is\\_flat\\_so\\_why\\_are\\_financials\\_cloud\\_vendors\\_growing\\_at\\_more\\_than\\_90\\_percent\\_per\\_annum#.UbmtsPJlPGA/](http://www.fsn.co.uk/channel_outsourcing/the_economy_is_flat_so_why_are_financials_cloud_vendors_growing_at_more_than_90_percent_per_annum#.UbmtsPJlPGA/)

2 <http://www.nist.gov/>

Cloud computing can also include, for example, other characteristics that make it attractive to businesses today. These include, agility, reduced costs, lower barriers to entry, usage-based pricing, independence from any particular device or location, portability, outsourced maintenance, monitored performance, scalability, security and general elasticity, to name a few.

Cloud computing is typically configured to provide a client with one or more of the following service models.

- a) Infrastructure as a service (IaaS), typically the most basic type of cloud service offered, these include services wherein the cloud computing provider offers the client with the use of physical or virtual machines offsite. The client is often required to maintain their own software and operating systems, patching and installing new applications when necessary.
- b) Platform as a Service (PaaS), wherein the cloud computing provider is configured to deliver a computing platform, for example, an operating system, webserver, execution environment of database for use by the client, and typically as configured by the client to their specifications.
- c) Software as a service (SaaS) allows clients to access software and databases that are maintained on remote infrastructures. Maintenance of software and underlying hardware infrastructure is done by the provider. Systems like these and other on-demand-software services may be configured to provide pay-per-use like subscription services. In more recent iterations, SaaS can include SaaS integration platforms (SIPs) which provide clients the ability to access most or all their software and applications from a single interface, reducing the need for duplication of data and providing, in some instances, a greater degree of synchronization between different software applications.

Along with the resurgence of cloud computing, there has been an increase in patenting of cloud computing innovation. One straightforward analysis indicates that cloud computing patents are on the rise, with a surprising number of patent families originating outside of the United States.<sup>3</sup>

With the increasing number of cloud patents<sup>4</sup>, and efforts to obtain more,<sup>5</sup> come the inevitable increase in cloud computing patent litigation,<sup>6 7</sup> including litigation brought by non-practicing

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3 Charlie Liang Analysis of cloud computing patent holder March 17, 2014, available at <http://thoughtsoncloud.com/2014/03/analysis-of-cloud-computing-patent-holders/>.

4 Jack Clark, Forget the mobile patent wars – these web giants have patented your DATA CENTER Route traffic? Made a load balancer? Oops, The Register, 11 Jul 2014, available at [http://www.theregister.co.uk/2014/07/11/google\\_microsoft\\_amazon\\_patents/](http://www.theregister.co.uk/2014/07/11/google_microsoft_amazon_patents/).

5 Press Release: Intellectual Ventures Announces Patent Agreement with Salesforce.com, May 24, 2013, available at <http://www.intellectualventures.com/news/press-releases/intellectual-ventures-announces-patent-agreement-with-salesforce.com/>.

6 <http://www.networkworld.com/article/2208318/cloud-computing/cloud-computing-raises-risk-of-patent-litigation--attorney-says.html>.

7 <http://www.itnews.com.au/News/282994,emc-vmware-named-in-cloud-patent-suit.aspx>; <http://www.thewhir.com/web-hosting-news/cloud-firm-personalweb-files-patent-infringement-lawsuit-against-google-amazon>.

entities (i.e., trolls)<sup>8</sup> against large cloud computing providers, including Google and Amazon as well as media companies including the New York Times and Time Magazine.<sup>9 10</sup>

At the same time, many large cloud service providers are openly announcing that they will not enforce their cloud related patents, in some part, to provide “a more robust defensive capability against incoming patent aggression.”<sup>11</sup> To this end, Google, for example has ‘donated’ 79 patents related to cloud computing to the public domain.<sup>12</sup>

Efforts to collect cloud related patents and to litigate notwithstanding, the technology for cloud computing patents tends suffer from at least one glaring problem vis a vis patenting: the inherently distributed nature of cloud computing and related platforms makes it highly likely that method claims will be rarely infringed in their entirety by single infringers.

Thus, until the boon of the en banc Federal Circuit en banc decision in *Akamai*,<sup>13</sup> patentees had to be careful to draft claims with a single infringer in mind. These tend to be particularly difficult in the cloud computing context, given its distributed nature and the tendency of service providers to employ third-party technologies, and/or outsource some back-end components of their services. Furthermore, the nature of the cloud may hide the infringement of some individual actors, making finding an induced infringement, likely a provider with deeper pockets than their numerous clients, more amenable to cloud computing patentees.

The US Code provides that:

- (a) Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.
- (b) Whoever actively induces infringement of a patent shall be liable as an infringer.<sup>14</sup>

The Federal Court has made it clear that different types of claims for inventions can be treated differently, for example, in terms of determining infringement under [35 USC 271\(a\)](#).<sup>15</sup>

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8 Amanda Ciccattelli, Patent trolls invade the cloud: The success of cloud computing has caught the attention [sic] of patent trolls, Inside Counsel, January 14, 2014, available at <http://www.insidecounsel.com/2014/01/14/patent-trolls-invade-the-cloud>.

9 <http://www.law360.com/articles/473572/unified-patents-seeks-uspto-review-of-clouding-ip-s-patent>.

10 <http://www.law360.com/articles/399063/nyt-cnn-reuters-others-hit-with-cloud-patent-suits>.

11 E.g., Google's Open Patent Non-Assertion Pledge (Open Patent Non-Assert or OPN, available at <http://www.google.com/patents/opnpledge/>).

12 Jeff John Roberts, Google donates 79 more patents to shield the cloud from lawsuits, August 8, 2013, Gigaom, available at <https://gigaom.com/2013/08/08/google-donates-79-more-patents-to-shield-cloud-from-lawsuits/>.

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

14 35 U.S. Code § 271 - Infringement of patent

15 [Minton v. Nat'l Ass'n of Sec. Dealers, Inc.](#), 336 F.3d 1373, 1378 (Fed.Cir.2003)

Thus, unlike a claim for a product, device or system where, for example the court concluded, “that the system had been used in the United States even though one of the claim limitations was only met by including a component located in Norway,”<sup>16</sup> or that

“We hold that to “use” a system for purposes of infringement, a party must put the invention into service, *i.e.*, control the system as a whole and obtain benefit from it [...] It did not matter that the user did not have physical control over the relays, the user made them work for their patented purpose, and thus “used” every element of the system by putting every element collectively into service.”<sup>17</sup>

The courts have determined that when a method or process consists of one or more steps, “[i]t is well established that a patent for a method or process is not infringed unless all steps or stages of the claimed process are utilized.”<sup>18</sup> Similarly, “users of accused system could not infringe method claims in the United States because one step of the method was performed in Canada.”<sup>19</sup>

What happens then when more than one party infringes parts -- but not individually -- all of the method claim?

When a method patent is infringed by two or more parties, the doctrine of joint infringement can result in liability provided that there is some relationship between the infringing parties. Initially, the courts had difficulty in defining this exact relationship. This is a long running concern and the exact nature of the necessary relationship has been in flux for a long time.<sup>20</sup>

For example in *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, the court suggested that “that some connection between the different entities justified” finding them liable for infringement.<sup>21</sup> In particular, the court “discerned no flaw” in the jury instructions of the district court, which included the following:

“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.”<sup>22</sup>

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16 *NTP, Inc. v. Research in Motion*, [418 F.3d 1282, 1316](#) (Fed.Cir.2005) (Referring to *Decca Ltd. v. United States*, [210 Ct.Cl. 546](#), 544 F.2d 1070 (1976).)

17 *Centillion Data Systems v. Qwest Communications*, [631 F. 3d 1279, 1284](#) (Fed. Cir. 2011)

18 *Roberts Dairy Co. v. United States*, [530 F.2d 1342, 1354](#) (1976); *Canton Bio-Medical v. Integrated Liner Tech.*, [216 F.3d 1367, 1370](#) (Fed. Cir. 2000) (“Infringement of process inventions is subject to the “all-elements rule” whereby each of the claimed steps of a patented process must be performed in an infringing process, literally or by an equivalent of that step, with due attention to the role of each step in the context of the patented invention.”)

19 *Muniauction, Inc. v. Thomson Corp.*, [532 F. 3d 1318, 1329](#) (Fed. Circ. 2006) (Citing *NTP, Inc. v. Research in Motion*, [418 F.3d 1282, 1317-18](#) (Fed.Cir.2005))

20 Veeraraghavan, Sriranga , Joint Infringement of Patent Claims: Advice for Patentees [23 Santa Clara Computer & High Tech. L.J. 211 \(2006-2007\)](#).

21 *Faroudja Labs., Inc. v. Dwin Elecs., Inc.*, [76 F. Supp. 2d 999](#) (N.D. Cal 1999)

22 *On Demand Machine Corporation v. Ingram Industries, Inc.*, [442 F. 3d 1331, 1345](#) (Fed. Cir. 2006)

In *Cross Medical Products*, citing precedent, the court noted that first, "In order to succeed on a claim of inducement, the patentee must show, first that there has been direct infringement"<sup>23</sup> and that this direct infringement required that for Medtronic to be found infringing, the other party that performed some of the limitations of the method claim had to be "agents" of Medtronic.<sup>24</sup>

In *BMC Resources v. Paymentech, L.P.*, the Federal Circuit worked towards shoring up multiple different court decisions on the issue of joint infringement and work to explicitly determine exactly how multiple parties could be found to be infringing a method claim.<sup>25</sup> It was established that this relationship had to be one of "direction of control" between the infringing parties,<sup>26</sup> without such a relationship none of the infringing parties could be said to have "perform[ed] or cause[d] to be performed each and every element of the claims."<sup>27</sup>

Citing to Restatement (Second) for support,<sup>28</sup> the court reasoned that it would be "unfair indeed for the *mastermind* in such situations to escape liability."<sup>29</sup>

Further, mere "arms-length cooperation" by the parties does not give rise to direct 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."<sup>30</sup>

A year later, in *Muniauction*, the Federal Circuit further articulated its new consolidated standard, particularly in instances where one of the parties provides instructions to complete the infringement of the method claims. Here, the court required that either the infringers perform "every step of the claimed methods [or] had another party perform steps on its behalf."<sup>31</sup> Crystallizing this, the court further noted that it would find joint liability in instances where "the law would traditionally hold the accused direct infringer vicariously liable for the acts committed by another party."<sup>32</sup>

The Federal Circuit had since pursued this line of reasoning. In *Golden Hour*, with Judge Newman dissenting, the court found that where the defendants "formed a strategic partnership, enabled

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23 *Cross Medical Products, Inc. v. Medtronic Sofamor Danek*, [424 F. 3d 1293](#) (Fed. Cir. 2005)

24 *Cross Medical Products, Inc. v. Medtronic Sofamor Danek*, [424 F. 3d 1293, 1311](#) (Fed. Cir. 2005)

25 Su, Michael Liu. "PATENT LAW: A Rock and a Hard Place: Choosing Between § 271 (a) and (b) for Divided Infringement in *Akamai*." *Berkeley Tech. LJ* 28 (2013): 609-1111

26 [498 F.3d 1373](#) (Fed. Cir. 2007).

27 [498 F.3d 1373, 1382](#) (Fed. Cir. 2007).

28 Agency § 220 cmt. d)

29 *BMC Resources v. Paymentech, L.P* [498 F.3d 1373, 1381](#) (Fed. Cir. 2007)(emphasis added)

30 *BMC Resources v. Paymentech, L.P* [498 F.3d 1373, 1381](#) (Fed. Cir. 2007)(emphasis added).

31 *Muniauction, Inc. v. Thomson Corp.*, [532 F. 3d 1318, 1330](#) (Fed. Cir. 2008).

32 [532 F.3d at 1330](#).

their two programs to work together, and collaborated to sell the two programs as a unit.”<sup>33</sup> The court felt that control or direction wasn’t satisfied. As it further necessitated that this control or direction as one of a mastermind and a complicit party: “Where the combined actions of multiple parties are alleged to infringe process claims, the patent holder must prove that one party exercised “control or direction” over the entire process such that all steps of the process can be attributed to the controlling party, i.e., the “mastermind.””<sup>34</sup>

Subsequently, in the nonprecedential *Travel Sentry v. Tropp*, the court ruled reiterated its joint liability standard. “In cases in which more than one entity performs the steps of a claimed method or process, a party is liable for direct infringement only if that party exercises “control or direction” over the performance of each step of the claim, including those that the party does not itself perform.”<sup>35</sup>

In 2012, the Federal Circuit again revisited the issue in *Akamai*.<sup>36</sup> Akamai was a consolidated *en banc* decision that included the panel *Akamai* case<sup>37</sup>, and also included a second related case, *McKesson*.<sup>38</sup>

Akamai is the exclusive licensee of an MIT patent 6,108,703. Akamai accused Limelight of infringing this patent, relating to a data delivery method via a content delivery network. In particular, Akamai’s patent allowed for a “scalable solution that could efficiently deliver large amounts of web content and handle flash crowds. Akamai obtained the three patents at issue, which all share the same specification and disclose a system for allowing a content provider to outsource the storage and delivery of discrete portions of its website content.”<sup>39</sup>

The claimed method at issue was claim 34<sup>40</sup>:

“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:”

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33 *Golden Hour Data Systems, Inc. v. emsCharts, Inc.*, [614 F.3d 1367, 1371](#) (Fed. Cir. 2010)

34 *Golden Hour Data Systems, Inc. v. emsCharts, Inc.*, [614 F.3d 1367, 1380](#) (Fed. Cir. 2010)

35 *Travel Sentry, Inc. v. Tropp*, [Nos. 2011-1023, 2011-1367](#) (Fed. Cir. Nov 5, 2012)

36 *Akamai Technologies, Inc. v. Limelight Networks*, [629 F.3d 1311](#) (Fed. Cir. 2010).

37 *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, No. 2009-1372 (Fed. Cir. Aug. 31, 2012).

38 *McKesson Techs. Inc. v. Epic Sys. Corp.*, No. 2010-1291, [2011 U.S. App. LEXIS 7531](#), (Fed. Cir. Apr. 12, 2011)

39 *Akamai Technologies, Inc. v. Limelight Networks*, [629 F.3d 1311, 1315](#) (Fed. Cir. 2012)

40 US Patent [6,108,703](#) (emphasis added)

“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.”

Both parties agreed that Limelight did not perform every step of the method claim. Rather: “Limelight provides the information necessary for its customers, the content providers, to modify their web pages or Internet address routing information to use the Limelight service. However, the content providers perform the actual tagging step (emphasized above) themselves.”<sup>41</sup>

Limelight argued, as a result that under *BMC*, and later, under reconsideration, under *Muniauction*, they lacked the control or direct requirement of joint infringers and were therefore not infringed. The district court granted a judgment as a matter of law (JMOL) to Limelight “holding that there was no material difference between Limelight's interaction with its customers and that of Thomson in *Muniauction*.”<sup>42</sup>

In reviewing the case, in the first Akamai panel decision, the Federal Circuit reiterated a slightly different view, harkening back to *Cross Medical*, of its direction or control doctrine:

“[T]he court has recognized that direct infringement applies when the acts of infringement are committed by an agent of the accused infringer or a party acting pursuant to the accused infringer's direction or control... **Absent an agency relationship** between the actors or some equivalent, however, a party that does not commit all the acts necessary to constitute infringement has not been held liable for direct infringement even if the parties have arranged to “divide” their acts of infringing conduct for the specific purpose of avoiding infringement liability.”<sup>43</sup>

Thus,

“While control or direction is a consideration, as is the extent to which instructions, if any, may be provided, what is essential is not merely the exercise of control or the providing of instructions, but whether the relationship between the parties is such that acts of one may be attributed to the other. Implicit in this court's holdings in *BMC Resources* and *Muniauction* is that the performance of a method step may be attributed to an accused infringer when the relationship between the accused infringer and another party performing a method step is that of principal and agent, applying generally accepted principles of the law of agency as explicated by the Supreme Court and the Restatement of Agency. The Restatement defines agency as “the fiduciary relationship that arises when one person (a ‘principal’) manifests

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41 *Akamai Technologies, Inc. v. Limelight Networks*, [629 F.3d 1311, 1317](#) (Fed. Cir. 2012)

42 *Akamai Technologies, Inc. v. Limelight Networks*, [629 F.3d 1311, 1318](#) (Fed. Cir. 2012)

43 *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, No. 2009-1372 (Fed. Cir. Aug. 31, 2012) (emphasis added)



assent to another person (an `agent') that the agent shall act on the principal's behalf and subject to the principal's control, and the agent manifests assent or otherwise consents so to act."

"For an agency relationship to exist, and thus, for infringement to be found, both parties must consent that the agent is acting on the principal's behalf and subject to the principal's control."<sup>44</sup>

With this in mind, the court ruled that:

"[A]s a matter of Federal Circuit law that there can only be joint infringement when there is an agency relationship between the parties who perform the method steps or when one party is contractually obligated to the other to perform the steps. Neither is present here... In this case, there is nothing to indicate that Limelight's customers are performing any of the claimed method steps as agents for Limelight."<sup>45</sup>

McKesson, alleged that Epic induced their clients to infringe the patent at issue, U.S. Patent No. 6,757,898. Epic, a software provider which sells a healthcare related program, MyChart, itself does not perform any of the limitations of the method claims; rather the performance of the method is split between patients and their healthcare providers.<sup>46</sup> McKesson had argued that rather than look to agency, the Court should consider joint infringement as a type of joint tortfeasor. "Under tort law, according to McKesson, joint liability attaches "where the acts of each of two or more parties, standing alone, would not be wrongful, but together they cause harm to the plaintiff."<sup>47</sup>

The panel found that the concept of joint tortfeasor would not work in the instance of direct liability in patent law as it is "a strict-liability offense limited to those who practice each and every element of the claimed invention."<sup>48</sup>

"Since the user (patient), not the provider (physician), decides whether to initiate the communication, the court holds that the provider does not "control or direct" whether the user takes this initiating step."<sup>49</sup>

Thus,

"[w]ithout an agency relationship or contractual obligation, the MyChart users' actions cannot be attributed to the MyChart providers, Epic's customers. Thus, McKesson has failed to demonstrate that any single party directly infringes the '898 patent. Absent direct infringement, Epic cannot be liable for indirect infringement."

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44 *Akamai Technologies, Inc. v. Limelight Networks*, [629 F.3d 1311, 1319](#) (Fed. Cir. 2012)(citations omitted)

45 *Akamai Technologies, Inc. v. Limelight Networks*, [629 F.3d 1311, 1320](#) (Fed. Cir. 2012)

46 *McKesson Technologies Inc. v. Epic Systems Corporation*, No. 2010-1291 (Fed. Cir. Apr. 12, 2011).

47 *McKesson Technologies Inc. v. Epic Systems Corporation*, No. 2010-1291 (Fed. Cir. Apr. 12, 2011).

48 *McKesson Technologies Inc. v. Epic Systems Corporation*, No. 2010-1291 (Fed. Cir. Apr. 12, 2011).

49 *McKesson Technologies Inc. v. Epic Systems Corporation*, No. 2010-1291 (Fed. Cir. Apr. 12, 2011).



In its en banc review of the cases, the Federal Circuit stated, but did not review its precedent regarding direct infringement:

“In the context of a method claim, that means the accused infringer must perform all the steps of the claimed method, either personally or through another acting under his direction or control. Direct infringement has not been extended to cases in which multiple independent parties perform the steps of the method claim [...] Absent an agency relationship between the actors or some equivalent, however, a party that does not commit all the acts necessary to constitute infringement has not been held liable for direct infringement even if the parties have arranged to "divide" their acts of infringing conduct for the specific purpose of avoiding infringement liability.”<sup>50</sup>

Rather, the court focused on issues of induced infringement under [35 U.S.C. § 271\(b\)](#). Induced infringement, unlike direct infringement is not a strict liability offense. For example, in DSU, the court noted that the “requirement that the alleged infringer knew or should have known his actions would induce actual infringement necessarily includes the requirement that he or she knew of the patent.”<sup>51</sup>

“Recent precedents of this court have interpreted section 271(b) to mean that unless the accused infringer directs or controls the actions of the party or parties that are performing the claimed steps, the patentee has no remedy, even though the patentee's rights are plainly being violated by the actors' joint conduct. *We now conclude that this interpretation of section 271(b) is wrong as a matter of statutory construction, precedent, and sound patent policy.*”<sup>52</sup>

The court reasoned that:

“Because section 271(b) extends liability to a party who advises, encourages, or otherwise induces others to engage in infringing conduct, it is well suited to address the problem presented by the cases before us, i.e., whether liability should extend to a party who induces the commission of infringing conduct when no single "induced" entity commits all of the infringing acts or steps but where the infringing conduct is split among more than one other entity.”<sup>53</sup>

While the court noted that:

“An important limitation on the scope of induced infringement is that inducement gives rise to liability only if the inducement leads to actual infringement. That principle, that there can be no indirect infringement without direct infringement, is well settled. The reason for that rule is simple: There is no such thing as attempted

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50 *Akamai Technologies, Inc. v. Limelight Networks, Inc.*, No. 2009-1372 (Fed. Cir. Aug. 31, 2012).

51 *DSU Medical Corp. v. JMS Co., Ltd.*, [471 F. 3d 1293, 1304](#) (Fed. Cir. 2006)

52 *Akamai Technologies, Inc. v. Limelight Networks*, [692 F. 3d 1301, 1306](#) (Fed. Cir. 2012)(emphasis added)

53 *Akamai Technologies, Inc. v. Limelight Networks*, [692 F. 3d 1301, 1307-8](#) (Fed. Cir. 2012).

patent infringement, so if there is no infringement, there can be no indirect liability for infringement.”<sup>54</sup>

Importantly, and here is where the Federal Circuit has been criticized, the court reasoned: “Requiring proof that there *has been* direct infringement as a predicate for induced infringement is not the same as requiring proof that a single party would be *liable* as a direct infringer.”<sup>55</sup>

Therefore, reasoned, the *en banc* court,

“If a party has knowingly induced others to commit the acts necessary to infringe the plaintiff's patent and those others commit those acts, there is no reason to immunize the inducer from liability for indirect infringement *simply because the parties have structured their conduct so that no single defendant has committed all the acts necessary to give rise to liability for direct infringement.*”<sup>56</sup>

As a practical matter, reasoned the court,

“A party who knowingly induces others to engage in acts that collectively practice the steps of the patented method—and those others perform those acts—*has had precisely the same impact on the patentee as a party who induces the same infringement by a single direct infringer; there is no reason, either in the text of the statute or in the policy underlying it, to treat the two inducers differently.* In particular, there is no reason to hold that the second inducer is liable for infringement but the first is not.”<sup>57</sup>

In expectation of the argument that the Supreme Court will later use to unanimously reverse the *en banc* decision, the court supported its decision noting that:

“The text of the induced infringement statute is entirely consistent with this analysis. While the direct infringement statute, section 271(a), states that a person who performs the acts specified in the statute “infringes the patent,” section 271(b) is structured differently. It provides that whoever “*actively induces infringement of a patent shall be liable as an infringer.*” *Nothing in the text* indicates that the term “infringement” in section 271(b) is limited to “infringement” by a single entity. Rather, “infringement” in this context appears to refer most naturally to the acts necessary to infringe a patent, not to whether those acts are performed by one entity or several.”<sup>58</sup>

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54 *Akamai Technologies, Inc. v. Limelight Networks*, 692 F. 3d 1301, 1308 (Fed. Cir. 2012). (citations omitted) (citing *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 526 (1972); *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 341 (1961); *Henry v. A.B. Dick Co.*, 224 U.S. 1, 12 (1912).)

55 *Akamai Technologies, Inc. v. Limelight Networks*, Inc., No. 2009-1372 (Fed. Cir. Aug. 31, 2012)(emphasis in the original)

56 *Akamai Technologies, Inc. v. Limelight Networks*, 692 F. 3d 1301, 1309 (Fed. Cir. 2012)(emphasis added)

57 *Akamai Technologies, Inc. v. Limelight Networks*, 692 F. 3d 1301, 1309 (Fed. Cir. 2012)(emphasis added)

58 *Akamai Technologies, Inc. v. Limelight Networks*, 692 F. 3d 1301, 1309 (Fed. Cir. 2012)(emphasis added)

As such the court claimed:

“At the end of the day, we are persuaded that Congress did not intend to create a regime in which parties could knowingly sidestep infringement liability simply by arranging to divide the steps of a method claim between them. And we have found no evidence to suggest that Congress intended to create different rules for method claims than for other types of claims.”<sup>59</sup>

Therefore, for example the non-unanimous court found that:

“In the *Akamai* case, although the jury found that the content providers acted under Limelight's direction and control, the trial court correctly held that Limelight did not direct and control the actions of the content providers as those terms have been used in this court's direct infringement cases. Notwithstanding that ruling, under the principles of inducement laid out above, Limelight would be liable for inducing infringement if the patentee could show that (1) Limelight knew of Akamai's patent, (2) it performed all but one of the steps of the method claimed in the patent, (3) it induced the content providers to perform the final step of the claimed method, and (4) the content providers in fact performed that final step.”<sup>60</sup>

Six judges ended up overruling the 2007 *BMC* precedent, for induced infringement, but not the much earlier *Fromson* precedent wherein the court ruled that while finding of inducement could be the result of the inducer and a second actor, direct infringement required that each limitation of the claim be done by the infringer: “because Advance's [the manufacturer] customers, not Advance, applied the diazo coating, Advance cannot be liable for direct infringement cannot be liable for direct infringement with respect to those plates but could be liable for contributory infringement.”<sup>61</sup> The *per curiam* majority did however implicitly overrule *Muniauction* described above.

Rounding out the court, Judge Newman dissenting from the majority would have gone further and overruled the single entity rule for even direct infringement under 271(a) --construing “whoever” in the statute to include even more than one actor, and 4 dissenting judges (Linn, Dyk, Prost and O'Malley) would have preferred to let the *BMC* precedent stand.

“The majority opinion is rooted in its conception of what Congress ought to have done rather than what it did. It is also an abdication of this court's obligation to interpret Congressional policy rather than alter it. When this court convenes *en banc*, it frees itself of the obligation to follow its own prior precedential decisions. But it is beyond our power to rewrite Congress's laws. Similarly, we are obliged to follow the pronouncements of the Supreme Court concerning the proper interpretation of those acts.”<sup>62</sup>

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59 *Akamai Technologies, Inc. v. Limelight Networks*, [692 F.3d 1301, 1318](#) (Fed. Cir. 2012)

60 *Akamai Technologies, Inc. v. Limelight Networks*, [692 F.3d 1301, 1318](#) (Fed. Cir. 2012)

61 *Fromson v. Advance Offset Plate, Inc.*, [720 F.2d 1565, 1568](#) (Fed. Cir. 1985),

62 *Akamai Technologies, Inc. v. Limelight Networks*, [692 F.3d 1301,1337](#) (Fed. Cir. 2012)

While limited in scope to method claims, and impacting mainly inducement of infringement but not infringement itself, (See efforts by the majority to distinguish themselves from *Aro*,<sup>63</sup> a product case) many saw the *en banc* ruling as an opportunity to broaden the scope of their claims.

As a result of this ruling, enforcement of cloud patenting method claims, particularly those that necessitated joint infringers became (temporarily) easier to enforce, at least in terms of finding induced infringement under [35 USC 271\(b\)](#). Patent drafters may have also taken advantage of this opportunity to draft broader claims that would necessitate joint infringement.

Biotechnology companies, many still reeling from *Mayo*<sup>64</sup> and *Myriad*,<sup>65</sup> may have embraced this decision as allowing them to broaden and empower their method claims for diagnostics by including a likely more patent-friendly treatment step.

Software companies, who had seen their method claims, which had initially been written to include multiple infringers, tighten up, saw the *en banc* ruling as a return to those halcyon post-State Street<sup>66</sup> days, albeit with the caveat that method claims infringed partially outside the United States would still not be liable under 271(a) or 271(b) or 271(f).<sup>67</sup>

Cloud computing related method claims were also strengthened as a result of the ruling, as claims could now be written to encompass the induced infringement by multiple non-agency actors, albeit with proof that the inducing party had knowledge.

However, not all software companies were happy with the *per curiam* opinion that broadened the opportunity to find induced infringement. For example, a broad consortium of software companies including Google, Cisco and Oracle, complained that the ruling had in effect resulted in a situation wherein the costs to investigate alleged instances of infringement or induced infringement became prohibitive. This might be particularly the case in instances of software for mobile devices.

In addition, hardware manufacturers were concerned that they might find themselves on the hook for an effectively indeterminable number of configurations that might lead to infringement.

Certiorari was granted by the Supreme Court to review the case and in June 2014, the court handed down a scathing (“The Federal Circuit’s analysis fundamentally misunderstands what it means to infringe a method patent”<sup>68</sup>) unanimous opinion. Notably, an experienced court of federal appellate judges spent an enormous amount of time and effort in their review and decision, and yet still provided a fractured ruling with multiple dissenting views. The Supreme Court in a relatively significantly shorter opinion found no difficulty overruling, perhaps as a result of the Robert’s courts

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63 *Aro Mfg. Co. v Convertible Top Replacement Co.*, [365 U.S. 336](#) (1961).

64 *Mayo Collaborative v. Prometheus Labs.*, [132 S. Ct. 1289](#), 566 U.S. 10, 182 L. Ed. 2d 321 (2012).

65 *Ass’n for Molecular Pathology v. Myriad*, [133 S. Ct. 2107](#), 569 U.S., [186 L. Ed. 2d 124](#) (2013).

66 *State Street Bank and Trust Co. v. Signature Financial Group, Inc.*, [149 F.3d 1368](#) (Fed. Cir. 1998).

67 Michael Dzwonczyk, Bulletproofing Method Claims For Post- Limelight Enforcement, 2nd Annual University of Akron School of Law Naples Midwinter Patent Law Experts Conference, Naples, FL. Feb. 10-11, 2014 (citing *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, [576 F.3d 1348](#) (Fed. Cir. 2009)), Available at <http://www.sughrue.com/files/Publication/2c8b4990-0c73-4330-b50e-625e2877f3c2/Presentation/PublicationAttachment/d9d2bf57-98b6-4080-a8d8-64e9de4463f3/01-18-14%20Final%20Naples%20Paper%20%282%29.pdf>

68 *Limelight Networks v. Akamai Technologies*, [134 S. Ct. 2111](#), [2117](#) (2014)

efforts to find unanimity in general,<sup>69</sup> perhaps as an effort to continue the very political war against patent trolls and their newest targets, cloud computing,<sup>70</sup> or perhaps as a result of a failure to implement patent law with the patent community in mind.

Perhaps questioning the Court's commitment to this issue, is their total mischaracterization of the Federal Circuit's majority opinion.

"The Federal Circuit's contrary view would deprive § 271(b) of ascertainable standards. ... What if a defendant pays another to perform just one step of a 12-step process, *and no one performs the other steps, but that one step can be viewed as the most important step in the process?* In that case the defendant has not encouraged infringement, but no principled reason prevents him from being held liable for inducement under the Federal Circuit's reasoning, which permits inducement liability when fewer than all of a method's steps have been performed within the meaning of the patent. The decision below would require the courts to develop two parallel bodies of infringement law: one for liability for direct infringement, and one for liability for inducement."<sup>71</sup>

Simplistically, the court held that the disengagement of 271(b) from the definition of infringement in 271(a) was untenable under the law.

*Assuming without deciding that the Federal Circuit's holding in Muniauction is correct*, there has simply been no infringement of the method in which respondents have staked out an interest, because the performance of all the patent's steps is not attributable to any one person. And, as both the Federal Circuit and respondents admit, where there has been no direct infringement, there can be no inducement of infringement under §271(b) [...] The decision below would require the courts to develop two parallel bodies of infringement law: one for liability for direct infringement, and one for liability for inducement.<sup>72</sup>

This in no way represents the Federal Circuit's opinion that still required, even under their revised inducement standard, all the steps of the claim to be infringed.

However, the court seemed to leave room to allow 271(a) infringement to be revisited and to include multiple non-agency actors.

"Finally, respondents, like the Federal Circuit, criticize our interpretation of §271(b) as permitting a would-be infringer to evade liability by dividing performance of a method patent's steps with another whom the defendant neither directs nor

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69 Bruce Allen Murphy, Scalia a Court of One, pg. 352 (Simon and Schuster, 2014)(quoting Roberts "Because there are clear benefits to a greater degree of consensus on the court, Unanimity, or near unanimity promotes clarity and guidance for the lawyers, for the lower Courts trying to figure out what the Supreme Court meant.)

70 Madelyn Stone, Patent trolls invade the cloud: What the attack means for providers, TechTarget available at <http://searchtelecom.techtarget.com/feature/Patent-trolls-invade-the-cloud-What-the-attack-means-for-providers>

71 *Limelight Networks v. Akamai Technologies*, 134 S. Ct. 2111, 2117-8 (2014)(emphasis added)

72 *Limelight Networks v. Akamai Technologies*, 134 S. Ct. 2111, 2117-8 (2014)(emphasis added)

controls. We acknowledge this concern. *Any such anomaly, however, would result from the Federal Circuit's interpretation of §271(a) in Muniauction.* A desire to avoid *Muniauction's* natural consequences does not justify fundamentally altering the rules of inducement liability that the text and structure of the Patent Act clearly require—an alteration that would result in its own serious and problematic consequences, namely, creating for §271(b) purposes some free-floating concept of “infringement” both untethered to the statutory text and difficult for the lower courts to apply consistently [...] Our decision on the §271(b) question necessitates a remand to the Federal Circuit, and on remand, the Federal Circuit will have the opportunity to revisit the §271(a) question if it so chooses.”<sup>73</sup>

Notably, given the Supreme Court's reliance on its interpretation of 271(a) to explain 271(b) one might have thought that they would have least acknowledged Judge Newman's arguments regarding reinterpreting 271(a) to better fit with the Courts reinterpretation of 271(b). But they didn't.

The Supreme Court ruling has change a lot of short-lived patent policies. Patentees, heretofore reliant on the Federal Circuits new inducement doctrine, now have to revisit their strategies and any litigation efforts to comply with the Supreme Court's ruling. Additionally, patent drafters may want to consider drafting claims that both look to single and/or multiple infringers if the Federal Circuit takes up the Supreme Court's offer to reconsider direct infringement under 271(a). Additionally, the new Republican Congress, ostensibly more in favor of patent reform may take a cue from the Supreme Court and revisit the metes and bounds of 271 in general.<sup>74</sup>

Perhaps either Congress or the Federal Circuit will take up the Supreme Court's invitations. In the meantime, “divided direct infringement was not the law before *Limelight* and is not the law now. The Supreme Court in *Limelight* highlighted that the Federal Circuit is free to revisit its precedent on direct infringement if it so chooses ... but the parties must play with the legal cards they have, rather than the ones they hope to deal with.”<sup>75</sup>

In light of the unknown for the near future, some general suggestions for patent drafters include:

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73 *Limelight Networks v. Akamai Technologies*, 134 S. Ct. 2111, 2120 (2014)(emphasis added)

74 See, Dennis Crouch Patent Reform 2015: Republican Agenda, Patently O, November 5, 2014 (“*With Senate control now in Republican hands, I expect that a revised version of the Innovation Act will be able to pass through both houses of congress in 2015 and be signed by President Obama.*”) See, also, Capital Business staff ,What Republican control of Capitol Hill means to companies big and small, The Washington Post, November 9, 2014 available at <http://www.washingtonpost.com/news/capital-business/wp/2014/11/09/what-republican-control-of-capitol-hill-means-to-companies-big-and-small/> See, also, Imran Khaliq and Dan H. Renberg, What the 2014 Election Means for Patent Reform, Mondaq Nov. 10, 2014, (“At the time, many speculated that Senate Majority Leader Harry Reid (D-NV) was reluctant to permit Senate floor consideration of patent reform legislation that was opposed by trial lawyers and elements of the pharmaceutical industry.”) available at <http://www.mondaq.com/unitedstates/x/353342/Patent/What+The+2014+Election+Means+For+Patent+Reform>

75 Motion to Amend Infringement Contentions Granted in Part and Denied in Part, *Nalco Co. v. Turner Designs, Inc.*, Case No. 13-cv-02727 (Magistrate Judge Nathanael Cousins)(denying plaintiff the opportunity to amend in light of the *Limelight* decision.) available at <https://cases.justia.com/federal/district-courts/california/candce/3:2013cv02727/267163/94/0.pdf?ts=1407829850>



- 1) Ensure that the novelty and non-obvious aspects of the cloud based innovation is clearly identified, given case law in software patents in general<sup>76</sup> the mere fact that an otherwise non-novel or obvious technology is used in the cloud may not survive a patentability analysis.
- 2) With much of cloud-based computing taking place on the back-end or in third party infrastructure a patentee may want to drafting at least some claims wherein infringement is easy to detect on for example, the client-side of the innovation.
- 3) Draft claims in light of the single infringer model, but perhaps include broader claims that allow for multiple infringers that would be enforceable in a revised 271 regime.
- 4) In instances where the innovation includes both a client-side and server side aspects, perhaps write distinct claims for the server side aspect independent of the client-side and vice versa.
- 5) Alternatively draft multiple patent applications with each of the unrelated infringers in mind, preempting the possibility that a claim can be construed as requiring multiple infringers and allowing the patentee to distinctly describe the invention from the perspective of each potential infringer.
- 6) Use system claims to cover unavoidable multiple infringer situations; the infringer that installs even just the last component of a claimed system is liable under the law for direct infringement.

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<sup>76</sup> *Alice Corp. Pty. Ltd. v. CLS Bank Intern.*, [134 S. Ct. 2347, 573 U.S., 189 L. Ed. 2d 296](#) (2014).