

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

METACLUSTER LT, UAB,
Petitioner,

v.

BRIGHT DATA LTD.,
Patent Owner.

PGR2022-00061
Patent 11,349,953 B2

Before THOMAS L. GIANNETTI, SHEILA F. McSHANE, and
RUSSELL E. CASS, *Administrative Patent Judge*.

GIANNETTI, *Administrative Patent Judge*.

DECISION
Granting Institution of Post-Grant Review
35 U.S.C. § 324

I. INTRODUCTION

Metacluster LT, UAB (“Petitioner”) filed a Petition requesting post-grant review of claims 1–34 (the “challenged claims”) of U.S. Patent No. 11,349,953 B2 (Ex. 1001, the “’953 patent”). Paper 1 (“Pet.” or “Petition”). Bright Data Ltd. (“Patent Owner”) filed a Preliminary Response. Paper 6 (“Prelim. Resp.”).

We may not institute a post-grant review “unless . . . the information presented in the petition filed under section 321, if such information is not rebutted, would demonstrate that it is more likely than not that at least 1 of the claims challenged in the petition is unpatentable.” 35 U.S.C. § 324(a). Upon consideration of the arguments and evidence, we determine Petitioner has demonstrated that it is more likely than not that at least one of the challenged claims is unpatentable. Accordingly, we institute a post-grant review of the challenged claims of the ’953 patent.

A. *Real Parties-in-Interest*

Petitioner initially identified Metacluster LT, UAB; Code200, UAB; Teso LT, UAB; Oxysales, UAB; and Coretech LT, UAB as the real parties-in-interest. Pet. 2. Petitioner updated its mandatory notices. Paper 7. The updated notices state that “Oxysales and [M]etacluster have been merged into Teso, with Teso succeeding to all of Oxysales and Metacluster’s assets, rights, and obligations.” *Id.* at 1. Further, “Teso is now operating as Oxylabs, UAB. Oxylabs, UAB is wholly owned by [C]oretech.” *Id.*

B. *Related Patents and Matters*

The ’953 patent is a continuation of U.S. Patent Nos. 10,469,614 (“the ’614 patent”). Ex. 1001, (60). The ’953 patent also shares a common specification with U.S. Patent No 9,742,866 (“the ’866 Patent”). Pet. 2; Paper 7, 1. The ’866 patent, in turn, is a division of U.S. Patent No.

9,241,044 (“the ’044 Patent”). Ex. 1001, (60). Petitioner refers to these as “Related Patents.” Pet. 3; Paper 7, 2.

The parties state that there are no pending litigations or post grant reviews involving the ’953 patent. Pet. 3; Paper 7, 2. However, Patent Owner has accused Teso, Metacluster, and Oxysales of infringing claims of the ’614 patent in *Bright Data Ltd. v. Teso LT, UAB*, Case No. 2:19-cv-00395 (E.D. Tex.) (“*Teso Litigation*”). Pet. 3; Paper 7, 1. Patent Owner has accused Tesonet and Metacluster of infringing claims of the ’044 and ’866 Patents in *Luminati Networks Ltd. v. UAB Tesonet*, 2-18-cv-00299 (E.D. Tex.) (“*Tesonet Litigation*”). Pet. 2–3, Paper 7, 2.

The parties identify numerous other litigations, post-grant reviews, and reexaminations involving patents that are related to the ’953 patent. Pet. 2–8; Paper 7, 1–4.

C. The ’953 Patent

The ’953 patent is titled “System And Method For Improving Internet Communication By Using Intermediate Nodes,” and issued on May 31, 2022, from an application filed on October 5, 2019. Ex. 1001, (54), (45), (22). The patent is subject to a terminal disclaimer. *Id.* at (*).

The ’953 patent is directed to a method for fetching content from a web server to a client device using tunnel devices serving as intermediate devices. Ex. 1001, (57). The client device accesses an acceleration server to receive a list of available tunnel devices. *Id.*

Requested content is partitioned into slices, with the client device sending a request for the slices to the available tunnel devices. *Id.* The tunnel devices may, in turn, fetch slices from a data server and send the slices to the client device, where the content is reconstructed from the received slices. *Id.*

A client device may also serve as a tunnel device, which serves as an intermediate device to other client devices. *Id.* Similarly, a tunnel device may also serve as a client device for fetching content from a data server. *Id.*

The selection of tunnel devices to be used by a client device may be made in the acceleration server, in the client device, or in both. *Id.*

Partitions into slices may be overlapping or non-overlapping, and the same slice, or the whole content, may be fetched via multiple tunnel devices. *Id.*

D. Challenged Claims

As noted, Petitioner challenges the patentability of claims 1–34 (i.e., all claims) of the '953 patent. Pet. 12. Claim 1, the only independent claim, is illustrative, and is reproduced below.¹

1. [preamble] A method for use with a resource associated with a criterion in a client device that communicates with a first server over the Internet, the client device is identified in the Internet using a first identifier and is associated with first and second states according to a utilization of the resource, and for fetching over the Internet a first content identified by a first content identifier, the method comprising:

[1a] connecting, by the client device, to the Internet;

[1b] sending, by the client device responsive to the connecting to the Internet, the first identifier to the first server over the Internet;

[1c] while connected to the Internet, periodically or continuously determining whether the resource utilization satisfies the criterion;

[1d] responsive to the determining that the utilization of the resource satisfies the criterion, shifting to the first state or staying in the first state, by the client device;

¹ The paragraph identifiers in brackets have been added to track those used in the Petition.

[1e] responsive to the determining that the utilization of the resource does not satisfy the criterion, shifting to the second state or staying in the second state, by the client device;

[1f] responsive to being in the first state, receiving, by the client device, the first content identifier from the first server; and

[1g] sending, by the client device in response to the receiving of the first content identifier, the first content to the first server.

Ex. 1001, 172:47–173:6.

E. Asserted Grounds of Unpatentability

Petitioner asserts that the challenged claims would have been unpatentable on the following grounds (Pet. 12–13):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–34	103 ²	Mithyantha ³
31	103	Mithyantha, RFC 2616 ⁴

In addition, Petitioner relies on declaration testimony from Dr. James Olivier (Ex. 1002, “Olivier Decl.”) in support of this challenge.

F. Description of the References Relied Upon by Petitioner

The following is a brief description of the asserted prior art references.

1. Mithyantha (Ex. 1009)

Mithyantha is directed to “systems and methods for using equal cost multi-path routing for traffic distribution in a cluster environment.”

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), which amended 35 U.S.C. § 103, was effective on March 16, 2013, before the earliest effective filing date of the ’953 patent. As a consequence, the amended version of § 103 applies here. *See infra*.

³ U. S. Patent No. 8,972,602 B2, issued March 3, 2015, application date June 15, 2013 (Ex. 1009).

⁴ *Hypertext Transfer Protocol – HTTP/1.1*, Network Working Group Request for Comments 2616, June 1999 (Ex. 1005).

Ex. 1009, 1:7–10. Mithyantha provides for accelerating network traffic between “one or more clients 102a-102n” that communicate with “one or more servers 106a-106n” via appliance 200. *Id.* at 4:58–65, 31:50–56. Petitioner relies on Figure 1B, reproduced below, a block diagram of an environment for delivering a computing environment from a server to a client via an appliance. *Id.* at 3:43–47.

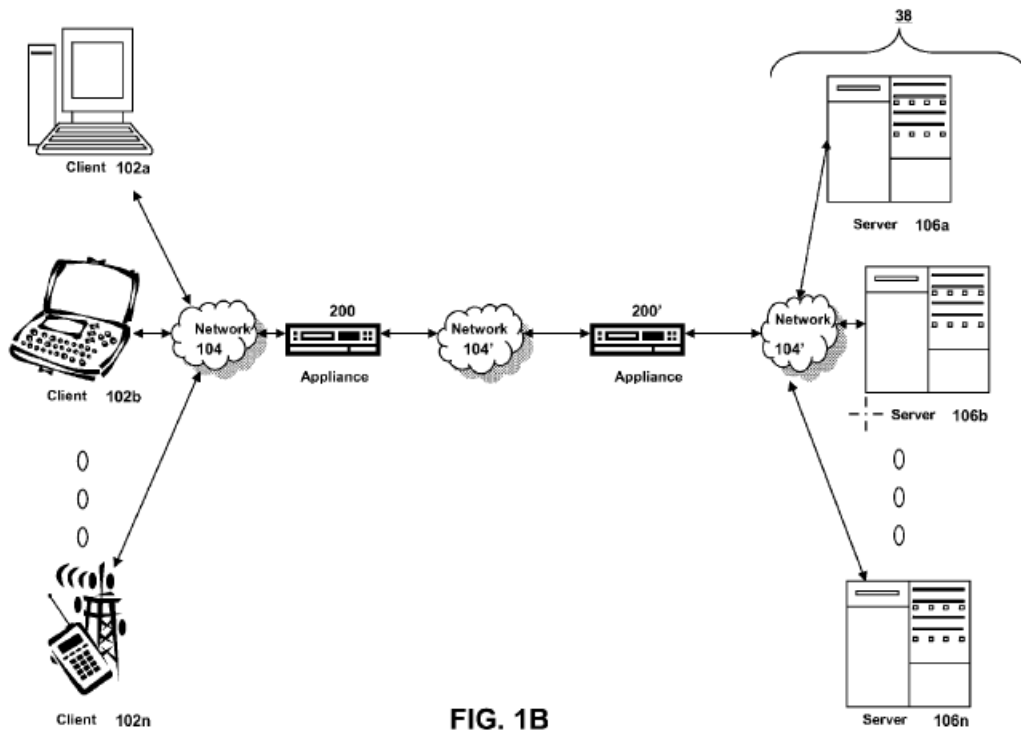


FIG. 1B

Figure 1B, above, shows a network environment that has one or more clients 102a–102n in communication with one or more servers 106a–106n via appliances 200 and 200'. Ex. 1009, 7:1–18. Appliances 200 can “act[] as a proxy or access server to provide access to the one or more servers 106.” *Id.* at 9:15–21.

Petitioner relies also on Figure 6 of Mithyantha, illustrating an “appliance cluster” environment. Pet. 32–35. Petitioner presents a composite of Figures 1B and 6 (“Fig. 6/1B”), following:

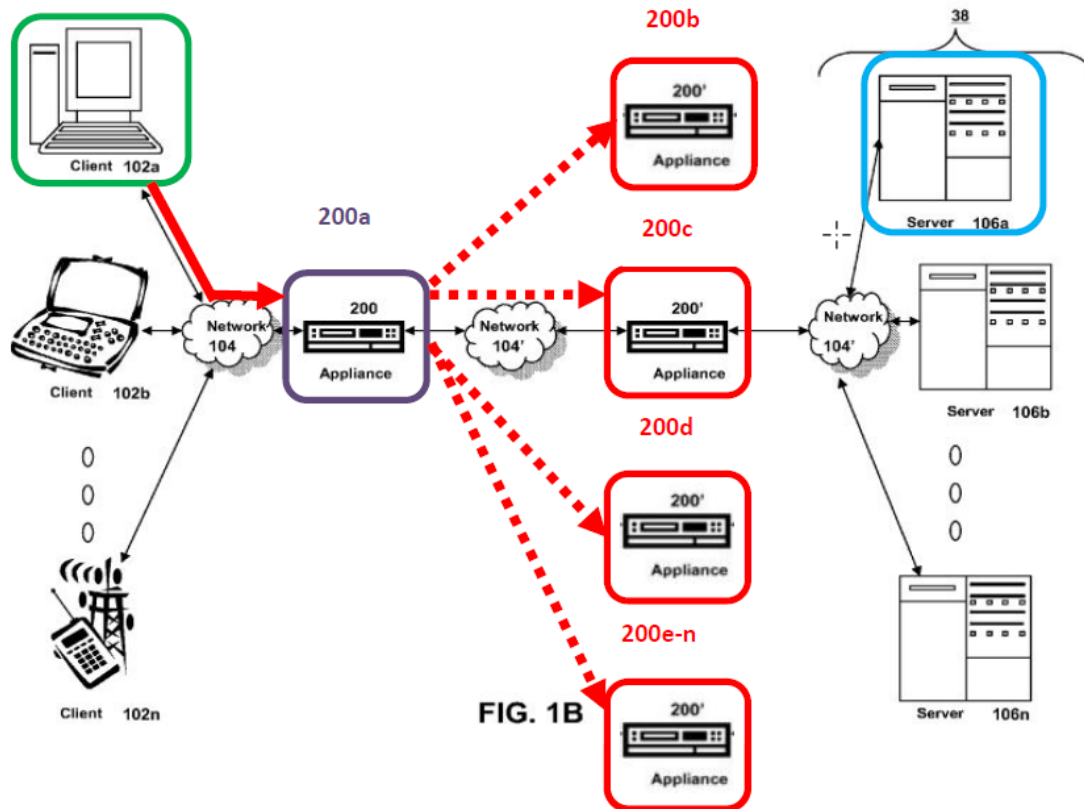


Figure 6/1B is a composite of Figures 1B and 6, created and annotated by Petitioner. Pet. 35. Mithyantha discloses that each device “may be deployed as and/or executed on any type and form of computing device, such as a computer, network device or appliance capable of communicating on any type and form of network.” Ex. 1009, 13:65–14:2.

Mithyantha further describes the appliances as an “interface unit” or “gateway,” that can facilitate SSL VPN connections and forward requests from the client to the server. *Id.* at 5:31–33, 5:54–59, 9:53–55. In other embodiments, Mithyantha discloses that the appliance may provide caching

in memory and/or storage to accelerate delivery of applications and data. *Id.* at 8:10–12.

Mithyantha’s clients, appliances, and servers communicate over networks, which can be Internet/World Wide Web networks using “any TCP/IP based protocol.” *Id.* at 5:3–7; 28:55–58. Clients 102 may send HTTP requests for web pages to any one of servers 106, which are described as web servers. *Id.* at 6:25–26, 6:52–56, 11:13–17.

2. *RFC 2616 (Ex. 1005)*

RFC 2616 is version 1.1 of “Hypertext Transfer Protocol – HTTP/1.1,” which defines the HTTP protocol for Internet communications. Ex. 1005, 1, 7.⁵ RFC 2616 explains that the HTTP protocol is a request/response protocol. *Id.* at 10.

II. DISCRETIONARY DENIAL

Patent Owner contends that the Board should exercise its discretion to deny the Petition. Prelim. Resp. 2–5. Patent Owner asserts “this PGR is not a good use of the Board’s finite resources.” *Id.* at 2. Patent Owner contends that “Petitioner has repeatedly, unsuccessfully challenged the parent ’614 Patent based on the same primary reference, Mithyantha.” *Id.* at 2–3. Patent Owner cites, as an example, IPR2020–01506, in which “[t]he Board denied institution based on the *Fintiv* factors in view of the Teso Litigation.” *Id.* at 3 (citing *Apple Inc. v. Fintiv Inc.*, IPR2020-00019, Paper 11 (PTAB March 20, 2020) (“*Fintiv*”)) (footnote omitted).

Patent Owner contends also that “Mithyantha was reviewed by the examiner during prosecution of the challenged ’953 Patent and the claims

⁵ Citations to exhibits use the page numbers applied by the parties and not the original page numbers.

were deemed allowable.” *Id.* at 4. Further, Patent Owner asserts that “the examiner reviewed and applied the Chauhan and Jackowski references during prosecution of the challenged ‘953 Patent.” *Id.* (emphasis omitted). Patent Owner contends that those two references “share the same assignee and network architecture as Mithyantha.” *Id.*

The Director may elect not to institute a proceeding if the challenge to the patent is based on matters previously presented to the Office. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 7 (PTAB Feb. 13, 2020). The starting point in this analysis is the two-part framework set forth in *Advanced Bionics*: (1) determining whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of the first part of the framework is satisfied, determining whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims. *Id.* at 8.

The first inquiry in the *Advanced Bionics* framework asks whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office. *Advanced Bionics*, Paper 6 at 8–9. Petitioner does not dispute that the Mithyantha and RFC 2616 references were previously presented to the Office in an IDS (Information Disclosure Statement), but were not applied by the Examiner. Pet. 9–10. Thus, Patent Owner shows that the first criterion of the *Advanced Bionics* framework is met as to those two references. *Advanced Bionics*, Paper 6 at 7–8 (“Previously presented art includes art made of record by the Examiner and art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS).”).

The second inquiry in the *Advanced Bionics* framework asks whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. *Advanced Bionics*, Paper 6 at 8–9.

Patent Owner argues that the Examiner reviewed and applied the Chauhan and Jackowski references during prosecution, and that those references share the same assignee and network architecture as Mithyantha. Prelim. Resp. 4. Patent Owner also asserts that Chauhan has “overlapping disclosure with Mithyantha.” *Id.* at 5. Anticipating this argument by Patent Owner, the Petition explains that “[d]uring prosecution, the Applicant overcame the Sigurdsson-Chauhan-Jackowski obviousness rejection by arguing non-combinability.” Pet. 10. Petitioner also explains that Patent Owner argued to the Examiner that the applied prior art (including Chauhan and Jackowski) failed to teach or suggest various features of the claims different from those before us here. *Id.* at 10—11.

We are not persuaded that Patent Owner demonstrates overlap between issues that the Examiner evaluated for Chauhan and Jackowski, which are not before us in this Petition, and Mithyantha to show that the art or arguments here were previously evaluated by the Examiner. Prelim. Resp. 4–5. More specifically, we agree with Petitioner that during prosecution, the Examiner’s findings as to Chauhan and Jackowski were directed to issues different from those before us here. *See* Ex. 1007. 375–381. Therefore, we do not find the evaluations of Chauhan and Jackowski performed by the Examiner during prosecution are relevant here.

As to the references before us here, Mithyantha and RFC 2616, Petitioner demonstrates that the Examiner erred. Pet. 12. Petitioner asserts that the Examiner erred in failing to appreciate the relevance of the Mithyantha and RFC 2616 prior art cited in the Petition and allowing the

claims to issue. There were no rejections based on Mithyantha or RFC2616. *Id.* at 9. As Petitioner explains, “[a]s set forth below, the Examiner erred by allowing the claims over the Grounds in this Petition, and the lack of analysis of material references submitted in IDSs during prosecution weighs against discretionary denial.” *Id.* (citing *Advanced Bionics*, Paper 6 at 10–11). Patent Owner does not address Petitioner’s showing of material error by the Examiner, and we agree with Petitioner that there is no indication of any extent of Examiner evaluation of Mithyantha and RFC 2616, short of listings in the IDS. Additionally, as discussed below, we find merit in the challenges to patentability under these references, which Petitioner cites as further supporting its assertion that the Examiner erred.

We determine that Petitioner’s un rebutted explanation of material error by the Examiner is sufficient to persuade us not to exercise our discretion based on the citation of Mithyantha and RFC 2616 in an IDS.

Finally, we address Patent Owner’s claim of harassment by Petitioner. Prelim. Resp. 2–3. As Petitioner points out, the Petition here is the only petition challenging the ’953 patent. Pet. 10. That Petitioner has challenged *other* patents of Patent Owner, both in district court proceedings and in the PTO, is a response to Patent Owner’s active multi-patent litigation program, and for that reason does not persuade us to deny this Petition, which is directed to a different patent.

For the foregoing reasons, we deny Patent Owner’s request that we exercise our discretion to deny the Petition.

III. ANALYSIS OF THE OBVIOUSNESS GROUNDS

A. *Post-grant Review Eligibility*

As a threshold issue, we must determine if the ’953 patent is eligible for post-grant review. The post-grant review provisions of the America

Invents Act (AIA) apply to a patent that contains a claim with an effective filing date on or after March 16, 2013. *See* AIA, Pub. L. No. 112-29, 125 Stat. 284 (2011), §§ 3(n)(1), 6(f)(2)(A). The statute defines the “effective filing date” as:

(A) if subparagraph (B) does not apply, the actual filing date of the patent or the application for the patent containing a claim to the invention; or

(B) the filing date of the earliest application for which the patent is entitled, as to such invention, to a right of priority under section 119, 365(a), 365(b), 386(a), or 386(b) or to the benefit of an earlier filing date under section 120, 121, 365(c), or 386(c).

35 U.S.C. § 100(i)(1).

The earliest possible effective filing date for the ’953 patent claims is the date of a provisional application filed on August 28, 2013. Ex. 1001, (60). Accordingly, the earliest effective filing date of the ’953 patent is after March 16, 2013, making it eligible for post-grant review.

Additionally, “[a] petition for a post-grant review may only be filed not later than the date that is 9 months after the date of the grant of the patent.” 35 U.S.C. § 321(c). The ’953 patent issued May 31, 2022, and the Petition was accorded a filing date of September 26, 2022, just under 4 months after the grant of the ’953 patent. Ex. 1001, (45); Paper 5, 1. Accordingly, the Petition was timely.

B. Level of Ordinary Skill in the Art

Petitioner contends a person of ordinary skill in the art “would have had at least a bachelor’s degree in Computer Science or related field (or equivalent experience), and at least two years’ experience working with and programming networked computer systems.” Pet. 14 (citing Olivier Decl. ¶ 34).

Patent Owner does not propose a level of ordinary skill in the art at this stage of the proceeding. *See generally* Prelim. Resp.

For the purposes of this Decision, we adopt Petitioner’s proposed level of ordinary skill in the art, with the exclusion of the qualifier “at least” because it introduces ambiguity. We determine that Petitioner’s definition is consistent with the prior art of record and the skill reflected in the specification of the ’953 patent based on our review of the record.

C. Claim Construction

In post-grant reviews, we interpret a claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.200(b). Under this standard, we construe the claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

1. “Client Device/First Server”

Petitioner asserts that “[t]he district court has addressed Petitioner and Patent Owner’s dispute over whether ‘client device’ and ‘server’ as used in the Related Patents refer to ‘a role a device plays in a method’ as Petitioner asserts, or ‘its structure or “physicality” rather than by its operation’ as Patent Owner asserts.” Pet. 24.

Petitioner urges us to follow the district court claim constructions: “The district court has repeatedly agreed with Petitioner and rejected Patent Owner’s arguments.” *Id.* In all, Petitioner refers to four district court claim construction orders — the claim construction order in the *Tesonet* litigation (Ex. 1018, “*Tesonet* order”), the claim construction order in the *Teso* litigation (Ex. 1010, “*Teso* order”), an additional order related to the term “server” in the *Teso* litigation (Ex. 1012, “additional *Teso* order”), and a

supplemental claim construction order in the *Teso* litigation (Ex. 1013, “supplemental *Teso* order”). *Id.* at 24–29.

Patent Owner disagrees with the constructions proposed by Petitioner based on the district court constructions. Prelim. Resp. 13–28. Patent Owner’s argument is best summarized by the following statement: “Petitioner deviates from the district court constructions and fails to account for any differences between servers and client devices, which is contrary to the express claim language and statements made by the applicant during prosecution.” *Id.* at 14. In other words, while appearing to accept the district court constructions for “client device” and “server,” Patent Owner, in fact, rejects them. Throughout Patent Owner’s discussion of claim construction, there is a failure to acknowledge the facts that the district courts in the *Teso* and *Tesonet* litigations have addressed and rejected its proposals.

In the *Tesonet* litigation, the district court construed the claim term “client device” in the related ’044 and ’866 patents. Ex. 1018, 48–51. The district court construed “client device” as “a device that is operating in the role of a client by requesting services, functionalities, or resources from other devices.” *Id.* at 51 (emphasis omitted).

In the *Teso* litigation, the district court construed “client device” in the ’614 patent as a “device that is operating in the role of a client by requesting services, functionalities, or resources from the server,” similar to the construction in the *Tesonet* order. Ex. 1010, 15.

The district court in the *Teso* litigation also construed the terms “first server” in the ’614 patent as “a server that is not the client device.” *Id.* at 16. The district court clarified this construction in the supplemental *Teso* order, explaining that “a component can be *configured* to operate in different

roles—so long as it does not ‘simultaneously serve as more than one of: the client device, the first server/second server, and the web server.’” Ex. 1013, 10. The district court explained that in making this clarification, “[t]he Court is not changing the construction of first server’ and ‘second server,’ as this understanding is already embedded in those terms’ construction.” *Id.* at 11. As discussed *supra*, in Section I.B, the ’953 patent and the ’044, ’866 and ’614 patents involved in the *Teso* and *Tesonet* orders are related as divisions or continuations of a common parent and their disclosures are similar. We find these decisions and their reasoning to be persuasive, and we therefore adopt their constructions for “client device” and “first server.” *See* Ex. 1018, 49–51; Ex. 1010, 15–16; Ex. 1013, 10–11.

The *Tesonet* district court specifically considered the issue of whether a client device should be construed in a role-based or structural manner. Ex. 1018, 48–51. This evaluation included whether a device could sometimes be operated as a client and at other times could operate as something else. *Id.* at 49 (“Plaintiff urged that a ‘client device’ should be defined by its structure or ‘physicality’ rather than by its operation.”). In rejecting this argument, the district court relied on the patent’s disclosure that “being a ‘client’ is a ‘role’ assumed by a device”:

Any network element in the system may be a dedicated device that assumes only a single *role*, and thus being only a client (using tunnels), a tunnel, a client (using agents/ peers), an agent, or a peer device. Alternatively or in addition, *a network element* may be capable of assuming two or more *roles*, either at different times or simultaneously, from the *list of roles including a client* (using tunnels), a tunnel, a client (using agents/peers), an agent, or a peer device. Alternatively or in addition, a device may be capable of assuming all of the above roles.

Id. at 50 (quoting '866 patent at 125:33–42, identical to the disclosure appearing in the '953 patent (Ex. 1001, 125:24–33)) (emphasis added).

The *Tesonet* district court also declined also to limit the “seemingly generic term ‘client device’” to requiring a “tunnel, agent, or peer devices serving as intermediate devices to fetch content in the method.” *Id.* at 51. Instead, the district court construed the term “client device” as “a device that is operating in the role of a client by requesting services, functionalities, or resources from other devices.” *Id.* (emphasis omitted).

The district court in the *Teso* litigation also addressed Patent Owner’s similar arguments and concluded that “[Patent Owner] cites nothing from the intrinsic record showing a client device *must* have a ‘client dedicated operating system.’” Ex. 1010, 15.

As discussed, the *Teso* court also addressed the construction of “first server.” *Id.* at 16. The *Teso* court determined that “first server” should be construed as a “server that is not the client device.” *Id.* In a supplemental order, the district court rejected Patent Owner’s argument that *Teso* “seeks to treat client devices and servers interchangeably” as “an oversimplification of the issue.” Ex. 1013, 10. The court continued that “[r]ather, a component can be *configured* to operate in different roles—so long as it does not ‘simultaneously serve as more than one of: the client device, the first server/second server, and the web server.’” *Id.* The court confirmed that Petitioner’s proposed clarification (that a “server” is “a device operating in the, role of a server”) is correct, and that this understanding is “embedded” in the constructions previously presented. *Id.* at 11. Therefore, the court stated “[it] is not changing the scope of the terms in any way, but merely providing a clarification of the scope of the terms as they stand.” *Id.*

Patent Owner argues that in the preamble of claim 1, “purely role-based constructions” are not “appropriate” because “the first server would sometimes be a ‘client device’ under the purely role-based constructions.” Prelim. Resp. 23. In addition, Patent Owner argues that the client device would sometimes be a ‘server’ under the purely role-based constructions.” *Id.* Patent Owner contends that the claim language shows that “the ‘client device’ is necessarily and consistently a client device regardless of the role being performed at a particular point in time” and “the ‘first server’ is necessarily and consistently a server regardless of the role being performed at a particular point in time.” *Id.* at 24.

Patent Owner refers to this as operating “‘exclusively’ in the server/client roles.” *Id.* at 25. At this stage, for the reasons given, we are not persuaded by this “exclusivity” contention, as it is contrary to the ’953 patent specification and to the reasoning of the district court orders and the claim constructions that we have adopted and discussed *supra*. See, e.g., Ex. 1001, 125:24–33 (emphasis added); Ex. 1018, 50–51 (*Tesonet* order, quoting identical disclosure in ’866 patent at 125:33–42).

Patent Owner refers to the prosecution history of the ’953 patent. *Id.* at 25–28. Patent Owner contends that various statements in the prosecution history of the ’953 patent and its ancestors, going back to the great-great grandparent application, “repeatedly distinguish ‘servers’ from ‘client devices.’” *Id.* at 25. As a general rule, “because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005). At this stage and in light of the statements in the ’953 patent specification referred to

supra and in the district court claim construction analysis, we are not persuaded by those arguments based on prosecution history.

At this juncture, and for the reasons given, we agree with and have adopted the district court’s claim constructions in the *Teso* and *Tesonet* litigations for these terms. As described in the passage quoted above on the respective roles of network elements, the specification of the ’953 patent discloses the role-based nature of network elements, which includes client devices and servers, and also confirms that network elements may perform two or more roles. *See* Ex. 1001, 125:24–33. In that same place, the specification also discloses that different roles may be assumed by network elements, either at different times or simultaneously. *Id.* This is consistent with the district court findings in *Teso* and *Tesonet*.

2. Other Terms

We only construe terms that are necessary to resolve disputes. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”). At this stage, we determine that no other terms require explicit construction.

D. Applicable Law

A patent claim is unpatentable under 35 U.S.C. § 103 if “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective date of the claimed invention to a person having ordinary skill in the art to which said subject matter pertains.” 35 U.S.C. § 103 (2011); *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations

including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective indicia of nonobviousness⁶. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

E. Obviousness of Claims 1–34 Over Mithyantha

Petitioner contends that claims 1–34 are unpatentable over Mithyantha. Pet. 29–95; Olivier Decl. ¶¶ 67–131. As will be discussed *infra*, Patent Owner asserts that Mithyantha does not teach several claim limitations. Prelim. Resp. 30–40. For the reasons that follow we determine that Petitioner has shown sufficiently at this stage that Mithyantha teaches or suggests the limitations of claim 1.

1. Independent claim 1

a) Preamble: A method for use with a resource associated with a criterion in a client device that communicates with a first server over the Internet, the client device is identified in the Internet using a first identifier and is associated with first and second states according to a utilization of the resource, and for fetching over the Internet a first content identified by a first content identifier, the method comprising:

Petitioner contends that Mithyantha meets the preamble limitations⁷ of claim 1 because Mithyantha discloses “a method for use with a resource (e.g., CPU usage or load, memory usage, bandwidth, delay, frame jitter, buffer levels, collisions, packet loss rates, temperature, uptime, or any other

⁶ The parties have presented no evidence of objective indicia of non-obviousness at this stage.

⁷ The preamble provides antecedent basis for the terms “client device” and “first server,” among others. We determine that the preamble is limiting. See Ex. 1010, 9 (parties agree preambles of claims in related patents are limiting).

status of the device) associated with a criterion (not exceeding a threshold) in an appliance from a cluster environment, e.g., appliance 200b, (the claimed ‘client device’) that communicates with a first appliance 200a (the claimed ‘first server’) over the Internet.” Pet. 48. Further, “the client device is identified in the Internet using an IP address (the claimed ‘first identifier’) and is associated with an active/available state (the claimed ‘first state’) and an inactive/unavailable state (the claimed ‘second state’) according to whether usage of a resource exceeding a threshold for a predetermined period of time (the claimed ‘utilization of the resource’), and for fetching over the Internet a first web page (the claimed ‘first content’) identified by a first URL within an HTTP web request (the claimed ‘first content identifier’).” *Id.* at 48–49.

Referring to its claim construction, Petitioner identifies appliance 200b in Mithyantha as the “client device” because “it is a device that operates in the role of a client by requesting services, functionalities, or resources from a server.” *Id.* at 49 (citing Olivier Decl. ¶ 104). Petitioner identifies appliance 200a as the “first server” because “it is a device that operates in the role of a server by offering information resources, services, and/or applications and that is not the client device.” *Id.* at 50.

Patent Owner responds that appliances 200a and 200b do not meet the preamble limitations of claim 1. Prelim. Resp. 30–31. Patent Owner contends that “appliances 200a, 200b of Mithyantha are both intermediaries and therefore, each of appliances 200a, 200b sometimes operates in the role of a server and sometimes operates in the role of a client.” *Id.* at 31. Patent Owner contends that “[b]ecause appliances 200a, 200b do not consistently operate in server/client roles, appliances 200a, 200b do not satisfy the preamble of claim 1.” *Id.*

We do not agree with this argument because it is based on Patent Owner’s “exclusivity” claim construction which the district court rejected and we did not adopt. For the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that the preamble limitations of claim 1 are met by Mithyantha.

b) Limitation 1a: connecting, by the client device, to the Internet;

Petitioner contends that limitation 1a is met because appliances 200a and 200b communicate over the Internet and, therefore, “[i]n order to communicate over the Internet, appliance 200b must first connect to the Internet.” Pet. 52–53 (citing Olivier Decl. ¶ 112).

Patent Owner does not address this limitation. For the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that limitation 1a is met by Mithyantha.

c) Limitation 1b: sending, by the client device responsive to the connecting to the Internet, the first identifier to the first server over the Internet;

Petitioner asserts this limitation is met because “Mithyantha discloses or renders obvious an implementation based on the FIG. 6/1B embodiment in which each of the appliances 200b-200n contains a ‘vServer 702’ that ‘advertis[es] its IP address to [appliance 200a] with a corresponding routing metric.’” Pet. 53 (citing Ex. 1009, 56:37–39; 25:24–31) (alterations in original). Petitioner explains that “[a person of ordinary skill] would also have understood that, based on the implementation based on the FIG. 6/1B embodiment . . . , in order to establish a ‘cluster’ environment, the appliances 200b-200n must first send or advertise their corresponding IP address over the Internet to appliance 200a ‘responsive to the connecting to the Internet.’” *Id.* at 54 (citing Olivier Decl. ¶ 115).

Patent Owner does not address this limitation, although Patent Owner disputes Petitioner’s identification of the “client device.” *See supra*, Section III.E.1.a). For the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that limitation 1b is met by Mithyantha.

d) Limitation 1c: while connected to the Internet, periodically or continuously determining whether the resource utilization satisfies the criterion;

Petitioner contends that Mithyantha discloses two embodiments that meet this limitation. In the first (Embodiment I) based on the Figure 6/1B embodiment, “appliance 200b includes a status monitor 704 that monitors resource utilization including ‘CPU usage or load, memory usage, bandwidth . . . or any other status.’” Pet. 55 (citing Ex. 1009, 56:61–57:4; Olivier Decl. ¶ 118) (alteration in original). In the second (Embodiment II), Mithyantha additionally discloses that the “status monitor of a [first] device may periodically poll other devices for health status.” *Id.* at 57 (citing Ex. 1009, 57:4–6) (emphasis omitted; alteration in original).

Patent Owner does not address this limitation. For the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that limitation 1c is met by Mithyantha.

e) Limitation 1d: responsive to the determining that the utilization of the resource satisfies the criterion, shifting to the first state or staying in the first state, by the client device;

Petitioner refers back to the prior discussion of the Embodiment I and Embodiment II disclosures in connection with claim limitation 1c. Pet. 58–60. Petitioner explains that in both embodiments, “status monitor 704 . . . determines whether ‘CPU usage or load, memory usage, bandwidth . . . or any other status’ of appliance 200b (the claimed ‘utilization’) ‘exceeds a

threshold, such as a CPU utilization rate past a threshold for a predetermined time’ (not exceeding a threshold being the claimed ‘satisfies the claimed criterion’).” *Id.* at 58–59 (citing Olivier Decl. ¶ 122).

Patent Owner does not address this limitation, although Patent Owner disputes Petitioner’s identification of the “client device.” *See supra*. For the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that limitation 1d is met by Mithyantha.

f) Limitation 1e: responsive to the determining that the utilization of the resource does not satisfy the criterion, shifting to the second state or staying in the second state, by the client device;

Petitioner contends that Mithyantha discloses, “[r]esponsive to the determination’ that the threshold is exceeded (the claimed ‘that the utilization of the resource does not satisfy the criterion’), ‘the status monitor 704 may direct the vServer 702 of the device [appliance 200b] to withdraw its advertised route’ and take other action to ‘resolve[] any issues or errors,’ signifying appliance 200b (the claimed ‘client device’) shifting from active/available (the claimed ‘first state’) to inactive/unavailable (the claimed ‘second state’).” Pet. 60 (citing Ex. 1009, 57:11–21, 59:13–50; Olivier Decl. ¶ 124) (alterations in original)

Patent Owner does not address this limitation, although Patent Owner disputes Petitioner’s identification of the “client device.” *See supra*. For the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that limitation 1e is met by Mithyantha.

g) Limitation 1f: responsive to being in the first state, receiving, by the client device, the first content identifier from the first server; and

h) Limitation 1g: sending, by the client device in response to the receiving of the first content identifier, the first content to the first server.

For limitation 1f, referring to Figure 6/1B, Petitioner contends that “appliances 200a and 200b ‘act[] as a proxy or access server to provide access to the one or more servers 106’ for requests from client 102a.” Pet. 61 (citing Ex. 1009, 9:15–21; Olivier Decl. ¶ 125) (alteration in original). Petitioner explains that “responsive to being active/available state (the claimed ‘first state’), appliance 200b either maintains or ‘re-advertise its route’ to the routing entity, appliance 200a ‘such that [appliance 200a] may begin including it in load balancing and multipath routing.’” *Id.* at 63 (citing Ex. 1009, 57:57–61; Olivier Decl. ¶ 128). Thus, “appliance 200b receives HTTP requests from appliance 200a responsive to being in the first state where appliance 200b has informed appliance 200a that it is available for traffic to be forwarded.” *Id.*

For limitation 1g, Petitioner refers to its analysis of limitation 1f. *Id.* at 63–64. Petitioner explains that “when appliance 200b (the claimed ‘client device’) receives HTTP requests from appliance 200a, it forwards the request to web server 106(a), receives the corresponding HTTP response (the claimed ‘first content’), and sends the received HTTP response to appliance 200a (the claimed ‘first server’).” *Id.* at 64 (citing Olivier Decl. ¶ 130).

Patent Owner disputes these contentions. For the “receiving” limitation 1f, Patent Owner responds that “[a]t this point in time, when appliance 200b receives a request from appliance 200a, appliance 200b is

operating in the role of a server, not a client.” Prelim. Resp. 32. Patent Owner continues, “[t]herefore, appliance 200b cannot qualify as the ‘client device’ because appliance 200b is not operating in the role of a client during performance of this method step.” *Id.*

Similarly, for the “sending” limitation 1g, Patent Owner responds “[a]t this point in time, when appliance 200b sends a response to appliance 200a, appliance 200b is operating in the role of a server, not a client.” *Id.* Patent Owner continues, “[t]herefore, appliance 200b cannot qualify as the ‘client device’ because appliance 200b is not operating in the role of a client during performance of this method step.” *Id.*

We do not agree with these arguments. They are a variation on Patent Owner’s “exclusivity” argument, that is, the “claimed components” “operate ‘exclusively’ in the server/client roles.” *See Id.* at 24–25. For the reasons discussed *supra*, in Section III.C.1, we have rejected this claim construction, as have the district courts in the *Teso* and *Tesonet* litigations.

We have considered Patent Owner’s additional arguments and find them unconvincing at this stage. *See* Prelim. Resp. 35–42. For example, we do not agree with Patent Owner’s argument that Mithyantha does not teach the “architecture” of claim 1 because “[i]t is improper for Petitioner to designate one appliance a ‘server’ and another identical appliance a ‘client device.’” *Id.* at 33. This is a variation on Patent Owner’s rejected argument that the same component cannot assume different roles. *See supra*, Section III.C.1. So, too, is the argument that “[a person of ordinary skill] would understand that appliance 200b is a server and therefore, not a client device in the context of the ’953 Patent.” Prelim. Resp. 36–37.

Patent Owner’s argument that “a [person of ordinary skill] would understand appliance 200b to be a corporate server” is not relevant because

this alleged distinction is not reflected in the challenged claims, and is, in any case, is contrary to Mithyantha's disclosure that its appliances can provide many different functions (*see, e.g.*, Ex. 1009, 8:65–67, 9:8–24, 9:53–55; 23:58–64), and may be implemented in many forms. That is, the implementation of appliance 200 is generally described as being on any form of computing device such as “computing device 100,” and “computing device 100 can be any workstation, desktop computer, laptop or notebook computer, server, handheld computer, mobile telephone.” *See id.* at 13:65–14:2, 16:58–64. Nor are we convinced at this stage by Patent Owner's argument that “[a person of ordinary skill] would not be motivated to use a ‘consumer computer’ such as a desktop/laptop/mobile telephone based on the teachings of Mithyantha at least because a consumer computer would not be capable of performing the operations of appliance 200 as taught by Mithyantha.” Prelim. Resp. 38. Patent Owner provides no evidentiary support for this argument.

In sum, for the reasons given, we determine that at this stage, Petitioner has demonstrated sufficiently that limitations 1f and 1g are met by Mithyantha.

i) Conclusion – Claim 1

For the foregoing reasons, we determine that Petitioner has demonstrated that it is more likely than not that it will prevail on its challenge to claim 1 of the '953 patent as obvious in light of Mithyantha.⁸

⁸ In addition to the arguments addressed *supra*, Patent Owner provides a listing of example “modifications” of Mithyantha by Petitioner that Patent Owner label as “hindsight.” Prelim. Resp. 40–42. Patent Owner provides no further explanation or evidence to support these examples, and therefore, at this stage, we do not consider them.

2. *Dependent Claims 2–34*

Petitioner contends that claims 2–34 are unpatentable over Mithyantha and provides an analysis. Pet. vi–xi, 65–95; Olivier Decl. ¶¶ 132–183. Patent Owner does not provide any additional argument or evidence directed to those dependent claims. Prelim. Resp. 30–40. For the reasons given by Petitioner, we determine that Petitioner has demonstrated sufficiently that Mithyantha teaches or suggests the limitations of claim 2–34. We further determine that for the foregoing reasons, that Petitioner has demonstrated that it is more likely than not that it will prevail on its challenge to claims 2–34 of the ’953 patent as obvious in light of Mithyantha.

F. *Obviousness of Claim 31 over Mithyantha and RFC 2616*

Claim 31 depends indirectly from claim 1 and recites: “The method according to claim 29, wherein the communication with the web server is based on, or using, HTTP persistent connection.” Ex. 1001, 174:63–65. Petitioner contends that dependent claim 31 would have been obvious over the combination of Mithyantha and RFC 2616. Pet. 95–97; Olivier Decl. ¶¶ 184–191. Petitioner explains that “[i]n implementing RFC 2616’s HTTP persistent connections in the Mithyantha system, communications flowing from client 102a to appliance 200a (the claimed ‘first server’) and thereafter to appliance 200b (the claimed ‘client device’) use HTTP persistent connections, the ‘default behavior of any HTTP connection’ in HTTP/1.1.” Pet. 97 (citing Ex. 1005, 29–30; Olivier Decl. ¶ 191).

Petitioner asserts “[a person of ordinary skill] would have been motivated to employ the disclosure of RFC 2616 in implementing the system of Mithyantha.” *Id.* at 96. This assertion is based on Mithyantha’s “explicit disclosure” of HTTP, and the fact that “RFC 2616 ‘standardized’ HTTP/1.1.” *Id.* In this implementation, “communications flowing from

client 102a to appliance 200a (the claimed ‘first server’) and thereafter to appliance 200b (the claimed ‘client device’) would use HTTP persistent connections.” *Id.* at 97 (citing Ex. 1005, 29–30; Olivier Decl. ¶ 190).

Patent Owner does not address this challenge to claim 31, although Patent Owner challenges Petitioner’s assertion that Mithyantha teaches or suggests the limitations of claim 1. *See* Section III.E.1.

For the foregoing reasons, we determine that Petitioner has shown that it is more likely than not to prevail on its challenge to claim 31 of the ’953 patent as obvious in light of Mithyantha and RFC 2616.

IV. CONCLUSION

After considering the evidence and arguments presently before us, we determine Petitioner has demonstrated that it is more likely than not that at least one of the challenged claims is unpatentable. Accordingly, we institute a post-grant review.

V. ORDER

In consideration of the foregoing, it is:

ORDERED that, pursuant to 35 U.S.C. § 324(d), a post-grant review is instituted as to claims 1–34 of U.S. Patent No. 11,349,953 B2 on all grounds stated in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 324(d) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this Order.

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Patent 11,349,953 B2

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