



**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Norfolk Division**

LEVEL 3 COMMUNICATIONS, LLC,

Plaintiff,

v.

Civil Action No. 2:07cv589

LIMELIGHT NETWORKS, INC.,

Defendant.

OPINION AND ORDER

This matter is before the Court on Defendant Limelight Networks, Inc.'s motion for summary judgment asserting non-infringement and invalidity of all patents-in-suit. The motion was fully briefed, and oral argument took place on December 18, 2008. The matter is now ripe for decision and the Court considers the merits below.

FACTUAL AND PROCEDURAL BACKGROUND

Plaintiff acquired the patents-in-suit, U.S. Patent Numbers 7,054,935 (the "935 patent"), 6,654,807 (the "807 patent" and, collectively with the '935 patent, the "Farber patents"), and 6,473,405 (the "405 patent"), from Savvis Communications Corporation in a deal that was publicly announced in December 2006 and that closed in January 2007. Plaintiff sent Defendant a letter dated February 9, 2007, informing Defendant of Plaintiff's acquisition of these patents.

On December 17, 2007, Plaintiff filed the instant action against Defendant, alleging that Defendant is directly and/or indirectly infringing one or more claims in each of the patents-in-suit. In its Complaint, Plaintiff generally described the technology that is the subject of these patents-in-suit as follows:

A Content Delivery Network (CDN) is a system that supports delivery of information, such as video, music, games, and software, to computer users or computers on behalf of its subscribers (typically content providers). A CDN can have multiple servers distributed at various locations around the U.S. and/or the world.

A content provider such as a website operator can subscribe to a CDN service and then use the CDN for delivery of that content provider's information to computer users or computers. A content provider's use of a CDN is transparent to its end users. For example, when a user requests information/content from a content provider that has subscribed to a CDN service, some or all of that requested information may be delivered to the user from one or more of the CDN's servers, instead of directly from the content provider itself.

A content provider that subscribes to a CDN service may offload substantial overhead and distribution responsibility to the CDN service, and CDN services provide a number of benefits and advantages to both content providers and end users. These include (a) quicker and more efficient delivery of the content providers' information, providing a better experience to their end users; (b) allowing content providers to avoid building and maintaining their own large networks of servers, thereby reducing their costs; (c) reducing load (and potential overload) on the content providers' own servers; and (d) scalability – allowing content providers to support extra capacity when needed.

Complaint ¶¶ 17–19. Plaintiff seeks to enjoin Defendant's alleged infringement and recover money damages. Defendant generally denies Plaintiff's allegations, and requests award of its costs and attorneys' fees for defending the suit.

In the course of the *Markman* hearing, the parties were able to come to agreement on the construction of four disputed patent claim terms, leaving a total of eighteen terms to be construed by the Court. The Court retained an expert agreed upon by the parties (Professor Ellen W. Zegura of the Georgia Institute of Technology in Atlanta, Georgia) to review certain of the remaining disputed terms and provide a report with a suggested resolution as to each such term. The parties responded with their positions on her suggested definitions as to these disputed claim

terms.¹ This Court issued its Opinion and Order on claim construction (“*Markman* Order”) on December 10, 2008. Trial in this matter is currently scheduled to commence on January 5, 2009.

STANDARD OF REVIEW

Summary judgment is appropriate when the Court, viewing the record as a whole and in the light most favorable to the non-moving party, determines that there exists no genuine issue of material fact and that the moving party is entitled to judgment as a matter of law. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322–24 (1986); *Terry’s Floor Fashions, Inc. v. Burlington Indus.*, 763 F.2d 604, 610 (4th Cir. 1985); Fed. R. Civ. P. 56(c). Although the initial burden obviously falls on the moving party, once the movant has properly filed evidence supporting summary judgment, the non-moving party may not rest upon mere allegations in the pleadings, but must instead set forth specific facts in the form of exhibits and sworn affidavits illustrating a genuine issue for trial. *Celotex*, 477 U.S. at 322–24; *Cray Commc’ns, Inc. v. Novatel Computer Sys., Inc.*, 33 F.3d 390, 393–94 (4th Cir. 1994). In other words, while the movant must carry the burden to show the absence of a genuine issue of material fact, when such burden is met, it is up to the non-movant to establish the existence of such an issue. *Celotex*, 477 U.S. at 322–23. Thus, while the non-movant “may not rest upon mere allegations in the pleadings, but must instead set forth specific facts in the form of exhibits and sworn affidavits,” *Celotex*, 477 U.S. at 322–24, when considering such exhibits, “the facts and all reasonable inferences must be viewed in the light

¹ Former United States District Judge Walter D. Kelley, Jr. presided over this case until February 27, 2008, when the case was reassigned to United States District Judge Robert G. Doumar. The matter was later briefly reassigned to United States District Judge Jerome B. Friedman, and then reassigned to this Judge for scheduling reasons.

most favorable to the non-moving party.” *Smith v. Va. Commonwealth Univ.*, 84 F.3d 672, 675 (4th Cir. 1996) (*en banc*).

In determining whether the non-moving party has established the existence of a genuine issue of material fact, facts must be deemed “material” if they are necessary to the resolution of the case and “genuine” if they are based on more than speculation or inference. *Thompson Everett, Inc. v. Nat’l Cable Adver., L.P.*, 57 F.3d 1317, 1323 (4th Cir. 1995). If, after reviewing the record, it appears that “a reasonable jury could return a verdict for [the non-movant], then a genuine factual dispute exists and summary judgment is improper.” *Evans v. Techs. Applications & Serv. Co.*, 80 F.3d 954, 958–59 (4th Cir. 1996); *see Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250 (1986) (“The inquiry performed is the threshold inquiry of determining whether there is the need for a trial—whether, in other words, there are any genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be resolved in favor of either party.”).

UNDISPUTED FACTS

The parties agree on the patents at issue in this case. As previously noted in the Court’s *Markman* Order, the parties agree that an origin server is a server at which resources originate, and that a subscriber is an entity that publishes resources via an origin server and is authorized to have requests for such resources served from the repeater server network. The parties also agree that the specifications of the Farber patents are identical to each other in all relevant respects. The parties further agree that neither of these patents expressly describes any embodiment of a system or method for use of a repeater server network where the functionality of the reflector (including best repeater selection) is performed by domain name server(s) (“DNS”). Finally, the

parties agree that in Defendant's system, for packets to get from Defendant's content delivery network ("CDN") to a user's device, the packets must pass through one or more nodes (routers) on the Internet that are not part of Defendant's CDN. Plaintiff contests all of Defendant's other factual contentions.

ANALYSIS

Defendant makes several arguments in support of its contentions of non-infringement and invalidity of the patents-in-suit. The Court will deal with each in turn.²

I. ORIGIN SERVERS

Defendant begins by claiming that an origin server is a required element of each of the asserted claims in the Farber patents, and contends in this connection that it does not infringe because it "does not either own, or direct or control, any 'origin servers' as that term is used in the Farber patents." Defendant Limelight Networks, Inc.'s Memorandum in Support of Its Motion for Summary Judgment of Non-Infringement and Invalidity of All Patents-in-Suit ("Mot. Mem.") at 1. In making this argument, Defendant cites the fact that the parties agreed to the first half of Defendant's proposed definition of the claim term "origin server:" a "server from which subscriber resources originate." Defendant then seizes on the word "originate" in that definition, arguing that since all subscriber content in Defendant's CDN literally originates from the subscribers' own computers or servers, which are not in the possession or under the control of

² Plaintiff informed the Court and Defendant by letter dated December 22, 2008 that it will not be pursuing claims of infringement under the '935 patent before the jury, but that it intends to proceed in its infringement case at trial on the basis of Claims 8, 12, 13, 26, 28, and 47 of the '807 patent and Claims 1, 2, 7, and 9 of the '405 patent. The Court's analysis in this Opinion and Order naturally will touch upon issues equally relevant to both of the Farber patents, but it is, of course, intended to relate primarily to the specific claims enumerated by Plaintiff for trial.

Defendant, Defendant's CDN does not infringe the Farber patents because its CDN does not contain such origin servers.

As an initial matter, Defendant's contentions appear to be at least superficially belied by its admission that it does, in fact, own and operate servers that Defendant itself refers to as "Limelight origin servers." The Court finds Defendant's arguments to be unconvincing for more fundamental reasons, as well. Although the language of this portion of the definition of "origin server" is admittedly drawn from the Farber patents' specifications (*see, e.g.*, '807 patent col. 4:45), the specifications immediately thereafter also provide a broader definition: "[m]ore generally, the origin server . . . is any process or collection of processes that provide resources in response to requests from a client" and can be "any off-the-shelf Web server." *Id.* col. 4:46–49.

This explanation is directly relevant to the intended meaning of "originate" in the Farber patents' specifications and in the definition of "origin server" adopted by the Court in its *Markman* Order. "Originate," as it is used in these contexts, does not mean that an origin server must be the server on which all subscriber resources are actually created. In other words, it need not be the *ultimate* origin of the subscriber resources. No such limitation is contemplated by the Farber patents' specifications, claims, or this Court's *Markman* Order. Instead, the origin server is simply the point of origin of subscriber resources *from the perspective and within the context or "universe" of the CDN*. The origin server is the interface between the subscriber's computer(s), server(s), or network(s) and the CDN to which the subscriber belongs, and is the point at which content created by the subscriber *becomes available to* the CDN's repeater servers. Whether the origin server through which a subscriber's resources are published to the CDN (and, depending on the chosen configuration, to the broader Internet) is owned, maintained,

or controlled by the subscriber, by the CDN provider, or (for that matter) by a third party on the subscriber's behalf, is of no consequence for purposes of this analysis. Likewise, for purposes of the Farber patents' claims, it does not matter whether the subscriber content is *loaded* onto the origin server by the subscriber itself, by the CDN operator, or by a third party. All of these examples would appear to be "origin servers" within the meaning of the Farber patents.

The foregoing is supported by the claim language and specifications of the Farber patents. Independent Claim 8 of the '807 patent, for example, discusses origin servers as "distinct from the plurality of repeater servers" and subscribers as "entities *that publish information via one or more origin servers.*" *Id.* col. 27:26–28 (emphasis added). This elaboration is not a new limitation, as Defendant argues in its reply brief, but instead the only interpretation that makes sense in the context of the Farber patents' claims and specifications. This understanding also comports with the background role played by origin servers in the Farber patents. In keeping with the thrust of Plaintiff's arguments, the Farber patents do not purport to *invent* origin servers, but instead simply *assume* their existence as components of the system or network in which the methods of the patent are implemented. Since they are not innovations of the Farber patents, but instead nothing more than "off-the-shelf Web server(s)" onto which subscriber content has been loaded (*id.* col. 4:46–49), their role in the claims is little more than that of mere presence: they are simply (a) the places from which subscriber resources can enter the CDN and (b) *not* repeater servers. The definition of origin server is not an indispensable clarification that operates as a limitation on the Farber patents' claims, and therefore origin servers do not qualify as elements of the claimed methods of the Farber patents for purposes of the "all elements" rule, as recently

articulated by the Federal Circuit in *TIP Systems, LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1376–77 (Fed. Cir. 2008).

In a closely related vein, Defendant advances the argument that a finding of infringement is precluded because subscriber content always originates at subscribers' own servers, and Defendant cannot be held liable for the actions or devices of its subscribers. However, as discussed above, although origin servers are admittedly assumed elements of the system in which the methods of the Farber patents' claims are implemented, they do not explicitly play any role in any particular step in those methods. Consequently, they are not directly implicated in determining whether or not an alleged infringer performs each of the steps in the methods contemplated by the Farber patents' claims. As the Federal Circuit noted in *BMC Res., Inc. v. Paymentech, L.P.*, 498 F.3d 1373, 1381 (Fed. Cir. 2007) (internal citations omitted):

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. . . . The steps of the claim might have featured references to a single party's supplying or receiving each element of the claimed process.

The Court agrees with Plaintiff that the Farber patents' claims fit the foregoing definition. The claims undeniably describe, by way of preamble, a system that assumes the existence of external elements such as origin servers, clients, client requests, and subscriber content (and, as discussed below, subscribers). *See, e.g., Microprocessor Enhancement Corp. v. Tex. Instruments Inc.*, 520 F.3d 1367, 1374 (Fed. Cir. 2008) ("Method claim preambles often recite the physical structures of a system in which the claimed method is practiced . . ."). However, the steps comprising the methods implemented in the Farber patents' system do not themselves appear to involve actions by multiple parties. Accordingly, Defendant's extensive reliance on the Federal Circuit's

analysis in *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318 (Fed. Cir. 2008) and *BMC*, which describe the standard applicable to method claims involving steps performed by multiple parties, is unavailing. Instead, infringement of the method claims simply entails performance of these steps by a single party. See, e.g., *Microprocessor*, 520 F.3d at 1375; *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1317–18 (Fed. Cir. 2005). Independent Claim 26 and its dependent claims are even more salient examples of this, since, as apparatus claims, they only tangentially refer to the existence of origin servers and do not even describe them as components in a system.

On the basis of the foregoing, the Court need not reach the question of whether origin servers purportedly owned and operated at arms-length by Defendant's customers can be attributed to Defendant. Although Plaintiff cites *Civix-DDI, LLC v. Cellco P'ship*, 387 F. Supp. 2d 869 (N.D. Ill. 2005) and *Inline Connection Corp. v. AOL Time Warner Inc.*, 472 F. Supp. 2d 598 (D. Del. 2007), which describe the applicable standard in this connection as whether an alleged infringer (1) exercised control over and (2) obtained beneficial use of the allegedly infringing system, Defendant rightly points out that those cases antedate *Muniauction* and *BMC* and, furthermore, that the Federal Circuit has never adopted the standard they articulate.

In addition to the foregoing analysis, Plaintiff has marshaled what appears to be substantial evidence to support its contention that Defendant does, in fact, own, operate, and control origin servers within the meaning of the Farber patents. This evidence includes testimony from employees of Defendant as well as Defendant's own client publications and marketing materials. The Court believes that a jury could conclude, on the basis of such evidence, that "origin server," within the meaning of the Farber patents, does not necessarily mean the server on which subscriber resources were created, but merely the server to which the

subscriber publishes the resources (or has the resources published) for distribution to clients via the CDN to which the subscriber belongs.³ Likewise, a jury could also conclude on this basis that the so-called “Limelight origin servers” fall within the meaning of “origin server” contemplated by the Farber patents for infringement purposes. Accordingly, the Court must conclude that there exists a genuine issue of material fact as to whether Defendant owns, operates, or controls origin servers within the meaning of the Farber patents and uses them in its CDN.

II. SUBSCRIBERS

Defendant next claims, in much the same vein, that “subscriber” is a required element of each of the asserted claims in the Farber patents, and contends in this connection that it does not infringe because (1) it is not a subscriber to its own CDN and (2) its contractual relationships with its customers do not grant Defendant direction or control over them sufficient to create vicarious liability for their actions. Plaintiff argues, as it did with respect to Defendant’s “origin server” argument, that subscribers are merely passive elements discussed only in the preamble of the Farber patents’ claims, and play no role in the steps of the claims’ methods. Consequently, Plaintiff argues that it can prove infringement without reference to actions taken by subscribers. *See, e.g., Microprocessor*, 520 F.3d at 1375; *NTP*, 418 F.3d at 1317–18.

The Court’s analysis of this issue, like the parties’ arguments, largely tracks the foregoing analysis of the arguments relating to the role of origin servers. Like origin servers, subscribers

³ The Court notes that this particular aspect of the meaning of “origin server” does not appear to have been addressed at length by the parties in their briefing on claim construction or at the *Markman* hearing. Accordingly, the Court does not consider this particular issue to have been part of its determinations regarding this term in its *Markman* Order.

are undoubtedly contemplated by the Farber patents' claims as components of the system in which the methods of the patents are implemented, but they are not discussed by the specifications or the steps enumerated in the Farber patent's method claims in such a way that they can be read as requirements that somehow limit the scope of the claims. *See Microprocessor*, 520 F.3d at 1375.⁴

This observation disposes of Defendant's argument that infringement cannot be proven against it because it requires action on the part of subscribers. As discussed above, the claims of the Farber patents are drafted in such a way as to allow infringement to be claimed on the basis of the actions of a single party, rendering jurisprudence regarding infringement by multiple parties in *Muniauction* and *BMC* inapposite. Although, logically speaking, the CDN must, of course, have subscribers that seek to publish content in order for there to be subscriber content for the CDN to serve using this technology, this is simply another way of saying that a business has to have customers. Obviously the Farber patents do not purport to invent the concept of customers; they purport to invent a dynamic method for serving the content of those customers over the Internet in response to client requests. Subscribers play no role in the steps of the methods described in the Farber patents' claims beyond their mere existence (and the existence of their content), and accordingly proof of infringement of the patents' claims does not necessarily involve any proof relating to acts or omissions by subscribers. Defendant's direction

⁴ Plaintiff claims that the fact that subscribers are discussed only passively in the Farber patents' text further supports its contention that "subscriber" is not a limiting element of the Farber patents' claimed methods. Although Plaintiff cites a useful mention of the significance of the use of the passive tense in claim text in *Good Sportsman Mktg. LLC v. Testa Assocs., LLC*, 440 F. Supp. 2d 570, 577 (E.D. Tex. 2006), the Court finds the reference, which occurred in the course of claim construction, to be too fleeting to provide a substantial foundation for further discussion of this point.

or control over its customers by virtue of its contractual relationships with them appears to be irrelevant to the infringement analysis in this case.

As with origin servers, Plaintiff also correctly points out that subscribers play an even less significant role in independent Claim 26 of the '807 patent, as well as the other similar apparatus claims. On the basis of the foregoing, even if the Court were inclined to agree with Defendant that "subscriber" is a requisite element for proof of direct infringement of the Farber patents' claims, Plaintiff has, at the very least, raised genuine issues of material fact as to whether or not Defendant has "subscribers" within the meaning of the Farber patents.

III. CONTROL OVER INTERMEDIATE NODES IN A PACKET'S PATH

Moving to the '405 patent, Defendant submits that every asserted claim in the '405 patent requires *all* nodes in the path from the CDN to the client to use the destination field in the transmitted packet to forward it toward its destination. Defendant argues on this basis that it does not infringe because it does not control all of the nodes on the paths between its CDN and clients' computers, and therefore cannot impose the destination field use requirement on the nodes outside of its control.

As Plaintiff explained at oral argument, to interpret the claims of the '405 patent in such a way as to require one implementing it to control every node on the default and alternate paths between its CDN and every client who might request subscriber content via the CDN (*i.e.*, anyone with a computer, a Web browser, and an Internet connection) would fly in the face of the patent's specification and claims and, indeed, the very nature of the Internet itself. As the '405 patent notes at the very outset of its discussion of the "Background of the Invention:"

This invention relates to . . . a mechanism for finding improved communication paths through a heterogeneous computer network by means of an overlay network.

The Internet today consists of a collection of interconnected administrative domains. Each domain is under the control of one or more administrators who decide what hardware equipment to employ and what control software to run. This localized control of the administrative domains requires the coexistence of a number of disparate, heterogeneous systems. . . .

. . . Routing protocols cooperate across different administrative domains, and through a variety of different software and hardware techniques, to monitor the presence and/or the state of connections in the Internet. Because of the great size and heterogeneous nature of the Internet, and the complexity of the routing task, these routing protocols are typically minimalistic

. . . .
What is needed is a mechanism enabling the selection of optimized network paths for the transmission of data . . . without requiring any change whatsoever to firmly entrenched communication protocols like IP.

‘405 patent cols 1:17–2:22. Construing the ‘405 patent’s invention, the function of which is “discovering and utilizing an optimized network path through overlay routing for the transmission of data” (*id.* abstract), in such a way that implementing it according to its terms would be practically impossible would make little sense, especially when such a construction is not merely unsupported, but contradicted, by even the introductory discussion in the ‘405 patent’s specification. It seems clear that to one of ordinary skill in the relevant art, and, indeed, to anyone with any familiarity with the Internet, the Internet is obviously not a single network over which any single entity has complete control, but instead a collection of independent but interconnected networks. Defendant cannot escape the allegations of infringement with such a creative, and yet nonsensical, reading of the ‘405 patent’s claims. Plaintiff has, at the very least, raised a genuine issue of material fact as to whether the ‘405 patent requires some or all of the nodes on the packet’s path to use the destination field to forward the packet toward the packet’s destination.

IV. DEFAULT AND ALTERNATIVE PATHS

Defendant next advances the argument that it does not infringe the '405 patent because the patent's claims require a data packet to be routed through *both* default and alternative paths. The Court finds this argument to be perhaps the least persuasive of Defendant's arguments, as it is clearly contradicted by the plain language of the claims and specification, as well as other extrinsic evidence, notably including the deposition testimony of the inventor.

The Court starts with the patent language. As discussed succinctly in the summary of the invention, the '405 patent envisions measuring the costs of transmitting data from a given source to a given destination along a default path or along one or more non-default, alternative paths, comparing the relative costs of those various paths, selecting "[a]n optimized path" (note the use of the singular), and transmitting the data along that selected path. *See* '405 patent col. 2:38–62.

Defendant seizes on the phrase "where the destination field in the received packet is used by nodes in the default and alternative paths to forward the received packet toward the destination," which appears in each of the claims of the '405 patent either explicitly or by virtue of the interdependence of the claims. In particular, Defendant emphasizes the "and" between "default" and "alternative" and the use of the plural "paths." However, a close reading of this phrase as well as the rest of the claim language and the specification makes it abundantly clear that the packet, in fact, need not travel along *both* paths. First, this phrase is used in the claim text in the course of describing not the actual transmission of the packet along either the default or the alternative path, but instead the point of selection of the optimal path from the default and various alternative paths identified and evaluated in terms of cost by the invention. Accordingly, even if Defendant's questionable reading of this phrase were correct, it would not mean that the

packet would actually have to be transmitted by the invention along both the default path and the alternative path(s).

Moreover, every other aspect of the claim language confirms that the invention intends a packet to be transmitted only along *either* the default path *or* an alternative path, whichever is calculated by the invention to be the optimal path. Claims 1 through 6 each describe an invention “for selecting *a path* from a dynamic router to destination” (emphasis added—note the use of the singular). Dependent claims 2 and 5 describe inventions for “transmitting a data packet received at the dynamic router along the alternative *path*” (emphasis added—again, note the use of the singular). Claims 7 through 12 likewise describe inventions to select optimal *successive* “hops” in the path from source to destination. A jury clearly could reach the conclusion articulated by the Court above. Accordingly, there remains a genuine issue of material fact with respect to this issue, as well.

V. USE OF DNS AND THE ALLEGED DUAL FUNCTION OF THE REFLECTOR

Defendant appears to have marshaled considerable evidence to support the proposition that the Farber patents should not be construed to encompass the use of DNS for repeater selection or reflection. The parties agree that DNS itself antedated the inventions at issue. As previously noted, the parties further agree that neither of the Farber patents expressly describes any embodiment of a system or method for use of a repeater server network where the functionality of the reflector (including best repeater selection) is performed by DNS.

Accordingly, there is no explicit textual basis on which to base the contention that the Farber patents contemplated the use of DNS as a repeater selector mechanism or reflector. Moreover, Defendant points to aspects of the file history and production documents that suggest that, at the

time the inventors were developing the invention, they considered a DNS-based approach to be “a radical alternative” to their own approach.

However, the Court believes the key issues here to be (1) whether or not the Farber patents’ relative silence as to a DNS-based version of its invention should properly be construed as supporting or, instead, precluding their possession of such version and (2) whether or not the inventors, by their references to existing DNS technology in the patents’ specifications, were distinguishing their invention from *existing* DNS-based approaches or, rather, from other possible new approaches that would largely share the innovative characteristics of their own invention, but would substitute a DNS server for the preferred, non-DNS-based embodiment of their repeater selector mechanism. The *existing* DNS-based approaches from which Farber and his fellow inventors were distinguishing their invention were not dynamic selection mechanisms using servers that only partially replicated origin server content. Instead, the DNS-based approaches to which the inventors referred were simpler load-balancing systems based on rotating or otherwise alternating sequences. *See, e.g.*, ‘807 patent cols. 1:53–2:17. Needless to say, the Farber patent’s invention also went beyond the basic function of DNS—resolving requests for Internet Protocol (“IP”) addresses corresponding to URLs or other identifiers of network locations. Accordingly, the extrinsic evidence marshaled by Defendant does not necessarily provide direct support for its proposition that the inventors, by characterizing these *existing* DNS-based approaches as predecessors or alternatives to their own system, were explicitly disclaiming applications of their invention that would use DNS as at least part of a *dynamic* repeater selector mechanism.

Plaintiff, on the other hand, cites testimony of one of the inventors, expert testimony, and production documents antedating the application for the patents that appear to demonstrate that the inventors (1) were aware of existing applications of DNS, as well as the perceived shortcomings of those existing approaches, and (2) had themselves conceived of using DNS *in a new or different way* in connection with their invention. Although it is true that such an embodiment does not later find explicit expression in the specifications and claims of the Farber patents, it is also true that such an embodiment is not explicitly disclaimed. The Farber patents are simply silent on this specific issue, and they use language that could reasonably be read by a jury either to encompass DNS-based approaches by virtue of its generality or not to encompass them by virtue of its failure to make any specific mention of innovative DNS-based solutions.

In a related vein, Defendant makes much of the Court's discussion of the term "handled" in its *Markman* Order. In particular, Defendant focuses on the Court's observation that the concept of the reflector lies at the heart of the inventions of the Farber patents. Defendant argues that the reflector performs two discrete functions—(1) intercepting messages and (2) selecting an appropriate repeater to serve the subscriber content requested by the client—and that, since its DNS-based system does not intercept messages within the meaning of the Farber patents, it cannot be found to infringe.

Although the Court believes Defendant's argument here to be stronger than its other arguments in support of summary judgment, Defendant reads too much into one portion of the Court's discussion of "handled" and too little into other portions and, more importantly, the actual construction of that term adopted by the Court. The Court's definition of "handled" on page 36 of its *Markman* Order begins with the phrase "[i]ntercepted *or otherwise sent* to the

reflector”⁵ (emphasis added). This construction corresponds with the Court’s observation on pages 34–35 of the *Markman* Order that co-location of the reflector with the origin server, though typical and preferred, is not required by the specification or the claims. The Court’s *Markman* Order further noted that the specification explicitly provides that “it is also possible to leave the origin server’s network address as it is and to let the reflector run at a different address or on a different port. In this way the reflector does not intercept requests sent to the origin server, but can still be sent requests addressed specifically to the reflector.” ‘935 patent col. 7:54–59. The ‘807 patent’s specification, of course, contains the same language, disclosing a configuration in which the reflector does not perform any interception function. This does not make the reflector any less the heart of the invention; it simply shows that the reflector does not necessarily, in all cases, have to perform *both* of the allegedly distinct functions that Defendant articulates. By the terms of the specifications and claims of the Farber patents, the reflector (or repeater server mechanism, as used in the ‘807 patent’s claims) does not cease to be a reflector simply because it is not co-located with the origin server in such a way that it intercepts messages on their way to the origin server. Even in such a configuration, it is still performing the essential appropriate repeater selection function. Furthermore, Plaintiff has suggested, with the apparent support of evidence including the testimony of one of the inventors, that, in certain configurations, DNS could be construed to be performing the interception function discussed above.

On the basis of the foregoing discussion, and in light of the evidence presented to the Court in connection with the instant motion (which likely will be expanded upon greatly at trial),

⁵ The Court notes here, by way of grammatical amendment, that the phrase should properly read “[i]ntercepted *by* or otherwise sent to the reflector” (emphasis added to show amendment).

the Court concludes that this issue—whether or not the Farber patents can fairly be read to encompass both DNS-based as well as non-DNS-based embodiments of their dynamic repeater selection method—is a genuine issue of material fact that must be decided by a jury.

Accordingly, the Court does not consider this to be an appropriate basis for granting summary judgment.

VI. INVALIDITY AND THE WRITTEN DESCRIPTION REQUIREMENT

Defendant argues, largely in parallel with and on the basis of the arguments discussed above, that the Farber patents do not meet the written description requirement of 35 U.S.C. § 112, ¶ 1, which provides:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Noting that Defendant fails to direct the Court's attention to any particular claim or claim element in the patents-in-suit in the course of making this argument, Plaintiff argues that the Farber patents contain sufficient detail to fulfill the requirements of 35 U.S.C. § 112, ¶ 1, citing the Federal Circuit's decisions in *Falkner v. Ingles*, 448 F.3d 1357, 1365–68 (Fed. Cir. 2006) (noting, *inter alia*, that a “claim will not be invalidated on section 112 grounds simply because the embodiments of the specification do not contain examples explicitly covering the full scope of the claim language”) and *In re Hayes Microcomputer Prods., Inc. Patent Litig.*, 982 F.2d 1527, 1533–34 (Fed. Cir. 1992) (“One skilled in the art would know how to program a microprocessor to perform the necessary steps *described in the specification*. Thus, an inventor is not required to describe every detail of his invention.”). Defendant argues that *Falkner* and

Hayes are both inapplicable. In *Falkner*, Defendant argues, the claim element at issue (poxvirus) was disclosed in the specification, whereas in this case no embodiment using DNS is explicitly disclosed in the Farber patents' specifications. Defendant argues that *Hayes* is inapposite because the omitted details at issue in that case were common knowledge and not part of what was allegedly invented by the patent-in-suit there, whereas in this case the use of DNS for repeater selection or reflection, which clearly would be a version of the Farber patents' invention, is not explicitly disclosed. However, the Federal Circuit noted in *Falkner* that the "descriptive text needed to meet these requirements varies with the nature and scope of the invention at issue, and with the scientific and technologic knowledge already in existence." *Id.* at 1367. The Federal Circuit continued, "a requirement that patentees recite known DNA structures, if one existed, would serve no goal of the written description requirement." *Id.* at 1368. Plaintiff argues on this basis that the specification need not spell out every detail of the invention, but only enough to show someone of ordinary skill in the relevant art that the inventor possessed the invention and allow that person of ordinary skill to replicate and use the described invention.

Although a jury might or might not agree with Plaintiff that a DNS-based version of the Farber patents' invention is truly comparable with the "known DNA structure" at issue in *Falkner* or the common-knowledge programming at issue in *Hayes*, the Court is unwilling to find that the claims and the specifications of the Farber patents fail to describe the elements of the invention sufficiently under 35 U.S.C. § 112, ¶ 1.⁶ The issue of whether or not the Farber patents

⁶ The Court notes, as it did in its *Markman* Order, that, absent detailed constructions of certain terms in the '935 patent (most notably "handled"), the claims of that patent might have been impermissibly overbroad. However, as the Court indicated to the parties at the hearing on the instant motion, the Court does not consider the '807 patent's claims to suffer from the same paucity of detail vis-a-vis its specification.

implicitly contemplate a DNS-based version of the repeater selector mechanism or reflector, especially in light of the Court's construction of "repeater selector mechanism," is simply not analogous to the much broader example discussed in *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005), a case upon which Defendant relies extensively. In that case, the Federal Circuit observed that a claim for a particular fuel-efficient automobile engine would not support "a broad claim to every possible type of fuel-efficient engine, no matter how different in structure or operation from the inventor's engine." *Id.* at 1346. Here, the issue is much narrower. As discussed above, the inventors here appear to have been aware of a possible version of their invention using DNS, but did not explicitly discuss that version in the text of the Farber patents. Accordingly, the question here is not whether the Farber patents' claims cover every possible type of method or apparatus, but simply whether they cover a discrete, specific version of the invention. The Court agrees with Plaintiff that the Farber patents fulfill the written description requirement of 35 U.S.C. § 112, ¶ 1.

Defendant's argument that the '405 patent fails to meet the written description requirement because it does not disclose an embodiment in which a data packet is sent down both the default path and one or more alternative path(s) is less persuasive, and can be addressed by reference to the Court's discussion of this issue above in connection with the infringement claims. The claims of the '405 patent simply do not require a given data packet to travel down both the default and one or more alternative path(s). Accordingly, there is no need for the '405 patent to disclose such an embodiment and, consequently, the Court does not find the '405 patent to violate the written description requirement of 35 U.S.C. § 112, ¶ 1 in this way.

CONCLUSION

On the basis of the foregoing, the Court finds that Plaintiff has successfully raised genuine issues of material fact for trial, and Defendant's motion for summary judgment must therefore be **DENIED**.

The Clerk is **REQUESTED** to send a copy of this Opinion and Order to the counsel of record for the parties.

It is so **ORDERED**.

/s/ msd

Mark S. Davis
UNITED STATES DISTRICT JUDGE

Norfolk, Virginia
December 29, 2008