

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

CIVIL ACTION NO. 06-11109-RWZ

AKAMAI TECHNOLOGIES, INC., et al.

v.

LIMELIGHT NETWORKS, INC.

MEMORANDUM AND ORDER

April 24, 2009

ZOBEL, D.J.

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I. Introduction

Defendant Limelight Networks, Inc. (“Limelight”) seeks relief from a jury finding of patent infringement and an award of \$45.5 million in damages to plaintiffs Akamai Technologies, Inc., and the Massachusetts Institute of Technology (hereinafter the singular “Akamai”) based on the defenses of inequitable conduct, laches, equitable estoppel and unclean hands. It also moves for reconsideration of my earlier denial of its motion for judgment as a matter of law (“JMOL”). After careful consideration of the evidence presented at the November 2008 bench trial and the arguments in the parties’ papers, I hold that Limelight has failed to prove that Akamai’s conduct was so egregious that its patent rights should not be enforced. However, based on a clarification in the standard for a finding of joint infringement articulated by the Federal Circuit after the jury trial, Limelight is entitled to JMOL on the issue of infringement.

II. Background and Procedural History

A. Content Delivery Service Providers

Both Akamai and Limelight provide Internet content delivery services to their customers, content providers who maintain, inter alia, news and entertainment web sites that supply content to end users' web browsers. Without such a service, a content provider must distribute all its content from its own web servers. This requires the content provider to purchase and maintain servers and telecommunications bandwidth to handle the worst case load, and even then it may be overwhelmed by an unanticipated event, such as a major national disaster, or even a planned event which draws a large number of viewers, such as the Super Bowl. In addition, end users located far from the content provider's servers may experience poor performance due to Internet delays and congestion.

Content service providers Akamai and Limelight both maintain their own content delivery network ("CDN") consisting of hundreds or thousands of servers located in multiple locations across the United States and around the world. Once a content provider has contracted for content delivery services, a portion of its web content, typically large data files such as images, video and/or sound, is supplied by the CDN from a server located close to the end user rather than from the content provider's servers. Because a content delivery service aggregates the data demands of multiple content providers with differing peak usage patterns and serves that content from multiple servers in multiple locations, it is less likely to slow down or fail when an event creates a high demand for particular content. In addition, since content is supplied from a server close to the end user, that content is less likely to be affected by Internet congestion or breakdowns. The result is that the content provider can obtain the

capacity to service its end users under worst case demand conditions without having to pay for capacity that is idle much of the time.

B. Operation of the Parties' Content Delivery Services

A web page typically consists of text interspersed with various types of content such as images, video and sound, which are referred to as page objects. The web page, as well as the page objects, are stored on the content provider's web server. The page objects are normally not included within the web page itself, rather the web page consists of only the text on the page along with links (i.e. an Internet address) pointing to the page objects. Upon receiving a request for a web page, the content provider's web server returns the web page containing these links to the end user's web browser. The end user's web browser then uses these links to request each page object from the content provider's server until all the objects have been retrieved and the web page fully rendered.

To utilize Akamai's or Limelight's content delivery service, the content provider modifies its web pages so that the links, or URLs,¹ to the page objects point to the content service provider's servers, not its own.² The end user's browser fetches the initial web page from the content provider's server and then uses the returned links to request the other objects on the page from the content service provider's servers. The

¹ URL is short for Uniform Resource Locator, the address of a file or resource on the Internet.

² As discussed infra, Limelight's customers may instead modify the way in which the links to page objects are translated into server addresses so that they are fetched from the content service provider's servers rather than the content provider's servers.

content delivery service provider replicates these page objects on some or all of its servers and directs the end user's request for an object to an appropriate server. Thus, only the initial page is supplied by the content provider; the remaining page objects are served by the content delivery service provider's web servers. Because the initial page supplied by the content provider is relatively small compared to the size of the page objects, the majority of the information on the page is served by the content delivery service provider.

C. Akamai's '703 Patent³

On July 14, 1998, Akamai filed a provisional application for what would become the '703 patent. The disclosures in this patent form the basis for Akamai's FreeFlow content delivery service. The utility application was filed on May 19, 1999,⁴ and Akamai filed a petition to make special ("PTMS") with the Patent and Trademark Office ("PTO") in September 1999 to expedite the examination of its application. See 37 C.F.R. § 1.102 (1999). The PTO allowed the PTMS the following month, then, after a single office action in February 2000, allowed the application in April 2000. The patent issued on August 22, 2000.

The '703 patent claims systems and methods for replicating page objects among a distributed set of content delivery service provider servers and redirecting end user requests for those objects to a particular content server. The specification describes,

³ United States Patent No. 6,108,703.

⁴ For simplicity, in this opinion I refer to the application that resulted in the '703 patent as the '703 application. The actual number of the application was 09/314,863.

inter alia, a modification to the Internet's address lookup system, the Domain Name System ("DNS"), to accomplish this redirection. The DNS consists of a set of computers known as domain name servers which translate ("resolve") textual names of computers on the Internet ("hostnames") into numerical Internet addresses ("IP addresses"). The '703 patent describes the use of virtual hostnames which do not resolve to the IP address of a particular server; rather, in conjunction with the modified DNS described in the patent, the virtual hostname resolves to the IP address of a server containing the page object which is near the end user, has the page object and is not overloaded.⁵ Thus, a given virtual hostname could resolve to the IP address of servers at opposite ends of the country or around the world depending on the location of the end user, the location of the content and the delays in routing to the available servers.

The two independent claims asserted in the instant case, however, do not require either the use of virtual hostnames or a modified DNS. They do require modifying the links to at least some of the page objects, termed "tagging" in the patent, so that requests for those objects resolve to a content server in a domain other than the content provider's domain. In this context, a domain is an organization's unique name on the Internet, for example "akamai.com" or "limelightnetworks.com."⁶ In addition, one

⁵ This is a simplified explanation of the methods described in the patent, which actually involve multiple levels of domain name servers and sequential DNS requests to obtain the IP address of the page object server.

⁶ A domain name is unique in the sense that only one entity can own a particular domain name. See Virtual Works, Inc. v. Volkswagen of Am., Inc., 238 F.3d 264, 266 (4th Cir. 2001). However, a single entity can register and respond to multiple domain

of the asserted claims, claim 19, also requires the initial page to be served from the content provider's domain.

The tagging described in the '703 patent adds or "prepends" the hostname of the content service provider's server to the original URL used to retrieve the page object from the content provider's server. Including the original URL in the tagged link provides the content service provider's server with the information necessary to retrieve the object from the content provider's server if it is not already stored ("cached") locally. Once the content service provider's server fetches an object from the content provider's server, it caches it locally so it is available for subsequent requests for that object.

D. The Farber '598 Patent

On February 10, 1998, Sandpiper Networks, Inc. ("Sandpiper") filed a United States patent application for a content delivery system. Just under a year later, Sandpiper filed an international patent application with the World Intellectual Property Organization under the Patent Cooperation Treaty ("PCT Application") containing the same specification as its earlier United States application. The PCT Application was published on August 12, 1999. Although Sandpiper's United States application was filed before Akamai's provisional application, Sandpiper's patent, United States Patent No. 6,185,598 (the '598 patent"), did not issue until February 6, 2001, after the '703 patent issued.⁷

names.

⁷ The '598 patent is alternately known as the "Farber patent" after one of its inventors, David J. Farber ("Farber").

The '598 patent claims systems and methods for a content delivery system similar to those claimed by Akamai. However, rather than use DNS to redirect an end user to an appropriate content server (termed a "repeater" in the '598 patent), the patent adds a component called a reflector to the content provider's server to redirect requests for page objects (termed "resources") to be served from a repeater. In one embodiment, the reflector redirects a resource by rewriting the link to the resource to create a new link which designates the repeater instead of the content provider's server. The rewritten link consists of an identifier for the repeater followed by the original URL to the resource. This identifier can be the hostname of the repeater or the actual IP address of the repeater. The end user's browser then uses the rewritten link to request the resource from the repeater. If the resource is available locally on the repeater, it is returned to the end user. If the resource is not already on the repeater, the repeater uses the original URL portion of the rewritten link to fetch the resource from the content provider's server, returns it to the end user and caches it locally for future requests.

E. Sandpiper's Footprint System

Sandpiper introduced its content delivery service, named Footprint, in September 1998. This initial system (hereinafter "Footprint 1.0") required reflector software running on the content provider's server to intercept end user requests for content and redirect them to Sandpiper's content servers. In spring of 1999, Sandpiper modified its system to use DNS, rather than the redirector software, to redirect end user requests for content. Akamai believed this new system ("Footprint 2.0") was a direct

copy of its then newly deployed content delivery system based on the '703 patent.

F. The Digital Island and Speedera Patent Infringement Lawsuits

In September 2000, Akamai filed suit against Digital Island, Inc. ("Digital Island") alleging, inter alia, infringement of the '703 patent by Digital Island's (nee Sandpiper's)⁸ Footprint 2.0 system. On December 21, 2001, a jury found that the Footprint 2.0 system infringed claims 1, 3, 5, 9, 17, 18 and 22 of the '703 patent, but that claims 17, 18 and 22 were invalid as anticipated by Digital Island's '598 patent or obvious in view of the '598 patent and a product by Cisco Systems, Inc., Distributed Director, disclosed in United States Patent No. 6,178,160. (See Civ. A. No. 00-11851-RWZ (D. Mass.), Docket # 232.) The district court granted a permanent injunction based on the jury verdict.

Digital Island appealed to the Court of Appeals for the Federal Circuit, arguing that claim 9 was not infringed and that claims 1, 3, 5, and 9 were invalid for anticipation and/or obviousness. In its opinion,⁹ the court described the history of Digital Island's

⁸ Digital Island acquired the Footprint system when it merged with Sandpiper in 1999. Digital Island was acquired by Cable and Wireless Plc in 2001, which, in turn, was bought by Savvis Communications. Level 3 Communications purchased Savvis' CDN business in January 2007 and acquired rights to intellectual property developed by Sandpiper. See Level 3 Commc'ns, LLC v. Limelight Networks, Inc., Civ. A. No. 2:07cv589, 2008 WL 5188143, at *1 (E.D. Va. Dec. 10, 2008). This complicated genealogy is useful in understanding the evidentiary dispute concerning the admission of images from Sandpiper's 1999 web site, discussed infra Part III.A.2.a.

⁹ By the time of the appeal, Digital Island had been acquired by Cable & Wireless Plc. Therefore, the Federal Circuit decision refers to Digital Island as "C & W."

'598 patent and its Footprint systems:¹⁰

The '598 patent is directed to similar systems and methods [as the '703 patent] for increasing the accessibility of web pages on the Internet. The '598 patent was filed on February 10, 1998, and issued on February 6, 2001. Thus the '598 patent is prior art to the '703 patent pursuant to 35 U.S.C. § 102(e). C & W marketed and sold products embodying the '598 patent under the name "Footprint." The relevant difference between the disclosure of the '598 patent and Akamai's preferred embodiment disclosed in the '703 patent is the location of the load balancing software. Akamai's preferred embodiment has the load balancing software installed at the DNS servers, while the '598 patent discloses installation of the load balancing software at the content provider, or origin, servers. The '598 patent does not disclose or fairly suggest that the load balancing software can be placed at the DNS servers. It is now understood that placement of the software at the DNS servers allows for load balancing during the resolving process, resulting in a more efficient system for accessing the proper information from the two server networks. Indeed, C & W later created a new product, "Footprint 2.0," the systems subject to the permanent injunction, in which the load balancing software was installed at the DNS servers as opposed to the content provider servers. Footprint 2.0 replaced C & W's Footprint product.

Akamai Techs. Inc. v. Cable & Wireless Internet Servs., Inc., 344 F.3d 1186, 1190-91

(Fed. Cir. 2003) (footnote omitted). The Federal Circuit held that claims 1 and 3 of the '703 patent were invalid because they did not require that the load balancing software be placed at the DNS servers and thus were anticipated by the '598 patent. Id. at 1194-95.

In February 2002, Akamai sued another competitor, Speedera Networks, Inc. ("Speedera"), alleging that Speedera's Universal Delivery Network infringed several Akamai patents, including the '703 patent. (See Civ. A. No. 02-10188-RWZ (D. Mass), Docket # 1.) The case settled in mid-2005 after the district court's order on claim

¹⁰ The Federal Circuit decision uses the term "load balancing" for the process of redirecting a request for a page object to an optimal server.

construction but before any other decision on the merits.

G. The Instant Lawsuit

Limelight began offering its content delivery services in late 2001. In the spring of 2004, Akamai and Limelight began a series of discussions concerning the possible acquisition of Limelight by Akamai. Ultimately, Akamai choose not to proceed with the proposed deal, and the discussions terminated in the fall of 2004.

In early 2006, Akamai and Limelight again resumed acquisition discussions. However, on June 22, 2006, Limelight informed Akamai that it had found alternative funding and was no longer interested in being acquired. On the following day, Akamai filed the instant lawsuit against Limelight alleging patent infringement.

On February 28, 2008, a jury found that Limelight infringed claims 19-21 and claim 34 of the '703 Patent and that none of the infringed claims were invalid due to anticipation, obviousness, indefiniteness, lack of enablement or written description. The jury awarded Akamai damages of \$41.5M based on lost profits and reasonable royalty from April 2005 through December 31, 2007, plus prejudgment interest, along with price erosion damages in the amount of \$4M. (See Jury Verdict (Docket # 287).)

The parties filed a flurry of post-trial motions. Akamai renewed its motion for partial summary judgment on Limelight's equitable defenses of laches, equitable estoppel and unclean hands,¹¹ moved for summary judgment on Limelight's defense of inequitable conduct and sought a permanent injunction. Limelight moved for a new trial

¹¹ Limelight had also asserted a defense of patent misuse, which was resolved by the allowance of Akamai's motion for partial summary judgment on this defense. (See Hr'g Tr. 5, Feb. 5, 2008 (Docket # 240).)

and for a judgment of obviousness and renewed its motion for JMOL on grounds of noninfringement and invalidity. After briefing and a hearing, I denied all six motions, including Akamai's motion for a permanent injunction, which was premature in light of the scheduled bench trial. Shortly thereafter, Limelight moved for reconsideration on the court's denial of its motion for JMOL, citing a newly announced Federal Circuit decision. (See Docket # 377.)

After a delay requested by the parties, the court held a three-day bench trial in November 2008 on Limelight's remaining equitable defenses.

III. Discussion

A. Inequitable Conduct During Prosecution of the '703 Patent

Limelight asserts that the applicants for the '703 patent and/or their attorney: (1) had a duty to, but intentionally failed to, investigate the prior art of their key competitor Sandpiper; and (2) intentionally withheld material from the PTO concerning Sandpiper's Footprint 1.0 CDN. It claims that these actions breached the duty of candor and good faith owed to the PTO and thereby constitute inequitable conduct rendering the patent unenforceable. Although I find that the information that was not disclosed was material, Limelight has failed to prove the requisite intent necessary to find inequitable conduct.

1. The Legal Standard for Inequitable Conduct

Applicants have a duty to prosecute patent applications with candor, good faith, and honesty. Duro-Last, Inc. v. Custom Seal, Inc., 321 F.3d 1098, 1099 (Fed. Cir. 2003); see also 37 C.F.R. § 1.56. A breach of this duty constitutes inequitable conduct and renders a patent unenforceable. See Impax Labs., Inc. v. Aventis Pharms., Inc.,

468 F.3d 1366, 1374 (Fed. Cir. 2006). To prove inequitable conduct, “the alleged infringer must provide clear and convincing evidence of (1) affirmative misrepresentations of a material fact, failure to disclose material information, or submission of false material information and (2) an intent to deceive.” Id.

The analysis of inequitable conduct is a two-step process. First, the court must determine whether both the materiality of the information and the intent to deceive have been established. Bristol-Myers Squibb Co. v. Rhone-Poulenc Rorer, Inc., 326 F.3d 1226, 1234 (Fed. Cir. 2003). If so, it must then “weigh them to determine whether the equities warrant a conclusion that inequitable conduct occurred.” Id. (quoting Molins PLC v. Textron, Inc., 48 F.3d 1172, 1178 (Fed. Cir. 1995)). In balancing, a greater showing of one factor can compensate for a lesser showing of the other. Id.

a. Materiality

Information is material if a reasonable examiner would consider it important in deciding whether to allow the patent application. Digital Control, Inc. v. Charles Mach. Works, 437 F.3d 1309, 1314 (Fed. Cir. 2006) (citations omitted). Information can be material even though disclosure of it would not render the invention unpatentable. Id. at 1318. However, prior art that is merely cumulative or less pertinent than information considered by the examiner is not considered material in analyzing a claim of inequitable conduct. Id. at 1319.

b. Intent

The evidence must also support a finding that the material information was withheld with an intent to deceive or mislead the PTO. Abbott Labs. v. Sandoz, Inc.,

544 F.3d 1341, 1356 (Fed. Cir. 2008). “[T]he involved conduct, viewed in light of all the evidence, including evidence of good faith, must indicate sufficient culpability to require a finding of intent to deceive.” Impax Labs., 468 F.3d at 1375 (citation omitted). Where the alleged conduct is the nondisclosure of information, there must be clear and convincing evidence that the applicant made a deliberate decision to withhold the information from the PTO. Molins, 48 F.3d at 1181.

2. Evidentiary Rulings

a. DX1209 - Sandpiper Web Site Images

As discussed infra, one of the factual issues relevant to the allegations of inequitable conduct is what Akamai knew about Sandpiper’s Footprint system and when it knew it. Daniel Lewin (“Lewin”), one of the inventors of the ’703 patent, admitted studying Sandpiper’s web site frequently during the pendency of the ’703 application. At the bench trial, Limelight moved to admit printouts of Sandpiper’s web site from January and May 1999 (DX1209),¹² which included several press releases describing the Footprint system, to show the extent of Akamai’s knowledge at the time. I admitted the exhibit de bene, and the parties have submitted briefs on its admissibility.

In two separate written lists of objections to Limelight’s exhibit list, provided to Limelight before the November bench trial, Akamai objected to DX1209 on grounds of

¹² “DX_____” refers to Limelight’s Trial Exhibit DX_____ offered at the November 2008 bench trial. Similarly, “PX_____” refers to Akamai’s Trial Exhibit PX_____ from the bench trial.

relevance and hearsay.¹³ (See Docket # 395, Exs. 1, 2.) It argues that the press releases are not relevant because there is no evidence that the inventors of the '703 patent ever saw them. However, Lewin testified that in August or September of 1998 a friend sent him the URL for Sandpiper's web site and suggested that he take a look at what it was doing. He further testified that he and others at Akamai

read the Web site in great detail, which had an overview of what they were doing, what the business was, who the people were that were involved in the company, overall descriptions of what the benefits to a customer were. Their network infrastructure was on the Web site.

(Lewin Dep. 80:5-11, Jan. 18, 2001.) At that time, Lewin discussed Sandpiper as a potential competitor with Tom Leighton ("Leighton"), the other inventor of the '703 patent (collectively with Lewin, the "Inventors"), as well as with other Akamai personnel. He continued to monitor Sandpiper's web site, agreeing that he "looked at the Sandpiper Web page almost daily." (*Id.* at 94:5-7.) Leighton testified that he first learned about Sandpiper in the fall of 1998 "as a consequence of the September 28th press release." (Trial Tr. Day 2, 109:18-22, Nov. 13, 2008.) He also explained that Akamai deduced the operation of Sandpiper's system by looking at how it delivered Sandpiper's own web site.

Several of the press releases in the proffered exhibit include a description of Sandpiper as "a provider of adaptive content distribution services" and describe Sandpiper's technology as "optimiz[ing] network performance by migrating content based on network conditions, content popularity and traffic loads." (*e.g.*, DX1209 at L3-

¹³ Akamai also generally reserved its right to object to any exhibit for lack of foundation.

AKLL-000007.) In addition, a September 28, 1998, press release describes the Footprint “distribution network” as “patent-pending.” (Id. at L3-AKLL-000010.) The evidence proffered supports the conclusion that both press releases were made available on the web site shortly after release. (Compare id. at L3-AKLL-000004 (list of Sandpiper press releases on web site as of Jan. 13, 1999), with id. at L3-AKLL-000025 (list of Sandpiper press releases on web site as of May 2, 1999).)

Lewin’s and Leighton’s testimony, that they paid close attention to Sandpiper’s web site beginning in fall of 1998, permits the inference, which I draw, that one or both of them read the press releases contained therein. Therefore, exhibit DX1209 is relevant to the issue of what the Inventors knew about Sandpiper and its Footprint system during the prosecution of the ’703 patent. See Fed. R. Evid 401.

Akamai’s second objection, that the Sandpiper web site printouts are hearsay, fails because they are not offered for the truth of the information contained within. Rather, Limelight seeks to show the Inventors’ knowledge that in late 1998 and early 1999 Sandpiper claimed to have a content delivery system that took content popularity, network loads and congestion into account in delivering content, and that it had submitted a patent application for some part of that system. Whether these claims were actually true is immaterial to the issue of inequitable conduct by Akamai. Therefore, both of Akamai’s pretrial objections to the exhibits are overruled.

On the first day of the bench trial, however, Akamai raised yet another objection, namely, that “the testimony that authenticates these press releases is itself hearsay.” (Trial. Tr. Day 1, 52, Nov. 12, 2008.) Before the trial, in September 2008, Limelight, to

authenticate DX1209, had provided excerpts from a Rule 30(b)(6) deposition of Andrew Swart ("Swart"), a former Sandpiper employee, taken in a lawsuit between Limelight and Level 3 Communications, LLC ("Level 3"). Akamai objected because it was not a party to that lawsuit and therefore did not have an opportunity to cross-examine Swart. In response, Limelight attempted to depose Swart again, this time with Akamai present. Level 3, however, provided not Swart, but Joseph Lawrence ("Lawrence"), a Level 3 employee, as its 30(b)(6) witness. (See Docket # 395, Exs. 6, 7.) Lawrence authenticated the web site printouts and the press releases based on discussions with Swart and another former Sandpiper employee, Will Crowder. Akamai now objects to Lawrence's authentication because it is based on hearsay, not personal knowledge, and Level 3 is not a party-opponent.

While Akamai did object to Lawrence's deposition testimony as hearsay two weeks before the trial, it did not put Limelight on notice that it objected to the authenticity of DX1209. It therefore waived that objection. See Fed. R. Civ. P. 26(a)(3)(B) (waiving any objection to exhibits disclosed prior to trial other than relevance, prejudice or confusion). DX1209, therefore, is admitted for the purpose of showing what information was on the Sandpiper web site in late 1998 and early 1999 when Lewin testified he was viewing the site.¹⁴

¹⁴ When asked directly by the court whether it was denying that the printouts were what was on the web site, Akamai's counsel demurred, admitting that the Sandpiper web site existed, and that Lewin viewed the web site and learned of at least one press release, but insisting several times that there was "no admissible evidence" that DX1209 was what was on the web site. (Trial Tr. Day 1, 52:25, Nov. 12, 2008.) Because Akamai was present to cross-examine Lawrence, whose testimony is not in conflict with that given by Swart earlier, I deem it to have sufficient circumstantial

b. PX1004A - Limelight's Markman Brief in the Level 3 Lawsuit

Akamai seeks to introduce a Markman brief that Limelight filed in an unrelated case as an admission by Limelight that the specification of the Farber '598 patent describes a system significantly different from that described by the '703 patent. In particular, it argues that Limelight's adoption of portions of an email memorandum Farber sent during the pendency of the '703 application establishes the authenticity and admissibility of that memorandum. Limelight objected to the admission of both the brief and the memorandum, and I invited Akamai to provide additional briefing on their admissibility post-trial. (See Trial Tr. Day 2, 53:23-25, Nov. 13, 2008.) Akamai has provided a paragraph of explanation why it believes these documents are admissible, citing only to Fed. R. Evid. 801(d)(2) (admissions by a party opponent are not hearsay). (See PX1004A, flysheet.)

The objection to this exhibit is sustained both because the briefing is inadequate to resolve the legal issue and because this evidence is, in any event, either not relevant to the issue of inequitable conduct or cumulative of other testimony.

c. DX1228 - Leighton's Testimony in the Digital Island Trial

At the November 2008 bench trial, Leighton testified that Akamai's investigation into the operation of the Footprint 1.0 system showed that it used IP addresses, not hostnames, to redirect requests for page objects from the content provider's server to the content service provider's servers. He denied both knowing that the Footprint 1.0

guarantees of trustworthiness to authenticate DX1209 under Fed. R. Evid. 807 as well.

system could alternately use hostnames to redirect object requests or having seen the Sandpiper PCT application, which described the use of hostnames as well as IP addresses, prior to the issuance of the '703 patent. On cross-examination, Limelight attempted to impeach Leighton's direct testimony using Farber's deposition and testimony from the 2001 Digital Island trial describing the Footprint 1.0 system. I allowed the questioning de bene over Akamai's objection. I now overrule that objection.¹⁵

Limelight post trial seeks to introduce a portion of Leighton's testimony from the Digital Island lawsuit to attempt to show that he learned additional information about Footprint 1.0 during the pendency of the '703 application. Akamai objects because by not identifying and offering this testimony at the bench trial, Limelight denied it the opportunity to counter-designate relevant testimony and denied Leighton the opportunity to explain his prior testimony. For reasons similar to those discussed supra Part III.A.2.a, overruling Akamai's objection to the Sandpiper web site printouts, its objection to this evidence is sustained.

3. The Allegedly Withheld Information

Limelight alleges that, during the pendency of the '703 application, Akamai was aware of Sandpiper and its Footprint 1.0 system, which, Limelight argues, is an embodiment of the '598 Patent, but failed to disclose this information to the PTO.

¹⁵ However, while this cross-examination did establish that Leighton learned that Footprint 1.0 could use hostnames from Farber's testimony at the Digital Island trial in 2000, this fact is not in conflict with his direct testimony that the Footprint 1.0 system, as Akamai observed it in 1998 and 1999, did not use hostnames.

Limelight further asserts that Akamai was aware that Sandpiper had filed a patent covering the Footprint 1.0 technology and, therefore, had a duty report this information to the PTO or at least conduct an investigation into Sandpiper as part of its PTMS.

a. Materiality

Limelight argues that the '598 patent, and thus the Footprint 1.0 system, was material because the Federal Circuit later held that claims 1 and 3 of the '703 patent were invalid as anticipated by the '598 patent. Akamai responds that the disclosures in the '598 patent were not material because they were cumulative of other information Akamai provided to the PTO. In addition, to the extent the Footprint 1.0 system was an embodiment of that patent, Akamai argues that it did not include the features that the Federal Circuit relied on to find anticipation. In particular, it asserts that the Footprint 1.0 system prepended IP addresses, not hostnames, and therefore did not require the use of DNS, both limitations of the claims ruled invalid as anticipated. See Akamai Techs., 344 F.3d at 1192 (a prior art reference is anticipating if it “discloses each and every limitation of the claim expressly or inherently”).

According to the testimony and evidence, the Inventors understood that Sandpiper's Footprint 1.0 system was a framework for delivering web content. As such it attempted to solve the same general problem Akamai was addressing, namely, reducing the bottleneck created by serving all content from a single server while avoiding the limitations of then existing mirroring content delivery systems. Mirroring systems, which duplicate content on multiple servers, do not scale well because it becomes increasingly difficult to keep the content of all the systems synchronized as

the number of servers increases. Footprint 1.0, like the system described in Akamai's '703 patent, implemented a content delivery system that split delivery of the contents of a web page by serving the initial page from the content provider's server, but some or all of the page objects from a server closer to the end user. Page splitting addresses the synchronization problem because the original web page need be kept up-to-date only on a single server, that of the content provider. By always fetching the initial page from the content provider's server, a page-splitting system guarantees that the user receives the current content. In addition, both the Footprint 1.0 system and the disclosure in the '703 application replaced the URL to each page object with a rewritten URL that consisted of an identifier for an optimal content server followed by the original URL for the object. This preserves the original Internet address of the object in the new URL, enabling the content server to fetch the object from the content provider's server if the object was not already cached locally. Therefore, unlike mirroring systems, these systems did not require that all content be copied to the content servers prior to the first end user request. This design ensures that any page objects updated by the content provider are migrated to the content service provider's servers when requested by end users.

The primary differences between the Footprint 1.0 system and that described in the '703 patent is that Footprint 1.0 prepended an IP address not a hostname,¹⁶ and the

¹⁶ Limelight disputes Akamai's contention that the Footprint 1.0 system only prepended IP addresses, not hostnames. As discussed infra Part III.A.3.b., I find credible the testimony and evidence Akamai offered that the Inventors only observed IP addresses prepended in their investigation into the operation of the Footprint 1.0 system.

determination as to which content server to prepend was made at the content provider's server by the reflector, not by the DNS system described in Akamai's application.

Nevertheless, Footprint 1.0 attempted to solve the same synchronization problem that the '703 sought to solve in much the same way. While much of the '703 patent focuses on the use of a virtual hostname and DNS to select an optimal content server, several of the claims of Akamai's patent differ from the Footprint 1.0 system only in the use of a normal hostname rather than an IP address prepended to the original URL or by requiring the resolution of a hostname. (See, e.g., '703 patent claim 14; id. claim 23.)

In addition, the Inventors viewed the Footprint 1.0 system as direct competition to their content delivery system, which was based on the invention claimed in the '703 patent, and they expended significant effort to investigate and reverse engineer the operation of this competing system. Given the similarity in the problem each system attempted to solve and in the operation of the respective systems, "a reasonable examiner would consider [Footprint 1.0] important in deciding whether to allow [Akamai's] application to issue as a patent." Digital Control, 437 F.3d at 1315. Thus, Sandpiper's Footprint 1.0 system was material information that should have been disclosed to the PTO during the pendency of Akamai's application, unless it was cumulative of other information provided.

At the bench trial, Akamai's expert, Kevin Jeffay ("Jeffay"), opined that the '598 patent, and thus its embodiment in the Footprint 1.0 system, was merely cumulative of other information Akamai included in its submissions to the PTO. In particular, he asserted that the Kriegsman and Kenner patents, which Akamai did provide to the PTO,

disclosed all of the relevant features of the '598 patent. The Kriegsman patent, United States Patent No. 5,991,809 (the "'809 patent") (PX1016), discloses a system consisting of a primary server and one or more secondary servers which mirror static files copied from the primary server.¹⁷ When the primary server receives a request for data, it returns all the dynamic data files requested, then determines an optimum secondary server to serve each static data file. If a requested dynamic data file contains links to static data, software on the primary server replaces those links with new links pointing to the static data on the optimum secondary server. (See '809 patent, col.9 ll.61-65.) However, unlike the disclosure in the '598 patent, the Kriegsman patent does not include the link to the original object in the rewritten link, and therefore the secondary server cannot use the URL of the requested object to request the object from the primary server if it is not stored locally. Rather, the patent describes a mirrored system in which the primary server copies static data to the secondary servers prior to redirecting users' requests for static content to a secondary server. (See id. col.6 l.67-col.7 l.9.)

The Kenner patent, United States Patent No. 6,003,030 (the "'030 patent") (PX1015), discloses a content delivery system primarily designed to serve video objects and which utilizes software installed on the end user's computer ("Client Software") to route requests for content to an optimal content server. Content to be

¹⁷ The Kriegsman patent defines "static files" as those which are repeatedly transferred without changes, while files which may be modified for each transfer are termed "dynamic files." (See '809 patent, col.1 ll.8-12.) "Static data" includes images, video, computer programs and other non-text data. (Id. col.2 ll.9-11.)

served is copied from the original web site to the content servers prior to end user requests for content. When a user makes a request for content which is marked as also available on the content servers, the Client Software attempts to download the content from the optimal server by constructing a URL pointing to that content on the content servers. (See '030 patent, col.15 ll.4-10.) If the content is not available, the Client Software tries the next available content server. If the content is not found on any of the content servers, the Client Software retrieves it from the original content provider's site. (See id. col.15 ll.18-24.)

According to Jeffay, Kriegsmann discloses all aspects of the '598 patent except for prepending the URL pointing to the original object on the content provider's server to the rewritten URL and retrieving the object from the content provider's server when it is not found on the content server. However, he asserts that these features are disclosed in the Kenner patent. Therefore, the disclosures of the '598 patent are, in his opinion, cumulative of those obtained by combining Kriegsmann and Kenner. But see Molins, 48 F.3d at 1180 (noting that a withheld reference can be material when no single piece of cited prior art taught the combination present in the reference).

Jeffay's conclusion assumes that the URL created by the '030 patent's Client Software to retrieve the object from a content server includes the original URL pointing to the object on the content provider's server. The patent describes passing information to the end user, and thus to the Client Software, about whether content is available on a content server within a text construct known as an "EMBED" statement. The patent's specification describes how it creates the URL to retrieve the object from a

content server, termed a "Smart Mirror:"

If the [page object] does not exist on the local computer, the player creates a new URL (step 78) in the following form: "http://", plus the IP address of the selected Smart Mirror site stored in the configuration file, plus the path name to mirror files (e.g. "/pub/mirror/"), plus the name of the content provider taken from the "SM" parameter in the EMBED statement, plus the [page object] filename taken from the EMBED statement.

('030 patent col.15 ll.4-10 (emphasis added).) If the content is not available on a content server, the Client Software retrieves it "from the original content provider's site as specified directly by the EMBED statement." (Id. col.15 ll.21-24.) Jeffay opines that "the name of the content provider" refers to the hostname of the original server. However, this is not explicitly stated in the '030 patent and hostnames are not necessarily identical to the name of the content provider, for example, content provider Volkswagen uses the hostname www.vw.com. In addition, both the '598 patent and the '703 patent explicitly describe prepending the hostname of the content service provider's server to the origin server and path to the original object and the Footprint 1.0 system prepended the IP address of a content server to the origin server and path to the original object. (See '598 patent col.8 ll.26-35; '703 patent col.8 ll.4-12; PX1009, 9-10.) The '030 patent, however, only describes appending the name of the content provider and the filename of the object, not the path to the original object. In addition, because the '030 patent does not require that a content server be able to retrieve objects which it does not already have mirrored, there is no reason to include the URL to the original object in the constructed URL. Therefore, the evidence is insufficient to conclude that the Kenner '030 patent discloses prepending the identifier of a content server to the URL of the original object as is disclosed in the '598 patent and as was

observed by the Inventors in examining the operation of Footprint 1.0. Thus, the '598 patent and the Footprint 1.0 system are not cumulative of the combination of the Kriegsman and Kenner patents.

In addition, neither Kenner nor Kriegsman disclose the technique described in the '598 patent in which content servers use the URL of the original object to retrieve the object if it is not already cached on the content server. In Kenner, it is the Client Software running on the end user's computer that fetches the object if it is not found on any content server. (See '030 patent col.6 ll.36-37, col.15 ll.21-24.) Kriegsman is a mirrored system with data copied to the secondary (content) servers by the primary server before any requests for content are made; therefore, the patent does not contemplate a need to fetch an object in response to a user request to a secondary server. (See '809 patent col.3 ll.45-48, col.6 l.67-col.7 l.5.)

For all of these reasons, I find that the '598 patent was material because it contained prior art which was later found to have anticipated several claims of the '703 patent and was not cumulative of other information provided to the PTO during the prosecution of the '703 patent. See Fox Indus., Inc. v. Structural Pres. Sys., Inc., 922 F.2d 801, 804 (Fed. Cir. 1990). I also find that the Footprint 1.0 system was not cumulative of other references provided to the PTO and thus was material for the reasons described supra.

b. Intent

Limelight argues that intent by the Inventors to withhold information from the PTO can be inferred from their careful examination of the Sandpiper web site, their

investigation into the operation of the Footprint 1.0 system, the temporal proximity of Akamai's PTMS following the publication of Sandpiper's PCT application and the limited search Akamai conducted as part of that PTMS.

Leighton testified that because the Footprint 1.0 system used IP addresses, not hostnames, it did not occur to him that it was relevant to Akamai's efforts to patent its DNS-based system. He stated that he viewed the Sandpiper system as having many of the same deficiencies as the mirroring systems that Akamai was trying to correct, in particular, the bottleneck of having all redirection determinations made at the content provider's server. Footprint 1.0 prepended IP addresses, so there was no way for Sandpiper to use DNS to distribute requests for page objects to other servers. Because he saw the use of DNS as fundamental to the Akamai invention, he did not consider disclosing Footprint 1.0 to the PTO. In addition, he testified that in late 1998 and early 1999 he was preoccupied with efforts to launch Akamai's own content delivery service.

When Sandpiper released Footprint 2.0 after Akamai launched its service, Leighton believed Sandpiper had copied the Akamai system in response to the problems created by the centralization inherent in the architecture of the Footprint 1.0 system. Therefore, he did not consider Footprint 2.0 relevant to the disclosures in the '703 patent application; rather, he asked his patent counsel to investigate the possibility of an infringement claim against Sandpiper when Akamai's patent finally issued. Finally, Leighton stated that he was unaware of Sandpiper's PCT application or its United States patent application until after the '703 patent issued.

Limelight disputes Leighton's credibility. It points out that Sandpiper's web site, which Akamai employees studied in detail, described Sandpiper's technology as "patent-pending" and cites an Akamai competitive overview (PX1009) which, it asserts, shows that Akamai was aware that Footprint 1.0 used hostnames as well as IP addresses.

While I find that Akamai employees, including Lewin, carefully examined Sandpiper's web site and considered Sandpiper a serious competitor in the content distribution arena, there is no evidence that anyone who saw the Sandpiper press releases recognized the "patent-pending" statement as relevant to Akamai's own patent application. As to Akamai's competitive overview, dated September 30, 1999; it only describes Footprint 1.0 as prepending IP addresses. (See PX1009, 9 ("[Sandpiper 1.0] redirect[s] inbound user requests . . . using proprietary routing tables that provide IP addresses"); id. at 10 ("URLs that used [Footprint 1.0] for content delivery typically appear as an IP address followed by a standard URL.")) The document also notes that "nearly all customers use Footprint 2.0," the copy of Akamai's system. (Id. at 9.) In addition, Lewin testified in an earlier deposition that Footprint 1.0 only prepended IP addresses. There is no evidence that the Inventors were aware that Sandpiper described prepending hostnames as a separate embodiment of its invention until they read it in the specification for the PCT application or the '598 patent. I find credible Leighton's testimony that the Inventors were not aware of Sandpiper's PCT application until after the '703 patent issued. The coincidence of Akamai's decision to file its PTMS six weeks after the PCT application was published is not enough to persuade me

otherwise.

Given the central importance of DNS to the disclosures of the '703 patent and the operation of Footprint 1.0 which only prepended IP addresses, together with the pressures of creating a startup company, I am persuaded that Leighton did not deliberately fail to disclose Footprint 1.0 to the PTO. There is also no evidence that Lewin intentionally failed to disclose Footprint 1.0, only that he studied Sandpiper's web site and therefore may have read Sandpiper's claim that its technology was patent-pending.

Akamai's patent attorney, David Judson ("Judson"), testified that he first became aware of Sandpiper in summer of 1999 because Akamai believed that Footprint 2.0 was a copy of its system. As a result, his investigations into Sandpiper looked to a possible infringement lawsuit, not possible prior art. Although he became aware of the Footprint 1.0 system as a result of his investigation, I credit his testimony that his focus was on infringement by the Footprint 2.0 system.

With respect to the prosecution of the '703 patent, Judson testified that he made two searches in preparation for the PTMS.¹⁸ First, he conducted a keyword search on a patent database, possibly the IBM patent database; however, he was not sure at trial. He is unable to locate any notes or records of the search. This search did not return

¹⁸ While a patent applicant normally has no duty to conduct a search for prior art, an applicant that seeks to have his or her application made special assumes, inter alia, an obligation to conduct a "careful and thorough search of the prior art." Manual of Patent Examining Procedure § 708.02(I)(D) (7th ed. 1998).

Sandpiper because at the time the company had no United States patents.¹⁹ In addition, he searched a patent assignment database for five companies identified by Leighton in the provisional application as involved in the problem of content delivery. Because the provisional application had been filed before Akamai became aware of Sandpiper, it was not one of the five companies listed and therefore was not among the companies searched. Judson testified that his practice was not to search a database of foreign patent assignments, which conceivably might have found Sandpiper's PCT application. Finally, he conducted a manual search through other patents he had in his office that he thought might be relevant.

Akamai did disclose approximately 50 references during the prosecution of the '703 case, including the Kriegsman and Kenner patents as well as a paper by Amir, et al. The Amir paper appeared on its face to have been published after the '703 application priority date, but Akamai disclosed to the PTO that it may have been publicly available before that date. At the jury trial, Limelight relied on the Kenner patent and a presentation by Peterson, one of the authors of the Amir paper, to argue that the '703 patent was obvious. Judson testified that he was not aware of the Sandpiper PCT application or the '598 patent until after the '703 patent issued.

In hindsight, Judson probably should have disclosed the existence of Sandpiper's Footprint system to the PTO, or at least included Sandpiper in his searches, and the lack of records concerning his PTMS search investigation is

¹⁹ It is unclear whether this search would have returned Sandpiper even if the database had included the '598 patent, since the '598 specification had its own lexicon for terms such as "reflector" and "repeater."

troubling. Nonetheless, I credit his testimony that by the time he became aware of Sandpiper he viewed it as a copier not an innovator. See Molins, 48 F.3d at 1181 (expressing concern about “the ease with which a relatively routine act of patent prosecution can be portrayed as intended to mislead or deceive”).

Limelight argues that intent can be inferred from Akamai’s failure to disclose the Footprint 1.0 system to the PTO, its decision to file a PTMS shortly after the Sandpiper PCT application was published²⁰ and the failure by Judson to search for Sandpiper as an assignee or to search foreign databases. But Akamai did disclose references which Limelight later argued to the jury either anticipated claims in the ’703 patent or, when combined, rendered those claims obvious. In addition, it disclosed the Amir paper and explained that the paper could be prior art notwithstanding its apparent date of publication. The Amir paper described the system on which the Peterson presentation was based, a reference heavily relied on by Limelight to invalidate the ’703 patent.

²⁰ Judson would not describe the reasons Akamai choose to file a PTMS or explain the timing of that application, citing client privilege. Limelight asserts that the court may draw a negative inference from this invocation of attorney-client privilege. This is incorrect. While the invocation of privilege denies Akamai the benefit of any benign explanation for the coincidence of its PTMS following so closely the publication of Sandpiper’s PCT application, it cannot contribute a negative inference. Compare Brasseler, U.S.A. I., L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1384 (Fed. Cir. 2001) (describing the invocation of privilege as one reason it was “not surprising that the district court was unable to point to any credible evidence upon which it could reasonably infer that [the patent attorneys] acted in good faith”), with Datapoint Corp. v. Picturitel Corp., 215 F.3d 1344, 1999 WL 507141, at *4 (Fed. Cir. July 15, 1999) (unpublished) (“The district court [] did not err in excluding the evidence that Datapoint’s counsel had invoked the attorney-client privilege and in declining to instruct the jury that it could infer wrongful intent on Datapoint’s part from counsel’s invocation of the privilege.”). See also Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp., 383 F.3d 1337, 1345 (Fed. Cir. 2004).

Thus, I conclude that Limelight has failed to prove by clear and convincing evidence that the Inventors intended to deceive the PTO or that Judson was deliberately indifferent to notice of material information during the pendency of the '703 application. Cf. Brasseler, U.S.A. I., L.P. v. Stryker Sales Corp., 267 F.3d 1370, 1383 (Fed. Cir. 2001) (finding attorneys willfully ignored notice of a potentially invalidating event in an conscious effort to avoid complying with their duty to disclose). Limelight has not sustained its burden of proof on its charge of inequitable conduct.

B. Limelight's Defenses of Laches and Equitable Estoppel

1. Legal Standard

a. Laches

To prevail on its laches defense, Limelight must prove by a preponderance of the evidence that: (1) "the plaintiff delayed filing suit for an unreasonable and inexcusable length of time from the time he knew or reasonably should have known of his claim against the defendant;" and (2) "the delay operated to the prejudice or injury of the defendant." A.C. Aukerman Co. v. R.L. Chaides Constr. Co., 960 F.2d 1020, 1032 (Fed. Cir. 1992) (en banc). The laches period begins to run when the patentee has actual or constructive knowledge of the infringer's activity. Id. A successful laches defense "bars relief on a patentee's claim only with respect to damages accrued prior to suit." Id. at 1041.

A presumption of laches exists where a patent holder delays more than six years before filing suit. Id. at 1035. Here, Limelight alleges only a five-year delay between Akamai learning of Limelight's CDN in 2001 and its filing of this lawsuit. Therefore,

there is no presumption of laches, and “unreasonable delay and prejudice [] must be proved and judged on the totality of the evidence presented.” Id. at 1038.

b. Equitable Estoppel

To show equitable estoppel, Limelight must prove: (1) that Akamai communicated by statements or conduct that it did not intend to press an infringement claim against Limelight; (2) that Limelight substantially relied on this misleading conduct, i.e. it was lulled into a false sense of security in its actions going forward; and (3) that it would be materially prejudiced if Akamai is allowed to proceed. A.C. Aukerman Co., 960 F.2d at 1041. The inferences Limelight derived from Akamai’s conduct must be reasonable. Id. at 1043. “[S]ilence alone will not create an estoppel unless there was a clear duty to speak” or the silence reinforces a plaintiff’s acquiescence to a defendant’s conduct. Id. Unlike laches, equitable estoppel does not require an unreasonable passage of time prior to filing suit. Id. at 1041. “Where equitable estoppel is established, all relief on a claim may be barred.” Id. The Federal Circuit has “adopted the preponderance of evidence standard in connection with the proof of equitable estoppel factors, absent special circumstances, such as fraud or intentional misconduct.” Id. at 1046.

2. Factual Background

Michael Gordon (“Gordon”), one of the founders of Limelight, testified that Limelight was founded in June 2001 and began marketing its content delivery service in November of that year. Limelight grew and added customers and equipment over the next several years. Late in the first quarter of 2004, officials from Akamai and Limelight

met to discuss the possible acquisition of Limelight by Akamai. Over the course of approximately the next six months, Gordon provided Akamai with information on Limelight's financial results, technology and content delivery architecture. At a meeting in June 2004, Gordon, along with Limelight's CEO and its Chief Technical Officer, met with a group of Akamai employees, including several technical people. At that meeting, Limelight explained that its network did not choose a best server, rather it used Internet routing techniques to route a user's request to a particular group of servers and assigned a particular server to fill the request on a round-robin basis. Gordon understood that Akamai viewed the infrastructure and architectures of Limelight's network as very different from its own. This understanding is confirmed by a summary Akamai prepared during the 2004 negotiations, which described Limelight as "tak[ing] a very different approach to its network architecture than Akamai." (DX1146, AKL064050.) Indeed, according to Gordon, Akamai reached the conclusion that, after an acquisition, the approach that "Akamai would pursue would be to migrate Limelight's customers off of Limelight's architecture and onto Akamai's and then decommission Limelight's network." (Trial Tr. Day 1, 124:11-15, Nov. 12, 2008.)

Ultimately, Akamai decided not to make an offer for Limelight. In a late October 2004 email to another of the founders of Limelight, Robert Wood ("Wood"), the Vice President of Corporate Development for Akamai, concluded the discussions with:

I . . . want to congratulate you on the great business that you and your team have built. I really enjoyed getting to know you and Mike [Gordon] and hope our paths cross again in the future. My understanding from the last conversation with Broadview is that you guys are going to receive tremendous value for the business and I am glad to hear it.

(DX1072.) Gordon testified that, although he had general discussions with Wood about the Speedera lawsuit, no one at Akamai ever indicated that Limelight's CDN infringed any Akamai patents.

During and after the 2004 negotiations, Limelight continued to add customers, purchase equipment and add capacity to its network. Gordon testified that Limelight invested about \$10 million in capital equipment in 2005 alone. It also added three new United States locations for its servers and began building points of presence in several European cities. Limelight purchased equipment at an increasing rate in 2006, at least doubling its purchases in the six months after the lawsuit was filed compared to the prior six months.

In April 2005, Limelight began implementation of a new architecture for its CDN which did not allocate servers on a round-robin basis; rather, it used software that maintained a list of information concerning the "health" of the available servers to select an appropriate server.

In early 2006, the parties renewed acquisition discussions, and this time they progressed to an offer by Akamai to acquire Limelight. However, Limelight decided to stay independent and find alternate funding. On June 22, 2006, it rejected Akamai's final offer, and the parties wished each other well. The following day, Akamai filed this lawsuit charging Limelight with infringing its patents. Gordon testified without contradiction that, prior to notifying him of the lawsuit, Akamai never suggested that Limelight infringed any of its patents or that it had considered suing Limelight.

Leighton testified that Akamai began to investigate the possibility that Limelight

was infringing its patents in mid-2005 because Limelight was starting to be a serious competitive threat and because the Speedera litigation had been resolved. The investigation concluded about the time the parties renewed their acquisition discussions. While the negotiations were ongoing, Akamai refrained from instituting any legal actions, but Limelight's disinclination to be bought removed such restraints.

On cross-examination, however, Leighton admitted that Akamai viewed Limelight as one of its competitors much earlier than 2005, a view confirmed by an April 2002 Akamai confidential document titled "How To Beat LimeLightNetworks." (DX1221.)²¹ In that report, Akamai recommended that its sales force "[p]osition LimeLight as a start up – just like the other 25 or so that are out there." (*Id.* at AKL124384.) In addition, an October 2003 internal Akamai email describes Limelight as "a key competitor in several accounts." (DX1212.)

Akamai clearly recognized Limelight as a potentially serious competitor as early as 2002 and, in its memo, considered how to beat Limelight, not the "other 25 or so" content delivery companies. (DX1221.) In addition, by April 2002 Akamai was aware that Limelight had "snagged one of its notable clients, MusicMatch.com" and was pricing its services aggressively against Akamai's FreeFlow service. (*Id.*) However, I find no evidence that Akamai investigated Limelight's technology in the context of patent infringement prior to mid-2005. Wood participated in both the 2004 and the

²¹ Although Akamai did not object to DX1221 during Leighton's cross-examination, it does so now on grounds of relevance. (See DX1221 flysheet.) The objection is overruled. Not only is it belated, but the document is relevant to the issue of how Akamai viewed Limelight at the time and what information it possessed concerning its competitor.

2004 acquisition discussion, and I credit his testimony that he was unaware of any investigation by Akamai into the question of patent infringement during the earlier negotiations. In addition, there is no evidence that Limelight's round-robin CDN implementation infringed any Akamai patent. While Akamai did include this implementation in its initial infringement contentions, it ultimately dropped it from the lawsuit, and the jury awarded damages only for Limelight's use of the architecture introduced in April 2005.

3. Discussion

a. Laches

Limelight argues that Akamai's delay of five years in filing this lawsuit prejudiced it because, had it known that Akamai believed Limelight's technology infringed its patents, Limelight "would likely not have focused solely on expanding its CDN business but would have also developed and expanded other types of business such as transit and hosting businesses." (Docket # 353, 7.) Limelight also complains about evidentiary disadvantages, including witnesses' loss of memory visited upon it as a result of the delay. According to Limelight, since Akamai viewed it as a competitor in the content delivery field, Akamai had a duty to investigate whether Limelight infringed any of its patents and cannot avoid a finding of laches by willful ignorance. Therefore, Limelight argues, Akamai's infringement damages should be limited to damages accruing after it filed suit in 2006.

Akamai responds that it did not learn that Limelight might be infringing its patents until 2005 and that, because it dropped any infringement claims based on

Limelight's pre-2005 technology, it sued within 14 months of when the infringing conduct began, and thus there can be no inexcusable delay. Akamai also disputes Limelight's claim that it was prejudiced by any delay in the filing of the lawsuit. Limelight's argument that it would have "likely" done something different is insufficient to show economic harm and the claimed lack of memory is rebutted by Limelight's factual allegations in its inequitable conduct claim. Moreover, Akamai states that the information Limelight seeks is available in the 2001 transcripts of the Digital Island case, which were taken much closer in time to the events at issue; thus, it suffered no evidentiary prejudice.

First, whether plaintiff unreasonably delayed filing suit depends on the date the clock began to run which, in turn, depends on the date on which plaintiff knew or should have known of defendant's infringement of the '703 patent. If Akamai first became aware of Limelight's use of the infringing technology in 2005, the 14-month delay in filing suit is too short to sustain a finding of laches. This is particularly true here as the parties were engaged in acquisition discussions for more than a third of that time. Limelight does not explicitly dispute this conclusion; rather, it argues that the unreasonable delay began in October 2001, when Akamai first learned of Limelight's competing service. (See Limelight's Proposed Findings of Facts and Conclusions of Law (Docket # 407, Ex. A), FF123, FF125, CL83.)

As to knowledge, none of the pre-2005 documents on which Limelight relies suggest that Akamai believed Limelight infringed Akamai's patents, only that Limelight posed a competitive threat. (See, e.g., DX1216, DX1225.) Indeed, that is what it told

Gordon, who testified that he was led to believe that Akamai viewed his company's technology as significantly different from its own, and Akamai's internal evaluation of Limelight in June 2004 made precisely that point. (See DX1146, AKL0964050.) Akamai's plan at the time was to purchase Limelight and then shut down Limelight's content delivery system and not even try to integrate it with Akamai's. Thus, there is no evidence that Akamai believed that Limelight was infringing its patents prior to 2005, but that Akamai failed to bring suit.

Nor did Akamai have a duty to investigate Limelight's CDN in 2001. While it "could not simply ignore any and all evidence of potentially infringing activity," it did not have a duty to investigate Limelight merely because it announced a competing service. Wanlass v. Fedders Corp., 145 F.3d 1461, 1466 (Fed. Cir.1998). A duty to investigate a particular product arises "when publicly available information about it should have led [the patent holder] to suspect that product of infringing." Id. Akamai does not claim to have invented the concept of content delivery services, nor does it claim that every content delivery service infringes its patent. Rather, as Leighton explained, the key ideas of the Akamai system are tagging page objects with a virtual hostname and adding intelligence to the DNS system to resolve that virtual hostname into an optimal server. During the 2004 discussions, Limelight described its content delivery service as allocating servers on a round-robin basis, i.e., sequentially rather than using some intelligent selection. This information did not give rise to a duty to investigate Limelight's CDN for infringement at that time.

There is also no evidence that Akamai learned of Limelight's April 2005

deployment of the infringing system or that it should have known of this deployment.²²

There is evidence only that, Akamai, concerned over Limelight's success in the marketplace, went looking for a way to blunt that competition in mid-2005 and discovered the alleged infringement as a result of its investigation. Prior thereto, it had no notice of any possible infringement and, therefore, no legal duty to investigate.

Finally, even if Akamai's two-year delay in bringing suit was unreasonable, Limelight has not shown that it was unduly prejudiced by that delay. While Gordon testified that Limelight looked at opportunities other than content delivery, and invested in some of them, it invested heavily in content delivery because it believed it would grow as broadband access and media content flourished. He suggested that, had Akamai indicated there might be an infringement issue, Limelight might not have made the investment it did, but did not explain how its decisions would have changed. Indeed, Limelight continued to invest even greater amounts in its content delivery business after the lawsuit was filed. In addition, Limelight did not then, and indeed still does not, believe its system meets, inter alia, the "tagging" limitation of the '703 patent or chooses an optimal server as required by the patent. (See, e.g., Docket # 310.) This evidence contradicts Limelight's assertion that it might have changed course had it

²² Nor did Limelight present evidence to suggest that detecting infringement of the '703 patent was "easily testable" such that Akamai had a duty to conduct an investigation of any content service provider competitor who conceivably could be using the patented technology, even without some additional knowledge that it used DNS to assign an optimal server. Wanlass v. GE, 148 F.3d 1334, 1339-40 (Fed. Cir. 1998) ("The frequency with which these types of investigations [into competitor's products] should have occurred is a function of their cost and difficulty.").

been warned of Akamai's claims of infringement. Limelight has failed to meet its burden to show material economic prejudice due to any delay in Akamai's filing suit.

Similarly, Limelight has failed to show that the evidentiary prejudice it alleges would not have occurred if discovery had taken place two years earlier. Lewin died in 2001, Limelight had access to the testimony of the Inventors and Akamai's employees from the two earlier lawsuits and there is no evidence that Judson's notes were lost after the suit was filed.

The defense of laches fails.

b. Equitable Estoppel

The factual question decisive of Limelight's defense of equitable estoppel is whether Akamai intentionally misled Limelight before initiation of this suit as to its position on infringement by Limelight and its plan to enforce its rights under the patent. Given Akamai's aggressive stance against infringers, but its silence as to Limelight's technology, Limelight argues it was reasonable for it to infer that Akamai did not think it infringed.

Akamai states that it had no duty to threaten or warn Limelight prior to suit that it was infringing and therefore there can be no estoppel. Furthermore, even if it had a duty to speak, Limelight can show no prejudice for the same reasons none exists in its laches defense.

Although Limelight asserts that it was lulled into a false sense of security by Akamai's silence during the 2004 negotiations, at that time it used only the round-robin method of selecting a server. At the trial Akamai did not assert that this method

violated the '703 patent, and the jury assessed damages only on Limelight's new system first implemented in the spring of 2005. Thus, Akamai's silence on patent issues, its statements that Limelight's network was very different and Wood's well wishes during the 2004 negotiations cannot be considered conduct intended to mislead Limelight.

By the time of the 2006 negotiations, Akamai clearly had concluded that Limelight's new system infringed its patent, however, it still had no obligation to warn Limelight prior to filing suit. See Aukerman, 960 F.2d at 1042 ("Silence alone will not create an estoppel unless there was a clear duty to speak . . ."). In order to foster reliance, Akamai's silence must "reenforce[] the defendant's inference from the plaintiff's known acquiescence that the defendant will be unmolested." Id. Here, negotiations began shortly after Akamai's investigation concluded that Limelight's system was infringing, and Akamai reasonably did not want to destroy the possibility of an acquisition by filing suit. It did, however, hint that Limelight could face litigation if the negotiations failed. During the 2006 negotiations, Wood responded to attempts by Limelight for a higher valuation by pointing out that Akamai had "a very hard patent portfolio, and that anyone operating a Content Delivery Network the way that Limelight was operating its Content Delivery Network certainly came through that patent portfolio." (Trial Tr. Day 3 Sess. 2, 77:5-8, Nov. 14, 2008.) The evidence is clear, and I find that Akamai did not deliberately mislead Limelight into believing it would not be sued for infringement.

At the same time, the evidence does not support Limelight's claim of reliance on

Akamai's silence in making business decisions. By 2005, Limelight already had contractual obligations to provide delivery services, and it believed and continues to believe that it does not perform several of the limitations of the asserted claims. Therefore, Limelight's equitable estoppel defense fails both for lack of misleading conduct by Akamai and lack of detrimental reliance by Limelight.

C. Unclean Hands

Unclean hands is a catch-all equitable remedy that allows a court to refuse to aid "one tainted with inequity or bad faith relative to the matter in which he seeks relief, however improper may have been the behavior of the defendant." Precision Instrument Mfg. Co. v. Auto. Maint. Mach. Co., 324 U.S. 806, 814 (1945). The misconduct alleged need not be punishable as a crime, but must "rightfully [] be said to transgress equitable standards of conduct." Id. at 815. A finding of unclean hands allows a court to deny relief to the culpable party.

The Supreme Court has found unclean hands and refused to enforce patent rights where a plaintiff settled an interference with a rival and ultimately obtained rights to the rival's invention even though it knew that the original applicant had committed perjury in his application to the PTO (Precision, 324 U.S. at 818-19) and where a patent holder used an earlier successful infringement suit as the basis for an injunction in a new suit, even though it had previously concealed evidence of prior use of the invention. Keystone Driller Co. v. Gen. Excavator Co., 290 U.S. 240, 247 (1933). In addition, the Federal Circuit has refused to enforce several other of a plaintiff's patents under the doctrine where it found inequitable conduct in the prosecution a related

patent. See Consol. Aluminum Corp. v. Foseco Int'l, Ltd., 910 F.2d 804, 812 (Fed. Cir. 1990).

Limelight bases its unclean hands defense on the same conduct that underlies its inequitable conduct and equitable estoppel defenses, discussed above. It argues that “these are the very types of wrongful actions that bar relief under the doctrine of unclean hands.” (Docket # 407, 38.) Even if the evidence supported Limelight’s claim, unclean hands is an exceptional remedy reserved only for truly egregious conduct. Here, the evidence does not support the claim of bad faith and unfair conduct.

D. Limelight’s Motion for Reconsideration

Limelight moves for reconsideration of the decision denying its motion for JMOL, which focused on the issue of whether it directs or controls every step of the asserted claims of the '703 patent. In particular, Limelight points to the Federal Circuit’s opinion in Muniauction, Inc. v. Thomson Corp., released two weeks after I denied its motion for JMOL, to argue that Akamai’s proof was insufficient for the jury to find it infringed the patent. 532 F.3d 1318 (Fed. Cir 2008), cert. denied, — S.Ct. —, 2009 WL 578715 (U.S. Mar. 9, 2009) (No. 08-847).

It is undisputed that Limelight does not itself perform every step of the claims found infringed. While it provides its customers with the information necessary for them to modify their web pages or Internet address routing information to utilize its service,²³ the actual modifications are performed by the customer, not Limelight. These

²³ In the first method, the customer changes the hostname address of one or more page objects in the initial web page to point to Limelight’s servers (the “prepend method”). In the second method, the customer adds or changes alias information in its

modifications are required steps in both of the independent claims found infringed by the jury.²⁴ In addition, the content provider is responsible for providing the initial web page to the end user, therefore, Limelight does not perform the first step of claim 19 as well.²⁵

1. BMC Resources

At trial, both parties relied on the Federal Circuit's opinion in BMC Resources, Inc. v. Paymentech, L.P., 498 F.3d 1373 (Fed. Cir. 2007), for their proposed jury instructions addressing the issue of direct infringement by multiple parties performing different steps of a single patented process. (See Docket # 264, 20; Docket # 267, 11.) In BMC Resources, the court reaffirmed the requirement that "[i]nfringement requires . . . a showing that a defendant has practiced each and every element of the claimed invention." 498 F.3d at 1380. However, a party cannot avoid infringement by "contracting out steps of a patented process to another entity" if it directs or controls the actions of that entity. Id. at 1381. The court acknowledged that "requiring control or

DNS record so that the hostname addresses of the page objects resolve to Limelight's servers without requiring any change to the customer's initial web page (the "CNAME method").

²⁴ (See '703 patent, claim 19 (. . . 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 [content delivery service] domain instead of the content provider domain; . . .); id., claim 34 (. . . 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 [content delivery service] domain instead of the content provider domain; . . .).)

²⁵ (See '703 patent, claim 19 (" . . . responsive to a request for the given page received at the content provider domain, serving the given page from the content provider domain; . . .").)

direction for a finding of joint infringement may in some circumstances allow parties to enter into arms-length agreements to avoid infringement.” Id.

The accused infringer in BMC Resources received payment information for a customer transaction from a merchant, forwarded it to a participating debit network who then forwarded it to an affiliated financial institution. The patented method included steps performed by all four parties, the merchant, the defendant payment services provider, the debit network and the financial institution. In addressing the question whether the defendant directed or controlled the steps it did not itself perform, the Federal Circuit concluded that the mere provision by the defendant of data describing the financial transaction to a debit network, “absent any evidence that [defendant] also provides instructions or directions regarding the use of those data,” was inadequate to establish that it controlled or directed the activity. Id. It also noted the tenuous relationship between the defendant and the financial institutions as weighing against a finding of direction or control, citing the lack of evidence “even of a contractual relationship” between them. Id. at 1382.

Thus, BMC Resources left 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 or directions regarding the use of those data. Similarly, BMC Resources suggested 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.

2. The Jury Instructions in the Instant Case

At the conclusion of the evidence in the instant case, I instructed the jurors that if they found that use of Limelight's service infringed the asserted claims then:

[t]he second issue is that I think it is not disputed that Limelight does not make [the prepend method] substitution. The substitution is made by the content provider. That raises the question whether the content provider, when carrying out this step, acts under the direction and control²⁶ of Limelight such that Limelight can properly be deemed to be the one to do it. And you heard argument about that just before we broke.

If Limelight did not direct and control this action, then this substitution cannot be attributed to Limelight. And Limelight cannot, therefore, infringe. And in the CNAME method, it's similar, but rather than modifying the object on the page served, the content provider modifies its DNS system so that the object is retrieved from Limelight's content delivery network by means of an alias of the hostname.

Again, the first [question] is whether this method of getting to the Defendant content delivery network infringes any claim, and the second question, again, is whether the content provider acted under the direction and control of Limelight. And again, if Limelight directed and controlled this action, it was effectively the action of Limelight, and then it may be found responsible. But if Limelight did not direct and control, both are necessary, the modification at the content provider, then it cannot be deemed to infringe.

Do you understand what I'm trying to tell you? It's like one acting for somebody else and controlling that person, then you can be responsible. But if the other person, if you do not control what the other person does, then you are not responsible for what the other person does, not liable for what the other person does.

So, you should review the evidence, decide how the Limelight systems work, how does the interaction with the content provider work, and, specifically, does Limelight direct and control the modifications or does the content provider carry out these tasks entirely independently. Then compare each of the mechanisms with what is claimed in the certain claims and,

²⁶ I initially instructed the jury that Limelight must both direct and control the actions of the content provider. Upon conferring with the counsel after this charge, I issued a correcting instruction as discussed infra.

specifically, does either of the Defendant's content delivery methods practice each element of whichever claim you are considering.

(Trial Tr. Day 13 Sess. 2, 20-22, Feb. 28, 2008.)

Upon conferring with the parties after this instruction, I issued the following correction:

One of those [things I didn't get right] is that I had told you with respect to activities that Limelight says were really done by somebody else, namely the content provider, that such activities are chargeable to Limelight if Limelight directed and controlled this content provider in the example we're using. I was wrong on that. It is either direct or control, control or direct; it doesn't have to be both.

(Id. at 52-53.)

Although the jury returned a finding of infringement on these instructions, Limelight moved for JMOL arguing that there was "no substantial evidence" that it "directs or controls another party to perform" several steps of the asserted claims. (Docket # 310, 3-4.) I denied the motion because, unlike in BMC Resources, here there was evidence that not only was there a contractual relationship between Limelight and its customers, but that it provided those customers with instructions explaining how to utilize its content delivery service. Therefore, I found that there was sufficient evidence for the jury to have found direction or control. Limelight now moves for reconsideration of that decision, arguing that under the Federal Circuit's subsequent decision in Muniauction "an accused infringer's control over access to an Internet-based system, coupled with instructions to customers on how to use that system, is insufficient to establish direct infringement." (Docket # 377, 2.) It asserts that Muniauction requires a showing that it is vicariously liable for the act committed by

others in order for a jury to find it directly infringed Akamai's patented method.

3. Muniauction

In Muniauction, decided July 14, 2008, MuniAuction, Inc. ("MuniAuction"), the patent owner, brought an action against defendant Thompson for infringement of a patent claiming a method of auctioning municipal bonds using a web browser. The preamble of claim 1 describes an auction system consisting of a "bidder's computer [] located remotely from [the bond] issuer's computer," with the two computers connected by an electronic network such as the Internet. Muniauction, 532 F.3d at 1322 (quoting United States Patent No. 6,161,099). The first step of the method requires "inputting data associated with at least one bid . . . into said bidder's computer . . ." Id. The court noted that this step is completed by the bidder, while "at least a majority of the remaining steps are performed by [defendant's] system." Id. at 1328-29. Therefore, the issue was whether the actions of the bidder could be combined with those of the defendant to give rise to a finding of direct infringement by the latter. Referencing its earlier decision in BMC Resources, the court explained

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." At the other end of this multi-party spectrum, mere "arms-length cooperation" will not give rise to direct infringement by any party.

Id. at 1329 (internal citations omitted). In applying this standard to the facts of the case, the Federal Circuit concluded that

[u]nder 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. In this case, 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. Therefore, Thomson does not infringe the asserted claims as a matter of law.

Id. at 1330 (internal citation omitted).

a. Vicarious Liability

Thus, the first question posed by the Federal Circuit's decision in Muniauction is the following: is 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?" BMC Resources, 498 F.3d at 1381. I conclude that the court intended the latter. First, in Muniauction, the court refers to vicarious liability as an alternative theory of liability to having "another party perform steps on its behalf." 532 F.3d at 1330. Second, in BMC Resources, the court cautioned that "a defendant cannot [] avoid liability for direct infringement by having someone else carry out one or more of the claimed steps on its behalf." 498 F.3d at 1379. Were vicarious liability a requirement for a finding of joint infringement, then an entity could use a patented method with impunity by hiring an independent contractor to perform one or more steps of that method. See, e.g., Graham v. Malone Freight Lines, Inc., 314 F.3d 7, 15 (1st Cir 1999) ("Employers are generally not liable for the negligent acts of the independent contractors they hire.") Yet in BMC Resources, the court explicitly stated that one cannot avoid infringement by "contracting out steps of a patented process to another entity." 498 F.3d at 1381.

There is no indication that the court intended to make a major change to this jurisprudence in its Muniauction decision.²⁷ While a showing of vicarious liability is sufficient to find direction or control, it is not a necessary requirement. Therefore, the fact that Limelight is not vicariously liable for the actions of its customers does not end the inquiry.

b. The Significance of Muniauction

However, Muniauction did establish a new data point on the continuum between an arms-length relationship and vicarious liability for determining direction or control. In BMC Resources, as discussed supra, the court's reasoning left open the possibility that evidence of direction or control might be found from the provision of "instructions or directions" regarding the use of the data the defendant provided to the debit networks. 498 F.3d at 1381. It similarly suggested that the lack of a contractual relationship between the defendant and the financial institutions was relevant in finding a lack of direction or control of the latter's actions by the former. Indeed, in opposing Limelight's original motion for JMOL, that is exactly how Akamai summarized the law on joint infringement:

The BMC decision and subsequent decisions of several District Courts identify factors that can support a finding of direction and [sic] control: (1) a contractual relationship between the accused party and the third party performing one or more steps of the claim; and (2) the accused infringer's provision of instructions, or directions to the third party that direct the third party to perform one or more steps of the claim.

²⁷ Nor was Muniauction decided en banc, a requirement to overruling a prior decision. See El-Shifa Pharm. Indus. Co. v. United States, 378 F.3d 1346, 1352 (Fed. Cir. 2004).

(Docket # 343, 31 (citations omitted).)

In Muniauction, however, the court explicitly held “[t]hat Thomson controls access to its system and instructs bidders on its use is not sufficient to incur liability for direct infringement.” 532 F.3d at 1330. It also described as not “relevant to whether Thomson satisfies the ‘control or direction’ standard of BMC Resources,” a jury instruction which directed the jurors to ask whether “there one party teaching, instructing, or facilitating the other party’s participation in the electronic auction process.” Id. at 1331. While the Muniauction decision makes no explicit mention of a contract between Thompson and its customers, it quotes the lower court’s finding that the defendant charges the bidders a fee for its services. See id. at 1329 (quoting Muniauction, Inc. v. Thomson Corp., 502 F. Supp.2d 477, 492 (W.D. Pa. 2007)). In addition, MuniAuction’s brief to the Federal Circuit highlighted the contractual relationship between the parties as a factor distinguishing Thompson’s actions from those of the defendant in BMC Resources. (See Docket # 378, Ex. D, 26; see also id. at 13 (describing Thompson’s contracts with bidders and issuers).) Thus, 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.

Limelight therefore argues that, under Muniauction, its “control over access to an Internet-based system, coupled with instructions to customers on how to use that system, is insufficient to establish infringement.” (Docket # 378, 2 (emphasis in original).) It asserts that its content delivery services are “remarkably similar” to the

auction bidding system deemed not infringed by Thompson in Muniauction such that that case's holding should be binding on the facts in this case. (Id. at 4-5.)

Akamai attempts to distinguish Muniauction, arguing that “[t]he facts of this case are grossly different” because once Limelight’s customers “sign Limelight’s contract, [they] are under a contractual obligation to – implement Limelight’s content delivery method by serving pages that include a hostname supplied by Limelight to the customer.” (Docket # 379, 3-4.) However, this formulation misstates the basis of the contract between Limelight and its customers. Limelight does not “contract[] out steps of a patented process to another entity.” BMC Resources, 498 F.3d at 1381. Rather, like Thompson, the fundamental agreement between Limelight and its customers is the provision of a service in exchange for payment. Thompson provides its customers with the ability to bid on municipal bonds, while Limelight promises to serve its customers’ page objects from its network. In each case, the customer must perform a step of the patented method in order to obtain the offered service, but the consideration offered by the customer is in the form of financial remuneration. Akamai’s argument -- that direction or control is established by the existence of a contractual relationship in which one entity incidentally has to perform a step of a patented process to receive the benefits of the contract – runs counter to the Federal Circuit’s holding that “mere ‘arms-length cooperation’ will not give rise to direct infringement by any party.” Muniauction, 532 F.3d at 1329; see also BMC Resources, 498 F.3d at 1381 (“[T]he 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.”). Therefore, while a contract to perform steps of a patented process on the mastermind’s behalf cannot shield the mastermind from liability for direct infringement, the existence in the instant case of a contract for services does not give rise to direction or control, even if the customer must perform one or more steps of the patented process in order to receive the benefits of those services.

Akamai further argues that because “[t]he customer must use the Limelight-supplied hostname” as instructed by Limelight in order to obtain its content delivery services, and because “[t]here is no other purpose for providing a hostname to the customer,” there was sufficient evidence for the jury to find direction or control of the tagging step. (Docket # 379, 3-4 (emphasis in original).) However, MuniAuction unsuccessfully made a similar argument to the Federal Circuit. It argued that because Thompson supplies a bidder ID and password to its customers and instructs its customers as to their use, and because that ID and password are necessary in order to access its auction system, “Thompson controls the [claimed] inputting step.” (Docket # 378, Ex. D, 11-12.) Nevertheless, the court held that controlling access to its system and instructing its customers on its use was not enough to evince direction or control.²⁸

²⁸ This result is likely to make unenforceable a number of patents claiming similar methods in which a remote user contacts a central server. The Federal Circuit implicitly acknowledged as much in BMC Resources by noting:

The concerns over a party avoiding infringement by arms-length cooperation can usually be offset by proper claim drafting. A patentee can usually structure a claim to capture infringement by a single party. See Mark A. Lemley et al., Divided Infringement Claims, 33 AIPLA Q.J. 255, 272-75 (2005). 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.

I find no material difference between Limelight's interaction with its customers and that of Thompson in Muniauction. 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,

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.

498 F.3d at 1381.

In its petition for a writ of certiorari, MuniAuction raised a similar concern. It argued that the Federal Circuit's holding "threatens drastically to change the meanings of the claims of hundreds or thousands of patents" and warned that "any claim that requires as one method step that a computer or cell phone must be activated by a user, even though that step is controlled by a web site operator or a carrier, can no longer be enforced against infringers." On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit at 21, 25, Muniauction, Inc. v. Thomson Corp., No. 08-847 (U.S. Dec. 22, 2008). See also id. at 35 (disputing the Federal Circuit's suggestion that the problem can be avoided by proper claim drafting and noting that in any event, it "generally cannot be implemented on issued patents already in litigation"). Nevertheless, the Supreme Court denied certiorari. See Muniauction, Inc. v. Thomson Corp., — S. Ct. —, 2009 WL 578715 (U.S. Mar. 9, 2009) (No. 08-847).

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.

Therefore, Limelight's motion for reconsideration is allowed and, based on the standard set forth in Muniauction, Limelight's motion for JMOL of noninfringement is allowed.

IV. Conclusion

For the reasons set forth, Limelight's Motion to Admit Trial Exhibit 1228 (Docket # 399) is DENIED. Limelight's Motion for Leave to File a Reply (Docket # 413) is ALLOWED. Limelight's Motion for Reconsideration of the Court's Denial of its Motion for JMOL Based on New Case Law (Docket # 377) is ALLOWED.

The parties shall submit a proposed form of judgment within 20 days.

April 24, 2009

DATE

/s/Rya W. Zobel

RYA W. ZOBEL

UNITED STATES DISTRICT JUDGE