

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VMWARE, INC.,
Petitioner

v.

INTELLECTUAL VENTURES I, LLC,
Patent Owner

Case IPR2020-00470
Patent 7,949,752

**PATENT OWNER'S PRELIMINARY RESPONSE
PURSUANT TO 37 C.F.R. § 42.107**

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	Joint Claim Construction Statement, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, April 17, 2020.
2002	Defendant's Preliminary Invalidity Contentions, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, January 15, 2020.
2003	Order Resetting Markman Hearing, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, April 16, 2020.
2004	Exhibit C-1: Invalidity Chart for U.S. Patent No. 7,949,752, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, filed July 31, 2019.
2005	Preliminary Claim Construction Rulings, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, May 14, 2020.
2006	Disputed Claim Terms, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, April 17, 2020
2007	Plaintiffs' Claim Construction Brief, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, March 6, 2020
2008	Defendant VMware, Inc.'s Opening Claim Construction Brief, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, March 6, 2020

Exhibit No.	Description
2009	Defendant VMware, Inc.'s Responsive Claim Construction Brief, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, March 27, 2020.
2010	Plaintiffs' Reply Claim Construction Brief, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, April 10, 2020.
2011	Defendant VMware Inc.'s Reply Claim Construction Brief, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, April 10, 2020.
2012	Plaintiffs' Supplemental Construction Brief, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, May 13, 2020.
2013	Defendant's Supplemental Claim Construction Statement, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, May 13, 2020.
2014	Intellectual Ventures' Technology Tutorial of the '752 patent, <i>Intellectual Ventures I, LLC et. al. v. VMware, Inc.</i> , No. 1:19-cv-01075, U.S. District Court for the Western District of Texas, April 24, 2020.

I. INTRODUCTION

The Board should deny institution of *inter partes* review (“IPR”) of U.S. Patent No. 7,949,752 (“the ’752 patent”) as a matter of discretion under 35 U.S.C. §314(a) and as a matter of substance because VMware, Inc.’s (“VMware”) Petition is deficient in four critical respects, any one of which warrants denial of institution.

As a matter of discretion, the Board should deny the Petition under 35 U.S.C. §314(a). This IPR, were it granted, would not conclude until several months after the April 2021 jury trial that is set to be heard in the parallel district-court case between the Patent Owner and the Petitioner over the validity of the ’752 patent. *Intellectual Ventures I, LLC et. al. v. VMware, Inc.*, 1:19-cv-01075 (W.D. Tex. July 31, 2019). Because that trial will decide the same issues presented in the Petition, instituting an IPR trial here will be an inefficient and duplicative use of the Patent Trial and Appeal Board’s (“PTAB”) and parties’ resources. This waste is easily avoided by a denial. *NHK Spring Co., Ltd., v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (P.T.A.B. Sep. 12, 2018) (precedential); *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential).

As for the substance of the Petition, there are four independent reasons to deny institution. First, Grounds 1 and 2 fail because they are premised on an erroneous construction of the claim term “agent” that is inconsistent with (indeed far broader) than the lexicographical definition of that term in the ’752 patent and

the definition VMWare has agreed with in the parallel district court case. *See* Sec.V.A; EX2001. Second, Grounds 3 and 4—despite using the correct construction of “agent”—fail because VMware does not show how or why a mobile agent would have been combinable with art that does not contemplate using a mobile agent. Third, all grounds fail because VMware has not shown how the art teaches or renders obvious “the service resource is *exhausted upon being consumed* by the network-based agent”—a feature recited by all claims. And fourth, all grounds fail because the Petition does not provide a sufficiently detailed rationale for why any of the claims would be found obvious over the prior art—forcing Intellectual Ventures I, LLC (“IV”) and the Board to guess at VMware’s obviousness theories. Accordingly, the Board should deny institution.

II. OVERVIEW OF THE TECHNOLOGY

A. Prior art systems required significant work by a service provider in order to customize functionality for integrated networked services.

Before the ’752 patent, conventional systems integrating networked services were lacking in a number of respects. For example, the existing systems integrating networked services of computers and telephones (e.g., e-mail and PIM vs. voice-mail and directory, etc.) had come pre-packaged from service providers. EX1001, 1:56-2:4. Customers of the service providers could not customize or add features or integrations to the existing systems. At most, customers for existing systems could

request that the service providers perform specific customizations or upgrades. *Id.*, 2:5-34.

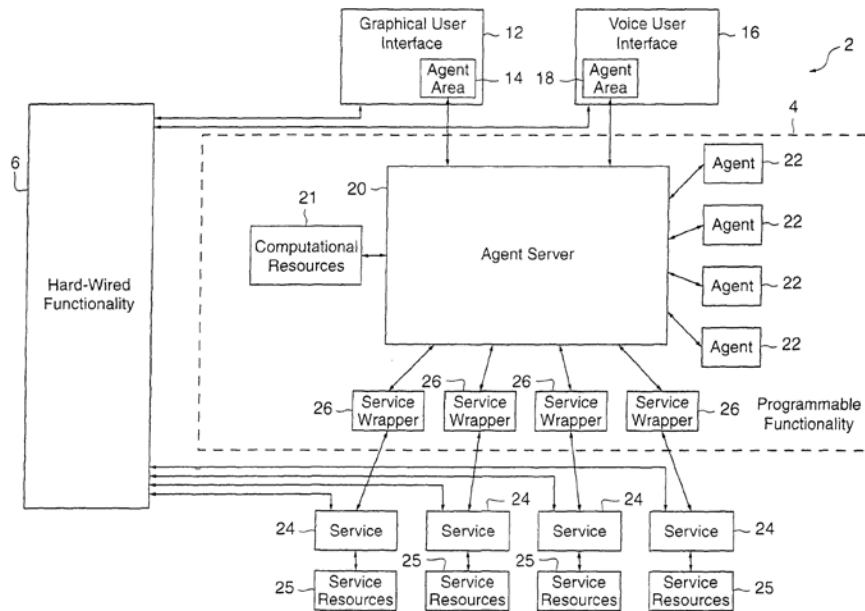
Because of these deficiencies and problems, service providers incurred significant overhead to be competitive, or their end users would defect to other service providers. Although some systems allowed end users to request that the service providers add desired customizations or upgrades, service providers' existing systems did not easily allow this. Service providers created bespoke solutions for each requesting customer, incurring costs and delays, or risked losing the customer to competing service providers able to provide the desired functionality with more agility—no existing systems allowing users to directly customize services. *Id.*, 2:25-34.

Due to the above-noted deficiencies, prior-art systems failed to provide users a convenient system that was efficient for service providers to operate competitively.

B. The '752 patent describes network-based agents allowing end-user customization of network-based services.

Recognizing the above-noted problems associated with prior systems, the inventors of the '752 patent addressed these deficiencies through a novel network-based agent architecture that allowed users to implement their own customized services and to contract with third parties to provide customized services, irrespective of the service provider. EX1001, 2:38-3:43; *see also id.*, FIG. 1

(reproduced below). The '752 patent describes a sophisticated architecture for service providers to implement, independent from client infrastructure of subscribers (users). In this way, users do not need to re-architect the service provider's infrastructure or demand that the service provider make changes to its own architecture to accommodate each end user.



EX1001, FIG. 1.

As shown above in Figure 1, a service provider operates a network system 2 to provide technological services to users (a.k.a. subscribers). EX1001 5:32-42. Communication lines allow access for users to interact with network system 2 via various interfaces. *Id.*, 6:5-27, 6:49-60 (interfaces 12 and 16 connect to network system 2 by communication lines as described in column 6 but not labeled in FIG. 1.) Programmable functionality component 4 can be programmed “by subscribers or third parties,” *id.*, 5:55-67, unlike prior art systems including those cited by VMware.

The ’752 patent specifically refers to users having a subscriber relationship with the provider, where the user controls the customization of services, as opposed to customization being controlled by a system administrator of a service provider. The prior art relied upon by VMware—Chow (EX1018) and Bauer (EX1019)—does not show the novel user customization of the ’752 patent. Instead, the art shows a provider’s system administrator performing any alleged custom agent functionality for subscribers, which would be inapposite to the primary purpose of the invention of the ’752 patent.

Representative claim 24 is reproduced below:

24. A method comprising:

receiving using a computing device, data for creating a
network-based agent;

invoking using the computing device, and in response to receiving a URL defining a type of event and identifying the network-based agent, execution of the network-based agent, wherein the invoking comprises using a service and a service resource configured to be consumed by the network-based agent for performing the operation, and wherein a discrete unit of the service resource is exhausted upon being consumed by the network-based agent; and communicating, using the computing device, a result of the operation over a network communication link.

EX1001, 27:52-65.

The '752 patent thus describes and claims a novel and innovative feature set that allows end-user customization of network-based services. These features of the '752 patent were crucial to the development of modern integrations of network-based systems (e.g., telephone, e-mail, and PIM).

C. The Cited Prior Art

1. Chow (EX1018)

U.S. Patent No. 6,029,175 (EX1018, "Chow") purports to describe "a software agent for automatically retrieving changed documents previously accessed from network and internetwork servers." EX1018, 3:60-64. Chow may retrieve web pages or documents from private sources, comparing changes and

considering “costs associated with retrieval,” including various charges. *E.g., id.*, 18:50-19:7, 25:52-26:17, 28:2-52. But Chow’s agent is not “mobile”—VMware does not contend otherwise—a critical omission, as shown below. Pet., 21-22

2. Bauer (EX1019)

U.S. Patent No. 5,367,635 (EX1019, “Bauer”) purports to describe “a network management agent having the capability of adding new objects to the agent without requiring modification of the agent source code and without stopping and restarting the agent. These new objects can then be used by network management users to initiate user defined processes.” EX1019, 3:46-51. When Bauer refers to a “user,” Bauer makes it clear that the “‘user’ refers to a person using the network management software. The user is usually the system administrator. Users can obtain management data and alter management data on the network by using network management software.” *Id.*, 1:18-30. Petitioner does not rely on Bauer to teach the claimed agent. Pet., 29-30. Nor does Bauer teach a mobile agent.

3. White (EX1020)

U.S. Patent No. 5,603,031 (EX1020, “White”), which is commonly owned by IV and incorporated by reference by the ’752 patent, describes “an agent” that is enabled to “transport itself from a first place process...in [a] network to a second place process in the network.” EX1020, 8:27-38. In other words, White describes

an agent as “a process which occupies a place and which is mobile, i.e.,] can move from a first place to a second place.” *Id.*, 16:65-67. Aside from some general background, *see id.*, 3:6-5:25, the Petition does not cite or rely on any other description in the 370 columns or 106 drawing sheets of White.

III. THE BOARD SHOULD EXERCISE ITS DISCRETION UNDER 35 U.S.C. § 314(a) TO DENY INSTITUTION OF THIS PETITION AS AN UNDUE BURDEN ON BOARD RESOURCES (GROUNDS 1-4).

Whether the PTAB should institute an *inter partes* review always is discretionary. 35 U.S.C. § 314(a); *Oil States Energy Servs. LLC v. Green’s Energy Grp., LLC*, 138 S. Ct. 1365 at 1371 (2018) (“The Decision whether to institute *inter partes* review is committed to the Director’s discretion.”). Here, the Board should exercise its discretion under 35 U.S.C. § 314(a) to deny institution based on its precedential decisions in *NHK Spring*¹ and *Fintiv*², and consistent with its other decisions that closely mirror the facts here. The ’752 patent is involved in parallel district-court litigation that involves the same issues, arguments, and evidence that

¹ *NHK Spring Co., Ltd., v. Intrix-Plex Techs., Inc.*, IPR2018-00752, Paper 8 (P.T.A.B. Sep. 12, 2018) (precedential).

² *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (P.T.A.B. Mar. 20, 2020) (precedential).

VMware has presented in the instant Petition. The district court has already expended substantial resources to gain familiarity with and resolve these issues and is scheduled to complete a jury trial by April 2021—about one year to the date after IV files this Preliminary Response and well before any expected final written decision in this proceeding. Duplicating the district court’s efforts would not be an efficient use of the Board’s resources and would not serve the primary purpose of AIA proceedings: to provide an effective and efficient *alternative* to district court litigation.

A. The facts in this case support denial under 35 U.S.C. § 314(a).

VMware has presented essentially the same art and grounds of unpatentability in its Petition that it is asserting in the district-court case—namely that claims 1, 3, 4, 6, 9, 10, 13, 22, 24 and 26 are obvious over (i) Chow alone, (ii) Chow and Bauer, (iii) Chow and White, and (iv) Chow, Bauer, and White. *See* EX2002. Specifically, in the district court, VMware submitted an invalidity contention chart where they used Chow to challenge the same claims challenged here. *See* EX2004. In this chart, VMware states: “[t]o the extent Chow ’175 is found not to anticipate any asserted claims or claim elements of the ’752 Patent, *the reference nevertheless renders those claims or claim elements obvious under 35 U.S.C. § 103, either alone or in combination with other art* identified in the cover pleading, herein, or Appendix C of VMware’s Preliminary Invalidity

Contentions.” *Id.*, 1 (emphasis added). Moreover, with respect to the other art that VMware alleges would have been combinable with Chow, VMware identifies Bauer and White. *See* EX2002, 9-10.

Regarding claim construction, since VMware presents the same invalidity theories in both this proceeding and the civil case, any relevant claim-construction issues necessary to resolve validity question, will of necessity be presented in both forums—and under the very same claim-construction standard. *See* Pet., 12 (acknowledging *the same claim construction* standard applies here as in the civil action). In fact, the parties have agreed on claim constructions for several terms (including the term “agent”) and already completed extensive claim-construction briefing in the district court for all disputed terms—each party filing multiple briefs with expert declarations and a technology tutorial. *See* EX2001, EX2006-EX2014. Additionally, a Markman hearing occurred on May 14 2020 and the court has already issued their constructions on all disputed claim terms. *See* EX2005. As the court stated prior to the Markman, it “is generally unlikely that the Court will select a party’s proposed construction instead of the preliminary construction”—which the Court confirmed during the hearing, making the Court’s constructions

final³. EX2003, 1; *see also* EX2005, EX2006. Accordingly, the district court's claim construction process is complete before the filing of this POR and before the Board issues an institution decision in the instant proceeding.

Additionally, the district court is set to complete a jury trial before any final decision from the Board would be due. A jury trial is scheduled to begin in early April 2021. Trial is thus scheduled to also conclude in early April 2021, which is less than one year from the date that IV is filing this Preliminary Response. Below is a summary of the significant events in the district court proceeding, all of which are scheduled to be completed before the Board would likely issue a final written decision in this proceeding (should trial improvidently be instituted):

- IV served its infringement contentions on November 5, 2019. *See* EX1013.
- VMware served its initial invalidity contentions on January 15, 2020, asserting the same references and arguments as in the instant Petition. EX1012, 4.

³ During the Markman hearing, the Court changed its construction for “consumed” to plain and ordinary meaning with that definition including “used” and excluding “used up.”

- A *Markman* hearing was held May 14, 2020, and the parties anticipate a claim construction order within a couple of week from the hearing.

EX2003, 1.

- Fact discovery will be completed by October 16, 2020. EX1012, 6.
- Expert discovery will be completed by December 21, 2020. *Id.*
- Case dispositive motions are due January 13, 2021. *Id.*
- A trial is scheduled to begin and conclude in early April, 2021. *Id.*, 8.

The Board's institution decision in this proceeding is due in the month of August, 2020, and thus (should trial be instituted) the Board's final written decision would be due no later than August, 2021—four months after the jury trial.

Because the district court will address the same or substantially overlapping issues, arguments, and evidence before the Board's final decision would be due, instituting review here would not be an efficient use of the Board's resources. Nor would it be an effective and efficient alternative to district court litigation.

Accordingly, the Board should exercise its discretion to deny institution.

B. The Board has previously denied institution based on facts that are similar to the facts in this proceeding.

The facts in this case mirror other cases where the Board has denied institution under 35 U.S.C. § 314(a). In *NHK Spring*, the Board considered several factors and denied institution, in part, because of the duplicative nature and the advanced stage of a parallel district court proceeding. *NHK Spring*, IPR2018-

00752, Paper 8 at 19-20 (applying discretion under 35 U.S.C. § 314(a)); *see also id.* at 11-18 (apply discretion under 35 U.S.C. § 325(d)). Other cases—relying on *NHK*—have also denied institution. For example, in *E-One, Inc. v. Oshkosh Corp.*, the Board applied *NHK Spring*’s analysis under 35 U.S.C. § 314(a) to deny institution. *E-One, Inc. v. Oshkosh Corp.*, IPR2019-00161, Paper 16 (P.T.A.B. May 15, 2019). In *E-One*, the Board reasoned: “In the § 314(a) portion of its analysis, [*NHK Spring*] noted that a district court proceeding involving the same patent was scheduled to go to trial before a final decision would have been due in the Board proceeding, and the Board proceeding would involve the same claim construction standard, the same prior art references, and the same arguments as in the district court.” *Id.* at 6. In both *NHK Spring* and *E-One*, factors warranting a denial of institution included: the district court investing considerable time and resources to handle the same issues presented in the IPR, and trials that were scheduled to be completed prior to a Board’s final written decision. These are no different from the facts here.

More recently, the Board issued a precedential decision identifying six factors considered when determining whether discretionary denial is appropriate—also leveraging the *NHK Spring* decision. Specifically, the Board in *Fintiv* stated that when the patent owner raises an argument for discretionary denial under *NHK*

due to an earlier trial date, the Board's decisions have balanced the following factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;
3. investment in the parallel proceeding by the court and the parties;
4. overlap between issues raised in the petition and in the parallel proceeding;
5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
6. other circumstances that impact the Board's exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 6. *Fintiv* states, "[t]hese factors relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding," *Id.*

Here, factors 1-6 all weigh in favor of denying institution. There is currently no stay in the parallel district court and no evidence exists that one may be granted if trial is instituted here (Factor 1). The parallel district-court proceeding continues to move forward as scheduled the court issuing preliminary constructions for all

disputed claim terms and after the completion of the *Markman* hearing a week ago. *See* EX2005. As discussed above, the district-court trial will be completed months before the Board’s projected statutory deadline for a final written decision (Factor 2). As *Fintiv* points out: “[i]f the court’s trial date is earlier than the projected statutory deadline, the Board generally has weighed this fact in favor of exercising authority to deny institution under *NHK*.” *Id.* at 9. Moreover, the parties and the court have invested considerable time and resources in the district court proceeding—having already engaged in discovery, completed claim construction briefing and conducted a *Markman* hearing (Factor 3). The Board in *Fintiv* explicitly stated, “district court claim construction orders may indicate that the court and parties have invested sufficient time in the parallel proceeding to favor denial.” *Id.* at 10. Here, the court will issue a claim construction order prior to the Board’s institution decision.

In addition, the dispute in this proceeding and the district court involves the same parties and there are overlapping issues in both proceedings—VMware having challenged the same claims using the same art in both proceedings (Factors 4 and 5).

Finally, regarding factor 6, the *Fintiv* decision noted:

[I]f the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution. In such cases, the institution of a trial may serve the interest of overall

system efficiency and integrity because it allows the proceeding to continue in the event that the parallel proceeding settles or fails to resolve the patentability question presented in the PTAB proceeding. By contrast, if the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present.

Id. at 14-15.

As shown below, VMware's Petition also fails on the merits for multiple reasons.

In light of the other factors discussed above—all favoring denial of institution—denying institution under 35 U.S.C. § 314(a) is appropriate. Instituting trial here would result in the waste of the Board's time and resources and result in duplicative work.

IV. CLAIM CONSTRUCTION⁴

VMware's Construction:	Patent Owner's Construction⁵
"... 'agent' is not construed (i.e. not limited to a mobile agent)...." Pet., 21.	" a process that occupies a place and that is mobile, i.e., can move from a first place to a second place"

The term "agent" should be construed to mean "a process that occupies a place and that is mobile, i.e., can move from a first place to a second place." This construction is unquestionably correct and is required because the '752 patent expressly defines "agent" as such.

In particular, the '752 patent incorporates by reference the entirety of the text of White: "an agent system is taught by U.S. Pat. No. 5,603,031 [White], issued to the Assignee of the present invention, the text of which is incorporated

⁴ IV only addresses VMware's proposed claim construction insofar as those constructions are relevant to the issues raised in this Preliminary Response. By not contesting any VMware proposed construction of a claim, IV is not agreeing that any of those constructions are correct.

⁵ Patent Owner's Construction is consistent with the construction of the term "agent" recommended by a magistrate judge in the Eastern District of Texas. EX1009, 24–26. The construction is also consistent with what the parties have agreed to in the on-going parallel civil case. EX2001, 2

herein by reference.” EX1001, 5:27-31. White’s text provides a glossary defining “agent” as “a process which occupies a place and that is mobile, i.e., can move from a first place to a second place.” EX1020, 16:65-67.

As a consequence, the ’752 patent itself has provided a definition of “agent” that must control here. When one patent expressly incorporates by reference another patent, and the incorporated patent defines a term, the incorporation includes that definition. *Cook Biotech Inc. v. Acell, Inc.*, 460 F.3d 1365 at 1375-77 (Fed. Cir. 2006).

Underscoring the soundness of this result, this definition is fully consistent with the examples of agents provided in the ’752 patent specification. *E.g.*, EX1001, 14:10-14 (“each agent 22 may move to the servers and other computers ... and afterward, execute thereon”); *see also id.*, 1:30-52. To be sure, the ’752 patent does not describe any example where the agent is non-mobile. And, for these same reasons, a magistrate judge in the Eastern District of Texas recommended this construction. EX1009, 24-26. In fact, VMWare has also agreed with this construction in the ongoing parallel civil case and thus the Court will adopt this construction. EX2001, 2. The Board should consider it and adopt it as well. *See* 37 C.F.R. § 42.100(b) (“Any prior claim construction determination concerning a term of the claim in a civil action, or a proceeding before the [ITC], that is timely made of record in the *inter partes* review proceeding will be

considered.”) In its Petition, VMware does not contest that the lexicographical definition of “agent” is the correct one. But it has suggested a broader construction could possibly apply here because IV proposed a broader construction in an earlier case against a different party. While it is true that IV did, at one time, propose a broader meaning for agent, that proposal was rejected by the magistrate judge in that case. EX1009. And, VMware has cited no case for the proposition that a Patent Owner’s earlier proposed construction of a term (later rejected in court proceedings) can be a legally acceptable basis to overcome the presumption that the patent’s express definition applies. Given that the PTAB no longer applies the broadest reasonable construction standard, IV’s earlier proposed but rejected constructing has no relevance here, and it would be legal error to apply it here.

V. GROUNDS 1 AND 2 ARE DEFICIENT BECAUSE THEY ARE PREMISED ON AN ERRONEOUS CONSTRUCTION OF “AGENT.”

As discussed above in Section III, for Grounds 1 and 2, VMware applies an incorrect construction of “agent,” which proves fatal. Chow, on which VMware relies for an “agent” teaching, lacks a mobile agent—“a process which occupies a place and which is mobile, i.e., can move from a first place to a second place”—as incorporated by the White reference. Pet., 16-17; EX1020, 16:65-67. Indeed, VMware concedes that if “agent” is interpreted to be a “mobile” agent then Chow does not disclose the claimed “agent.” See Pet., 21, 56-57. Because Grounds 1 and 2 are materially defective in this regard, the Board does not need to spend its

resources on considering these grounds, which constitute nearly half of the Petition. *See id.*, 29-56.

VI. GROUNDS 3 AND 4 ARE DEFICIENT BECAUSE VMWARE DOES NOT ADEQUATELY EXPLAIN HOW OR WHY A MOBILE AGENT WOULD HAVE BEEN COMBINABLE WITH CHOW OR BAUER.

Grounds 3 and 4 fare no better even though VMware applies the correct construction of “agent” for these grounds. Here, VMware relies on the art and arguments from Grounds 1 and 2—Chow and Bauer—and introduces White, the same reference that the ’752 patent incorporates by reference for the definition of “agent.” *See* Pet.,21-22 However, the substantive analysis presented in these grounds is cursory at best and fails to establish (i) how or why a Person of Ordinary Skill in the Art (“POSITA”) would have combined the teachings of White with Chow or Bauer, or (ii) why or how it would have been appropriate to modify Chow’s system to include a mobile agent even though Chow does not contemplate such a modification.

1. VMware fails to explain how the combination of Chow and White achieves the claimed invention.

To show that a combination of references renders a claim obvious, VMware is required to show how “the references would be combined to produce the claimed invention.” *Trivascular, Inc. v. Samuels*, 812, F.3d 1056 at 1066. But VMware’s cursory, one-paragraph explanations of Grounds 3 and 4 falls significantly short of this standard.

VMware concedes that if “agent” is interpreted to be a “mobile” agent then Chow does not disclose the claimed “agent.” Pet., 56. In an attempt to fill this gap, VMware relies on White. But VMware’s obviousness analysis for the combination of Chow and White is entirely divorced from the very claim element—mobile agent—that it contends White discloses. Indeed, in its description of White—VMware never even mentions the word “mobile.”

Instead, VMware’s obviousness analysis focuses on Chow’s alleged reliance on “remote procedure calling,” Pet., 58, and White’s teaching of “remote programming” as somehow an improvement upon “remote procedure calling.” *Id.* (citing EX1020, 4:22-28). According to VMware, given that White solved some of the issues with prior art remote programming systems, a POSITA would have preferred to use White’s remote programming implementation rather than the prior art remote programming implementations.” Pet., 59. But even assuming a POSITA would have been motivated to use White’s “remote programming” instead of Chow’s “remote procedure calling,” which they would not, VMware never explains why “remote programming” somehow means the combination would have a “mobile agent.”

In fact, the differences between “remote programming” and “remote procedure calling,” as White describes, have nothing to do with whether an agent is mobile or not. Instead, “remote programming” differs from “remote procedure

calling” in that under “remote programming” actual instructions to be executed are sent to a remote device for execution, instead of just requesting functions be executed on a remote device. *Compare* EX1020, 2:66-3:6 (“In remote procedure calling, a client process...requests action through a server process”), *with* 4:23-26 (“In remote programming...a ‘client process’ ...sends to a server process... a list of instructions”). Thus, even if a POSITA were to adopt a “remote programming” approach for Chow’s “polling daemon” instead of a “remote procedure calling” approach, there is simply no reason that Chow’s “polling daemon” would need to be a “mobile.” But, more importantly, VMware provides no explanation for *how* adopting White’s “remote programming” approach would necessitate Chow’s “polling daemon” being “mobile. VMware was required to do so. *See Trivascular*, 812, F.3d 1056 at 1066. Accordingly, VMware has failed to demonstrate that the combination of Chow and White renders obvious the challenged claims under Ground 3.

Ground 4 fails for similar reasons. For Ground 4, VMware exclusively relies on its reasoning set forth in Grounds 1-3. As explained above, those grounds fail to set forth a sufficient showing of obviousness. Thus, Ground 4 also fails to set forth a sufficient showing of obviousness for the same reasons. Accordingly, the Board should deny institution for all challenged claims.

2. VMware does not explain why or how it would have been appropriate to modify Chow's system to include a mobile agent even though Chow does not contemplate such a modification.

In addition to showing “how” references are combined to produce the claimed invention, VMware is also required to show why “the references would be combined to produce the claimed invention.” *Trivascular, Inc.*, 812 F.3d 1056 at 1066. But VMware has failed to sufficiently do so here because its analysis is entirely unrelated to the “claimed invention.”

As explained above, VMware appears to contend that Chow's alleged stationary agent would be converted to a “mobile” agent by replacing Chow's “remote procedure calling” with White's “remote programming.” Putting aside that VMware never explains why such a conversion would occur, VMware also never explains why a POSITA would be motivated to convert Chow's alleged “agent” from stationary to mobile.

The entirety of VMware's motivation to combine focuses on “remote programming” versus “remote procedure calling” instead of the actual term in the claims—agent. Specifically, VMware analysis boils down to its contention that according to White, “remote programming” was preferable to “remote procedure calling,” and, consequently, a POSITA would be motivated to use “remote programming” instead of “remote procedure calling.” *Pet.*, 58-59. But VMware

needed to “identify a reason that would have prompted a person of ordinary skill in the art to combine the elements *as the new invention does*” *KSR Int’l Co. v. Teleflex. Inc.*, 550 U.S. 398 (2007). That is, VMware needs to show *why* a POSITA would be motivated *to use a mobile agent instead of a stationary agent*—because that is the “new invention.” Instead, VMware’s analysis focused solely on why a POSITA would allegedly be motivated to use “remote programming” instead of “remote procedure calling.” Yet, neither “remote programming” nor “remote procedure calling” are elements of the challenged claims or even relevant to the challenged claims. Thus, VMware has failed to set forth an adequate motivation to combine.

VMware’s motivation also fails for an additional reason. As discussed above, VMware’s entire motivation to combine boils down its contention that a POSITA would be motivated to use “remote programming” over “remote procedure calling” because, according to VMware, White states that “remote programming” is allegedly an improvement over “remote procedure calling.” Pet., 58 (citing EX1020, 5:17-25). But, simply put, White does not say this. Instead, White states that whether or not “remote programming” is an improvement depends on the circumstances. Specifically, in some circumstances, White states that “remote programming encounters the same inefficiencies of remote procedure calling.” EX1020, 5:26-30. Thus, even by White’s own description, it is far from a

certainty that “remote programming” is an improvement of “remote procedure calling.” Nevertheless, VMware’s entire motivation to combine relies on assumption that it is a certainty that “remote programming” would be an improvement over Chow’s “remote procedure calling.” Consequently, VMware’s motivation to combine is deficient for these additional reasons too.

VII. THE BOARD SHOULD DENY INSTITUTION BECAUSE PETITIONER HAS FAILED TO DEMONSTRATE HOW THE ART TEACHES “THE SERVICE RESOURCE IS *EXHAUSTED UPON BEING CONSUMED BY THE NETWORK-BASED AGENT.*” (GROUNDS 1-4).

Each independent claim recites language defining a relationship between a service resource and a network agent, namely how “the service resource is *exhausted upon being consumed* by the network-based agent.” EX1001, 25:65-67, 26:35-39, 27:61-63 (emphasis added). Irrespective of any disputed claim construction, Pet., 18-20, VMware nonetheless fails to address this relationship sufficiently in the Petition.

Instead of pointing to any specific part of Chow as teaching “the service resource is exhausted upon being consumed,” VMware merely argues that because Chow’s “Revision Manager program ...would only retrieve the document [or] webpage if the monetary costs...associated with that retrieval did not exceed a ‘certain acceptable cost,’” *id.*, 33 (parentheticals omitted)), and because a “POSITA would have understood that money can be spent only once,” *id.*, 34, then

a “POSITA would have understood that Chow [also] taught” the claim terms. *Id.*, 35. This reasoning is far from adequate. Even assuming for the sake of argument that money is a “service resource,” which IV does not concede here, VMware has not shown that Chow describes, suggests, or otherwise inherently requires any exhaustion of said money *upon* any given consumption. Chow does not disclose when any alleged exhaustion would occur.

While it would also be improper for VMware to rely on its expert’s declaration to introduce necessary elements into the Petition, the declaration also does not adequately explain or provide support for how Chow teaches or renders obvious the claimed features of “the service resource is exhausted upon being consumed.” EX1005, ¶115. “Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.” 37 C.F.R. § 42.65. Accordingly, VMware’s expert declaration cannot remedy the Petition’s deficiencies.

For these reasons, Petitioner has not demonstrated a reasonable likelihood of prevailing for any challenged claim. Petitioner’s failure to explain how Chow meets this claim feature infects every ground in its Petition. The Board should therefore deny institution.

VIII. THE BOARD SHOULD DENY INSTITUTION BECAUSE PETITIONER HAS FAILED TO PROVIDE PROPER OBVIOUSNESS RATIONALES FOR THE CHALLENGED CLAIMS, AS REQUIRED UNDER KSR (GROUNDS 1-4).

VMware alleges that Chow discloses every limitation of independent claims 1, 9, and 24, among other claims in the '752 patent. But VMware does not argue anticipation under pre-AIA 35 U.S.C. § 102(e), as may be expected of a Petitioner alleging that every limitation is disclosed by a single reference. *E.g.*, Pet., 29-36. Instead, VMware argues only obviousness grounds under 35 U.S.C. § 103(a), without performing the requisite analysis of identifying differences between the claims and the prior art, and without providing a proper rationale (if any rationale) for why the independent claims would have been obvious to a POSITA. This approach results in the deficiency of Grounds 1 and 2. Grounds 3 and 4 are no better, as they incorporate by reference the entirety of the arguments from Grounds 1 and 2. Additionally, as discussed above, Grounds 3 and 4 are flawed, because VMware introduces White without providing the requisite obviousness analysis and rationale supporting the alleged combination. *See* Section VI

For Ground 1, VMware's analysis is shallow and conclusory: the first paragraph of each section begins with "a POSITA would have understood that Chow taught . . .," and ends with "a POSITA would have understood that Chow taught . . .," without analyzing the *Graham* factors reaffirmed by the Supreme Court in *KSR*. *KSR Int'l Co.*, 550 U.S. at 406 (quoting *Graham v. John Deere Co.*,

383 U.S. 1 at 17-78 (1966) (“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; Against this background, the obviousness or nonobviousness of the subject matter is determined.”)); *see, e.g.*, Pet., 29-36.

Without determining any differences between the prior art and the claims, VMware’s analysis is not made explicit, also in contravention of the Supreme Court’s rule in *KSR*. *KSR*, 550 U.S. at 418 (“Often, it will be necessary for a court to look to interrelated teachings...effects of demands known ... background knowledge possessed by a [POSITA], all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed...To facilitate review, this analysis should be made explicit”).

Without analyzing the *Graham* factors, no obviousness rationale can be articulated under 35 U.S.C. § 103; IV and the Board and IV are not put on adequate notice of the obviousness rationale relied upon by VMware. To institute on any of the grounds proposed in the Petition, the Board would be forced to perform its own obviousness rationale and provide its own rational underpinnings. For at least these reasons, VMware has not made a sufficient case upon which the Board can base an agency action or finding that could be held lawful under the Administrative Procedure Act (APA). *See In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002) (citing 5 U.S.C. § 706(2)).

Thus, for at least the above reasons, VMware has failed to establish a reasonable likelihood of success of demonstrating unpatentability with respect to at least one claim for Grounds 1. All other grounds presented by VMware incorporate the deficiencies of Ground 1, and thus Grounds 2-4 are equally deficient. Accordingly, this Petition should be denied.

IX. CONCLUSION

In sum, the Petition should be denied under 35 U.S.C. § 314(a), 35 U.S.C. § 325(d), and on the merits.

Respectfully submitted,

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CERTIFICATION OF WORD COUNT (37 C.F.R. § 42.24(d))

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE** specified in 37 C.F.R. § 42.24 have 6,014 words, in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24(b)(1). This word count was prepared using Microsoft Word 2010.

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CERTIFICATION OF SERVICE (37 C.F.R. § 42.6(e))

The undersigned hereby certifies that the above-captioned **PATENT OWNER'S PRELIMINARY RESPONSE PURSUANT TO 37 C.F.R. § 42.107** and **associated exhibits** were served electronically in their entireties on May 20, 2020, upon the following parties by email:

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