

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

S.M.R INNOVATIONS LTD and Y.M.R TECH LTD,
Patent Owner.

IPR2024-01048
Patent 10,547,648 B2

Before STACEY G. WHITE, CHRISTOPHER L. OGDEN, and
MARY C. HOFFMAN, *Administrative Patent Judges*.

HOFFMAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Apple Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1, 5–8, 10, 11, 13, 15, 16, 18, and 19 of U.S. Patent No. 10,547,648 B2 (Ex. 1001, “the ’648 patent”). S.M.R Innovations Ltd and Y.M.R Tech Ltd (collectively “Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”). With our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 7, “Prelim. Reply”) regarding the impact of the transfer of the related district court case to Patent Owner’s arguments regarding discretionary denial.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . and any response . . . 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.” Based on the current record and for the reasons explained below, Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one of the challenged claims of the ’648 patent. Thus, we institute this *inter partes* review.

We provide the following preliminary findings of fact and conclusions of law for the sole purpose of explaining our reasons for instituting this *inter partes* review. Any final determinations shall be based on the full trial record.

A. REAL PARTIES IN INTEREST

Petitioner identifies Apple Inc. as the real party in interest. Pet. 68. Patent Owner identifies S.M.R Innovations Ltd and Y.M.R Tech Ltd as the real parties in interest. Paper 4, 2.

B. RELATED PROCEEDINGS

The parties identify *inter partes* reviews IPR2024-01047, IPR2024-01049, and IPR2024-01050, and *S.M.R Innovations Ltd. v. Apple Inc.*, 6:23-cv-00479, D.I. 1 (W.D. Tex. Jul. 1, 2023) (“the parallel proceeding”) as challenging the ’648 patent in federal district court.¹ Pet. 68; Paper 4, 3–4. Petitioner indicates that the parallel proceeding was recently transferred to the Northern District of California. Prelim. Reply 1.

II. BACKGROUND

A. THE ’648 PATENT (EX. 1001)

The ’648 patent “relates to routing of data including multimedia between electronic devices,” in particular, rerouting of incoming communications to devices other than the initial receiving device. Ex. 1001, 1:22–26. For example, as seen in Figure 1 reproduced below, an incoming call to a cellular phone may be routed to other electronic devices (a fixed telephone and a computer monitor). *Id.* at 5:57–62.

¹ Patent Owner also identifies several other closed district court proceedings. Paper 4, 4.

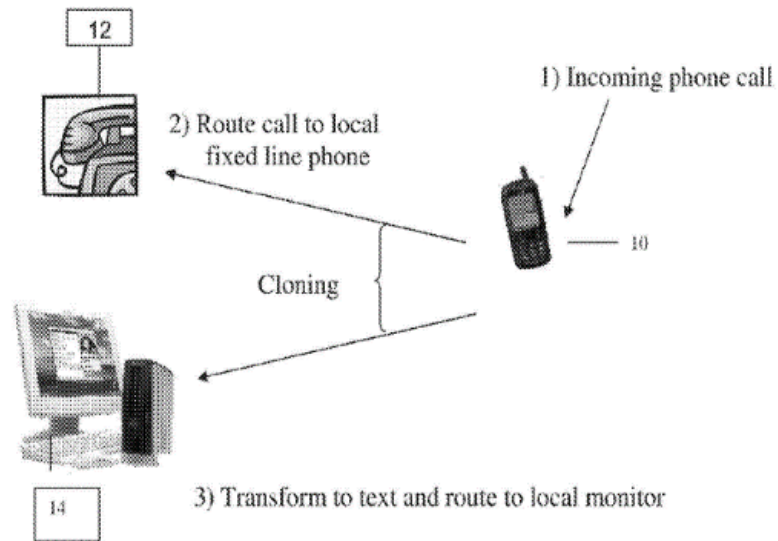


Fig. 1

Figure 1 illustrates three devices in proximity: cellular telephone 10, fixed telephone 12, and computer/monitor 14. Ex. 1001, 5:58–61. At step 1, an incoming voice call is received at the cellular telephone, which detects the presence of the fixed telephone and computer monitor. *Id.* at 5:61–66. At step 2, the cellular telephone routes the call to the fixed telephone. *Id.* at 5:65–66. At step 3, the cellular phone routes the call to the computer monitor. *Id.* at 6:2–5. Software, provided at either the cellular phone or the computer, may transform the call from voice to text. *Id.* at 6:5–7. The cellular telephone can clone, or duplicate, the call to route it to both the fixed telephone and the computer monitor. *Id.* at 9:62–63. Call rerouting is performed by an apparatus, shown below in Figure 2. *Id.* at 4:18–20.

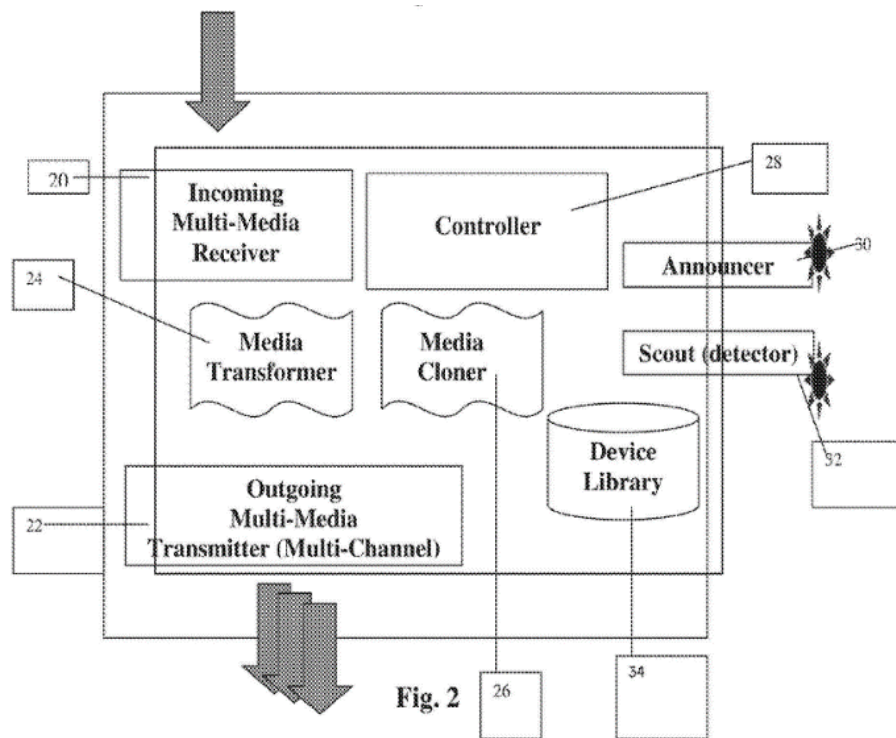


Figure 2 illustrates a block diagram for an apparatus, for attachment to an electronic device, that allows the electronic device to support rerouting. Ex. 1001, 4:18–20. The apparatus includes incoming multimedia receiver 20, media cloner 26, media transformer 24, outgoing multimedia transmitter 22, controller 28, and preferably announcer 30, scout (detector) 32, and device library 34. Ex. 1001, 7:6–32. The apparatus may be a physical card, chip, or attached stand-alone unit, or may be realized as software within the electronic device. *Id.* at 8:25–31.

In operation, multimedia receiver 20 receives incoming media content. Ex. 1001, 7:1–32. Controller 28 may direct the content to media cloner 26 (for duplicating content to be routed to more than one device) and/or media transformer 24 (for transforming content, e.g., from voice to text). *Id.*; *id.* at 6:49–64. Controller 28 then directs the content to outgoing multimedia transmitter 22 for routing to one or more devices. *Id.* at 7:1–27.

Announcer 30 announces to the environment device availability for accepting routed media (i.e., whether the device is busy or not) and may also announce device type and usage conditions. Ex. 1001, 7:33–36. Scout 32 scans the environment to find devices available to accept routed media. *Id.* at 8:1–6. As one example, announcer 30 is barcode sticker attached to the device, including device type and usage conditions, and scout 32 is a barcode reader. *Id.* at 7:53–58; 3:6–7. As an alternative example, announcing and scouting may be accomplished via transmissions. *Id.* at 7:41–44, 8:1–6. For example, fixed phone 12 and computer 14 may transmit announcements while cellular phone 10 scans the environment to detect transmitted announcements. *Id.*

Device library 34 contains information needed for communicating with the device (such as fixed phone 12 or computer 14), which typically includes usage related information, technical information regarding expected media formats and transmission technology specifications, including protocols, used by the device type, and pre-defined user preferences. Ex. 1001, 8:7–14.

B. CHALLENGED CLAIMS

The Petition challenges claims 1, 5–8, 10, 11, 13, 15, 16, 18, and 19 of the '648 patent. Pet. 1. Claims 1, 15, and 19 are independent claims. Ex. 1001, 12:59–14:58.

Claim 1 of the '648 patent is illustrative and reads as follows²:

1. *[pre]*A method of informing a device about an availability of media content at a mobile device connected to a local area network (LAN), comprising:

² For ease of reference, we include italicized bracketed designations for the preamble recitation and limitations of claim 1.

- [1a]*using the mobile device for:
- [1b]*identifying one or more available devices compatible to handle the media content and connected to the LAN;
- [1c]*wirelessly communicating information to an intermediate routing device connected to the LAN for indirectly routing messages or media content to at least one of the one or more available devices via said intermediate routing device; and
- [1d]*wirelessly signaling the one or more available devices indicating an availability of a media content at the mobile device;
- [1e]*wherein the media content is originated from an external source disconnected from the LAN;
- [1f]*wherein the media content selected from a group consisting of: audio content and video content.

Ex. 1001, 12:59–13:9.

Independent claims 15 and 19 recite corresponding subject matter.

Ex. 1001, 13:58–14:18, 14:31–53. Specifically, claim 15 recites “[a] mobile apparatus for informing a device about an availability of media content,” and claim 19 recites “[a] computer program product for a device for informing a user about an availability of media content at a mobile device.” *Id.*

C. ASSERTED GROUNDS OF UNPATENTABILITY

The Petition advances four grounds, as summarized in the table below:

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1	1, 5, 6, 15, 18	103(a) ³	Zhang, ⁴ Fillebrown, ⁵ Pasanen, ⁶
2	7, 11, 16, 19	103(a)	Zhang, Fillebrown, Pasanen, Skinner ⁷
3	8, 10	103(a)	Zhang, Fillebrown, Pasanen, Rofheart ⁸
4	13	103(a)	Zhang, Fillebrown, Pasanen, Angelo ⁹

Pet. 4.

In support of its arguments, Petitioner relies on a Declaration of Dr. Sayfe Kiaei. Ex. 1003.

³ 35 U.S.C. § 103 (2006), *amended by* Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29 § 103, sec. (n)(1), 125 Stat. 284, 287, 293 (2011) (effective Mar. 16, 2013). The pre-AIA version of § 103 applies because the ’648 patent claims priority to U.S. applications filed before March 16, 2013, the effective date of the AIA amendments. *See* Ex. 1001, code (63); Pet. 2.

⁴ Zhang, US 7,536,182 B2, issued May 19, 2009. Ex. 1004.

⁵ Fillebrown et al., US 2001/0053134 A1, published December 20, 2001. Ex. 1005 (“Fillebrown”).

⁶ Pasanen, US 6,587,450 B1, issued July 1, 2003. Ex. 1006.

⁷ Skinner, US 6,703,930 B2, issued March 9, 2004. Ex. 1007.

⁸ Rofheart et al., US 7,058,414 B1, issued June 6, 2006. Ex. 1008 (“Rofheart”).

⁹ Angelo et al., US 2003/0061493 A1, published March 27, 2003. Ex. 1009 (“Angelo”).

III. ANALYSIS

A. LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the art at the time of the invention is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)).

Petitioner asserts that a person of ordinary skill in the art (“POSITA”), at the filing date of the ’648, “would have had a master’s degree in computer engineering, electrical engineering, or a related field, with at least 2 years of experience with wireless communications. Additional education or experience might substitute for the above requirements.” Pet. 3 (citing Ex. 1003 ¶¶ 28–29).

Patent Owner asserts “a POSITA would have had a Bachelor’s degree in Computer Science, Computer Engineering, Electrical Engineering, or a related field in computing technology, and at least two years’ experience in wireless communication and mobile devices including multimedia streaming, or equivalent education, research, experience, and knowledge.” Prelim. Resp. 2–3.

Patent Owner’s proposed formulation differs from Petitioner’s in that it requires 1) less education, and 2) additional experience (i.e., in mobile devices including multimedia streaming). At this stage, Patent Owner does not contend that the differences between the parties’ proposals would affect our patentability analysis. Prelim Resp. 2–3. We also note that the ’648 patent does not appear limited to “mobile devices including multimedia streaming” because the Specification states “[t]he present invention relates

to routing of data including multimedia between electronic devices, and more particularly but not exclusively to rerouting of incoming communications that may or may not include multimedia to devices other than the initial receiving device.” Ex. 1001, 1:22–26.

With the exception of the open-ended phrase “at least,” we preliminarily determine Petitioner’s proposed formulation, which is supported by declaration testimony and generally consistent with the level of skill reflected in the ’648 patent and the prior art of record, to be sufficient. Ex. 1003 ¶ 28 (citing Ex. 1001, 1:22–29, 4:26–4:46, 11:13–12:30); *see also Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required “where the prior art itself reflects an appropriate level and need for testimony is not shown” (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985))). Furthermore, our decision to institute would be the same regardless of the differences between Patent Owner’s and Petitioner’s formulations.

B. CLAIM CONSTRUCTION

In an *inter partes* review, the Board construes the terms of a patent claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc).

The parties do not propose any express claim construction. Pet. 4; *see generally* Prelim Resp. We also determine that no express claim construction is necessary for our Decision, apart from that discussed in our below analysis. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor*

Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that only terms in controversy must be construed “and only to the extent necessary to resolve the controversy”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. OVERVIEW OF ASSERTED PRIOR ART

1. Zhang (*Ex. 1004*)

Zhang describes “[a] method and system for extending the capabilities of a handheld device by providing a framework within which small handheld devices can use their helper environment, the devices around them, to expand their limited capabilities.” *Ex. 1004*, code (57). An exemplary helper environment is illustrated in Figure 1, below.

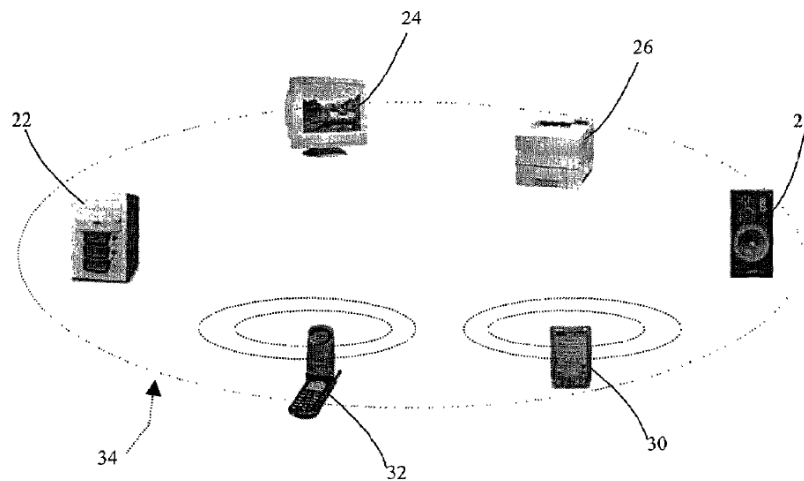


Fig. 1 A Helper Environment

Figure 1, above, depicts helper environment 34 with two handheld mobile devices (Personal Digital Assistant (“PDA”) 30 and cellular phone 32) and four helper servers (storage device 22, display device 24, printing device 26, and audio device 28). *Ex. 1004*, 3:25–31. The mobile devices use the helper environment, via a wireless LAN (WLAN) framework, to

extend their limited capabilities. *Id.*; *id* at 4:46–49. For example, the PDA can locate a nearby display device to better display content. *Id.* at 3:32–37.

A mobile device interacts with its helper environment according to the following steps. First, during device discovery, the mobile device identifies nearby helper servers. Ex. 1004, 3:47–48. Second, during service query, the mobile device queries the identified helper servers to determine whether they are capable of providing the helper service (in other words, whether the helper servers offer the needed helper service). *Id.* at 3:49–64. Third, during request transfer, the mobile device sends a service request to a selected helper device to determine whether the helper device can service the request at the moment. *Id.* at 53–54, *id.* at 4:1–5. The helper device may then grant, queue, or deny the service request. *Id.* at 7:23–26. Once the helper device grants the mobile device’s service request, the mobile device begins transferring data. *Id.* at 4:5–8. After data transfer, the helper device operates on the received data. *Id.* The mobile device remotely controls the task on the helper server according to user interaction via a remote control interface description on the mobile device. *Id.* at 3:54–60.

2. Fillebrown (Ex. 1005)

Fillebrown describes a wireless router for a personal wireless network. Ex. 1005, code (57). Router 120 routes data traffic between devices within the personal wireless network and extends the range of the personal wireless network by amplifying routed signals. *Id.* ¶¶ 16, 17, 34, 49, 57, 61.

3. Pasanen (Ex. 1006)

Pasanen describes “a wireless local area network comprising at least one server device, one or several peripheral devices, and means for transferring information between the server device and the peripheral

devices.” Ex. 1006, 1:1–6. Figure 1, below, illustrates an embodiment of the wireless local area network.

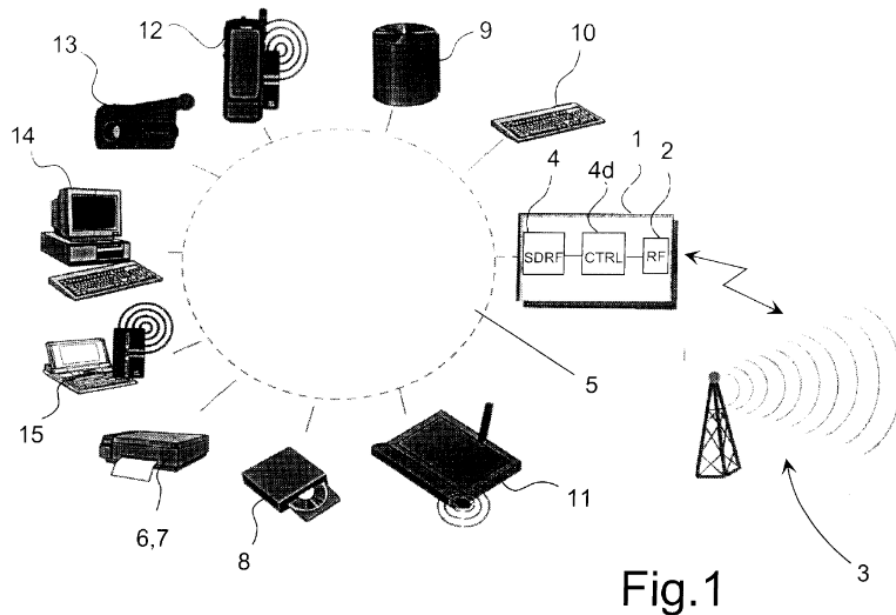


Figure 1, above, depicts wireless local area network 5 with server device 1 (a mobile station) and peripheral devices 6–15 (printer, telecopier device, CD-ROM reading device, mass storage, auxiliary display, etc.). Ex. 1006, 4:20–43. Mobile station 1 comprises means 2 for setting up a data transmission connection with long-distance mobile communication network 3, means 4 for setting up the short-distance wireless local area network between the service device and peripheral devices, and controller 4d. *Id.* at 4:44–62.

In use, the local area network allows for data transmission, such as a phone call, from the mobile station to the peripheral devices and vice versa. *Id.* at 5:17–23, 13:51–53. The phone call to the mobile station may originate from the mobile communication network. *Id.* at 4:44–46, 13:51–53. Peripheral device 12, a wireless audio interface, is equipped with a

microphone and an earpiece to be used instead of the mobile station's microphone and earpiece. *Id.* at 4:31–34.

4. Skinner (Ex. 1007)

Skinner describes “methods and apparatus for detecting an event, and for alerting a user of the occurrence of the event by way of a message, wherein the user can be at nearly any local or remote location, and wherein the user can establish criteria for the routing of the message as well as the mode in which the message is presented.” Ex. 1007, 3:14–19.

Sensor 102 detects an event (e.g., receipt of a signal such as a telephone ring signal). *Id.* at 4:9–20. Connected to the sensor, controller 104 then signals communication device 114 (e.g., pager, cellular phone, or any internet-enabled device) via communication network 112 regarding the event. *Id.* at 3:34–39, 3:64–4:3. The communication device then presents the signal from the controller in a form communicable to the user, such as audible beeps or a flashing light. *Id.* at 6:35–40.

5. Rofheart (Ex. 1008)

Rofheart describes a method and system for enabling device functions based on distance information. Ex. 1008, code (54). According to one embodiment, a user enables communications between the user's device and one or more remote wireless devices via a touch screen interface on the user's device. *Id.* at 28:22–38, Fig. 9. The interface displays the user device and remote devices in the form of a graphical map. *Id.* The user is able to easily associate the physical locations of the remote devices relative the user's device with the corresponding screen locations. *Id.*

6. Angelo (Ex. 1009)

Angelo “relates generally to the secured transmission of information, such as audio, video or a combination of audio and video. More particularly, the invention relates to a portable electronic device capable of encrypting and sending audio to a destination device.” Ex. 1009 ¶ 4. The information is encrypted in real time so that real-time, two-way communication can occur. *Id.* at 9.

D. GROUND 1: OBVIOUS OVER ZHANG, FILLEBROWN, PASANEN

Under Ground 1, Petitioner contends that claims 1, 5, 6, 15, and 18 are unpatentable under § 103(a) as obvious over Zhang, Fillebrown, and Pasanen. Pet. 9–44.

1. Legal Principles

A claim is unpatentable under § 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). When a ground in a petition is based on a combination of references, we consider “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). We base our obviousness inquiry on factual considerations 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 skill in the art, and (4) any objective indicia of obviousness or non-obviousness that may be in evidence.¹⁰ *See Graham*, 383 U.S. at 17–18.

We begin our analysis with independent claim 1. Considering these factors, we preliminarily determine that Petitioner has shown a reasonable likelihood that claim 1 is unpatentable as obvious over Zhang, Fillebrown, and Pasanen, for the reasons explained below.

2. Claim 1 Preamble

The preamble of claim 1 recites “[a] method of informing a device about an availability of media content at a mobile device connected to a local area network (LAN),” wherein the method comprises certain features. Ex. 1001, 12:59–61. Petitioner identifies Zhang’s mobile device (e.g., cellular phone 32) and helper servers connected to WLAN helper environment 34, where the cellular phone informs a helper server, such as audio device 28, of data (e.g., audio data) at the cellular device. Pet. 9–13 (citing, e.g., Ex. 1001, 2:16–19, 3:25–64, 4:32–58, 7:1–14, Fig. 1); Ex. 1003 ¶¶ 90–97. Currently, Patent Owner does not specifically contest this. *See* Prelim. Resp.

At this stage, we need not decide whether the preamble is limiting because we are persuaded that Zhang teaches the preamble of claim 1, for the reasons given by Petitioner.

¹⁰ At this stage, neither party argues that there are objective indicia of obviousness or non-obviousness, so this factor is not part of our analysis. *See generally* Pet.; Prelim. Resp.

3. Disputed Claim 1 Limitations: 1b and 1d

(a) Petitioner's Contentions

Limitation 1b recites “identifying one or more available devices compatible to handle the media content and connected to the LAN.” Ex. 1001, 12:63–64. Petitioner identifies Zhang’s teaching that the mobile device (cellular phone 32) scans a WLAN framework (helper environment 34) to discover connected helper servers, such as audio device 28. Pet. 14–16 (citing Ex. 1004, 3:25–43, 4:35–50; Ex. 1003 ¶¶ 91–95, 99–102). Petitioner explains that, during Zhang’s “device discovery” and “service query” steps, the mobile device identifies nearby helper servers and determines their compatibility (i.e., whether a helper server offers the needed helper service). Pet. 14–15 (citing Ex. 1001, 3:25–64, 4:1–5, 6:40–44; Ex. 1003 ¶¶ 91–95, 113–114). Petitioner further explains that, during the “request transfer” step, Zhang’s mobile device determines helper server availability based on the helper server’s response to the mobile device’s service request. *Id.* For example, the helper server “informs the [mobile device] whether its service request can be granted right away, has to be queued, or is denied (e.g., not enough total resource on the server or authentication failure).” *Id.* (citing Ex. 1004, 7:22–25).

Limitation 1d recites “wirelessly signaling the one or more available devices indicating an availability of a media content at the mobile device.” Ex. 1001, 13:3–5. Petitioner identifies Zhang’s sending the service request to the helper server, which occurs during the request transfer step. Pet. 23–24 (citing Ex. 1004, 4:1–8; Ex. 1003 ¶ 114). Petitioner explains that the mobile device and the helper server (wirelessly) communicate over the WLAN. *Id.* at 24.

(b) Patent Owner Arguments; Analysis

We now address Patent Owner’s argument with respect to limitations 1b and 1d, along with our preliminary analysis.

As discussed above, limitation 1b recites the step of “identifying one or more available devices” and limitation 1d recites the step of “wirelessly signaling the one or more available devices.” Patent Owner argues that the claim requires performing step 1b before step 1d, i.e., that the claim requires identifying the device(s) as available *before* wirelessly signaling those devices. Prelim Resp. 6–7. Patent Owner argues Petitioner’s mapping is in error because Zhang identifies devices as available *after* wirelessly signaling them. *Id.*

We preliminarily disagree with Patent Owner. Although the claim lists step 1b before step 1d, method steps are not ordinarily construed to require a specific order of performance unless the claims or Specification directly or implicitly require that specific order. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369–70 (Fed. Cir. 2003). Nothing in the express claim language precludes performing step 1d before step 1b, as in Zhang. For example, the claim does not contain temporal terms, like “then” or “next,” nor does the claim otherwise specify that step 1b must precede step 1d. Although Patent Owner points out that a term of step 1d (i.e., *the* one more available devices) derives antecedent basis from text in step 1b (i.e., one more available devices), this alone does not directly or implicitly require performing step 1b before step 1d. Prelim Resp. 6–7 (citing Ex. 1002, 240, ’648 patent prosecution history). Nor does the Specification require performing the step of identifying devices as available before the step of wirelessly signaling those devices or even that the steps be mutually

exclusive. For example, there are no statements that this step order is important, nor disclaimer of any other order, nor any prosecution history indicating a surrender of any other order. Moreover, according to the Specification, announcer 30, which is the component that identifies devices as available prior to the wirelessly signaling, is only “preferably provided.” Ex. 1001, 7:28–31.

Even assuming Patent Owner were correct that step 1b must precede step 1d, Patent Owner’s position that device(s) must be identified *as available* does not appear to be commensurate with the claims. According to its plain meaning, limitation 1b does not appear to require identifying devices *as available*; the claim merely requires identifying “available devices.” *See In re Self*, 671 F.2d 1344, 1348 (CCPA 1982) (rejecting arguments “not based on limitations appearing in the claims”). In other words, the claim does not appear to require identifying (i.e., determining) whether devices are available but merely requires identifying devices that happen to be available. According to our preliminary understanding, Zhang’s mobile device 1) discovers (identifies) connected available and unavailable helper servers, and then 2) sends (wirelessly signals) service requests to compatible available and unavailable helper servers. Ex. 1004, 3:44–4:8, 6:51–7:13. Thus, Zhang identifies and then wirelessly signals available devices (Zhang also identifies and then wirelessly signals unavailable devices). As such, we preliminary determine that Zhang meets the claim language “identifying one or more available devices” and “wirelessly signaling the one or more available devices.”

4. Undisputed Claim 1 Limitations: 1a, 1c, 1e, and 1f

At this stage, Patent Owner does not dispute Petitioner’s contentions regarding limitations 1a, 1c, 1e, and 1f, which are discussed briefly below.

Limitation 1a recites “using the mobile device for [the subsequent steps],” and Petitioner identifies the “mobile device” as Zhang’s mobile device (e.g., cellular phone 32). Ex. 1001, 12:62; Pet. 14 (citing Ex. 1004, 3:25–43).

Limitation 1c recites “wirelessly communicating information to an intermediate routing device connected to the LAN for indirectly routing messages or media content to at least one of the one or more available devices via said intermediate routing device.” Ex. 1001, 12:65–13:2.

Petitioner argues that limitation 1c is taught by the combination of Zhang with Fillebrown. Pet. 18. Petitioner identifies Zhang’s teaching of transmitting commands and media content from the mobile device to helper servers via a wireless network, WLAN. Pet. 16–18 (citing Ex. 1004, 3:25–60, 4:1–8, 4:32–50, 7:1–14, 8:13–22; Ex. 1003 ¶¶ 103, 104, 114–118).

Acknowledging that Zhang does not expressly teach an intermediate routing device, Petitioner identifies Fillebrown’s intermediate wireless router (wireless router 120) for providing network range extension by amplifying routed signals. *Id.* at 19–22 (citing Ex. 1005 ¶¶ 16, 34, 49, 51, 57, 61).

Petitioner contends a POSITA would have been motivated to modify Zhang to route data via an intermediate wireless router pursuant to Fillebrown to provide network range extension, and that such a modification would have had a reasonable expectation of success because Zhang and Fillebrown teach the same network setup (i.e., WLAN using a wireless protocol/standard such as IEEE 802.11 or Home RF). Pet. 22–23 (citing Ex. 1003 ¶¶ 109–111)

Limitation 1e recites “wherein the media content is originated from an external source disconnected from the LAN.” Ex. 1001, 13:6–7. Limitation 1f recites “wherein the media content selected from a group consisting of: audio content and video content.” *Id.* at 13:8–9.

Petitioner argues that limitations 1e and 1f are taught by the combination of Zhang-Fillebrown with Pasanen. Pet. 30. Petitioner states that while “Zhang does not expressly describe receiving a phone with the cellular phone,” Zhang’s cellular phone 32 is capable of receiving phone calls over a cellular phone network. Pet. 28 (citing Ex. 1001, 3:25–29; Ex. 1003 ¶ 121). Petitioner also identifies Pasanen’s phone call audio from an external cellular communication network. Pet. 31–32 (citing, e.g., Ex. 1005, 2:27–40, 4:20–37, 13:1–61, Figs. 1, 3). Petitioner further contends a POSITA would have been motivated to modify Zhang to receive media content (a phone call) originating from a disconnected, external source (a cellular communication network), as taught by Pasanen, allowing a user to participate in a cellular phone call via Zhang’s helper server (e.g., a more capable speaker and microphone). *Id.*; *id.* at 31 (citing Ex. 1003 ¶¶ 123–124). Petitioner contends such a modification would have had a reasonable expectation of success because Zhang’s cellular phone already includes hardware and programming instructions to receive cellular phone calls and to communicate with a helper server. Pet. 31 (citing Ex. 1003 ¶¶ 123–124).

At this stage, Patent Owner does not specifically contest Petitioner’s contentions with respect to limitations 1a, 1c, 1e, and 1f, and we are sufficiently persuaded that the Zhang-Fillebrown-Pasanen combination teaches each of these limitations for the reasons given by Petitioner. *See generally* Prelim. Resp.

5. Conclusion as to Claim 1

For the above reasons, we determine that Petitioner has shown, sufficiently persuasively at this stage, that the Zhang-Fillebrown-Pasanen combination teaches or suggests all the limitations of claim 1. We, therefore, determine that Petitioner is reasonably likely to prevail in showing that claim 1 is unpatentable under § 103(a) as obvious over Zhang, Fillebrown, and Pasanen.

6. Claims 5 and 6

For claims 5 and 6, which depend from claim 1, Petitioner advances arguments that map with particularity every claim limitation to teachings in Zhang, Fillebrown, and Pasanen. Pet. 32–33. At this stage in the proceeding, Patent Owner does not contest those arguments except to contend that the Zhang-Fillebrown-Pasanen combination does not teach or suggest claim 1, which we addressed above. Prelim. Resp. 7.

7. Claims 15 and 18

Independent claim 15 is an apparatus claim similar to method claim 1; claim 18 depends from claim 15. Ex. 1001, 14:4–16. Petitioner advances arguments that map with particularity every claim limitation of claims 15 and 18 to teachings in Zhang, Fillebrown, and Pasanen. Pet. 33–44.

Notably, claim 15 recites limitations 15b (“a controller adapted to identify one or more available devices . . .”) and 15d (“wherein the controller is adapted to wirelessly signaling the one or more available devices . . .”), which correspond to claim 1’s limitations 1b and 1d, discussed above. Ex. 1001, 12:63–13:5, 14:4–16. Petitioner identifies Zhang’s mobile device hardware and software, which identifies and wirelessly signals available compatible connected helper servers and/or

Petitioner identifies Pasanen’s controller 4d. Pet. 37 (citing Ex. 1004, 3:25–31, 4:35–38; Ex. 1003 ¶¶ 135–138), 43 (citing Ex. 1003 ¶¶ 147–148).

Patent Owner argues that Zhang fails to teach or suggest limitations 15b and 15d for the same reasons as limitations 1b and 1d (i.e., that identifying devices as available must occur before wirelessly signaling the available devices). Prelim Resp. 7–8. For the reasons discussed above, at this stage, we do not agree. We further note that Patent Owner’s argument based on temporal step order is inapposite because claim 15 is an apparatus claim and does not recite method steps.

IV. OTHER GROUNDS

Because Petitioner has shown a reasonable likelihood of prevailing with respect to at least one claim, we will institute on all claims and all grounds raised in the Petition. 37 C.F.R. § 42.108(a) (“When instituting . . . review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”); *see SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

For Grounds 2–4, we provide the following remarks as guidance to the parties in an effort to promote a streamlined trial.

For each additional ground, Petitioner maps with particularity every claim limitation to disclosures in the asserted prior art. Pet. 44–65.

Regarding Ground 2, Patent Owner’s main contention is with respect to independent claim 19. Prelim. Resp. 8–15. Patent Owner first argues that Zhang-Fillebrown-Pasanen-Skinner does not teach or suggest informing the user of a helper server about an availability of media content at a mobile device because “[n]one of [the four references] seeks to inform the user of a device about media content (such as a phone call) that is available for

rerouting from another device.” Prelim. Resp. 12. Rather, “any flashing or ringing at the helper device (per Skinner’s teaching) would not notify a user that media content is currently *available* at the mobile device” but rather has already been rerouted to the helper device. *Id.* at 15. Secondly, Patent Owner argues “none of the combination’s references seeks to provide the user of the secondary device with the ability to choose whether to accept, for example, a phone call to the primary (mobile) device at the secondary device.” *Id.*

The parties may wish to further explore whether a notification at the helper server, such as Skinner’s flashing light, informs a user of an availability of media content at Zhang’s mobile device. Preliminarily, we disagree with Patent Owner’s first argument because, for example, the event that triggers the flashing or ringing could be the incoming service request (rather than the incoming media content following acceptance of the service request). We also note that Zhang teaches that the mobile device retains state information. Ex. 1004, 10:48–63. When the mobile device moves, causing a change in helper servers, state information is passed to the new helper server so that it can resume providing the helper service to the data indicated in the saved state information. *Id.* Thus, it appears that Zhang’s media content remains available at the mobile device, even after the media content has been routed to the first helper server, because other helper servers are able to later obtain the media content from the mobile device. With respect to Patent Owner’s second argument, we see nothing in claim 19 that requires providing the user with the ability to choose whether to accept or decline the media content.

Regarding claims 7, 11, and 16 under Ground 2, as well as claims 8, 10, and 13 under Grounds 3 and 4, Patent Owner does not contest Petitioner’s mapping and arguments except to contend that Zhang-Fillebrown-Pasanen does not teach or suggest claims 1 or 15, which we addressed above. Prelim. Resp. 8, 15–16.

V. DISCRETION TO DENY INSTITUTION UNDER § 314(a)

A. BACKGROUND: § 314(A) AND *FINTIV*

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an *inter partes* review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review” (emphasis omitted)).

In light of the parallel district court proceeding challenging the ’648 patent, Patent Owner urges the Board to exercise our discretion to deny institution of this *inter partes* review based on the factors established in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Prelim. Resp. 16–21. Petitioner argues that the Board should decline to exercise our discretion. Pet. 65–66. For the reasons below, we decline to exercise our discretion to deny institution in this case.

An advanced state of a parallel district court proceeding is a “factor that weighs in favor of denying the Petition under § 314(a).” *NHK Spring Co. v. Intrix-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”). Specifically, an early trial date is part of a

“balanced assessment of all relevant circumstances in the case, including the merits.” Consolidated Trial Practice Guide (November 2019) 58.¹¹

In *Fintiv*, the Board explained that “cases addressing earlier trial dates as a basis for denial under *NHK* have sought to balance considerations such as system efficiency, fairness, and patent quality.” *Fintiv*, Paper 11 at 5 (footnote omitted). *Fintiv* sets forth six nonexclusive factors for determining “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.* at 6. These factors consider the following:

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.

Id. at 5–6. In evaluating these factors, we “take[] a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review.” *Id.* at 6.

The Director of the U.S. Patent and Trademark Office has issued additional guidance on the application of the *Fintiv* factors. See Katherine

¹¹ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

K. Vidal, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022) (“*Fintiv* Memo”).¹² The *Fintiv* Memo states that “to benefit the patent system and the public good, the PTAB will not rely on the *Fintiv* factors to discretionarily deny institution in view of parallel district court litigation where a petition presents compelling evidence of unpatentability.” *Id.* at 2.

We now address the parties’ arguments with respect to the *Fintiv* factors. In the analysis that follows, we first consider whether *Fintiv* factors 1–5 weigh in favor of exercising our discretion to deny institution. For the reasons discussed below, we conclude that these factors together do not favor denial of institution. As such, we do not address whether the Petition presents compelling evidence of unpatentability under factor 6.

See CommScope Techs. LLC v. Dali Wireless, Inc., IPR2022-01242, Paper 23 at 4–5 (PTAB Feb. 27, 2023) (precedential) (“In circumstances where . . . the Board’s analysis of *Fintiv* factors 1–5 favors denial of institution, the Board shall then assess compelling merits.”).

B. *FINTIV* FACTOR 1: WHETHER THE COURT GRANTED A STAY OR EVIDENCE EXISTS THAT ONE MAY BE GRANTED IF A PROCEEDING IS INSTITUTED

A district court stay of parallel litigation pending resolution of an *inter partes* review allays concerns about inefficiency and duplication of efforts, and strongly weighs against exercising our authority to deny institution. *Fintiv*, Paper 11 at 6. The parties have not indicated that a motion to stay

¹² Available at https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621_.pdf.

has been filed in the Northern District of California parallel litigation; accordingly, we weigh the first *Fintiv* factor as neutral. Prelim. Reply 1.

C. *FINTIV* FACTOR 2: PROXIMITY OF THE COURT’S TRIAL DATE TO THE BOARD’S PROJECTED STATUTORY DEADLINE FOR A FINAL WRITTEN DECISION

The *Fintiv* Memo directs the Board to “consider the median time from filing to disposition of the civil trial for the district in which the parallel litigation resides.” *Fintiv* Memo, 3 (footnote omitted).

Petitioner indicates that, because the parallel litigation was recently transferred to the Northern District of California, there is no set trial date and an initial case management conference is scheduled for April 2025,¹³ which is several months after this Decision. Prelim. Reply 1. Petitioner does not directly address median time to trial.

Because there has been a transfer and no trial date has been set, making it likely that we will issue our Final Written Decision well before trial in the parallel litigation, we weigh the second *Fintiv* factor as strongly against exercising discretion to deny institution.

D. *FINTIV* FACTOR 3: INVESTMENT IN THE PARALLEL PROCEEDING BY THE COURT AND THE PARTIES

The third *Fintiv* factor concerns the amount of investment in the parallel proceeding by the district court and the parties.

Patent Owner argues that the parties have invested significant resources in the parallel proceeding. Prelim. Resp. 18–19. According to Patent Owner, (1) Patent Owner has deposed six of Petitioner’s employees and one of Petitioner’s expert witnesses, (2) Petitioner has deposed Patent

¹³ In its Preliminary Reply, Petitioner indicated a date of April 16, 2024, but this appears to be a typographical error. See Prelim. Reply 1.

Owner's two principals, (3) the parties have extensively briefed issues relating to venue and a motion to compel discovery, (4) the parties have exchanged infringement and invalidity contentions, (5) the parties have submitted opening and reply claim construction briefs, including expert declarations (6) and the [W.D. Tex.] district court is set to conduct a claim construction hearing on November 8, 2024, which is prior to an expected Board institution decision. *Id.* at 19 (citing Exs. 2002–2007).

Conversely, Petitioner argues that the parallel proceeding “remains in a nascent stage,” and that “the investment in the co-pending proceedings is low.” Pet. 66 (citing Ex. 1018). Furthermore, Petitioner indicates that the original district court (W.D. Tex.) did not hold a claim construction hearing and that the parallel proceeding has been transferred to the Northern District of California. Prelim. Reply 1.

Although there has been some investment by the parties and the original district court, in view of the transfer, some work still remains. Therefore, we weigh the third *Fintiv* factor as neutral.

E. *FINTIV* FACTOR 4: OVERLAP BETWEEN ISSUES RAISED IN THE PETITION AND IN THE PARALLEL PROCEEDING

In the *Fintiv* Memo, the Director stated that, “[c]onsistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB.” *Fintiv* Memo, 3 (footnote omitted) (citing *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential) (“*Sotera*”)).

The Petition involves the same claims and references (i.e., Zhang, Pasanen, Fillebrown, Skinner, and Angelo) as in the parallel litigation. *See* Pet. 4; Ex. 2005; Ex. 2006. Petitioner stipulates “not to assert in the litigation (1) the Proposed Grounds of invalidity presented here nor (2) any grounds utilizing *Zhang* and *Pasanen* for the Challenged Claims, ensuring no overlap in invalidity issues between this IPR and the co-pending litigation.” Pet. 66. Patent Owner argues that Petitioner’s stipulation “falls well short of a *Sotera* stipulation.” Prelim. Resp. 20.

Although Petitioner’s stipulation does not mitigate completely the concerns of duplicative efforts between the district court and the Board and of potentially conflicting decisions, the stipulation minimizes overlap with regard to the specific grounds raised here.¹⁴ Therefore, we weigh the fourth *Fintiv* factor as against exercising discretion to deny institution.

F. *FINTIV* FACTOR 5: WHETHER THE PETITIONER AND THE DEFENDANT IN THE PARALLEL PROCEEDING ARE THE SAME PARTY

“If a petitioner is unrelated to a defendant in an earlier court proceeding, the Board has weighed this fact against exercising discretion to deny institution under *NHK*.” *Fintiv*, Paper 11 at 13–14 (footnote omitted).

Patent Owner asserts that “Apple is the defendant in the parallel district court litigation and the Petitioner in this proceeding.” Prelim. Resp. 20. Petitioner does not dispute this assertion. *See generally*,

¹⁴ *See Sand Revolution II, LLC, v. Cont’l Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 11–12, n.5 (PTAB June 16, 2020) (concerns about the degree of overlap may be mitigated where a petitioner agrees not to pursue in the parallel proceeding the grounds advanced in the petition) (informative).

Petition. As the parties are related, we do not weigh the fifth *Fintiv* factor as against exercising discretion to deny institution.

G. *FINTIV* FACTOR 6: OTHER CIRCUMSTANCES THAT IMPACT THE BOARD’S EXERCISE OF DISCRETION, INCLUDING COMPELLING MERITS

None of the first five *Fintiv* factors discussed above weigh in favor of exercising discretion to deny institution. Thus, these factors, in totality, do not favor exercising discretion to deny institution. We do not address whether Petitioner has presented compelling merits of unpatentability when, as here, our analysis of the first five *Fintiv* factors does not favor denial of institution. *CommScope Techs.*, Paper 23 at 5.

VI. CONCLUSION

We determine that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition, and we institute *inter partes* review.

Any argument not raised in a Patent Owner Response to the Petition, or as permitted in another manner during trial, shall be deemed waived even if asserted in the Preliminary Response. In addition, nothing in this Decision authorizes Petitioner to supplement information advanced in the Petition in a manner not permitted by the Board’s Rules.

VII. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of all challenged claims of the ’648 patent is instituted on all grounds of unpatentability set forth in the Petition; and

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FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(a) and 37 C.F.R. § 42.4, notice is given of institution of trial commencing on the entry date of this Decision.

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