Paper 7 Date: November 12, 2019

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC., Petitioner,

v.

VOIP-PAL.COM, INC., Patent Owner.

IPR2019-01009 Patent 9,948,549 B2

Before KEVIN F. TURNER, JONI Y. CHANG, and CHRISTOPHER L. OGDEN, *Administrative Patent Judges*.

TURNER, Administrative Patent Judge.

DECISION Denying Institution of *Inter Partes* Review 35 U.S.C. § 314

I. INTRODUCTION

Apple Inc. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–30 ("the challenged claims") of U.S. Patent No. 9,948,549 B2 (Ex. 1001, "the '549 Patent"). Paper 2 ("Pet."). Voip-Pal.com, Inc. ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition "shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." For the reasons stated below, we determine that Petitioner has not established a reasonable likelihood that it would prevail with respect to at least one claim. Therefore, no *inter partes* review is instituted in this proceeding.

A. Related Matters

The parties indicate that the '549 Patent, as well as three other related patents—namely, U.S. Patent Nos. 9,826,002 B2 ("the '002 patent"), 9,813,330 B2 ("the '330 patent"), and 9,537,762 B2 ("the '762 patent")—are involved in *Voip-Pal.com, Inc. v. Amazon.com, Inc.*, 5:18-cv-07020-LHK (N.D. Cal.), and *Voip-Pal.com, Inc. v. Apple, Inc.*, 5:18-cv-06216-LHK (N.D. Cal.). Pet. 59–61; Paper 4, 1.

Petitioner has filed concurrently three other petitions, involving these related patents: (1) IPR2019-01008, involving the '002 patent; (2) IPR2019-01006, involving the '330 patent; and (3) IPR2019-01003, involving the '762 patent. Pet. 59; Paper 4, 1. Previously, Petitioner filed

four other petitions: IPR2016-01198 and IPR2017-01398, involving related U.S. Patent No. 9,179,005 B2 ("the '005 patent"), and IPR2016-01201 and IPR2017-01399, involving related U.S. Patent No. 8,542,815 B2 ("the '815 patent"). Pet. 60–61. The '549 Patent is a continuation of the '330 patent, which is a continuation of the '762 patent, which is a continuation of the '005 patent, which is a continuation of the '815 patent. Ex. 1001, code (63).

B. The '549 Patent

The '549 Patent is generally related to voice over Internet protocol ("IP") communications. Ex. 1001, 1:20–21. The '549 Patent is titled "Producing Routing Messages for Voice Over IP Communications," and discloses a telephony system, in which calls are classified as either public network calls or private network calls and routing messages are produced based on that classification. *Id.* at code (54), Abs. In particular, when the call is classified as a public network call, a routing message, identifying a gateway to the public network, is produced. *Id.* at Abs. When the call is classified as a private network call, a routing message, identifying an address on the private network associated with the callee, is produced. *Id.*



Figure 7 of the '549 Patent is reproduced below.

Figure 7 above shows a processor circuit of a routing controller that facilitates communication between callers and callees. *Id.* at 17:65–67. As shown, routing controller ("RC") 16 includes RC processor circuit 200, which includes processor 202, program memory 204, table memory 206, buffer memory 207, and I/O port 208. *Id.* at 17:67–18:4.

Generally, RC 16 executes a process to facilitate communication between callers and callees. *Id.* at 14:65–15:9. The process involves: (1) in response to initiation of a call by a caller, receiving a callee identifier from the caller, (2) using call classification criteria associated with the caller to classify the call as a public network call or a private network call, and (3) producing a routing message identifying an address on the private network, associated with the callee when the call is classified as a private network call, and producing a routing message identifying a gateway to the public network when the call is classified as a public network call. *Id*.

C. Illustrative Claim

Of the challenged claims, claims 1, 14, and 17 are independent.

Claims 2–13 and 30 depend from claim 1; claims 15 and 16 depend from

claim 14; and claims 18–29 depend from claim 17. Claim 1 is illustrative:

1. A method of routing a communication in a communication system between an Internet-connected first participant device associated with a first participant and a second participant device associated with a second participant, the method comprising:

[1a] causing at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute;

[1b] receiving, by the at least one processor, a second participant identifier inputted by the first participant using the first participant device to initiate a communication, the second participant identifier being associated with the second participant device;

[1c] processing the second participant identifier, based on the at least one first participant attribute obtained from the first participant profile, to produce a new second participant identifier;

[1d] classifying the communication as a system communication or an external network communication;

[1e] when the communication is classified as a system communication, producing a system routing message, based on the new second participant identifier, that identifies an Internet Protocol (IP) address of a network element through which the communication is to be routed thereby causing the communication to be established to the second participant device; and

[1f] when the communication is classified as an external network communication, producing an external network

routing message, based on the new second participant identifier, that identifies an address associated with a gateway to an external network thereby causing the communication to the second participant device to be established by use of the gateway to the external network.

Ex. 1001, 37:30–63 (bracketed matter and emphases added).

D. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 4-5)¹:

Claims Challenged	35 U.S.C. §	References
1–10, 17–26, 29, and 30	103	Chu ² and Scott ³
11–16, 27, and 28	103	Chu, Scott, and Hinchey ⁴

¹ For purposes of this Decision, we assume the claims at issue have an effective filing date prior to March 16, 2013, the effective date of the Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), and we apply the pre-AIA version of 35 U.S.C. § 103.

² U.S. Patent No. 7,486,684 B2, issued February 3, 2009 (Ex. 1003, "Chu").

³ U.S. Patent No. 6,760,324 B1, issued July 6, 2004 (Ex. 1004, "Scott").

⁴ U.S. Patent Publication No. US 2002/0122547 A1, published September 5, 2002 (Ex. 1006, "Hinchey").

II. ANALYSIS

A. Claim Construction

In an *inter partes* review proceeding based on a petition filed on or after November 13, 2018, a patent claim shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (as amended Oct. 11, 2018).⁵ This rule adopts the same claim construction standard used by Article III federal courts, which follow *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny. Under this standard, the words of a claim are generally given their "ordinary and customary meaning," which is the meaning the term would have to a person of ordinary skill at the time of the invention, in the context of the entire patent including the specification. *See Phillips*, 415 F.3d at 1312–13.

Neither party seeks explicit claim construction of any term. *See* Pet. 5; *see generally* Prelim. Resp. In light of the parties' arguments and evidence, we find that it is unnecessary to construe any claim terms expressly for our determination of whether to institute a review of the challenged claims. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)) (noting that

⁵ *See* Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018).

"we need only construe terms 'that are in controversy, and only to the extent necessary to resolve the controversy").

B. Principles of Law

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of obviousness or nonobviousness.⁶ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

C. Level of Ordinary Skill in the Art

In determining the level of ordinary skill in the art, various factors may be considered, including the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC, Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995)

⁶ Neither party presents evidence or arguments regarding objective evidence of obviousness or nonobviousness in the instant proceeding at this time. *See generally* Prelim. Resp.; Pet.

(quotation omitted). Petitioner's declarant, Tal Lavian, Ph.D., testifies that a person of ordinary skill in the art in the context of the '549 Patent would have been a person having at least a bachelor's degree in electrical engineering, or in a related field, with at least 2–4 years of industry experience in designing or developing packet-based and circuit-switched telecommunication systems. Ex. 1005 ¶ 60. Patent Owner does not challenge this assessment in its Preliminary Response. *See generally* Prelim. Resp. We note that Petitioner's assessment appears consistent with the level of ordinary skill in the art at the time of the invention as reflected in the prior art in the instant proceeding. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For purposes of this Decision, we agree with Dr. Lavian's assessment.

D. Obviousness over Chu and Scott

Petitioner asserts that claims 1-10, 17-26, 29, and 30 are unpatentable under § 103(a) as obvious over Chu and Scott. Pet. 6–43. Patent Owner argues, among other things, that the asserted prior art combination fails to teach or suggest "using the first participant identifier to locate a first participant profile," as required by the claims. Prelim. Resp. 31-48.

For the reasons provided below, we agree with Patent Owner and determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claims 1–10, 17–26, 29, and 30 are unpatentable.

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1. Overview of Chu (Ex. 1003)

According to Chu, its "invention relates to the field of communication systems and more specifically to the management and control of voice-over Internet Protocol (VoIP) virtual private networks (VPNs) in an IP-based public branch exchange (PBX) environment." Ex. 1003, 1:9–13.



Figure 2 of Chu is reproduced below.

Figure 2 of Chu above shows a portion of communication system 200, which includes customer premises 105 having a plurality of IP phones 101–103 and server 110 connected to a VoIP-VPN Service Provider (SP) at SP central office 205. *Id.* at 4:24–28. Connection 145 between customer premise 105 and SP central office 205 is made via router 140. *Id.* at 4:29–30. Server 110 communicates with soft-switch 220 with an agreed-upon signaling protocol, such as H.248 and Session Invitation Protocol (SIP). *Id.* at 4:49–52. Soft-switch 220 is the intelligence of the

system. Id. at 4:59.



Figure 6 of Chu is reproduced below.

Figure 6 of Chu above depicts a flow diagram of forward signaling of a call in the ingress soft-switch of system 200, illustrating the sequence of signaling and control message to originate an On-Net Call. *Id.* at 3:21–22, 8:39–40. The sequence is shown as a series of flow arrows 602–616, starting at step 602 when the user picks up the handset at phone 101. *Id.* at 8:39–40, 8:55–9:1. At step 604, server 110 sends a H.248 "signal" command to IP phone 101, instructing phone 101 to generate a dial tone to the user, and server 110 also sends another message to instruct IP phone 101 to begin to collect dialed digits from the user. *Id.* at 8:59–62. At step 606, IP phone 101 collects dialed digits from the user and sends them to server 110 through H.248 "event" messages. *Id.* at 8:62–64. At step 608, after receiving all the dialed digits from IP phone 101, "server 110 consults *its dial plan* to determine whether the call is local, to another on-net phone, or to a phone that is on the PSTN." *Id.* at 8:65–9:1 (emphasis added).

2. Overview of Scott (Ex. 1004)

Scott discloses a method, system, and computer program product for providing voice over the Internet communication. Ex. 1004, Abs. Figure 2 of Scott is reproduced below.



Figure 2 above shows VoIP system 200, which allows traffic (e.g., voice or fax data) originating on a circuit-switched network to be carried over a packet-switched network. *Id.* at 6:23–27. VoIP system 200 acts as a bridge between public switch telephone network ("PSTN") 205 and IP network 215, allowing voice and fax traffic to be carried over IP network 215. *Id.* at 6:27–29, 6:54–55. VoIP system 200 includes gateway servers 210, 220, database servers 240, routing servers 230, management system 250, provisional system 260, network manager 270, and license server 280. *Id.* at 6:43–46. Calls can be placed from telephones 201–203, 206 at PSTN

205. *Id.* at 6:30-42. The number dialed by the user is translated using an E.164 translator into a standardized format. *Id.* at 65:41-43.

3. Discussion

Claim 1 recites, in part:

causing at least one processor to access at least one memory storing a first participant profile identifying at least one first participant attribute.

Ex. 1001, 37:35–37 (emphasis added) (hereafter the "first participant profile" limitation). Independent claim 17 also recites a similar limitation, namely "wherein the at least one processor is operably configured . . . to access a first participant profile to load, into the at least one memory." *Id.* at 40:57–62. By virtue of their dependency, claims 2–10, 18–26, 29 and 30 also require this limitation.

To account for this claim limitation, Petitioner notes that the dialed digits in Chu are first processed at step 608, shown in Figure 6 of Chu (reproduced above), to determine whether "the call is local, to another on-net phone, or to a phone that is on the PSTN" before generating a SIP "invite" message that is sent to the soft switch and processed to route the call further in step 610. Pet. 16 (citing Ex. 1003, 8:65–9:49). Petitioner acknowledges that "Chu does not teach or suggest modifying the dialed digits based on attributes of the caller." *Id.* at 9. Petitioner asserts that the "proposed combination of Chu and Scott contemplates Scott's user profile and dialed digit reformatting incorporated into the Chu infrastructure in advance of processing the called number to route the call." *Id.* at 16.

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Petitioner argues that "Scott teaches that each user has a 'dialing plan' *specific to that user* which includes the user's home international prefix, national prefix, country code and area code," and that "[t]his dialing plan is *configured by the user* and *is therefore user-specific*." *Id.* at 17 (emphases added). As support, Petitioner cites to Scott at column 67, lines 1–9, and Dr. Lavian's testimony, which also cites to the same passage of Scott for support. Pet. 18; Ex. 1005 ¶¶ 71, 73 (citing Ex. 1004, 67:1–9). Petitioner further argues that a person of ordinary skill in the art would have recognized that "the Scott dialing plan comprising caller attributes would both (1) be stored on a database and (2) *accessed using the caller identifier*," citing only to Dr. Lavian's testimony (Ex. 1005 ¶ 76) for support. Pet. 17 (emphasis added).

Petitioner's arguments and Dr. Lavian's testimony are conclusory and unsupported other than by reference to a passage in Scott. Nothing in that portion of Scott relied upon by Petitioner and Dr. Lavian teaches or suggests using a caller identifier to access a user-specific dialing plan. Ex. 1004, 67:1–9. Scott does not indicate that each user has a dialing plan *specific to that user*, or that the user configures a dialing plan. Id. Scott is silent as to how the parameters (international prefix, national prefix, country code, and area code) are being accessed, or who configures those parameters. Id. Moreover, those parameters are information about the calling area, not user-specific information. Id. In short, Scott does not teach or suggest that each user has a user-specific dial plan, much less using a user identifier to access a user-specific dialing plan, as Petitioner contends.

Furthermore, we agree with Patent Owner that Scott suggests that the dialing plan is for all the users of *a gateway in that area*, not associated with a specific user individually as Petitioner alleges. Prelim. Resp. 43–45. Indeed, the portion of Scott relied upon by Petitioner merely teaches that "[t]he country/area code settings panel allows one to provide information about your local calling area to the Gateway service," and "[t]his is used to provide a dialing plan that emulates *the dialing plan* provided by the local telephone company *in that area*." Ex. 1004, 67:1–6 (emphases added). Scott's country/area code settings panel is one of "the three panels that allow the configuration of the Gateway application." Id. at 66:19–20 (emphasis added). As Patent Owner notes (Prelim. Resp. 44-45), Scott suggests that the gateway dialing plan is configured by a system administrator, who manages and configures software components for the VoIP system, not each individual user or caller. Ex. 1004, 4:4-5, 4:10-12, 9:39-48 (explaining that "[m]anagement system 250 . . . is used to perform configuration administration of software components for the VoIP system 200," and to "make changes to the configuration of these components," "allow[ing] all of the gateway, routing and database servers 210-240 in the network to be configured from a single point"), 17:59-63 (explaining that the management system could be run on different machines "allowing several administrators to jointly manage the network") (emphases added). In short, Scott's dialing plan is not user-specific.

In light of the foregoing, Scott does not support Petitioner's arguments (Pet. 16) or Dr. Lavian's testimony (Ex. 1005 ¶¶ 71, 73) that the dialing plan in Scott is user-specific or configured by the user.

In addition, Dr. Lavian's testimony (Ex. 1005 ¶ 76) does not support Petitioner's argument that a person of ordinary skill in the art would have recognized that the dialing plan in Scott would be accessed using the caller identifier. Pet. 18. Dr. Lavian's testimony does not cite to Scott, but instead cites to Chu (Ex. 1003, 12:60–64) for support. However, Chu does not teach or suggest a user-specific dial plan, let alone using a user identifier to access a user-specific dial plan. Rather, Chu discloses an *enterprise or corporate* dial plan that is accessed by the *server* ID, not a user identifier. Ex. 1003, 3:55–64, 9:31–33, 12:59–64.

As Patent Owner points out, "Chu uses the term 'subscriber' to refer to an *enterprise or corporate entity* that controls one or more local IP-PBX systems, and *not an individual person*." Prelim. Resp. 32–36, 44–45 (emphases added). Notably, Chu explains that a "subscriber" is associated with multiple IP-PBX systems, multiple IP addresses, and multiple phones:

The VoIP VPN service connects all the IP-PBXs of a subscriber into a single logical network . . . where *subscribers can use their own internal dial plan* Similarly, *a subscriber can use their own IP address assignment plan* in assigning *IP addresses* to the IP-PBX *server* and the *IP phones*.

Ex. 1003, 3:55–64 (emphases added).

The above description is for establishing a call between *two IP* phones at two locations of the same subscriber. Many subscribers, each with multiple locations, can be served by the same packet-switch/soft-switch network. Each subscriber can use their . . . own IP address plan as well as their own dial plan.

Id. at 12:59–64 (emphases added). In short, the subscriber's dial plan in Chu is an *enterprise* dial plan that applies to all the user of the enterprise, not associated with a specific user individually.

Significantly, as Patent Owner notes (Prelim. Resp. 36–43), Dr. Lavian's testimony improperly conflates Chu's *enterprise* dial plan with a *user-specific* dial plan and conflates "subscriber" with "user." Ex. 1005 ¶ 76. For example, Dr. Lavian states that "Chu expressly discloses geographically dispersed subscribers each of whom may use *subscriber-specific* dial plans," and that "[b]ecause one *subscriber* may call another, such a system would necessarily support storing a *user-specific* dial plan for the callee in the database as well." *Id*. (emphases added).

Furthermore, Dr. Lavian opines, without citing any specific support in Chu, that "a subscriber's dial plan, in addition to an ID of the server, *must necessarily include*" a user-specific identifier, such as an E.164 telephone number, "because multiple subscribers can be associated with a single local telephone control server or database server." Ex. 1005 ¶ 76 (emphasis added). Dr. Lavian's testimony is unsupported by, and inconsistent with, Chu's disclosure. Chu uses the *server* ID to access the *enterprise* dial plan, not a user identifier. Ex. 1003, 9:31–33 (noting that "the soft-switch 220 consults the dial plan for this subscriber" and the "dial plan to use can be determined from *the ID of the server* 110" (emphasis added)).

More importantly, Dr. Lavian's testimony rests on the incorrect premise that a user-specific identifier is necessary because all subscribers (enterprises) use a server ID that does not include "unique subscriber-specific information." *See* Ex. 1005 ¶ 76. This ignores Chu's teaching that "a subscriber can use *their own IP address assignment plan in assigning IP addresses to the IP-PBX server.*" Ex. 1003, 3:61–63 (emphasis added). As Chu explains, "[t]o each subscriber, it appears that all their

locations are connected by *a private network*, although the same network is used to *serve multiple subscribers*," and "[t]hus, the SP network is providing VoIP *virtual private network* service," and "[t]he VoIP VPN service connects all the IP-PBXs of a subscriber into a *single logical network*." *Id.* at 12:64–67, 3:55–56 (emphases added). In short, the server ID in Chu is unique to each subscriber (enterprise) because each subscriber uses their own IP address assignment plan. Therefore, contrary to Dr. Lavian's testimony, it is not necessary to use a user identifier, in addition to the server ID, to access Chu's enterprise dial plan.

In view of the foregoing, we give little, if any, weight to Dr. Lavian's testimony (Ex. 1005 ¶¶ 71, 73, 76) relied upon by Petitioner to support its argument that the combination of Chu and Scott teaches or suggests using a user identifier to access a user-specific dialing plan. *See* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."); *see also In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1368 (Fed. Cir. 2004) (noting that "the Board is entitled to weigh the declarations and conclude that the lack of factual corroboration warrants discounting the opinions expressed in the declarations"); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985) (stating a lack of objective support for expert opinion "may render the testimony of little probative value in [a patentability] determination").

Also we are not persuaded by Petitioner's arguments, which are not supported by Scott or Chu, but instead merely based on speculation or conjecture. As the U.S. Court of Appeals for the Federal Circuit has

explained, "legal determinations of obviousness . . . should be based on evidence rather than on mere speculation or conjecture." *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1290 (Fed. Cir. 2006); *see also Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375–76 (Fed. Cir. 2011) (noting that prior art's "speculative and tentative disclosure of what 'might' or 'may' [explain the cause of a desired effect] does not sufficiently direct or instruct one of skill in this art").

Based on the evidence in this record, we determine that Petitioner has not shown sufficiently that the combination of Chu and Scott teaches or suggests the aforementioned "first participant profile" limitation, as required by claims 1-10, 17-26, 29, and 30.

4. Conclusion on Obviousness over Chu and Scott

For the reasons discussed above, we conclude that Petitioner has not shown a reasonable likelihood of success in challenging claims 1-10, 17-26, 29, and 30.

E. Obviousness over Chu, Scott, and Hinchey

Petitioner asserts that claims 11–16, 27, and 28 are unpatentable under § 103(a) as obvious over Chu, Scott, and Hinchey. Pet. 43–58. Similar to the above-discussed independent claims 1 and 17, independent claim 14 recites, in part, "causing at least one processor to access a first participant profile to load a plurality of first participant attributes into at least one memory." Ex. 1001, 39:57–60. We determine that at least this limitation is equivalent to the "first participant profile" limitation discussed above in our analysis for the obviousness ground based on Chu and Scott. Petitioner does

not rely on Hinchey to remedy the deficiencies discussed above, but rather relies upon its arguments associated with claim 1. Pet. 53 (For independent claim 14, Petitioner's analysis as to the "first participant profile" limitation relies upon its analysis for claim 1). We already addressed those arguments, and we find those arguments unavailing here for the reasons stated above. Therefore, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claims 11–16, 27, and 28 are unpatentable.

III. CONCLUSION

For the foregoing reasons, the information presented in the Petition and evidence in this record do not establish that there is a reasonable likelihood that Petitioner would prevail in challenging claims 1–30 of the '549 Patent.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is *denied*, and no trial is instituted.

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