

Patent Owner's Preliminary Response
IPR2025-00690 (U.S. Patent No. 9,402,120)

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SKULLCANDY, INC.,
Petitioner,

v.

EARIN AB,
Patent Owner.

Case IPR2025-00690
Patent 9,402,120

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION

Patent Owner Earin AB (“Patent Owner”) respectfully requests the Board deny institution of this Petition as it fails to demonstrate a reasonable likelihood that it will succeed in showing that either of the challenged claims 20 and 21 of U.S. Patent No. 9,402,120 (EX1001 or the “’120 Patent”) is unpatentable.

The Petition raises three grounds of unpatentability based on obviousness. All three suffer fatal deficiencies that preclude institution. In Ground 1, the Petition fails to demonstrate Olodort discloses or renders obvious the claimed “idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected.” For this limitation, the Petition relies solely on Olodort, pointing to its mere disclosure of a “lower power state,” but fails to demonstrate any disclosure of two connections—between the first and second wireless earbud and between the first wireless earbud and the wireless audio streaming host device—being disconnected in this “lower power state.” Moreover, the Petition’s Ground 1 also entirely neglects to address a portion of the last two limitations of claim 20, which require “attempting to reconnect with” and “initiat[ing] a pairing procedure with” both “the wireless audio streaming host device and other known wireless audio streaming host devices if applicable.”

In Ground 2, the Petition adds the Yamashita reference to the Ground 1 combination to alternatively teach the “attempting to reconnect” limitation of claim

20. But just like the references cited in Ground 1, Yamashita does not teach “attempting to reconnect with ... other known wireless audio streaming host devices.” Thus, Ground 2 fails to cure Ground 1’s deficiencies.

Finally, in Ground 3, the Petition adds the Bluetooth Spec. 4.1 document to the Grounds 1 and 2 combinations to alternatively teach the “idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected” and “attempting to reconnect with the wireless audio streaming host device and other known wireless audio streaming host devices” limitations—notably, two of the limitations that Patent Owner alleges are absent from the Petition’s Ground 1. Problematically, the Petition does not even attempt to establish a key threshold issue—that the Bluetooth Spec. 4.1 was publicly accessible such that it qualifies as a printed publication under 35 U.S.C. § 102(a). As discussed below, this alone dooms Ground 3. Further, just as with the other cited references, the Bluetooth Spec. 4.1 does not disclose or render obvious the “idle mode” or “attempting to reconnect” limitations. Accordingly, Ground 3 fares no better than Grounds 1 or 2.

For these and additional reasons detailed below, institution should be denied.

II. BACKGROUND

The '120 Patent describes systems and techniques for providing wireless audio via earbuds. EX1001, Abstract. According to the Background section of the

'120 Patent, “[i]mportant characteristics of wireless earbuds are physical size, convenience and user-friendliness, duration between battery chargings, operational reliability and, of course, the perceived acoustic quality of the streamed audio.” *Id.*, 1:20-23.

To achieve these and other characteristics, the '120 Patent describes a procedure “for automatic power preservation” in which there is “switching between idle and operational modes for a wireless earbud.” *Id.*, 9:48-49, 9:59-61. In this embodiment, “[i]n response to detecting connection [of the first wireless earbud] to a charger, the [first] earbud (e.g. earbud 10a) will enter idle mode, wherein existing connections to a second wireless earbud (e.g. earbud 10b) and to a wireless audio streaming host device (e.g. device 100) will be disconnected.” *Id.*, 10:3-7.

When the first wireless earbud is removed from the charger, “disconnection of the battery from the charger will be detected” and “the [first] wireless earbud will enter operational mode” in which “a true wireless stereo, TWS, reconnection with the second wireless earbud will be attempted.” *Id.*, 10:8-16. “If the attempt is successful, the [first] wireless earbud will be operated as a TWS audio receiver . . . in association with the second wireless earbud. Otherwise, the [first] wireless earbud will be operated as a mono wireless audio receiver.” *Id.*, 10:17-22.

In the scenario where the first wireless earbud operates as a TWS audio receiver, the procedure described in the specification determines if the first wireless

earbud is a master device,¹ and if so it then automatically attempts to reconnect to the same wireless audio streaming host device it was previously connected to prior to the entering “idle mode” and other *known* wireless audio streaming host devices. *Id.*, 10:23-32. If the reconnection is successful, the procedure ends “with a successful automatic reconnection both with the second earbud and the wireless audio streaming host device completely without any use of manual intervention by the earbud user (other than removing the earbud from the charger).” *Id.*, 10:33-39.

On the other hand, if the reconnection fails, the procedure automatically initiates a pairing procedure with that wireless audio streaming host device and other known wireless audio streaming host devices. *Id.*, 10:43-48; *see also id.*, 1:40-2:2.

As noted above, the Petition challenges claims 20-21. Claim 20 is an independent claim from which claim 21 depends. Claim 20 is directed to the above-described procedure, is illustrative for purposes of this preliminary response, and recites:

¹ Patent Owner recognizes that the master/slave terminology have largely been replaced with more neutral terminology, such as primary/secondary and central/peripheral. However, since the challenged patent uses this terminology, to avoid confusion, Patent Owner uses this terminology in this preliminary response as well.

20.[pre] A wireless earbud having an idle mode and an operational mode, the wireless earbud comprising:

[20.a] an earbud housing;

[20.b] a loudspeaker element;

[20.c] a rechargeable battery; and

[20.d] at least one main printed circuit board having disposed thereon circuitry for wireless radio communication, audio codec and earbud operation control;

[20.e] wherein the circuitry is configured for automatic power preservation by:

[20.e.1] detecting connection of said battery to a charger and in response entering the idle mode, *wherein existing connections to a second wireless earbud and to a wireless audio streaming host device **will be disconnected***; and

[20.e.2] detecting disconnection of said battery from said charger and in response entering the operational mode by:

[20.e.2.i] *attempting a true wireless stereo, TWS, **reconnection** with the second wireless earbud*;

[20.e.2.ii] *if the attempt is successful, operating the wireless earbud as a TWS audio receiver and otherwise operating the wireless earbud as a mono wireless audio receiver*;

[20.e.2.iii] if operated as a TWS audio receiver, determining whether the wireless earbud is a master device or a slave device with respect to the second wireless earbud;

[20.e.2.iv] if the wireless earbud is determined to be a master device, *attempting to reconnect with the wireless audio streaming host device and other known wireless audio streaming host devices* if applicable; and

[20.e.2.v] if reconnection with the wireless audio streaming host device fails, *initiate a pairing procedure with the wireless audio streaming host device and other known wireless audio streaming host devices* if applicable.

Id., claim 20 (emphases added).

III. PERSON OF ORDINARY SKILL IN THE ART

The Petition proposes that “[a] person of ordinary skill in the art (‘POSITA’) relevant to the ’120 Patent as of September 5, 2014—the earliest priority date claimed in connection with the ’120 Patent—would have had at least a Bachelor of Science degree in electrical or computer engineering and one or two years of experience in designing wireless audio products.” Pet., 11. For purposes of this preliminary response, Patent Owner does not dispute this definition.

IV. CLAIM CONSTRUCTION

The Petition asserts that the challenged claims should be given their plain and ordinary meanings. *Id.*, 15. For purposes of this preliminary response, Patent Owner does not dispute that the plain and ordinary meaning should apply to all claim terms and phrases.

V. THE PETITION FAILS TO SHOW A REASONABLE LIKELIHOOD OF PREVAILING ON ANY OF THE ASSERTED GROUNDS OF UNPATENTABILITY

The Petition raises three grounds of unpatentability, all of which are obviousness grounds and all of which fail to show that the challenged claims 20-21 are obvious as detailed below.

A. Ground 1: The Petition fails to show either challenged claim is obvious over the combination of Olodort and Guccione.

1. *The Petition does not show that Olodort discloses or renders obvious “[20.e.1] an idle mode, wherein existing connections to a second wireless earbud and to a wireless streaming host device will be disconnected.”*

The Petition relies solely on Olodort (EX1002) for this limitation, which is a requirement of both challenged claims. The Petition points to Olodort's “low power state” as disclosing the claimed “idle mode.” Pet., 23 (quoting EX1002, ¶55); *see also id.*, 30. However, Olodort does not teach that its “low power state” involves “existing connections to a second wireless earbud and to a wireless streaming host device [being] disconnected.” For example, Olodort does not disclose what happens

to any existing connections of a wireless earbud when it enters into the low power state:

The connection between USB interface circuitry 105 and the system 103 can be used by system 103 to cause it to enter a low power state when it determines that the USB interface, through conductors 107, has been coupled to a power source to charge battery 125. In this manner, system 103 can intelligently determine that it should be in a low power state while the battery 125 is being charged through the use of a USB port such as USB port 311 shown in FIG. 8D.

EX1002, ¶55. Thus, while Olodort teaches a generic “low power state,” it does not disclose that the “low power state” involves disconnecting an existing connection between two earbuds, or an existing connection between an earbud and a wireless audio streaming host device (e.g., a mobile phone or computer). The Petition cites no other disclosure in Olodort for the limitation.

Conceding this lack of disclosure in Olodort, the Petition claims that “[a] person of ordinary skill in the art *would understand* that the low power state of Olodort is one in which ‘existing connections to the second wireless earbud and to a wireless audio streaming host device will be disconnected’ because Olodort characterizes its lower power state as ‘a standby mode.’” Pet., 23-24 (citing EX1002, claim 38 and EX1007, ¶¶84-87) (emphasis added). The only evidence the Petition cites in support of this obviousness theory is (1) claim 38 of Olodort and (2)

paragraphs 84-87 of its expert Jeremy Cooperstock's declaration. Neither supports the Petition's theory.

First, claim 38 has nothing to do with *entering* "a standby mode," but is rather directed to *exiting* the "standby mode": "The method of claim 34, wherein the low power state is a standby mode from which the second earpiece is awakened in response to detecting that the second earpiece has been attached to an ear." EX1002, claim 38. Claim 38 contains no disclosure concerning what happens to "existing connections" when exiting, let alone entering, the "standby mode." The same is true of claim 34, the claim from which claim 38 depends, and claim 32, the independent claim from which claim 34 depends. *See id.*, claims 32 and 34.

Second, the Petition's reliance on Dr. Cooperstock's declaration at paragraphs 84-87 likewise does not support its theory. Paragraphs 84-85 of the declaration merely parrot the Petition and fail to provide any reasoning concerning why a POSA would have understood Olodort as the Petition claims. *Compare* EX1007, ¶¶84-85 *with* Pet., 23-24. The declaration merely states in conclusory fashion, and without citation or analysis, that a POSA would understand that "the low power state taught in Olodort to mean that the earpieces are disconnected from one another and from any wireless audio streaming host device." EX1007, ¶85. This conclusory statement parroting the Petition should be accorded little if any weight. *cxLoyalty, Inc. v. Maritz Holdings Inc.*, 986 F.3d 1367, 1378 (Fed. Cir. 2021) ("We do not accord

weight to conclusory expert testimony.”); *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15-17 (PTAB Aug. 24, 2022) (precedential) (denying institution and noting that the petitioner’s expert declaration “merely repeats, verbatim, the conclusory assertion for which it is offered to support ... and is entitled to little weight”), *sua sponte Director Review*, Paper 12 at 5 (PTAB Feb. 10, 2023) (affirming denial of institution and “giving little weight to Petitioner’s expert because the expert declaration merely offered conclusory assertions without underlying factual support and repeated, *verbatim*, Petitioner’s conclusory arguments”), *POP Review denied*, Paper 13 (PTAB Feb. 10, 2023).

And paragraphs 86-87 provide a *different* obviousness theory in the event the Petition’s theory fails, one based on a modification to Olodort to add “circuitry for disconnecting the earbuds from one another and from any wireless audio streaming host device when in the low power state.” EX1007, ¶86. The Board should disregard this theory because it is not in the Petition. It is well established by statute and by the Board’s regulations that it is ***the Petition*** that must lay out the Petitioner’s theories of alleged unpatentability. *See, e.g.*, 35 U.S.C. § 312(a)(3) (A petition for inter partes review “may be considered only if ... the *petition identifies*, in writing and with particularity ... the evidence that supports the grounds for challenged to each claim.”) (emphasis added); 37 C.F.R. § 42.104(b)(4) (“The *petition* must specify where each element of the claim is found in the prior art patents or printed

publications relied upon.”) (emphasis added); *Apple Inc., v. ContentGuard Holdings, Inc.*, IPR2015-00449, Paper 10 at 17 (PTAB July 15, 2015) (denying institution because, *inter alia*, the petition’s naked citations to references and an expert declaration failed to satisfy 35 U.S.C. § 312(a)(3) and 37 C.F.R. § 42.104(b)(4)). The rationale for these requirements is that “the expedited nature of IPRs bring with it an obligation for petitioners to make their case in their petitions to institute. While the Board’s requirements are strict ones, they are requirements of which petitioners are aware when they seek to institute an IPR.” *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016).

In addition, other portions of the Board’s regulations also specifically prohibit exactly what Petitioner is attempting to do here—incorporate arguments by reference from Dr. Cooperstock’s declaration into the Petition. 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another.”); *see also 3M Co. v. Evergreen Adhesives, Inc.*, 860 F. App’x 724, 727-28 (Fed. Cir. 2021) (affirming Board’s reliance on § 42.6 in its refusal to consider argument provided by way of improper incorporation by reference to testimony offered in 3M’s expert declaration); *Cisco Sys., Inc. v. C-Cation Techs., LLC*, IPR2014-00454, Paper 12 at 16-17 (PTAB Aug. 29, 2014) (informative) (in a decision denying institution, refusing, under 37 C.F.R. § 42.6(a)(3), to “consider

arguments that are not made in the Petition, but are instead incorporated by reference to the cited paragraphs and claims charts of [the expert] Declaration”).

Because the Petition fails to demonstrate Olodort discloses or renders obvious this limitation, the Petition does not show that there is a reasonable likelihood that Petitioner would prevail with respect to either challenged claim.

2. *The Petition fails to demonstrate that Olodort teaches or renders obvious “[20.e.2.i] attempting a . . . reconnection with the second wireless earbud.”*

This limitation, also a requirement of both challenged claims, requires that the first wireless earbud “attempt[s] a ... reconnection with the second wireless earbud” ***after the disconnection*** of the first and second wireless earbuds recited in limitation [20.e.1]. EX1001, claim 20, limitation [20.e.1]; *see supra* § V.A.1.

The Petition relies only on Olodort for this limitation. Pet., 24. The Petition fails to show Olodort teaches or renders obvious “reconnection with the second wireless earbud” at least because it fails to show Olodort teaches or renders obvious the preceding disconnection in the first place, as discussed immediately above in § V.A.1. The Petition cites only Olodort’s claim 52 for this “attempting a ... reconnection” element (Pet., 24, 31), which states: “[A]fter the other of the first and the second earpieces is removed from its chamber then the first and the second earpieces are automatically switched to stereo mode.” EX1002, claim 52. But as a matter of logic, any “switching to stereo mode” that occurs when one or both of

Olodort's earbuds is removed from its chamber cannot satisfy the claimed "reconnection with the second wireless earbud," which requires the *prior disconnection* recited in the challenged claim that Olodort fails to disclose.

Because the Petition fails to demonstrate Olodort discloses or renders obvious "attempting a . . . *reconnection* with the second wireless earbud" subsequent to prior *disconnection* of the earbuds from each other, the Petition cannot prevail with respect to challenged claim 20 and its dependent claim 21.

3. *The Petition fails to demonstrate that Olodort teaches or renders obvious "[20.e.2.ii] if the attempt is successful, operating the wireless earbud as a TWS audio receiver and otherwise operating the wireless earbud as a mono wireless audio receiver."*

Like the prior "attempting a ... reconnection with" limitation, this limitation occurs *after the disconnection* of the first and second wireless earbuds recited in limitation [20.e.1]. Namely, limitation [20.e.2.ii], also recited in both challenged claims, requires "operating the wireless earbud as a TWS audio receiver" if limitation [20.e.2.i]'s reconnection attempt is successful and "operating the wireless earbud as a mono wireless audio receiver" otherwise (i.e., if the reconnection attempt is not successful).

The Petition relies only on Olodort for this limitation. Pet., 24, 31-32. The Petition fails to show Olodort teaches or renders obvious this limitation at least because it fails to show Olodort teaches or renders obvious the preceding

disconnection of the earbuds from each other, and the preceding reconnection attempt, as discussed immediately above in §§ V.A.1 and V.A.2.

Moreover, even setting aside that Petition cannot establish that Olodort discloses or renders obvious any “reconnection,” the Petition fails to establish that “connection” of Olodort’s earpieces to each other is what causes the earpieces to operate in stereo mode, or that a lack of such a “connection” is what causes one of them to operate in mono mode. In its theory, the Petition relies only on claims 43, 50, and 52. Pet., 24, 31-32. Claim 43 simply discloses a first and second earpiece with respective chambers for recharging. EX1002, claim 43. And claim 50, which depends directly from claim 49 (and indirectly from claims 43, 44, 45, and 48), is similarly directed to a first and second earpiece with respective chambers for recharging, and further specifies that each of the earpieces is configured to operate in a mono mode after being removed from its chamber while the other remains in its chamber in a low power mode. *Id.*, claims 43, 44, 45, 49, and 50. And claim 52, which depends from claim 49, contains the same “mono” limitation as claim 50 and further specifies that when the other earpiece is likewise removed from its chamber, both earpieces are automatically switched to stereo mode. *Id.*, claim 52. At bottom, Olodort only discloses operating the earpieces in mono or stereo mode based on *whether the earpieces are chambered or unchambered*, not based on whether the earpieces are reconnected to each other. In contrast, limitation [20.e.2.ii] requires

operating the wireless earbud as a TWS audio receiver *if* there is a ***successful (re)connection of the first wireless earbud with the second wireless earbud*** or as a mono wireless audio receiver ***otherwise***.

Olodort does not disclose or render obvious “if the attempt is successful, operating the wireless earbud as a TWS audio receiver and otherwise operating the wireless earbud as a mono wireless audio receiver,” as required by both challenged claims. Accordingly, the Petition does not show that there is a reasonable likelihood that Petitioner would prevail with respect to either challenged claim.

4. *The Petition fails to demonstrate that Olodort or Guccione teach or render obvious “[20.e.2.iv] if the wireless earbud is determined to be a master device, attempting to reconnect with the wireless audio streaming host device and other known wireless audio streaming host devices if applicable.”*

This limitation requires “attempting to reconnect” the first wireless earbud with both (1) “the wireless audio streaming host device” to which the earbud was previously connected and (2) “***other known wireless audio streaming devices***.” Both challenged claims have this requirement.

As an initial matter, this “attempting to reconnect” occurs ***after the disconnection*** of the first wireless earbud from “the wireless audio streaming host device,” as recited in limitation [20.e.1]. The Petition fails to show that Olodort discloses or renders obvious this disconnection, and does not present any theory as to this disconnection based on Guccione (EX1003). *See supra* § V.A.1. The Petition

therefore likewise cannot establish that Olodort or Guccione, alone or in combination, discloses or renders obvious limitation [20.e.2.iv]—there can be no “attempt[] to reconnect” when there was no disconnection in the first place.

Furthermore, even setting aside that the Petition cannot establish that Olodort or Guccione discloses or renders obvious any “reconnection,” the Petition fails for the additional reason that it entirely neglects the second part of this limitation, “attempting to reconnect with ... ***other known wireless audio streaming host devices*** if applicable”—known wireless audio streaming host devices other than the specific wireless audio streaming host device to which the first wireless earbud was most recently previously connected.

The Petition purports to rely on both Olodort and Guccione for limitation [20.e.2.iv]. With respect to Olodort, the Petition cites Olodort's abstract, paragraphs 14 and 55, and claims 42, 56, and 59. Pet., 26, 32. None of these cited portions, however, teaches or suggests attempting to connect with “***other known*** wireless audio streaming host devices.” Olodort's abstract is completely silent as to any “connections” altogether, and rather discusses hardware aspects and that the earpieces can function as a master-slave system. EX1002, Abstract. Olodort's paragraph 14 similarly explains that the earpieces can function as a master-slave system. *Id.*, ¶14. And paragraph 55 teaches receiving communication signals from ***a single host device***, not ***multiple known host devices*** as required by the challenged

claims: “The system 103 can include one or more antennas 109 which are designed and configured to provide wireless connections to *a host device, such as a cellular telephone or an entertainment device*, and to also provide wireless communication to another earpiece in the wireless headset.” *Id.*, ¶55 (emphasis added).

Olodort's claims 42, 56, and 59 (and the claims from which claim 42 depends) disclose ways to configure a master-slave relationship between earpieces and different modes in which the earpieces may operate, but are completely unrelated to attempting to connect or reconnect to any wireless audio streaming host device altogether, much less multiple such host devices. *See id.*, claims 32, 34, 38-42, 56, and 59.

Recognizing that Olodort does not expressly disclose this limitation, the Petition attempts to rely on an inherent disclosure theory. The Petition claims that “[t]he successful transmission of signals between the master earpiece device and a host device . . . must inherently be preceded by an attempt at reconnection because successful reconnection cannot take place without first making an attempt to do so.” Pet., 26. The Petition does not cite any evidence in support of this inherency theory. But even if the theory were well-supported, this theory does not address the aspect of this claim limitation missing from Olodort—attempting a (re)connection with *other* known audio streaming host devices.

Recognizing Olodort's deficiencies, the Petition claims that if "Patent Owner argue[s] that Olodort's disclosure" is insufficient, that Guccione discloses this limitation. *Id.*, 28. In support of this alternative theory, the Petition cites Guccione at paragraphs 60 and 65, quoting a single part of paragraph 60: "[T]he headset is powered on and will first attempt to reconnect to the last phone used (if any)." *Id.*, 32 (quoting EX1003 ¶60); *see also id.*, 28. These paragraphs, at most, describe attempting to reconnect with **one known host device** (the last connected one) and if that "phone is out of range or not available, the headset 10 will automatically enter a discoverable state." EX1003, ¶60; *see also id.* ¶65 ("When powered on, the headset 10 will automatically reconnect to the last connected phone. If the headset 10 is on, but not connected to any devices, pressing the multifunction button 20 will establish a connection to the last connected phone.").

Thus, in these two paragraphs, Guccione teaches attempting to reconnect with a **single device**—only the last connected/used phone, not also with **other known** wireless audio streaming host devices as required by the challenged claims. Further, Guccione's teaching that the headset enters a discoverable state if the "phone is out of range or not available" (*id.*, ¶60) does not disclose attempting to **reconnect** with other **known** wireless audio streaming host devices—Guccione does not contemplate that there are other known devices aside from "the last phone used." Entering into Guccione's "discoverable state" merely teaches the earpiece becoming

available to *pair* with devices, not that it attempts to *reconnect* to any other *known* device.

At bottom, Guccione does not disclose this limitation, and the Petition presents no obviousness theory for this limitation concerning Guiccone's disclosures. The only obviousness theory the Petition presents for this limitation is that it would have allegedly been obvious to combine these irrelevant disclosures from Guiccone with Olodort. Pet., 28-29. The Petition provides no further analysis of what combining the references would teach to a POSA that they individually do not. *See id.* Thus, this "combination" does not remedy the root of the problem with Petition's theory—the Petition fails to establish that the difference between what is claimed and what Guiccone discloses would be rendered obvious by Guccione's combination with Olodort. *See Meta Platforms, Inc. v. Eight KHZ, LLC*, IPR2023-01023, Paper 51 at 19 (PTAB Jan. 6, 2025) ("Petitioner has not addressed this difference between what is claimed and what is disclosed by Pedrotti or explained why the combined teachings of [the references] would have rendered [the limitation] obvious to one of skill in the art."), *appeal docketed*, No. 25-1514 (Fed. Cir. Mar. 10, 2025).

Because the Petition fails to demonstrate Olodort or Guccione teaches or renders obvious "if the wireless earbud is determined to be a master device, attempting to reconnect with the wireless audio streaming host device and other

known wireless audio streaming host devices if applicable,” the Petition does not show that there is a reasonable likelihood that Petitioner would prevail with respect to either challenged claim.

5. *The Petition fails to demonstrate that Guccione teaches or renders obvious “[20.e.2.v] if reconnection with the wireless audio streaming host device fails, initiate a pairing procedure with the wireless audio streaming host device and other known wireless audio streaming host devices if applicable.”*

Limitation [20.e.2.v] provides what occurs in the event that reconnection of the first wireless earbud with “***the wireless audio streaming host device***” (i.e., to the host device to which the first wireless earbud was connected prior to [20.e.1]’s disconnection) fails. In that situation, the first wireless earbud then “initiates a pairing procedure with ***the wireless audio streaming host device and other known wireless audio streaming devices if applicable.***”

As an initial matter, as with the prior limitation [20.e.2.iv], the claimed “initiate a pairing procedure” occurs ***after the disconnection*** of the first wireless earbud from “the wireless audio streaming host device,” as recited in limitation [20.e.1]. The Petition fails to show that Olodort discloses or renders obvious this disconnection, and does not present any theory as to this disconnection based on Guccione (EX1003). *See supra* § V.A.1. The Petition therefore likewise cannot establish that Olodort or Guccione, alone or in combination, discloses or renders obvious limitation [20.e.2.v]—there can be no “initiat[ion of] a pairing procedure”

after a failed “attempt[] to reconnect” when there was no disconnection in the first place.

Even setting aside the absence of the preceding conditions, the Petition, relying solely on paragraph 60 of Guccione, fails to demonstrate this “initiate a pairing procedure” limitation is disclosed or rendered obvious. Pet., 26, 32-33. Rather than initiating a pairing procedure with the *same wireless audio streaming host device* to which the first wireless earbud was previously connected and a reconnection was attempted and to *other known wireless audio streaming host devices*, as discussed in the context of the prior limitation, Guccione discloses pairing only with an *unknown* device (i.e., not the “wireless audio streaming host device” or “other known audio streaming host devices”):

In order to pair the headset 10 with an AG, the headset is powered on and will first attempt to reconnect to the last phone used (if any). If the phone is out of range or not available, the headset 10 will automatically enter a discoverable state. A period of time is available to pair the headset 10 with a cell phone or PC before it enters a low power sleep mode.

EX1003, ¶60. Thus, when Guccione's headset fails to reconnect with the last phone used because that “phone is out of range or not available,” it enters a discoverable state to pair with some *unknown* “cell phone or PC,” not the last phone used or any other *known* device. Indeed, Guccione does not contemplate that there are other

known devices aside from “the last phone used.” Accordingly, Guccione fails to disclose “if reconnection with the wireless audio streaming host device fails, initiate a pairing procedure with the wireless audio streaming host device and other known wireless audio streaming host devices.” And the Petition does not present any obviousness theories concerning Guccione’s disclosures for this limitation.

Because the Petition fails to demonstrate this limitation is disclosed or rendered obvious by Guccione, the sole reference it relies upon for this limitation, the Petition cannot succeed as to claim 20 or its dependent claim 21.

B. Ground 2: The Petition fails to show the addition of Yamashita to Ground 1 renders obvious the challenged claims.

In Ground 2, the Petition combines Olodort and Guccione with Yamashita, alternatively citing Yamashita as teaching the “attempting to reconnect” limitation of claim 20, limitation [20.e.2.iv], in the event that Olodort and Guccione are insufficient. Pet., 35.

As a preliminary matter, the Petition does not attempt to address any of the other deficiencies of Ground 1’s Olodort and Guiccone combination. As detailed above, this combination fails to render obvious numerous other limitations of both challenged claims. *See supra* §§ V.A.1-3, V.A.5. Ground 2 does not present any additional argument on those limitations, instead relying on the disclosures of

Olodort and/or Guccione for them. Pet., 34. Ground 2 fails for the same reasons as explained in those cited sections.

And as detailed below, Yamashita does not disclose or render obvious the “attempting to reconnect” limitation. The Petition relies on Yamashita at paragraphs 41-42 as allegedly disclosing this limitation. *Id.*, 35. Neither of these cited paragraphs, however, discloses “attempting to reconnect with the wireless audio streaming host device *and* other known wireless audio streaming host devices.” Instead, Yamashita teaches attempting to reconnect with *the same* audio player repeatedly until successful: “At this time, the reconnection information stored in advance in the address storage unit 63 is read, and the reconnection process is repeated using *only the reconnection information* until the reconnection is successful.” EX1005, ¶42. According to Yamashita, the reconnection information is the device ID, i.e., the address of the *single* audio player to which reconnection is attempted. *Id.*, ¶41 (“the system control unit 51 reads the device ID, *which is the identification (address) information of the audio player* 10 stored in the address storage unit 64.”). Yamashita expressly teaches repeating reconnection attempts “using *only* the reconnection information” of the *same, single* audio player. Therefore, even if Yamashita could be understood as disclosing “attempting to reconnect with the wireless audio streaming host device” to which it was last connected within the meaning of the claims (which Patent Owner does not concede),

Yamashita does not disclose attempting to reconnect to “*other* known wireless audio streaming host devices,” as also required by both challenged claims.

The Petition also presents no obviousness theory as to why Yamashita's disclosures render this limitation obvious. Accordingly, the Petition also fails to demonstrate this limitation is rendered obvious by Yamashita.

Ground 2 of the Petition cannot succeed with respect to challenged claim 20 and its dependent claim 21 for the same reasons that Ground 1 fails, and because it fails to show that Yamashita remedies any of Ground 1's deficiencies.

C. Ground 3: Petitioner fails to show the addition of the Bluetooth Spec. 4.1 to Grounds 1 or 2 renders obvious the challenged claims.

In Ground 3, Petitioner alternatively cites the Bluetooth Spec. 4.1 as teaching the claimed (1) “idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected,” (Pet., 40-42), and (2) “attempting to reconnect with the wireless audio streaming host device *and* other known wireless audio streaming host devices,” (*id.*, 43-44).

As a preliminary matter, the Petition does not attempt to address any of the other deficiencies of Ground 1's Olodort and Guccione combination. As detailed above, this combination fails to render obvious numerous other limitations of both challenged claims. *See supra* §§ V.A.2-3, V.A.5. Ground 3 does not present any additional argument on those limitations, instead relying on the disclosures of

Olodort and/or Guccione for them. Pet., 39. Ground 3 fails for the same reasons as explained in those cited sections.

And as detailed below, the Petition likewise does not attempt to establish that the Bluetooth Spec. 4.1 was publicly accessible as of the priority date to qualify as a printed publication. Nor does the Petition demonstrate that the Bluetooth Spec. 4.1 teaches or renders obvious either the (1) “idle mode” or (3) “attempting to reconnect” limitations. Accordingly, Ground 3 fails to cure the deficiencies of Grounds 1 and 2, and must also fail.

1. *The Petition does not attempt to establish that the Bluetooth Spec. 4.1 was publicly accessible before the priority date to qualify as a printed publication.*

A fatal defect to the Petition is its failure to address whether the Bluetooth Spec. 4.1 was publicly accessible before the priority date such that it qualifies as a printed publication, despite the burden to so establish resting squarely on the Petitioner. *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 15 (PTAB Dec. 20, 2019) (precedential) (“[T]he burden is on the petitioner to identify with particularity evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent, and therefore that there is a reasonable likelihood that it qualifies as a printed publication.”). Moreover, “there is no presumption in favor of institution or in favor of finding a reference to be a printed publication under § 42.108(c) or any other

authority.” *Id.* A petitioner must instead demonstrate that a given reference is publicly accessible by showing “it was ‘disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can locate it.’” *First Solar, Inc. v. Sade*, IPR2023-00827, Paper 13 at 14 PTAB Nov. 16, 2023) (quoting *Kyocera Wireless Corp. v. Int’l Trade Comm’n*, 545 F.3d 1340, 1350 (Fed. Cir. 2008)).

The Board routinely denies institution where, as here, Petitioners fail to meet this threshold burden. *See, e.g., Guardian Alliance Tech., Inc. v. Miller*, IPR2020-00031, Paper 23 at 21 (PTAB Mar. 26, 2020) (denying institution because “Petitioner has not shown a reasonable likelihood that either Background Solutions or POBITS [were publicly accessible to be] prior art to the ’188 patent” and thus “has not demonstrated a reasonable likelihood that it would prevail” as to any challenged claim), *reh’g denied*, Paper 27 (PTAB July 27, 2020); *see also Sandoz Inc. v. Abbvie Biotechnology Ltd.*, IPR2018-00002, Paper 13 at 8-13 (PTAB May 3, 2018) (denying institution because the Petition failed to demonstrate that relied-on drug labels were adequately disseminated or otherwise accessible to qualify as printed publications); *First Solar*, 17-19 (denying institution because, *inter alia*, the Petition failed to adequately show that the asserted references were printed publications); *Microsoft Corp. v. Throughputer, Inc.*, IPR2023-00852, Paper 18 at 20-21 (PTAB Nov. 9, 2023) (denying institution because “Petitioner fails to show a

reasonable likelihood that [the asserted reference] qualifies as a prior art printed publication” and therefore Petitioner “has not established a reasonable likelihood that it would prevail”).

Monolithic Power Systems, Inc. v. Volterra Semiconductors LLC is instructive here. In *Monolithic Power*, the petitioner asserted that a document, referred to as “Philips,” qualified as prior art under 35 U.S.C. § 102(a). IPR2020-01351, Paper 20 at 6 (PTAB Mar. 4, 2012). Rather than present evidence of Philips’s dissemination or availability to interested persons, the petitioner argued, *inter alia*, that *components* described in Philips were widely used, and that a document cited in Philips was available, before the priority date. *Id.*, 6-7. The Board rejected these arguments because “Petitioner does not address the public accessibility of Philips at all.” *Id.*, 9. The Board further noted that failure to address public accessibility *in the petition* rendered the petition fatally flawed: “[W]ere Petitioner to attempt to cure the deficiencies of its prior art showing with respect to Philips, it would need to *impermissibly change its theory* to show the public accessibility of Philips.” *Id.*, 11 (emphases added). As a result, the Board held that “Petitioner does not establish a reasonable likelihood of prevailing in showing that Philips is prior art under 35 U.S.C. § 102(a)” and denied institution on that basis. *Id.*, 11-12.

Worse here, the Petition presents *no evidence* attempting to show that the Bluetooth Spec. 4.1 was publicly accessible as of the priority date of the challenged

patent—the Petition is *entirely silent* on this issue. *See generally* Pet., 38-45. For example, the Petition presents no evidence of the Bluetooth Spec. 4.1's dissemination or availability to interested persons. *See First Solar*, 14. The accompanying declaration of Dr. Cooperstock is similarly devoid of any such analysis. *See generally* EX1007. Moreover, as articulated in *Monolithic Power*, even if the described subject matter (here, Bluetooth 4.1 technology) was publicly available (for which the Petition presents no evidence), that is irrelevant to Petitioner's burden.

Accordingly, the Petition fails to establish that there is a reasonable likelihood that it will prevail on Ground 3 because it fails to address the threshold issue of public accessibility of one of the references involved in this combination, the Bluetooth Spec. 4.1.

2. *As with Olodort, the Petition fails to demonstrate that the Bluetooth Spec. 4.1 teaches or renders obvious “[20.e.1] . . . the idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected.”*

Setting aside that the Petition fails to establish the public accessibility of the Bluetooth Spec. 4.1, the Petition alternatively relies on this reference to teach this claim limitation, “idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected.” Pet., 38-43. The Petition cites the Bluetooth Spec. 4.1 at pages 159, 161, 163, and 172 as

teaching a “STANDBY state” *Id.*, 40. However, just like in Ground 1 above, the Bluetooth Spec. 4.1 only discloses (and the Petition only points to) a generic “STANDBY state.” The Bluetooth Spec. 4.1, just like Olodort, does not disclose that in that mode “existing connections [of a first wireless earbud] to a second wireless earbud and to a wireless audio streaming host device will be disconnected.”

For example, on Page 159, the Bluetooth Spec. 4.1 discloses three major states and nine substates: “There are three major states: STANDBY, CONNECTION, and PARK; in addition, there are nine substates, page, page scan, inquiry, inquiry scan, synchronization train, synchronization scan, master response, slave response, and inquiry response.” EX1006, 159. But there is no disclosure that such “STANDBY” state involves either of the disconnections required by this limitation, i.e., disconnection of the first wireless earbud from the second wireless earbud, and disconnection of the first wireless earbud and the wireless audio streaming host device.

The same is true of the remaining cited pages. Pet., 40. Pages 161, 163, and 172 of the Bluetooth Spec. 4.1 only disclose that no connections have been established in the “STANDBY” state, but do not disclose or suggest disconnecting existing connections when entering that state. EX1006, 161 (“In the STANDBY state, no connection has been established and the device can use all the capacity to carry out the page scan.”); *id.*, 163 (“In the STANDBY state, no connection has been

established and the device can use all the capacity to carry out the page.”); *id.*, 172 (“In the STANDBY state, no connection has been established and the device can use all the capacity to carry out the inquiry.”). Thus, the Petition fails to point to anything in the Bluetooth Spec. 4.1 that discloses the claimed “idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected.”

Petitioner also argues in the alternative that a POSA “would have been motivated by the Bluetooth® Spec. 4.1 to modify the ‘low power state’ and ‘standby mode’ taught in Olodort to be ‘idle mode[s]’ in which ‘existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected.’” Pet., 41. This argument fails for at least two reasons.

First, as to Olodort, in its discussion of Ground 1, Patent Owner has already addressed why the Petition fails to establish that a POSA would have been motivated to make this modification. *See supra* § V.A.1 (detailing how a POSA would not understand Olodort as the Petition claims, and how the Petition fails to advance its “modification” theory in the body of the Petition, as required by the Board’s regulations). The Petition provides no further reasoning or analysis on this issue in Ground 3. Pet., 41.

Second, as to the Bluetooth Spec. 4.1, the Petition likewise fails to establish that a POSA would have been motivated to modify the Bluetooth Spec. 4.1’s

STANDBY state such that connections between the first wireless earbud and the second wireless earbud, and between the first wireless earbud and the host device, would have been disconnected. The only reasoning presented in the Petition for this modification is that “the Bluetooth® Spec. 4.1 characterize[s its] relevant state as ‘standby,’” and “In the STANDBY state, no connection has been established.” Pet., 41 (citing EX1006, 161, 163, 172). But as already addressed above, these portions of the Bluetooth Spec. 4.1 do not disclose or suggest disconnecting the claimed “existing connections.” The Petition provides only conclusory attorney argument and no expert testimony on this issue, which turns heavily on what a POSA would have been motivated to do, and therefore cannot demonstrate obviousness of this limitation in view of the Bluetooth Spec. 4.1. *See, e.g., In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (“To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements.”); *Samsung Elecs. Co. v. Elm 3DS Innovations, LLC*, IPR2016-00390, Paper 64 at 51 (PTAB June 23, 2017) (holding that petition failed to meet its burden to prove obviousness of the challenged claims in part because petitioner presented only “conclusory statements,” which are “insufficient to establish that one of ordinary skill in the art would have had reason to combine the references in the manner proposed by Petitioner”).

The Petition also proposes “[i]mplementing the standby state disclosed in the Bluetooth® Spec. 4.1 . . . in the earpieces of Olodort.” Because just like Olodort, the Bluetooth Spec. 4.1 fails to disclose the claimed “idle mode” in which “existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected,” modifying Olodort with the teachings of the Bluetooth Spec. 4.1, without more, cannot cure the deficiencies of Olodort and render this limitation obvious. *Meta Platforms*, 19.

Accordingly, the Petition fails to demonstrate that the Bluetooth Spec. 4.1 in combination with Olodort² discloses or renders obvious the claimed “idle mode, wherein existing connections to a second wireless earbud and to a wireless audio streaming host device will be disconnected.”

3. *As with Olodort and Guccione, the Petition fails to establish that the Bluetooth Spec. 4.1 teaches or renders obvious “[20.-e.2.iv] . . . attempting to reconnect with the wireless audio streaming host device and other known wireless audio streaming host devices.”*

In Ground 3, the Petition alternatively relies on the Bluetooth Spec. 4.1 to teach “attempting to reconnect with the wireless audio streaming host device **and other known** wireless audio streaming host devices if applicable.” The Petition cites

² The Petition does not rely on Yamashita for this claim limitation in Ground 3. Pet., 40-42.

the Bluetooth Spec. 4.1's "STANDBY state" for this limitation, specifically that "the 'STANDBY state is' one in which 'no connection has been established.'" Pet., 43 (quoting EX1006, 161, 163, 172). The Petition then contends that "[a] person of ordinary skill in the art would have understood from this disclosure that wireless devices do not remain permanently connected to their paired host, but require reconnection at some point." *Id.* But as discussed above, the Bluetooth Spec. 4.1 does not disclose or suggest that any connections between an earbud and a host device or "paired host" are disconnected upon entering the STANDBY state. *See supra* § V.C.2.

However, even if it were true that in the Bluetooth Spec. 4.1's "STANDBY" state there is reconnection with a "paired host" (which Patent Owner does not concede), as with its Olodort theory, the Petition's Ground 3 fails because it entirely neglects the second part of this limitation, "attempting to reconnect with . . . ***other known wireless audio streaming host devices*** if applicable"—known wireless audio streaming host devices other than the specific wireless audio streaming host device to which the first wireless earbud was previously connected (here, the "paired host"). Thus, at best, the Petition's theory addresses only reconnection to ***the previously connected wireless audio streaming host device***, and not ***other known audio streaming host devices***, as required by both challenged claims.

The Petition also proposes “[i]mplementing circuitry for attempting reconnection, as disclosed in the Bluetooth® Spec. 4.1, in the earpieces of Olodort.” Pet., 43. Because just like Olodort, the Bluetooth Spec. 4.1 fails to disclose the claimed “attempt to reconnect” limitation, modifying Olodort with the teachings of the Bluetooth Spec. 4.1, without more, cannot render this limitation obvious. *Meta Platforms*, 19.

Accordingly, the Bluetooth Spec. 4.1 does not cure the deficiencies of Olodort or Guccione³ with respect to “attempting to reconnect with the wireless audio streaming host device ***and other known*** wireless audio streaming host devices if applicable.” Because the Petition fails to demonstrate that this limitation is disclosed or rendered obvious by the Bluetooth Spec. 4.1, the Petition cannot succeed as to claim 20 or its dependent claim 21.

VI. CONCLUSION

The Petition fails to establish a reasonable likelihood of prevailing on any of Grounds 1-3, and therefore, Patent Owner respectfully requests that the Board deny institution of the Petition.

³ The Petition does not rely on Yamashita for this claim limitation in Ground 3. Pet., 42-43.

Patent Owner's Preliminary Response
IPR2025-00690 (U.S. Patent No. 9,402,120)

Respectfully Submitted,

Dated: July 16, 2025

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CERTIFICATION UNDER 37 C.F.R. § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for all portions of the foregoing Patent Owner's Preliminary Response totals 7,833 words per Microsoft Word, which complies with the requirement of 14,000 words allowed under 37 C.F.R. § 42.24(d).

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CERTIFICATE OF SERVICE

As authorized by Patent Owner's Mandatory Notice, I hereby certify that on July 16, 2025, a copy of this document has been served in its entirety by electronic mail on Petitioner's lead and backup counsel.

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