UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE PATENT TRIAL AND APPEAL BOARD
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THE MANGROVE PARTNERS MASTER FUND, LTD., APPLE INC.,
and BLACK SWAMP IP, LLC,
Petitioner,

v.

VIRNETX INC.,
Patent Owner.
_____

Case IPR2015-01047[1]
Patent 7,490,151 B2
_____

Before MICHAEL P. TIERNEY, KARL D. EASTHOM, and
STEPHEN C. SIU, *Administrative Patent Judges*.

SIU, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and C.F.R. § 42.73

The Mangrove Partners Master Fund, Ltd., Apple Inc., and Black

Swamp IP, LLC (collectively, "Petitioner") requested *inter partes* review of

claims 1, 2, 6–8, and 12–14 of U.S. Patent No. 7,490,151 B2 ("the '151

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[1] Apple Inc. and Black Swamp IP, LLC, which filed petitioners in IPR2016-00063 and IPR2016-00167, respectively, have been joined as Petitioners in the instant proceeding.

patent"). We issued a Decision to institute an *inter partes* review (Paper 11, "Inst. Dec.") of claims 1, 2, 6–8, and 12–14 of the '151 patent as unpatentable under 35 U.S.C. 102 as anticipated by Kiuchi[2] or under 35 U.S.C. 103(a) over the combination of Kiuchi, RFC 1034,[3] and Rescorla[4] or the combination of Kiuchi and any one of Rescorla or RFC1034. Inst. Dec. 3, 12; Paper 24 1–2.

   After institution of trial, VirnetX Inc. ("Patent Owner") filed a Patent Owner's Response (Paper 54 (redacted version), "PO Resp." and Paper 54 (non-redacted version)), to which Petitioner replied (Paper 58 (redacted version), "Pet. Reply"; Paper 56 (non-redacted version); and Paper 59, "Pet. Separate Reply"). Patent Owner and Petitioner also each filed a Motion to Exclude, a corresponding Patent Owner's Opposition to Petitioner's Motion to Exclude and Petitioner's Opposition to Patent Owner's Motion to Exclude, and corresponding Petitioner's Reply to Patent Owner's Opposition to Motion to Exclude and Patent Owner's Reply to Petitioners' Opposition of Motion to Exclude. Papers 64, 66, 68, 69, 70, 71. Patent Owner and Petitioner each also filed a Motion to Seal. Paper 47, 57. Oral argument was conducted on June 30, 2016. Transcripts of that argument has been made of record. Paper 79, "Tr."; see also Paper 78.

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[2] Takahiro Kiuchi and Shigekoto Kaihara, C-HTTP – *The Development of a Secure, Closed HTTP-Based Network on the Internet*, PROCEEDINGS OF THE SYMPOSIUM ON NETWORK AND DISTRIBUTED SYSTEM SECURITY, IEEE 64-75 (1996) (Ex. 1002, "Kiuchi").

[3] P. Mockapetris, *Domain names – Concepts and Facilities*, Network Working Group, Request for Comments: 1034 (1987) (Ex. 1005, "RFC 1034").

[4] E. Rescorla and A. Schiffman, *The Secure HyperText Transfer Protocol*, Feb. 1996 (Ex. 1004, "Rescorla").

We have jurisdiction under 35 U.S.C. § 318(a). After considering the evidence and arguments of both parties, and for the reasons set forth below, we determine that Petitioner met its burden of showing, by a preponderance of the evidence, that claims 1, 2, 6–8, and 12–14 of the '151 patent are unpatentable.

RELATED MATTERS

The '151 patent is the subject of the following civil actions: (i) Civ. Act. No. 6:13-cv-00211-LED (E.D. Tex.), filed February 26, 2013; (ii) Civ. Act. No. 6:12-cv-00855-LED (E.D. Tex.), filed November 6, 2012; and (iii) Civ. Act. No. 6:10-cv-00417-LED (E.D. Tex.), filed August 11, 2010. Pet. 1.

The '151 patent is also the subject of Reexamination Control Nos. 95/001,697 and 95/001,714. Pet. 2.

THE '151 PATENT (EX. 1001)

The '151 patent discloses a system and method for automatic creation of a virtual private network (VPN) in response to a domain-name server look-up function. Ex. 1001, 36:58–60.

ILLUSTRATIVE CLAIM(S)

Independent claim 1 is representative of the claimed subject matter. Claim 1 is reproduced below:

> 1. A data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client and, for each intercepted DNS request, performs the steps of:
> (i) determining whether the intercepted DNS request corresponds to a secure server;

(ii) when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns an IP address of a nonsecure computer, and

(iii) when the intercepted DNS request corresponds to a secure server, automatically initiating an encrypted channel between the client and the secure server.

OVERVIEW OF PRIOR ART

Kiuchi

Kiuchi discloses closed networks (i.e., closed HTTP (Hypertext Transfer Protocol)-based network (C-HTTP)) of related institutions on the Internet. Ex. 1002, 64. A client and client-side-proxy "asks the C-HTTP name server whether it can communicate with the [specified] host" and, if "the query is legitimate" and if "the requested server-side proxy is registered in the closed network and is permitted to accept the connection," the "C-HTTP name server sends the [requested] IP address." Ex. 1002, 65. After confirmation by the C-HTTP name server "that the specified server-side proxy is an appropriate closed network member, a client-side proxy sends a request for connection to the server-side proxy, which is encrypted." *Id.*

The server-side proxy "accepts [the] request for connection from [the] client-side proxy" (Ex. 1002, 65) and, after the C-HTTP name server determines that "the client-side proxy is an appropriate member of the closed network," that "the query is legitimate," and that "the client-side proxy is permitted to access . . . the server-side proxy," the "C-HTTP name server sends the IP address [of the client-side proxy]." Ex. 1002, 66. Upon receipt of the IP address, the server-side proxy "authenticates the client-side proxy" and sends a connection ID to the client-side proxy. After the client-side proxy "accepts and checks" the connection ID, "the connection is

established," after which time, the client-side proxy forwards "requests from the user agent in encrypted form using C-HTTP format." Ex. 1002, 66.

RFC1034

RFC 1034 discloses that a "name server may be presented with a query" and that the name server may either "pursue[] the query for the client at another server" (recursive approach) or "refer[] the client to another server and lets the client pursue the query" (iterative approach). Ex. 1005, 4.

Rescorla

Rescorla discloses syntax for securing messages sent using Hypertext Transfer Protocol. Ex. 1004, 1.

ANALYSIS

Patentability issues

As Petitioner explains, Kiuchi discloses, for example, a data processing device, comprising memory storing a domain name server (DNS) proxy module that intercepts DNS requests sent by a client. *See, e.g.*, Pet. 25-28; Ex. 1003 at 18, 20–22, 27, 28, 31; Ex. 1002, 64–66. Kiuchi also discloses determining whether the intercepted DNS request corresponds to a secure server (Pet. 28–29; Ex. 1003, 23, 24, 26; Ex. 1002, 65), when the intercepted DNS request does not correspond to a secure server, forwarding the DNS request to a DNS function that returns a IP address of a nonsecure computer (Pet. 29–30; Ex. 1003, 23; Ex. 1002, 65), and when the intercepted DNS request corresponds to a secure server, automatically initiating an encrypted channel between the client and the secure server (Pet. 30–32; Ex. 1003 23–25, 28–31; Ex. 1002, 64–66).

DNS Features

Patent Owner argues that "Kiuchi does not disclose the recited DNS features" (PO Resp. 13) because "Kiuchi repeatedly differentiates its C-HTTP features from DNS." PO Resp. 14 (citing Ex. 2038 41–42).

Claim 1 recites a DNS request. The DNS request is "sent by a client," potentially "corresponds to a secure server," and may result in any one of a return of an IP address of a nonsecure computer or the initiation of an encrypted channel between the client and the secure server. Claim 1 does not appear to recite any other specific features of the DNS request.

As Petitioner explains, Kiuchi discloses the "client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL," that the C-HTTP name server "examines whether the requested server-side proxy . . . is permitted to accept the connection from the client-side proxy," and if so, "sends the IP address . . . of the server-side proxy." Ex. 1002 65; Pet. 29.

Patent Owner argues that the "request" of Kiuchi differs from the claimed "DNS request" because "Kiuchi explains that the C-HTTP name service is used 'instead of DNS.'" PO Resp. 14. As Patent Owner points out, Kiuchi discloses that "[i]n a C-HTTP-based network" a "C-HTTP-based secure, encrypted name and certification service is used" "instead of DNS." Ex. 1002, 64, Abstract. However, other than what is tantamount to a mere difference in nomenclature, Patent Owner does not point out specific differences between the "request" of Kiuchi and the "request" as claimed. As discussed above, Kiuchi discloses a "request" from a user agent (i.e., "client") that requests an IP address corresponding to a domain name with

subsequent formation of an encrypted channel (i.e., secure communication link) between the user agent (i.e., "client") and origin server (i.e., "the secure server"), which appears to be the same as the request as claimed with the only apparent difference being the use of the descriptor "DNS" recited in claim 1. Furthermore, Patent Owner has argued in related proceedings that its claimed "secure domain name" "cannot be resolved by a *conventional domain name service*." *See, e.g.*, *Apple Inc. v. Virnetx Inc.*, IPR2015-00870, slip. op. at 22 (PTAB Jan. 25, 2016) (Paper 23) (citing related reexamination proceedings advancing the argument) (emphasis added). This further obscures what Patent Owner intends to cover by the term "DNS."

In addition, we credit testimony of Dr. Fabian Monrose that the claim term "domain name service request" "does not limit it to . . . specific RFCs" and Dr. Monrose's observation of the lack of "any analysis as to [a domain name service request] being limited or not thereof to a specific RFC." Ex. 1036, 104:21-22, 105:18-19; see also Ex. 1036, 106:15-16 ("I haven't provided any analysis that [a request as claimed] must comply with any RFC"). During oral argument, in response to a questions asking what a DNS requires, Patent Owner declined to define it, generally contending that whatever it is, Kiuchi does not disclose it. *See* Tr. 70:6–12 ("I think one of ordinary skill in the art would know that. But clearly when a reference specifically tells you it is not using DNS, you don't even have to go down that road," *id.* 71:8–9 (processing the DNS request in Patent Owner's invention "might not be conventional"), *id.* 71:1–74:24, 84:4–24 ("It is still a DNS request. . . . whether you want to call it conventional - - non-conventional or whatever."). Hence, we disagree with Patent Owner's implied contention that renaming a request that requests an IP address corresponding to a domain name that is capable of requesting access to a

7

secure web site (as disclosed by Kiuchi and as recited in claim 1) from "DNS request" to "C-HTTP-based . . . service . . . instead of DNS" alone is sufficient to create a patentable difference between requests that appear identical in all other respects.

Patent Owner also argues that Kiuchi's "request" differs from the claimed "request" because Kiuchi discloses "that the . . . DNS lookup is generated only if an error condition occurs in which C-HTTP connectivity fails." PO Resp. 14. However, claim 1 does not appear to recite any specific steps to be performed with respect to an error condition or whether connectivity fails (or not) in conjunction with the (non-recited) error condition.

Determining whether the DNS request corresponds to a Secure Server

Petitioner explains that Kiuchi discloses "[t]he C-HTTP name server 'determin[es]' whether the host in the C-HTTP name request sent by the client-side proxy is part of the closed network and whether the connection is permitted, and if so, returns an IP address and public key." Pet. Reply. 8 (citing Ex 1002 65). Hence Petitioner argues that Kiuchi discloses a client (i.e., client-side proxy) that sends a request to a domain name server (DNS) proxy module (i.e., C-HTTP name server) that returns a corresponding IP address. We agree with Petitioner. Ex. 1002, 65.

Patent Owner argues "Kiuchi does not anticipate claim 1" because "it is the C-HTTP name server [of Kiuchi] . . . that examines whether the server-side proxy is registered in the closed network" (PO Resp. 17). Hence, Patent Owner does not appear to dispute that Kiuchi discloses a C-HTTP name server (or domain name server proxy module) that determines whether

the DNS request corresponds to a secure server, as recited in claim 1, for example.

Automatically initiating

Patent Owner argues that Kiuchi fails to disclose automatically initiating an encrypted channel between the client and the secure server, as recited in claim 1, "because encryption does not extend to Kiuchi's user agent" and "Kiuchi discourages end-to-end encryption, from a client to a target device." PO Resp. 18. However, claim 1 does not recite "end-to-end encryption" or that encryption must extend to the user agent. For at least this reason, we are not persuaded by Patent Owner's argument.

In any event, as previously discussed, Kiuchi discloses establishing an encrypted channel between a client (i.e., "client-side proxy") and a secure server (i.e., "server-side proxy"). Even assuming Patent Owner's contention to be correct that one of skill in the art would have broadly but reasonably understood that a channel that is "between [A] and [B]" requires that the channel "extend[] from [A] and [B]" such that the channel "should be provided all the way from [one component] to [the other component]" (PO Resp. Br. 11), we agree that Petitioner has met its burden by a preponderance of the evidence that Kiuchi discloses an encrypted channel that extends from the client-side proxy (i.e., "client") and the server-side proxy (i.e., "secure server") or, alternatively, that an encrypted channel is "provided all the way from" the client-side proxy (i.e., "client") to the server side proxy (i.e., "secure server"). *See e.g.*, Paper 58 14; Ex. 1002 65–66. Patent Owner does not demonstrate persuasively a difference between such a channel and the encrypted channel between the client ("client-side proxy") and secure server ("server-side proxy") of Kiuchi.

Client

Patent Owner argues that Petitioner relies "on Kiuchi's client-side proxy for the 'client' part of the claimed 'encrypted channel'" but that Kiuchi's client-side proxy cannot be equated with 'the "client" part of the claimed "encrypted channel" because "Petitioner Black Swamp is already relying on the client-side proxy for the claimed 'domain name server (DNS) proxy module'." PO Resp. Br. 19 (citing IPR2016-00167 Pet. 13). Petitioner Black Swamp explains that Kiuchi discloses an embodiment in which the "client-side proxy asks the C-HTTP name server whether it can communicate with the host." IPR2016-00167 Pet. 20. In other words, in this embodiment relied upon by Petitioner and contrary to Patent Owner's assertion, Petitioner equates Kiuchi's "C-HTTP name server" (and not the client-side proxy) with the claimed DNS proxy module. Patent Owner does not explain sufficiently a difference between Kiuchi's client-side proxy and the claimed client with respect to this issue.

Patent Owner also argues that "Kiuchi's client-side proxy is not a user's computer" because "Kiuchi does not disclose any user associated with the client-side proxy." PO Resp. Br. 20. Hence, Patent Owner disputes Petitioner's mapping of Kiuchi's client-side proxy to the claimed "client." Pet. Reply. 10–12. We are not persuaded by Patent Owner's argument.

Claim 1 recites "client" but does not recite "user's computer." To the extent that Patent Owner argues that Kiuchi's client-side proxy is not a "client," as recited in claim 1 and even assuming Patent Owner to be correct that a "client," as recited in claim 1, must be "associated with" a user, we are not persuaded by Patent Owner that Kiuchi fails to disclose that the client-side proxy is "associated with" a user. For example, Kiuchi discloses that

users within an institution (e.g., "hospitals and related institutions" – Ex. 1002 64) are provided with access to "information [that is] shared among" institutions in which a "client-side proxy" receives a request for access from a user agent. One of skill in the art would have understood that in order for a user or "user agent" in an "institution" to provide a request to access information, the "user agent" (itself being "associated with" a user) would be "associated with" the "client-side proxy" to which the user agent sends a request. Otherwise, the user would be unable to send a request to the client-side proxy, the client-side proxy not being associated with the user in the first place. Hence, even assuming Patent Owner's proposed definition to be correct that a "client" must be "associated with" a user, Patent Owner does not demonstrate sufficient differences between a "client-side proxy" of Kiuchi that is "associated with" a user (and receives a request from the associated user) and the claimed "client" that Patent Owner argues must be also be somehow "associated with" a user.

Patent Owner argues that Kiuchi's "client-side proxy" is distinct from the claimed "client" because, according to Patent Owner, Kiuchi provides "separate references to the 'client' and 'client-side proxy.'" PO Resp. Br. 21. We are not persuaded by Patent Owner's argument at least because even assuming that Kiuchi refers to a "client" and "client-side proxy" separately as Patent Owner contends, Patent Owner does not point out sufficient differences between the "client-side proxy" of Kiuchi and a "client," as recited in claim 1 for at least the previously stated reasons.

Patent Owner argues that the Federal Circuit "found 'evidence that the 'client' of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy." PO Resp. 21 (citing *VirnetX, Inc. v. Cisco Systems, Inc.*, 767 F.3d 1308, 1324 (Fed. Cir. 2014))).

Presumably, Patent Owner argues that the "client-side proxy" cannot be equated with the "client," as recited in claim 1, because the Federal Circuit held that the "web browser" of Kiuchi must be equated with the claimed "client." We are not persuaded by Patent Owner's implied argument.

First, the Federal Circuit held that "the district court did not err in denying [Defendant's] JMOL motion with respect to invalidity" because "there was evidence that the 'client' of Kiuchi is actually a web browser." *Cisco,* 767 F.3d at 1324. We disagree with Patent Owner's implied argument that the Federal Circuit held that 1) Kiuchi's "web browser" must be equated with the claimed "client," 2) Kiuchi's "client-side proxy" must not be equated with the claimed "client," and 3) Kiuchi's "web browser" (which is supposedly mandated by the Federal Circuit to be exclusively equated with the claimed "client") differs materially from the claimed "client" such that Kiuchi fails to disclose a "client." Rather, the Federal Circuit actually held that there was sufficient "evidence" that Kiuchi discloses a web browser as a "client" such that the district court did not err in denying defendant's JMOL motion. *See id.* This holding does not address whether Kiuchi's client-side proxy (which Petitioner equates with the claimed "client" in this embodiment) is the same as or is different (and, if so, in what way) from the claimed "client."

Second, as Patent Owner points out, the district court and the Federal Circuit do not construe claim terms under a broadest reasonable interpretation standard as we do. PO Resp. Br. 21–22. Hence, even assuming that the Federal Circuit held that the claim term "client" must be construed a particular way under a claim construction standard other than the broadest reasonable standard, Patent Owner does not explain sufficiently

how this would apply to the present proceedings in which a broadest reasonable standard is used.

Patent Owner argues that despite the differing standards of claim construction, the Federal Circuit "has emphasized that the Board nevertheless has an 'obligation to acknowledge that interpretation' and 'to assess whether it is consistent with the broadest reasonable construction of the term." PO Resp. Br. 21–22 (citing *Power Integrations, Inc. v. Lee*, 797 F.3d 1318, 1326 (Fed. Cir 2015)). We acknowledge the district court's construction as being slightly narrower than our construction and as involving different evidence, arguments, and standards of proof. *See Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2142–2146 (2016).

Third, as previously discussed, Patent Owner contends that the Federal Circuit "found evidence that the 'client' of Kiuchi is actually a web browser, a component that is distinguishable from the client-side proxy." Hence, the Federal Circuit states that the district court was presented with evidence that Kiuchi discloses a web browser that is a client and is not the same as the client-side proxy of Kiuchi. In other words, the Federal Circuit makes no comment on claim construction at all (under any standard, much less a broadest reasonable standard) since the "web browser" and the "client-side proxy" are both terms disclosed by Kiuchi and neither term is recited in claim 1, for example.

Each Intercepted DNS Request

Patent Owner argues that Kiuchi fails to disclose each step recited in claim 1 "for each intercepted DNS request." PO Resp. Br. 24. As discussed above, Petitioner equates Kiuchi's client-side proxy with the claimed

"client." Kiuchi discloses that the "client-side proxy asks the C-HTTP name server whether it can communicate with the host specified in a given URL," in response, the C-HTTP name server "examines whether the requested server-side proxy is . . . permitted to accept the connection," and, if so, "the C-HTTP name server sends the IP address and public key of the server-side proxy [to the client-side proxy]" (Ex. 1002 65), and subsequently, "the connection is established." Ex. 1002 66. Kiuchi does not appear to also disclose that this process is *not* performed. Therefore, we are not persuaded by Patent Owner's argument.

Hence, Petitioner has met its burden of demonstrating by a preponderance of the evidence that claim 1 is unpatentable.

Claims 2, 6–8, and 12–14

Claim 2 recites determining whether the client is authorized to access the secure server. Patent Owner argues that Kiuchi only discloses "checking whether" a server "is registered in the network" but fails to disclose determining whether a client is "authorized" to access the secure server, as recited in claim 2, because "whether the server-side proxy [of Kiuchi] is permitted to connect says nothing as to the client computer's authorization." PO Resp. 26. However, Patent Owner does not assert or demonstrate sufficiently a difference between 1) determining if a device is "permitted" to connect (as disclosed by Kiuchi) and establishing a connection between a client and the server only if the device is determined to be "permitted" to connect and 2) determining if the client is "authorized" to access the secure server. One of skill in the art would have understood that a client that is determined to be "permitted to connect" also would be determined to be

"authorized" to do so. Otherwise, the client would not be permitted to connect with the server, which would be contrary to the determination that the device is "permitted to connect."

Patent Owner does not provide additional arguments in support of claims 6–8 and 12–14 with respect to Kiuchi. PO Resp. Br. 25–26. As such, on this record, Petitioner has met its burden of demonstrating by at least a preponderance of the evidence that claims 2, 6–8 and 12–14 are unpatentable.

Obviousness - Kiuchi and Rescorla and/or RFC 1034

Patent Owner argues that Rescorla or RFC 1034 "do not remedy the deficiencies of Kiuchi." PO Resp. Br. 28. However, as previously discussed and taking Patent Owner's arguments into consideration, Petitioner has met its burden by demonstrating by at least a preponderance of the evidence that the disputed claims are unpatentable over Kiuchi. As such, no "deficiencies" of Kiuchi are identified. Therefore, we are not persuaded by Patent Owner's argument.

In any event, Petitioner relies upon Rescorla only to the extent that Kiuchi fails to disclose or suggest automatically initiating (or creating) a secure channel between a client and secure server or a secure channel "between" a client and a secure server. Pet 37–38. As discussed above, we agree with Petitioner that Petitioner has met its burden by demonstrating by at least a preponderance of the evidence that Kiuchi discloses these features.

Petitioner relies upon RFC 1034 only in the event that the issue of whether Kiuchi only discloses "the allegedly 'wrong' network entity within Kiuchi's architecture has responsibility for a given task" is raised. We do not identify an alleged "wrong" network entity performing a "responsibility

for a given task." At least for this additional reason, we are not persuaded by Patent Owner's argument.

Patent Owner also argues that it would not have been obvious to one of ordinary skill in the art to have combined the teachings of Kiuchi with any one or both of Rescorla and/or RFC1034 because there was a "long-felt need" for "ways to easily and conveniently establish secure communication links, such as VPN communication links," "others attempted to create easy-to-enable secure communications [but] failed," "the technology was . . . met with skepticism," "the claimed inventions have experienced commercial success, with multiple companies licensing the technology," and "[t]hose in the industry have also praised the inventions." PO Resp. 29, 31, 32, 33, 34. Hence, Patent Owner argues secondary considerations to rebut the *prima facie* showing of obviousness.

Long Felt Need

Patent Owner argues that "[p]rior to the claimed inventions, it was widely recognized that providing secure remote access to a LAN or WAN was extremely difficult for IT support desks" and that the claimed invention "combine[s] both the ease of use *and* the security aspects of a VPN, without sacrificing one or the other . . . by automatically initiating an encrypted channel between a client and a secure server through a DNS process as claimed." PO Resp. 29 (citing Ex. 2050, 8, 9, 11, 131-132).

Based on the evidence of record, we are not persuaded by Patent Owner's argument that "it was widely recognized that providing secure remote access . . . was extremely difficult." Rather, Patent Owner's evidence indicate that "[r]emote access . . . [is] insecure and unreliable" but that "[y]ou can solve the security problem using client-to-LAN virtual

private network (VPN) technology." Ex. 2050 ¶ 8 (citing Ex. B-4 at 1).
Hence, rather than being "extremely difficult" to provide secure remote
access, as Patent Owner alleges, Patent Owner's declarant (Dr. Robert
Dunham Hosrt III) points out that, in fact, it was known in the art that any
security problems associated with remote access could be solved. Hence,
solutions were known in the art that provided secure remote access. On this
record, however, Patent Owner fails to demonstrate with specific and
credible evidence that such solutions were "extremely difficult" to
implement (*see e.g.*, Ex. B-4 at 1) prior to the filing of the '151 patent.

Also, Patent Owner argues that there was a long felt need to combine
both the ease of use *and* the security aspects of a VPN by automatically
initiating an encrypted channel between a client and a secure server. As
discussed above, Kiuchi predates the filing of the '151 patent and also
discloses this feature. Patent Owner does not explain how the claimed
invention satisfies this alleged "long felt need" of providing secure remote
access when Kiuchi, at least, already provided for secure remote access.

Patent Owner also argues that "the Defense Advanced Research
Projects Agency ('DARPA') funded various research programs to . . .
provide easy-to-initiate secure communication links" and that "SAIC also
spent significant resources of its own on their development [of "cutting edge
technology]." PO Resp. 31. Patent Owner does not explain sufficiently how
the amount of resources spent by either "DARPA" or "SAIC" for various
research programs to further "information assurance and survivability" or
"cutting edge technology" demonstrates a long felt need for the claimed
invention. We are not persuaded by Patent Owner's argument.

  Failure of Others

17

Patent Owner argues that "Dynamic Coalitions,' was specifically created to address the ability of the Department of Defense to quickly and easily set up secure communications over the Internet" but that "none of [the organizations operating under "Dynamic Coalitions"] came up with a solution . . . that was even close to providing the ease of use of the solutions provided in the claimed inventions of the '151 patent." PO Resp. 31-32 (citing Ex. 2050, 4-5, 10, 11).

We are cautioned by the Federal Circuit that, with respect to secondary considerations alleged by Patent Owner in response to a *prima facie* showing of obviousness, "the obviousness inquiry centers on whether 'the claimed invention as a whole' would have been obvious." *WBIP, LLC v. Kohler Co*., Appeal Nos. 2015-1038, 2015-1044, slip op. at 15 (Fed. Cir., July 19, 2016). Looking at the "claimed invention as a whole," we note that claim 1, for example, recites a data processing device that determines whether an intercepted DNS request corresponds to a secure server, forwards the DNS request to a DNS function that returns an IP address of a nonsecure computer (when the intercepted DNS request does not correspond to a secure server), and automatically initiating an encrypted channel between the client and the secure server when the intercepted DNS request corresponds to a secure server. As previously discussed in the record, Kiuchi discloses these features, either taken separately or as a "whole." Patent Owner does not indicate a portion of the "whole" of the claimed invention that Kiuchi supposedly does not disclose. Not having identified sufficiently a part of the "whole" of the claimed invention that Kiuchi does not disclose, we conclude that Kiuchi discloses the "whole" of the claimed invention. Therefore, Patent Owner fails to show a nexus to its evidence of secondary considerations.

While Patent Owner argues that DARPA-sponsored entities were supposedly unable to provide "the ease of use of the solutions provided in the claimed inventions of the '151 patent," Patent Owner does not demonstrate persuasively and with credible evidence that Kiuchi, for example, was also unable to provide "the ease of use of the solutions provided in the claimed inventions of the '151 patent." As previously discussed, Kiuchi appears to have succeeded in providing such solutions.

Skepticism

Patent Owner argues that "a DARPA program manager informed one of the co-inventors that technology disclosed in the '151 patent would never be adopted" and that "IT offices of many large companies and institutions expressed skepticism that secure connections could ever be enable easily by regular computer users" because secure connections "could only be achieved through difficult-to-provision VPNs and . . . easy-to-set-up connections could not be secure." PO Resp. 32 (citing Ex. 2050 13-15, 136, 137). We are not persuaded by Patent Owner's argument.

We are directed by the Federal Circuit to consider the "*claimed invention as a whole*," when considering secondary considerations raised in response to a prima facie showing of obviousness. Patent Owner does not indicate that the DARPA program manager in question informed the co-inventor that technology *claimed* in the '151 patent would never be adopted. Further, even assuming the manager's comment concerns the claimed invention, we are not persuaded by Patent Owner's argument because citing one person's opinion as to whether the claimed invention would be adopted does not constitute general skepticism in the industry. For example, Patent Owner does not list any credible publications on this point or indicate that

any studies were performed over a statistically significant proportion of those of skill in the art that would indicate that there was, in fact, a general feeling of skepticism in the field that secure communications could be accomplished.

In any event, we note that Patent Owner's evidence indicate that the problem of providing secure remote access was already solved. See, e.g., Short Decl. Ex. B-4 at 1 ("But fear not: You can solve the security problem"). It is unlikely that those of skill in the art would have been skeptical that secure remote access, for example, could be achieved, given the fact that secure remote access was already being accomplished by ordinarily skilled artisans.

Commercial Success

Patent Owner argues that "the claimed inventions have experienced commercial success, with multiple companies licensing the technology." PO Resp. 33. However, Patent Owner does not provide any data regarding market share or revenue from sales of any products alleged to be encompassed by the claimed invention. *Id.* Rather, Patent Owner argues commercial success based solely on the alleged fact that various business entities entered into licenses with Patent Owner. Even assuming that the cited business entities entered into licenses with Patent Owner, this allegation alone would be insufficient to demonstrate commercial success at least because Patent Owner provides insufficient evidence suggesting that the reason any of the business entities entered into licenses with Patent Owner was due to the merits of any claim at issue here, as opposed to any number of other reasons (e.g., expediency, advertising, or avoiding a lawsuit).

Even assuming that the cited business entities entered into licensing for the sole reason that Patent Owner's claimed invention was a "commercial success," we are still not persuaded by Patent Owner's argument.

Patent Owner argues that that the claimed invention "automatically initiates the encrypted channel," and that "this was a sought-after goal." PO Resp. 35. Hence, Patent Owner appears to argue a nexus between the alleged secondary considerations and the claim limitation of "automatically initiating an encrypted channel between the client and the secure server." However, as previously discussed, this feature is disclosed by Kiuchi. Under these circumstances, any commercial success stems from what was known in the prior art so that there can be no nexus. *Tokai Corp. v. Easton Enters., Inc.*, 632 F.3d 1358, 1369 (Fed. Cir. 2011); *Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006).

As previously stated and in accordance with instructions from the Federal Circuit, we consider the "*claimed* invention *as a whole*" when determining whether Patent Owner has provided a sufficient nexus between the alleged secondary considerations (e.g., commercial success) and the claimed invention ("as a whole") to overcome the prima facie showing of obviousness. As previously discussed above and based on the evidence of record, Kiuchi discloses each of the parts of the claimed invention that constitute the "whole" of the claimed invention and, therefore, also discloses the "whole" claimed invention. Therefore, when considering the "claimed invention as a whole," we still conclude that Patent Owner has not provided a sufficient showing of nexus between the alleged secondary considerations and the "claimed invention as a whole" to overcome the prima facie showing of obviousness.

Praise in the Industry

Patent Owner argues that "[t]hose in the industry have . . . praised the inventions . . . by investing in the technology or licensing it." PO Resp. 34. However, as previously discussed, Patent Owner does not demonstrate sufficiently any specific reason for any alleged investment and licensing activity on the part of business entities. As previously discussed, Patent Owner provided insufficient evidence to conclude that any licensing (or investing for that matter) activity was performed for any particular purpose or was related to any specific claim at issue in this proceeding. Nor does Patent Owner demonstrate sufficiently a nexus between the alleged praise and the "claimed invention as a whole." Based on the evidence of record, we can only conclude that there is an allegation that licenses were entered into and investments were made without any showing as to the motivation behind these alleged activities. This is insufficient to conclude that these alleged activities were performed as a form of "praising" the "claimed invention as a whole" (or as a form of "commercial success").

In addition, much of Patent Owner's alleged secondary evidence with respect to praise in the industry appears to involve security—which *Cisco* deemed to include anonymity and data security— but the claims at issue here do not require anonymity. *Cisco* emphasized that the term "'security' [in the '151 patent and related patents] does not have a plain and ordinary meaning" and that the term "secure communication link" requires anonymity. *Cisco*, 767 F.3d at 1317 ("VirnetX has not indentified even a single embodiment that provides data security but not anonymity"). Any praise or solutions discuss providing secure links in general, so they appear to encompass the specific disclosed security techniques in the '151 patent

that involve providing anonymity using hopping techniques, which is not claimed. But generally providing anonymity and encryption was well-known. *See Cisco*, 1317–18 (describing how the patents provide solutions using a two-layer encryption format for proving encryption and anonymity). Accordingly, Patent Owner's evidence is not reasonably commensurate in scope with the claims, and it fails to show a nexus because it does not relate to what is disclosed and claimed.[5] Regarding the reasonably commensurate in scope requirement, *see Therasense, Inc. V. Becton, Dickinson & Co.*, 593 F.3d 1325, 1336 (Fed. Cir. 2010) ("finding no long-felt need *because the claims were broad enough to cover devices that did not solve the problem*"); *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.,* 229 F.3d 1120, 1130 (Fed.Cir.2000) (stating the presumption that commercial success is due to the patented invention applies "if the marketed product embodies the claimed features, *and is coextensive with them*") (emphasis added); *In re Law*, 303 F.2d 951, 1162 (CCPA 1961) ("Thus, assuming the affidavits are a proper showing of commercial success, they do not show commercial success of dockboards covered by the appealed claims which are not limited to the bead of claim 13."). In *MeadWestVaco Corp. v. Rexam Beauty and Closures, Inc*., 731 F.3d 1258 (Fed. Circ. 2013), the court held that a district court erred by considering "secondary considerations of non-obvious [that] involved only fragrance-specific uses, but *the claims now at issue are not fragrance-specific*." *Id*. at 1264 (emphasis added). Similarly, in *In re Tiffin*, 448 F.2d 791 (CCPA 1971), the court found that claims that are "too broad" fail to show that the claims are reasonably commensurate with the scope of

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[5] Patent Owner does not argue here that its claims here require anonymity and they do not.

the objective evidence of non-obviousness: "The solicitor's position is that

the objective evidence of non-obviousness is not commensurate with the

scope of claims 1–3 and 10–16, reciting 'containers' generally, but

establishes non-obviousness only with respect to "cups" and processes of

making them. We agree." *Id*. at 792.

Printed Publication – RFC 1034 and Rescorla

Patent Owner asserts that "Petitioners have not established by a

preponderance of the evidence that RFC 1034 or [Rescorla] qualifies as a

'printed publication.'" PO Resp. 40. The determination of whether a given

reference qualifies as a prior art "printed publication" involves a case-by-

case inquiry into the facts and circumstances surrounding the reference's

disclosure to members of the public. *In re Klopfenstein*, 380 F.3d 1345,

1350 (Fed. Cir. 2004). On its face, RFC 1034 is a dated "Request for

Comments" from the "Network Working Group," discussing generally

known methods for responding to a query from a client. Ex. 1005, 4. On its

face, Rescorla is a dated "Internet-Draft" from the Internet Engineering Task

Force (IETF) and described as a "draft document[] valid for . . . six months."

Ex. 1004, 1. Moreover, RFC 1034 explicitly states that "[d]istribution of

this memo is unlimited." Ex. 1005, 1. These indicia suggest that it is more

likely than not that both documents were made available to the public (over

the Internet).

To bolster its showing, Petitioner provides evidence suggesting that

RFC 1034 and Rescorla would have been accessible to the interested public.

For example, Petitioner provides testimony of Dr. Roch Guerin who

explains that "Request for Comment" documents or "RFCs' or 'Internet-

Drafts' are "publications [that] are prepared and distributed" and "can be

obtained from a number of Internet hosts using . . . document-retrieval systems." Ex. 1003, 46. Dr. Guerin also testifies that such documents are "published and widely distributed" for "a period for others to provide comments on the document" and that the "publication date of each RFC is contained in the RFC, . . . in the top right corner of the first page of the document [which is] the date it was released for public distribution on the Internet." Ex. 1003, 44. Ex. 1003 47–48.

Petitioner also relies on evidence (RFC2026) describing the general practice of publishing documents "as part of the "Request for Comments' (RFC) document series" in which "RFCs can be obtained from a number of Internet hosts using anonymous FTP, gopher, World Wide Web, and other Internet document-retrieval systems." Pet. Reply 19–20 (citing Ex. 1003, 45–52; Ex. 1010, 4, 8–9, 19–20). Exhibit 1010 further corroborates the testimony of Dr. Guerin and the indicia of availability on the face of RFC 1034.

Patent Owner characterizes Petitioner's showing as providing "naked assertions." PO Resp. 41. Patent Owner contends that "Dr. Guerin refers to RFC 2026 [but that RFC 2026 is] irrelevant in determining whether Rescorla or RFC 1034 qualifies as a printed publication" (PO Resp. 41) and challenges other evidence as too general and lacking a sufficient foundation. *See* PO Resp. 41–42.

The parties agree that Exhibit 1010, RFC 2026, reflects "generally accepted practices" for RFC documents and Internet-drafts and states that "any interested person can obtain RFCs from a number of Internet hosts." *See* Ex. 1010, 6. Patent Owner characterizes this evidence of "generally accepted practices" as being published "***nine years after*** the alleged publication date of RFC 1034" and, therefore, supposedly irrelevant to the

publication of RFC 1034 (or Rescorla). Patent Owner does not demonstrate persuasively, however, how the publication date of RFC 2026, which describes general practices of publishing documents in the RFC series fails to relate to the public availability of RFC 1034 or Rescorla. On the contrary, it appears that RFC 2026 confirms the statement in RFC 1034 that "[d]istribution of [RFC 1034] is unlimited" and the statement in Rescorla that the Rescorla is available for at least 6 months from the stated publication date. Ex. 1005 1, Ex. 1004 1. Accordingly, we hold that Petitioner has provided sufficient evidence to establish that RFC 1034 and Rescorla are printed publications and are not persuaded by Patent Owner's arguments.

Petitioner's Declarant's (Dr. Roch Guerin) testimony

Petitioner filed a Declaration of Dr. Roch Guerin. Ex. 1003. Patent Owner argues that Petitioner's Declarant's testimony should "be given little, if any, weight" because, according to Patent Owner, "Dr. Guerin failed to consider, let alone opine on, how any of the claim features are disclosed in asserted references." PO Resp. 36. Patent Owner's arguments are moot in view of the fact that we did not rely on Dr. Guerin's testimony in determining whether "claim features are disclosed in asserted references." *Id.* In any event, Dr. Guerin's testimony is helpful in the other respects to which he testified and entitled to due weight.

Additional Issues

Joinder of Black Swamp

Patent Owner argues that "Petitioner Black Swamp was improperly joined to the 01047 proceeding" because "[e]xpert testimony was required in

this case given the complexity of the technology at issue" and Black Swamp supposedly failed to file this allegedly "required" expert testimony. This argument was previously raised by Patent Owner and previously addressed. IPR2016-00167 Prelim. Resp. 7–10; IPR2016-00167 Dec. Inst. 4–5; Paper 38, 3–4; Paper 42, 2–3. We remain unpersuaded by Patent Owner's re-iterated arguments for at least the reasons previously provided.

In response to the question of whether Petitioner is *required* to rely on expert testimony for purposes of institution, Patent Owner now states that "the Federal Circuit" has held that "Petitioner has both the 'initial burden of production' and 'the burden of persuasion to prove unpatentability by a preponderance of the evidence." PO Resp. 40. Patent Owner, however, does not explain the relevance of this statement, even if assumed to be true, to whether or not a Petitioner is *required* to rely on expert testimony for purposes of institution. We remain unpersuaded by Patent Owner.

Alleged previous challenges

Patent Owner argues that "[t]he '151 patent has been challenged ten times in *inter partes* proceedings before the Office" and, therefore, "this proceeding is barred by 35 U.S.C. §§ 312(a)(2) and 315(b) – (c). PO Resp. 45–46. Under 35 U.S.C. §§ 312(a)(2), a "petition . . . may be considered only if . . . the petition identifies all real parties in interest." Under 35 U.S.C. §§ 315(b) and (c), an "inter partes review may not be instituted if the petition . . . is filed more than one year after the date on which the petitioner . . . is served with a complaint" and that the Director "may join as a party . . . any person . . .." Neither of the cited statutes appears to state that a petition may not be instituted or otherwise considered if the patent being challenged

has been previously challenged. Thus, even assuming Patent Owner's contention to be correct that the '151 patent has been challenged previously, we are not persuaded by Patent Owner's argument.

To the extent that Patent Owner argues that the present proceedings should be terminated pursuant to 35 U.S.C. § 325(d), this argument was previously raised and addressed. Prelim. Resp. 16–18 and Dec. Inst. 10–11. We remain unpersuaded by Patent Owner's argument for the reasons stated in the Decision.

Real Parties in Interest

Patent Owner argues that The Mangrove Partners Master Fund, Ltd. failed to name all real parties in interest. PO Resp. 46–52, 56–57. In support of this allegation, Patent Owner re-iterates arguments that were previously raised and addressed in the record. Prelim. Resp. 1–13; Dec. Inst. 8–9; Patent Owner's Request for Rehearing Under 37 C.F.R. § 42.71(d)(1) filed October 21, 2015, Paper 13, 3–7; Decision on Request for Rehearing, dated November 13, 2015, Paper 19, 2–9. We remain unpersuaded by Patent Owner's arguments.

For example, Patent Owner argues that "The Mangrove Partners Hedge Fund is 'the investment manager' for" unnamed funds and that "[a]ll of the funds have a 'shared investment objective . . . [to] compound their net worth while minimizing the chances of a permanent loss of capital." PO Resp. 47 (citing Ex. 2001 4). As previously discussed,

> [w]e are not persuaded by Patent owner's arguments because
> Patent Owner does not explain sufficiently how any of these
> statements, even if assumed to be true, demonstrate or even
> suggest that any of the cited additional entities "exercised control
> over a party's participation in" the preparation or filing of the
> Petition. Indeed, the fact that other funds have a common

> objective . . . does not . . . relate to whether or not the other funds exercised control over any aspect of the filing of the present Petition or not.

Paper 19, 4.

Patent Owner also argues that "the Mangrove Partner's Hedge Fund has 'complete discretion regarding the investment of" the unnamed funds and 'has repeatedly demonstrated that, in practice, it exercises total control over Petitioner Mangrove." PO Resp. 47, 48 (citing Ex. 1001 3, 17). As we previously explained,

> even assuming that the Mangrove Partners Hedge Fund has 'complete discretion' regarding investment objectives of the Funds, as Patent Owner contends, Patent Owner does not demonstrate that the Mangrove Partners Hedge Fund also has 'complete discretion' over the preparation or filing of the Petition to the extent of exercising control over the preparation or filing of the Petition.

Paper 19, 4-5.

Patent Owner argues that unnamed entities "fund all of the activities of Petitioner Mangrove . . . receive management and investment fees from investors, and are co-owners of Petitioner Mangrove." PO Resp. 48-49 (citing Ex. 2001 15, 17). As we previously explained, Patent Owner's "contention, even if assumed to be true, is insufficient to demonstrate that any of [the unnamed entities] played any role in the preparation or filing of the petition (i.e., controlled the preparation or filing of the Petition)" and "Patent Owner has not demonstrated sufficiently that [the unnamed entities], in fact, fund[] *all* of the activities of the Petitioner, *including* the preparation or filing of the present Petition to the extent of exercising control over the preparation or filing of the present Petition." Paper 19, 7-8.

Patent Owner argues that "Mangrove Capital . . . is an 'affiliate' of the Mangrove Partners Hedge Fund and 'serves as the general partner of the US Feeder.'" PO Resp. 49. Patent Owner further argues that "Mangrove Capital is allocated 20% of the annual increase in the net worth of an Investor's interest in a Fund" and that "[a]ny persons acting on behalf of Mangrove Capital are subject to the supervision and control of [the named Petitioner] in connection with any investment advisory activities." *Id*. Even assuming to be correct Patent Owner's contention that any persons acting on behalf of Mangrove Capital are subject to the supervision and control of the named Petitioner in connection with any investment advisory activities, we are still not persuaded by Patent Owner. For example, Patent Owner does not assert or demonstrate persuasively that "Mangrove Capital" exercised control over the preparation or filing of the present Petition.

Patent Owner argues that "investors would have each provided substantial funding for the Petitioner" and that "undisclosed investors that provided substantial funding for the Petitioner . . . are RPIs." PO Resp. 51. As we previously explained,

> Patent Owner does not demonstrate persuasively that any
> specific investor provided [funds] to exercise control over the
> preparation or filing of the Petition (or that any specific investor
> was even aware of the Petition) or that any of the alleged
> [funds] was, in fact, used to exercise control over the
> preparation or filing of the Petition on behalf of any specific
> investor.

Paper 19, 9.

Patent Owner argues that "the fiduciary relationship between the unnamed investors and the Mangrove Partners Hedge Fund . . . further

compels a finding that the investors are RPIs." PO Resp. 51. As we previously stated,

> [e]ven assuming that the Mangrove Partners Hedge Fund seeks to increase profits for its investors under a "fiduciary duty," as Patent Owner alleges, Patent Owner does not demonstrate persuasively that the Mangrove Partners Hedge Fund also exercised control over any aspect of the preparation or filing of the present Petition. Indeed, it is assumed that many funds in existence would also seek to increase profits for its investors but are not real-parties-in-interest in the present matter (i.e., "exercised control" over the preparation or filing of the Petition) merely by virtue of the fact that these funds seek to increase profits.

Paper 19, 5.

RPX Corporation as Real Party in Interest

Patent Owner argues that "RPX Corporation . . . is an RPI to the Petition filed by Mangrove" and the failure to name RPX Corporation as a real party in interest should bar the proceeding. PO Resp. 52–54, 56–57. In particular, Patent Owner argues that the Mangrove entities "are RPX's fifth largest shareholder," "owned 'approximately 5.0% of the Shares outstanding for RPX," had "recently met with management for RPX," "received . . . shares of RPX stock," subsequently "received still more shares, with its ownership increasing," and are represented by "James Bailey [who] represent[ed] RPX in [related matters]." *Id.* at 52–54. Patent Owner also argues that "Mr. [James] Bailey is not counsel in any other PTAB proceedings." *Id.* at 54. Hence, Patent Owner argues that RPX Corporation constitutes a real party in interest in the instant proceeding because the named real party in interest (i.e., Mangrove) owns shares of stock of RPX Corporation and/or Mangrove is represented by counsel who previously

represented RPX. We are not persuaded by Patent Owner's argument at least because Patent Owner provides insufficient evidence supporting the implied contention that the alleged fact that a fund owns stock in a company and/or retains the services of an attorney who previously represented the company in a different matter would implicate that company as a real party in interest in any *inter partes* review proceedings filed by the fund.

Apple Inc.'s Time Bar

Patent Owner argues that Apple, Inc. is "time-barred from this proceeding" because, according to Patent Owner, Apple Inc. failed to "'properly file[] a petition' within the one-year deadline specified in 315(b)." PO Resp. 58. Patent Owner further argues that "the term 'properly filed' was meant to encompass the timing requirement of section 315(b), and that section 315(b)'s timing exemption was not intended to alter that requirement." *Id*. at 58–59. The argument was previously presented and previously addressed in IPR2016-00063 prior to consolidation with this case. IPR2016-00063, Prelim. Resp. 1–3 (Paper 10); IPR2016-00063 Dec. Inst. 3–4, Paper 13; Patent Owner's Request for Rehearing Under 37 C.F.R. § 42.71(d)(1) of Institution Decision in IPR2016-00063, dated February 8, 2016, Paper 38, 6–10; Decision on Request for Rehearing, dated February 26, 2016, Paper 41, 2. We remain unpersuaded by Patent Owner's arguments for the reasons stated in the Decisions cited above.

Alleged Improper Argument(s) in the Reply Brief

Patent Owner argues that Petitioner presented various improper arguments in the Petitioner's Consolidated Reply Brief and in the Separate Reply Brief filed by Apple Inc.

In particular, Patent Owner argues that Petitioner provides a new argument in Petitioner's Consolidated Reply Brief in which Petitioner maps Kiuchi's "user agent" to the claimed "client." Paper 61, 1–2 (citing Paper 58 3). In the Petition, Petitioner states Kiuchi discloses "DNS requests sent by a user agent acting as a client," the "client-side proxy receives a request from the user agent," "the user agent's request," and that "[t]he user agent [of Kiuchi] is a 'client,' under that term's broadest reasonable interpretation." Pet. 25–26. *See also* IPR2016-00167 Pet. 13–14. We do not agree with Patent Owner that Petitioner provided this claim mapping for the first time in the Consolidated Reply Brief given these (and other) explicit statements made by Petitioner in the Petition.

Patent Owner argues that Petitioner provides a new argument in Petitioner's Consolidated Reply Brief in which Petitioner maps Kiuchi's "server-side proxy" to the claimed "secure server." Paper 61, 1–2 (citing Paper 58 3). In the Petition of joined case IPR2016-00167, Petitioner stated that "in addition to the origin server, the server-side proxy is a secure server." IPR2016-00167 Pet. 16–17. We do not agree with Patent Owner that Petitioner provided this claim mapping for the first time in the Consolidated Reply Brief given at least this explicit statement made by Petitioner in the Petition in joined case IPR2016-00167.

Patent Owner argues that Petitioner provides a new argument in Petitioner's Consolidated Reply Brief in which Petitioner argues that "the client-side proxy and C-HTTP name server" perform the claimed determining step but previously only argued that "the client-side proxy" performs this determining step. Paper 61, 2. In the Petition, Petitioner stated that "the client-side proxy [of Kiuchi] determines whether the request corresponds to a secure server by asking . . . the C-HTTP name server [of

33

Kiuchi] whether it can communicate with the host." Pet. 29, *See also* IPR2016-00167 Pet. 15–16. Hence, Petitioner previously argued that the client-side proxy and the C-HTTP name server perform the claimed determining step in the Petition. We do not agree with Patent Owner that this argument was first raised by Petitioner in Petitioner's Consolidated Reply Brief. In any event, we did not rely on this cited portion of the Petitioner's Consolidated Reply Brief so this issue is moot.

Patent Owner argues that Petitioner provided new arguments in Petitioner's Consolidated Reply Brief "relying on Kiuchi's appendices," arguments relying on RFC 1945 (Exhibit 1014), and regarding Apple's "numerous accusations against Patent Owner." Paper 61, 1–3. Patent Owner's arguments are moot in view of the fact that we did not rely on these cited portions of Petitioner's Consolidated Reply Brief or the cited portion of Petitioner's separate reply brief filed by Apple, Inc.

MOTIONS TO EXCLUDE

Patent Owner filed a Motion to Exclude with respect to Exhibits 1010, 1012-1014, 1029, 1031–1034, 1037, 1039–1042, and 1044. Paper 66. Petitioner filed a Motion to Exclude with respect to Exhibit 2050. Paper 64.

Exhibit 1010

Patent Owner argues that Exhibit 1010 "lack[s] relevance." Paper 66, 8. Exhibit 1010 corresponds to RFC 2026, a document that Petitioner relies upon to demonstrate the general practice of publication of documents in the RFC series and Internet-drafts (in response to Patent Owner's argument regarding the public availability of RFC 1034 and Rescorla). In view of Petitioner's reliance on Exhibit 1010 in response to the issue of public

availability of RFC 1034 and Rescorla, as raised by Patent Owner, we disagree with Patent Owner that this document lacks relevance. Patent Owner's motion to exclude is denied with respect to Exhibit 1010.

Exhibits 1012–1014, 1029, 1031–1034, 1037, 1039–1042, 1044, 2050

Patent Owner moves to exclude Exhibits 1012–1014, 1029, 1031–1034, 1037, 1039–1042, and 1044. Petitioner moves to exclude Exhibit 2050. We either did not rely on the disputed exhibits (i.e., Exhibits 1012–1014, 1029, 1031–1034, 1037, 1039–1041, 1044, and 2050) or we do not identify the disputed exhibits in the record and, therefore, did not rely on the exhibits (i.e., Exhibit 1042). Patent Owner's motion to exclude and Petitioner's motion to exclude with respect to Exhibits 1012–1014, 1029, 1031–1034, 1037, 1039–1042, 1044, and 2050 are dismissed as moot.

MOTIONS TO SEAL

Patent Owner filed a Motion to Seal Exhibits 2042, 2058, and 2059, and the un-redacted version of Patent Owner's response. Paper 47. Petitioner filed a Motion to Seal the un-redacted version of Petitioners' Consolidated Reply Brief. Paper 57.

There is a strong public policy in favor of making information filed in an *inter partes* review open to the public, especially because the proceeding determines the patentability of claims in an issued patent and, therefore, affects the rights of the public. Under 35 U.S.C. § 316(a)(1) and 37 C.F.R. § 42.17, the default rule is that all papers filed in an *inter partes* review are open and available for access by the public; however, a party may file a concurrent motion to seal and the information at issue is sealed pending the outcome of the motion. It is only "confidential information" that is

protected from disclosure. 35 U.S.C. § 316(a)(7); *see* Office Patent Trial
Practice Guide, 77 Fed. Reg. 48,756, 48,760 (Aug. 14, 2012). The standard
for granting a motion to seal is "good cause." 37 C.F.R. § 42.54(a). The
party moving to seal bears the burden of proof in showing entitlement to the
requested relief, and must explain why the information sought to be sealed
constitutes confidential information. 37 C.F.R. § 42.20(c). As set forth in
the Trial Practice Guide (77 Fed. Reg. at 48,761), there is an expectation that
information will be made public if identified in this Final Written Decision.

We have reviewed Exhibits 2042, 2058, and 2059, the un-redacted
versions of Patent Owner's Response, and the un-redacted version of
Petitioners' Consolidated Reply Brief. We conclude that they contain
confidential business information. None of the content of those documents
that is asserted as constituting confidential business information has been
identified in this Final Written Decision in reaching a determination in this
proceeding with respect to the claims of the '151 patent. We are persuaded
that good cause exists to have those documents remain under seal.

The record will be maintained undisturbed pending the outcome of
any appeal taken from this decision. At the conclusion of any appeal
proceeding, or if no appeal is taken, the documents will be made public. *See*
Trial Practice Guide, 77 Fed. Reg. at 48,706–61. Further, either party may
file a motion to expunge the sealed documents from the record pursuant to
37 C.F.R. § 42.56. Any such motion will be decided after the conclusion of
any appeal proceeding or the expiration of the time period for appealing.

ORDERS

After due consideration of the record before us, it is:

ORDERED that claims 1, 2, 6–8, and 12–14 of the '151 patent are held unpatentable;

FURTHER ORDERED that Patent Owner's Motion to Exclude with respect to Exhibit 1010 is *denied*;

FURTHER ORDERED that Patent Owner's Motion to Exclude with respect to Exhibits 1012–1014, 1029, 1031–1034, 1037, 1039–1042, and 1044 is *dismissed*;

FURTHER ORDERED that Petitioner's Motion to Exclude is dismissed;

FURTHER ORDERED that Patent Owner's Motion to Seal (Paper 47) is granted;

FURTHER ORDERED that Petitioner's Motion to Seal (Paper 57) is granted; and

FURTHER ORDERED that, because this is a Final Written Decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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