

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioners,

v.

KIWI INTELLECTUAL ASSETS CORPORATION,
Patent Owner.

Case IPR2026-00164
Patent RE50,307

PATENT OWNER'S PRELIMINARY RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit No.	Description
2001	U.S. Patent Application No. 14/260,501 Prosecution History
2002	U.S. Patent Application No. 15/082,408 Prosecution History
2003	Portions of Congressional Record - Senate, S1360-94, Mar. 8, 2011
2004	Patent and Trademark Office, Notice of Proposed Rulemaking - Revision to Rules of Practice before the Patent Trial and Appeal Board, https://federalregister.gov/d/2025-19580 , Oct. 17, 2025
2005	Docket Control Order, <i>KIWI Intellectual Assets Corp. v. Samsung Electronics Co., Ltd. et al.</i> , 2:25-cv-00811-JRG (E.D. Tex.) (ECF No. 31)
2006	'307 PATENT CLAIM LANGUAGE SUMMARY TABLE (Demonstrative Exhibit)
2007	Reserved

Pursuant to 37 C.F.R. § 42.107, Patent Owner KIWI Intellectual Assets Corporation (“Patent Owner” or “KIWI”) files this preliminary response to the Petition, setting forth reasons why the Petition for *inter partes* review (“IPR”) of claims 34-120 and 130-35 of U.S. Patent No. RE50,307 (the “’307 patent”), as requested by Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (“Petitioners” or “Samsung”), should be denied on the merits.¹

I. INTRODUCTION

The Petition challenges claims 34-120 and 130-35 of the ’307 patent based on seven grounds, five of which Petitioners attribute to PO’s claim interpretations (Grounds 1-3, 6, and 7) and two grounds that Petitioners attribute to Petitioners’ or PO’s claim interpretations (Grounds 4 and 5). *See* Pet., 1-2. Each of these Grounds is wrong in a manner that does not depend on the disputed claim constructions.

Each challenged independent claim is directed to a socket that allows a plug to be inserted two different ways, which the claims refer to as the plug being either normally inserted or oppositely inserted (*e.g.*, with the plug able to be inserted

¹ By submitting this Preliminary Response, no waiver of any argument is intended by Patent Owner. Patent Owner will have a right to file a complete response to the Petition, should the Board institute *inter partes* review. 37 C.F.R. § 42.120(a).

either right-side up or upside down).² Inside the claimed socket, there are two sets of contacts on opposite sides of a tongue. Outside the socket, two sets of pins, each electrically connected to a contact of the set of contacts on opposite sides of the tongue, extend out of a base. For example, claim 34 recites “each of the first contacts is electrically connected to a respective first pin extending out of the plastic base” and “each of the second contacts is electrically connected to a respective second pin extending out of the plastic base.” The other independent claims include similar features.

The Petition contains numerous flaws. First, Petitioners' improper and unsupported claim construction positions should result in denial of the Petition. As explained in Section III below, Petitioners adopt inconsistent claim construction positions for purposes of infringement and invalidity.

Further, as explained in Section IV below, each Ground in the Petition fails. Andre is the primary reference for Petitioners' first set of challenges, Grounds 1-3, but Andre lacks the claimed arrangement of contacts and pins, particularly as only

² It should be understood that the terms “right-side up” or “upside down” are used here, like the use of “normal” and “opposite” in the claims, as convenient but arbitrary ways to explain the two possible insertion orientations for a plug into a bidirectional socket. A socket and plug combination that allows two possible insertion orientations obviates the notion of a “correct” orientation.

one pin per set of two upper and lower contacts extends out of Andre's base.

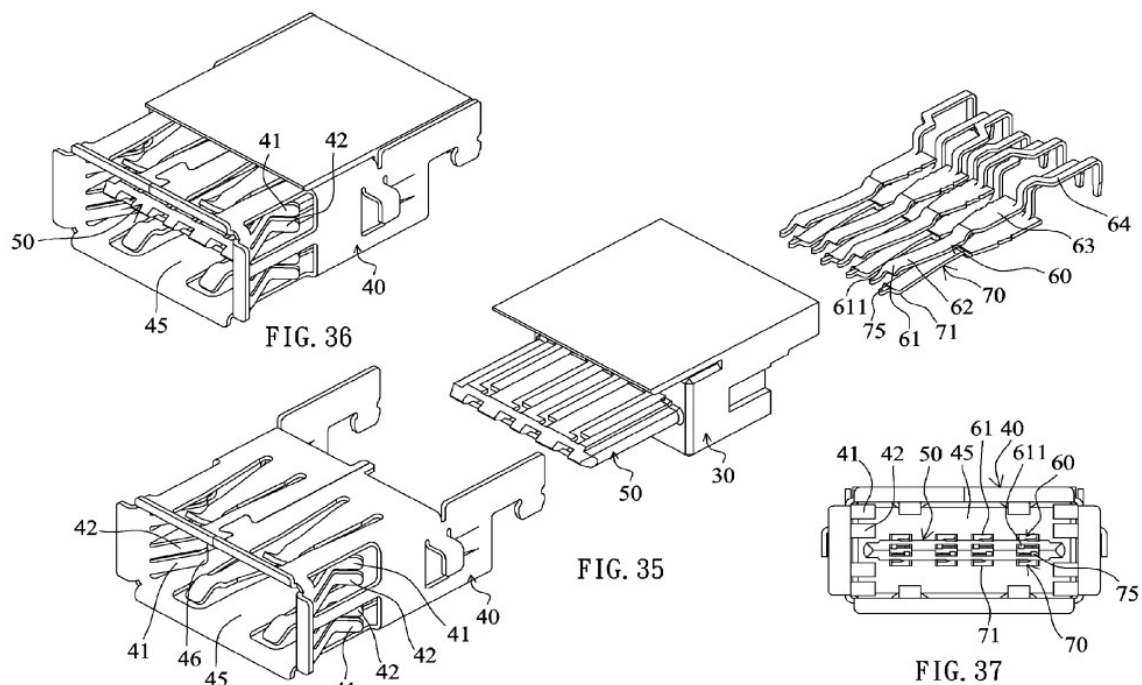
Petitioners' attempt to remedy that deficiency is based not on patents and printed publications, but on an expert's hindsight reconstruction of the claims. Lufan is the primary reference for Petitioner's second set of challenges, Grounds 4-7, but Lufan also fails to show the claimed arrangement of contacts and pins. In these challenges, Petitioners seek to remedy the deficiencies of Lufan with an additional reference, Yuming, which describes a socket having a defined orientation (not one that allows both right-side-up and upside-down connections as claimed). But Petitioners' motivation for making such modifications is completely absent. Rather, Petitioners' justification for modifying the references is an allegation that the references are "similar." The similarity of references, however, fails as a matter of law to establish the necessary motivation to combine the references. Thus, once again, Petitioners' purported combination relies purely on hindsight reconstruction to recreate the claimed invention.

For these reasons, as explained in more detail below, the Petition should be rejected on the merits, and no *inter partes* review should be granted.

II. THE '307 PATENT

The '307 patent is entitled, "Socket Structure with Duplex Electrical Connection," and discloses and claims various embodiments of an electrical connector. Importantly, the connector of the '307 patent allows for a

corresponding plug to be inserted into the connector either right-side up, *i.e.*, normally, or upside-down, *i.e.*, oppositely. *See, e.g.*, '307 patent, 10:57-60. Also, as shown, for example, in Figs. 35-37 (reproduced below), the electrical connector includes a tongue 50 with rows of contact terminals (60, 70), where each contact of the terminals (61, 71) connects to a respective pin (64) extending out of its base 30 ('307 patent, 10:57-11:23).



The Petition challenges 22 independent claims of the '307 patent (claims 34, 56, 67, 78, 88, 98, 108, 110, 112, 114, 115, 116, 117, 118, 119, 120, 130, 131, 132, 133, 134, and 135). Independent claim 34 recites in full:

1. **34[pre]**³ 34. A socket structure with duplex electrical connection, the socket structure comprising:

34[a] a plastic base;

34[b] a connection slot, which is disposed in front of the plastic base and configured to be connected to a plug having at least one row of connection terminals;

34[c] a tongue, which has a first surface with grooves, and a second surface with grooves, the second surface disposed opposite the first surface, **34[d]** the tongue being disposed on one end of the plastic base and within the connection slot, such that chambers of the connection slot on two sides of the tongue allow the plug to be normally and oppositely inserted and positioned into the connection slot;

34[e] at least one row of first contacts separately arranged on the first surface of the tongue, wherein **34[f]** *each of the first contacts is electrically connected to a respective first pin extending out of the plastic base*; and

34[g] at least one row of second contacts separately arranged on the second surface of the tongue, wherein:

34[h] *each of the second contacts is electrically connected to a respective second pin extending out of the plastic base*;

34[i] the socket structure is operative to simultaneously electrically connect via the first and second contacts;

³ The bolded designations added before the preamble and each claim element correspond to Petitioner's designations as set forth in the Petition.

34[j] the at least one row of first contacts has a functional reverse mirror configuration relative to the at least one row of second contacts, and the socket structure is thereby configured for two separate operational states:

34[k] *a first operational state when the plug is normally inserted into the connection slot* with the at least one row of connection terminals of the plug facing the second surface of the tongue, the at least one row of connection terminals of the plug are electrically connected to the at least one row of second contacts and

34[l] the tongue is disposed within the connection slot, wherein the connection slot is symmetric with symmetric up and down chambers, and symmetric left and right chambers around the tongue; and

34[m] *a second operational state when the plug is oppositely inserted into the connection slot* with the at least one row of connection terminals of the plug facing the first surface of the tongue, the at least one row of connection terminals of the plug are electrically connected to the at least one row of first contacts, and

34[n] the tongue is disposed within the connection slot, wherein the connection slot is symmetric with symmetric up and down chambers, and symmetric left and right chambers around the tongue.

'307 patent, claim 34 (emphasis added in bold and italics text)

Similarly, every other challenged independent claim recites limitations concerning sets of pins (a first pin and a second pin) and normal or opposite insertion of a plug like those highlighted in claim 34. *See* Ex. 2006.

III. CLAIM CONSTRUCTION

Petitioners' improper and unsupported claim construction positions require denial. Under 37 C.F.R. § 42.104(b)(3), a petitioner is required to identify how the challenged claims should be construed. Petitioners must "choose a single claim construction that best captures the true meaning of the patent claim." *Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.*, IPR2025-00632, Paper 20, 4 (Director Nov. 3, 2025) (precedential) (quoting *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340, at 51,350). But here, Petitioners set forth their proposed constructions and then adopt a *different* construction for purposes of arguing the challenged claims are invalid. This is improper. And even if it wasn't, the Petition also fails to properly support the proposed constructions. For at least these reasons, the Petition should be denied.

A. Grounds 1-3 and 6-7

Petitioners have failed to show a reasonable likelihood that they will prevail on Grounds 1-3 and 6-7 at least because these grounds fail to comply with the requirements of 37 C.F.R. § 42.104(b)(3).

Petitioners assert constructions for three groups of terms: the "simultaneously electrically connect terms," the "duplex electrical connection terms," and the "functional reverse mirror/reverse mirror terms." Pet., 4-5.

Petitioners assert that the first two sets of terms require “a dual-slot so that two plugs may be simultaneously connected thereto.” *Id.*, 5. Petitioners further assert that the third set of terms require that a socket's tongue have “identical predetermined sequences of contact functions on both sides, in reverse order.” *Id.* Petitioners intend to assert these constructions in parallel litigation.

But rather than applying these constructions, Petitioners adopt a different construction for purposes of showing invalidity. *Id.* (describing Patent Owner's anticipated constructions). Petitioners then apply Patent Owner's anticipated constructions to all Grounds. *Id.*, 1-2. Indeed, Petitioners are clear that they only contend that Grounds 1-3 and 6-7 invalidate the claims under Patent Owner's constructions. *See, e.g., id.*, 1-2, 11, 99, 103; EX1003 at ¶¶ 119, 233, 418.

Petitioners do not comply with Rule 42.104(b)(3) where they adopt inconsistent claim construction positions for purposes of infringement and invalidity. *Revvo Techs.*, IPR2025-00632, Paper 20, 5 (“[T]he Board erred when it determined that Petitioner complied with Rule 42.104(b)(3) by proposing Patent Owner's district court constructions.”). There is a narrow exception to this general rule when Petitioners properly explain why different positions were warranted. *Id.*, 3-4. Here, Petitioners state only that the district court may not adopt their proposed constructions. *Pet.*, 6. But the Director has already explained that this is not a

sufficient excuse. *Revvo Techs., Inc. v. Cerebrum Sensor Techs., Inc.*, IPR2025-00632, Paper 36, 4 (Director Jan. 26, 2026).

Accordingly, the Petition should be rejected for failure to comply with Rule 42.104(b)(3). The Board has previously characterized this issue as “dispositive.” *Orca Sec. Ltd. v. Wiz, Inc.*, IPR2025-01086, Paper 13, 9 n.4 (PTAB Dec. 15, 2025). Indeed, the Board has even rejected grounds based on inconsistent claim construction positions at the final written decision stage. *See, e.g., BOE Tech. Grp. Co. v. 138 East LCD Advancements Ltd.*, IPR2024-00973, Paper 35, 64 (PTAB Dec. 1, 2025).

In addition, Petitioners are scheduled to serve their invalidity contentions in the district court on the same day this Preliminary Response is being filed. To the extent that Petitioners contend that the claims and/or claim terms are indefinite in district court, that would further demonstrate Petitioners' failure to comply with Rule 42.104(b)(3).⁴ *See Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00340, Paper 18, 3-4 (Director Nov. 5, 2025) (informative).

⁴ Given the near-simultaneous nature of when Petitioners' Invalidity Contentions are due to Patent Owner, Patent Owner expects to submit Petitioners' Invalidity Contentions as Exhibit 2007, if necessary, along with updated mandatory notices, as supplemental material in support of this Preliminary Response.

Furthermore, the Petition does not demonstrate a reasonable likelihood of prevailing on the merits at least because the underlying claim construction is not properly supported.

Rule 42.104(b)(3) does not merely require a petitioner to state the construction; rather, a petitioner is required to “explain, in detail, how the challenged claim is to be construed with supporting factual and legal analysis.” *Duo Sec., Inc. v. Strikeforce Techs., Inc.*, IPR2017-01064, Paper 7, 8 (PTAB Oct. 16, 2017) (denying institution based on improperly supported claim construction under 37 C.F.R. 42.22 and 42.104).

Grounds 1-3 and 6-7 are premised on Patent Owner's “anticipate[d]” constructions. Pet., 5. To support these constructions, Petitioners merely identify what they anticipate Patent Owner will interpret the claims to cover, rather than construing these terms, and then provide unexplained citations to various pages of an exhibit. The Board has previously found such an approach insufficient. *See BOE Tech. Grp.*, IPR2024-00973, Paper 35, 62 (“We decline Petitioner's invitation to sift through this evidence without any guiding arguments to determine whether, or why, it supports Petitioner's contentions.”). Indeed, given that Petitioners apparently disagree with Patent Owner's interpretations, it is not surprising that they do not even attempt to support them. *See Ford Motor Co. v. Mass. Inst. Of Tech.*, IPR2020-00013, Paper 9, 14 (PTAB Mar. 26, 2020) (finding no reasonable

likelihood of prevailing where petitioner “opted to avoid advocating before us that its adopted construction is the proper one and [did not point] to evidence supporting that construction”).

For these reasons, Petitioners have failed to demonstrate a reasonable likelihood of prevailing on Grounds 1-3 and 6-7.

B. Grounds 4-5

Grounds 4-5 are based on both Petitioners' and Patent Owner's anticipated constructions. Pet., 6. These grounds also fail from the outset.

Initially, to the extent Grounds 4-5 are based on Patent Owner's anticipated constructions, they fail for the same reasons as addressed above in connection with Grounds 1-3 and 6-7. *See* §III.A, *supra*. And to the extent that Petitioners allege indefiniteness in district court, that would require denial for Grounds 4-5 regardless of how the relevant terms are construed.

Petitioners have also failed to properly support their chosen construction. Instead, the Petition merely states the proposed construction and points to unexplained citations. This falls short of meeting the Board's requirements. *See Duo Sec.*, IPR2017-01064, Paper 7, 8 (explaining that petition must provide “supporting factual and legal analysis”).

For the first two sets of terms, for example, Petitioners allege that the construction is based on “applicants' [sic] disclaimer.” Pet., 5. But Petitioners do

not identify how they believe the applicant disclaimed any subject matter; rather, they cite to their own discussion of the challenged patent and the prosecution history. *Id.* But what, for example, are Petitioners relying on as “mak[ing] clear that the invention does not include a particular feature”? *See Pacing Techs., LLC v. Garmin Int’l, Inc.*, 778 F.3d 1021, 1024 (Fed. Cir. 2015). Petitioners leave that for the Board and the Patent Owner to determine for themselves. This failure is particularly relevant because Petitioners bear the burden of establishing disclaimer. *See, e.g., TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1064 (Fed. Cir. 2016); *see also Shure Inc. v. Clearone, Inc.*, IPR2017-01785, Paper 91, 12 (PTAB Jan. 24, 2019) (finding party failed to meet burden for disclaimer where it did not “adequately explain the relationship” between the construction and the identified evidence).

For the third set of terms, Petitioners allege that their construction is based on “applicants’ [sic] lexicography.” Pet., 5. But this is supported only by a citation to thirty-six lines of the specification that are explained only by a single parenthetical: “defining ‘functional reverse mirror’ in terms of two identical USB2.0 interfaces in reverse order.” *Id.* Where in these thirty-six lines did the patentee “clearly set forth a definition of the disputed claim term” and “clearly express an intent to define the term” in the manner Petitioners allege? *See Philip Morris Prods., S.A. v. RAI Strategic Holdings, Inc.*, IPR2020-01094, Paper 29, 11

(PTAB Jan. 11, 2022) (quoting *GE Lighting Sols., LLC v. AgiLight, Inc.*, 750 F.3d 1304, 1309 (Fed. Cir. 2014)). Petitioners again leave it for the Board and the Patent Owner to figure it out in evaluating and responding to the Petition. And even if this were sufficient to support Petitioners' construction of "functional reverse mirror," it fails to even attempt to explain why the same construction would apply to the separate term "reverse mirror." See *DR Burton Healthcare LLC v. Trudell Medical Int'l*, IPR2018-01025, Paper 9, 18 (PTAB Nov. 29, 2018) (finding no reasonable likelihood of prevailing based on "Petition's failure to persuasively analyze the differences between the two terms").

Petitioners' failure to properly support their claim construction positions requires denial of the Petition. See *Samsung Electronics Am., Inc. v. Cobblestone Wireless, LLC*, IPR2024-00319, Paper 16, 20 (PTAB Jun. 24, 2024) ("Where a petitioner specifically relies on a particular construction of a claim term in order to demonstrate unpatentability . . . that claim construction is part of the unpatentability analysis, and the petitioner must provide a sufficient basis to support that construction.").

While these issues standing alone would be enough to deny the Petition, the Board can also deny institution for reasons unrelated to these terms. In particular, the Board need only consider the plain and ordinary meaning of other terms to find Petitioners' challenges to be without merit. Accordingly, without waiving its right

to address claim construction more fully in a Patent Owner Response, Patent Owner shows in Section IV that the Petition fails to establish the presence or obviousness of every claimed element found in each independent claim.

IV. PETITIONERS' CHALLENGES FAIL ON THE MERITS

A. The Petition Improperly Attempts to Incorporate External Materials by Reference to Its Petition

As an initial matter, throughout the 106-page Petition, Petitioners cite to and improperly rely upon its voluminous expert declaration, Ex. 1003. That Declaration (Ex. 1003) spans 278 pages and is conservatively estimated to exceed 60,000 words. Thus, the incorporation of such a declaration is improper for a variety of reasons, including that it fails to provide notice of Petitioners' theories, it completely upends the type-volume limitations on a Petition, and it is an improper incorporation by reference. *See* 37 C.F.R. § 42.6(a)(3) ("Arguments must not be incorporated by reference from one document into another document.").

To that end, Patent Owner will address the theories presented in the Petition, but will also point out selected instances in the Declaration that highlight the deficiencies of Petitioners' challenges.

B. Petitioners' Challenges Fail

As will be explained below, none of Petitioners' theories show the disclosure or obviousness of the "pin" limitations for the claimed socket recited in claim 34, and Petitioners rely upon this incorrect analysis for each of their

challenges of the independent claim. As such, Petitioners' theories fail entirely. Patent Owner will step through each of the Grounds recited in the Petition in turn below.

1. Ground 1 Based on Andre

Petitioners' Ground 1 alleges that claims 34-39, 41-65, 67-75, 78-86, 88-96, 98-106, 114-120, 130-135 are rendered obvious based on Andre.⁵

As noted above, the socket recited in each independent claim of the '307 patent requires two sets of contacts on opposite sides of a tongue and two sets of pins, with a first pin electrically connected to a first contact and a second pin connected to a second contact. *See, e.g.*, Ex. 2006 (reproducing claimed elements for each independent claim challenged in the Petition). For example, with regard to the contacts, element 34[e] recites "at least one row of ***first contacts*** separately arranged on the ***first surface*** of the tongue" and element 34[g] recites "at least one row of ***second contacts*** separately arranged on the ***second surface*** of the tongue." '307 patent, claim 34 (emphasis added). With regard to the pins, element 34[f] recites "each of the ***first contacts*** is electrically connected to a respective ***first pin*** extending out of the plastic base" and 34[h] recites "each of the ***second contacts*** is electrically connected to a respective ***second pin*** extending out of the plastic base." '307 patent, claim 34. Similarly, every other challenged independent claim recites

⁵ Ex. 1005, U.S. Patent No. 7,094,089 ("Andre").

limitations concerning a first pin and second pin, along with the capability for normal or opposite insertion of a plug like those highlighted in claim 34.

In contrast, primary prior art reference Andre only has a single pin per set of opposite contacts. As shown in Fig. 4A of Andre (reproduced below), Andre discloses a receptacle 202:

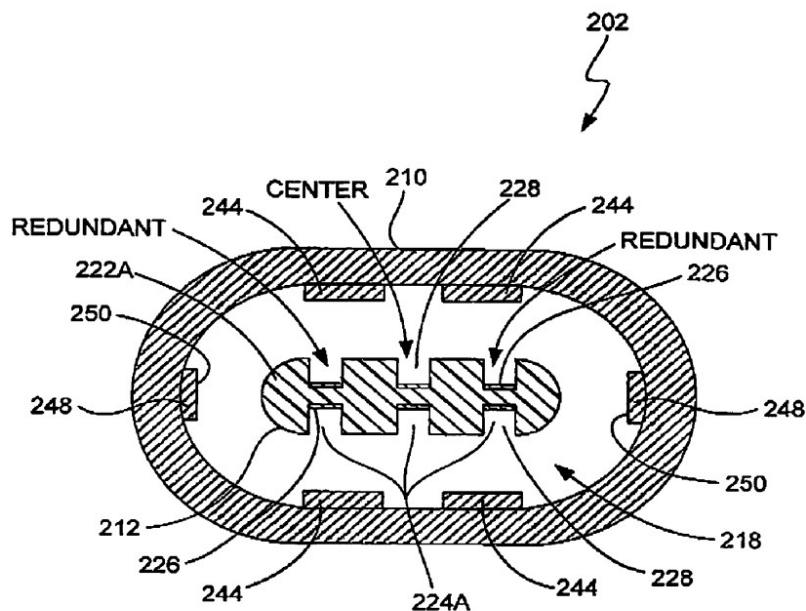
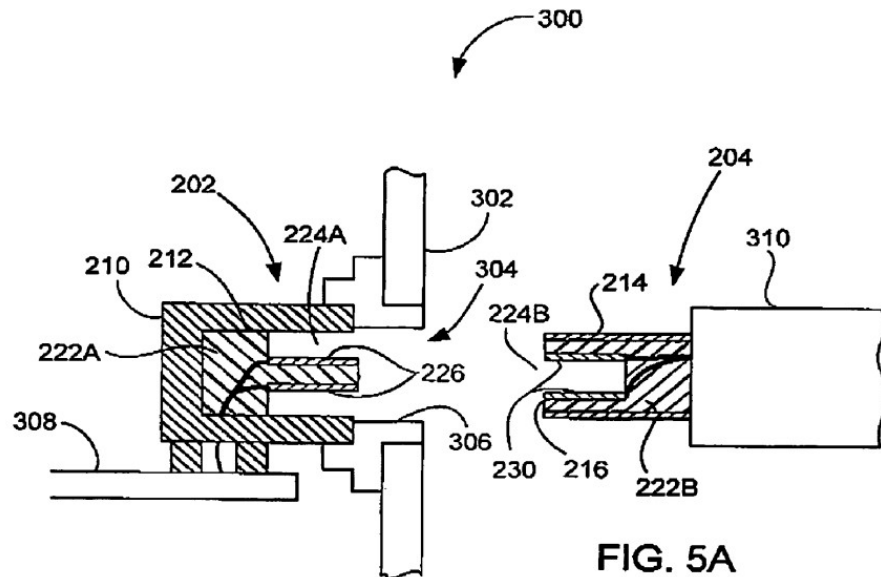


FIG. 4A

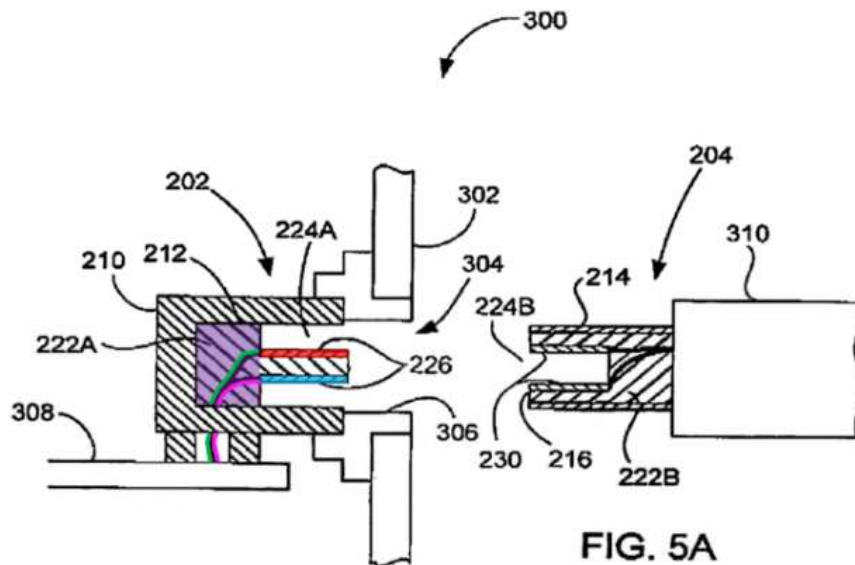
Andre explains that, in receptacle 202, a respective contact 224A includes an upper contact pad and a lower contact pad separated by insulating member 222A. Andre, 9:45-47. Importantly, Andre teaches a POSITA that “[t]he upper contact pad is connected to the lower contact pad.” Andre, 9:51-52 (“proximally, distally or somewhere in between”). Being so connected, Andre makes clear that “[e]ach set of contact pads (upper/lower) is connected to a separate terminal or post.” Andre, 9:53-56.

Fig. 5A of Andre (reproduced below) depicts this structure where a set of upper/lower contact pads share a single pin extending from base 222A:



The Petition's initial annotation of Fig. 5A (Pet., 18) (reproduced below) suggests with green highlighting that a pin corresponds to an upper contact pad 226 by extending the highlighting only from the pin to the upper contact pad:

5A of Andre that includes two pins highlighted in green and pink extending from base 222A (reproduced below):



EX1005, Fig. 5A (modified).

Pet., 21; *see also* Ex. 1003, ¶147.

The Petition's justification for modifying Andre is not found in any patent or printed publication. Rather, in violation of 35 U.S.C. § 311, Petitioners use their expert to suggest Andre has a "redundancy" problem and then proposes to solve that problem through only expert testimony. Violating the law of obviousness, the expert's theory is based on an impermissible attempt to recreate the claims of the '307 patent.

Moreover, the expert's redundancy theory is entirely conclusory and substitutes Andre's teachings with hindsight reasoning. Andre discloses:

The upper contact pad is connected to the lower contact pad. This may be done proximally, distally or somewhere in between. Each set of contact pads (upper/lower) is connected to a separate terminal or post, each of which is capable of being electrically connected to a PCB.

Andre, 9:51-56. Thus, Andre explicitly explains “[e]ach *set* of contact pads (upper/lower) is *connected* to a *separate* terminal or post,” Andre, 9:53-56, and leaves open where that connection can take place in the socket housing, stating the connection “may be done proximally, distally or somewhere in between.” Andre, 9:52-53.

Petitioners nevertheless propose that opposite contact pads of Andre still be “connected”—not within the housing as Andre teaches—but in a PCB that the housing connects to. Pet., 21 (“moving the connection between two wires to a location outside of the housing”). But as seen above, a POSITA would understand that when Andre discusses “proximally, distally, or somewhere in between,” Andre is discussing the connection prior to “[e]ach *set* of contact pads (upper/lower) [being] *connected* to a *separate* terminal or post.” Thus, it is a complete misreading of Andre for Petitioners to suggest that Andre’s discussion of “proximally, distally, or somewhere in between” extends beyond the terminal or post, outside the housing, and onto a PCB.

Accordingly, a POSITA would not find Andre to disclose or suggest the limitations of the “pin” elements 34[f] and 34[h] of claim 34.

Further, the Petition relies on its analysis of claim 34 for the remainder of the independent claims challenged in Ground 1, either directly or through a chain of incorporation. *See* Pet., 39 (alleging “[c]laim 56 is substantially the same as claim 34 except ... [listing elements] These differences do not change the invalidity analysis described for claim 34”); Pet., 42 (alleging “[c]laim 67 is substantially the same as claim 34, except ... [listing elements] These differences do not change the invalidity analysis described for claims 34 and 62”); Pet., 43 (alleging “[c]laim 78 is substantially identical to claim 67, except ... [listing elements] Andre discloses these limitations, as already described for **claims 34**, 39, 67, 70”) (emphasis added); Pet., 43 (alleging “[c]laims 88-96 are substantially identical to claims 78-86 but without “metal housing” and are invalid for the same reasons” [claim 78 incorporated the analysis of claim 34]); Pet., 44 (alleging “[c]laims 98-106 are substantially identical to claim 88-96 but without limiting the number of contacts and reciting “functional” in 98[j], and invalid for the same reasons”); Pet., 44 (alleging “[c]laim 114 is substantially the same as claim 98 but without ‘grooves’ and is invalid for the same reasons” and “[c]laims 115, 117-120 are invalid for the reasons explained for claim 114”); Pet., 45 (alleging “[c]laims 130 and 133 are invalid because they are substantially the same

as claim 34” and “[c]laims 131-132, 134-135 are invalid because they are substantially the same as claim 34”).

2. Ground 2 Based on Andre and Lufan

Petitioners’ Ground 2 alleges that claims 34-120 and 130-135 are rendered obvious based on Andre in view of Lufan.⁶ Pet., 52. The Petition initially relies on its analysis of Andre from Ground 1 in this second challenge. Pet., 52 (“**34[pre], 34[a]-34[i], 34[k]-34[n]**: ... The Andre-Lufan-Socket adopts these features of Andre, §VII.B.i, and discloses these limitations for the reasons described for Ground 1.”) Accordingly, Ground 2 fails for the same reasons as stated above for Ground 1.

Further, the Petition relies on its analysis of claim 34 for the remainder of the independent claims challenged in Ground 2, either directly or through a chain of incorporation. *See* Pet., 53 (alleging “Andre and Lufan therefore render claim 56 invalid for the reasons described in claim 34”); Pet., 54 (alleging “[c]laim 67 is substantially the same as claim 34, and the differences do not change the invalidity analysis described for claim 34”); Pet., 55 (alleging “[c]laim 78 is substantially the same as claim 67 ... and the Andre-Lufan-Socket discloses those limitations, as described for *claims 34, 39, 67, 70*”) (emphasis added); Pet., 56 (alleging “[c]laims 88-96 are substantially the same as claims 78-86 ... and are invalid for the same

⁶ Ex. 1007, Translation of Chinese Patent No. CN201113094Y (“Lufan”).

reasons” [claim 78 incorporated the analysis of claim 34]); Pet., 56 (alleging “[c]laims 98-107 are substantially the same as claim 88-97 ... and invalid for the same reasons”); Pet., 56 (alleging “Claim[s] 108-109 are substantially the same as claims 98 and 57, except add the limitations of claims 35, 39, 40, 42, 43, and 61, all of which are disclosed by the Andre-Lufan-Socket. ... Claims 110-111 are invalid for the same reasons as 108, 56-57, 63-64, and Claims 112 and 113 are invalid for the same reasons as claims 110-111 and 36”); Pet., 57 (“[c]laim 114 is substantially the same as claim 98 but without ‘grooves’ and is invalid for the same reasons” and “[c]laims 115, 117-120 are invalid for the same reasons as claim 114” and “[c]laim 116 is invalid for the same reasons as claim 98”); Pet., 57 (alleging “[c]laims 130-135 are invalid because they are substantially the same as claim 34”).

3. Ground 3 Based on Andre, Lufan, and USB 3.0

Petitioners’ Ground 3 alleges claims 34-120 and 130-135 are rendered obvious based on Andre in view of Lufan and USB 3.0.⁷ While Ground 3 notably does not dedicate space to addressing each individual claim listed in the challenge of Ground 3, including claim 34 (Pet., 58-60), Ground 3 is best understood to rely

⁷ Ex. 1015, USB Implementers Forum, Inc., Universal Serial Bus 3.0 Specification, rev. 1.0 (Nov. 12, 2008) (“USB3.0”).

on the analysis of Grounds 1 and 2 for the challenged independent claims, and therefore fails for the same reasons as Grounds 1 and 2.

4. Ground 4 Based on Lufan, Yuming, and Lee

Petitioners’ Ground 4 alleges claims 34-51, 53-96, 98-106, 108-114, 117-120, 130-135 are rendered obvious based on Lufan in view of Yuming⁸ and Lee.⁹

Lufan discloses a socket that allows a user to place a USB device into a socket without regard to the orientation of the plug. Lufan, 1 at [57] (enabling the USB plug to be inserted in two orientations). As with the Andre reference used in Grounds 1-3, Lufan discloses redundant connections on opposite sides of a tongue in the socket.

In Ground 4, Petitioners seek to redesign Lufan’s socket by including structures from Yuming, which the Petition refers to as “known details.” But the Petition provides no articulated reason for combining the references and merely provides a bare conclusion that Lufan and Yuming should be combined because of their “similarities.” Pet., 62 (“In view of these *similarities*, a POSITA would have been motivated to implement Lufan with the details of Yuming.”) (emphasis added). Similarities in the references, however, do not adequately provide a motivation to combine. *See William Wesley Carnes, Sr., Inc. v. Seaboard*

⁸ EX1008, Translation of Chinese Patent No. CN201204344Y (“Yuming”).

⁹ Ex. 1010, U.S. Patent No. 6,854,984 (“Lee”).

International Inc., IPR2019-00133, Paper 10, 18 (PTAB May 8, 2019) (noting a “statement of similarity, however, does not constitute an articulated reasoning with rational underpinning as to why a POSITA would combine elements of one reference with another, and why a POSITA would modify the teachings of the references to arrive at the claimed invention.”)

Petitioners’ expert fares no better, parroting the Petition in conclusory fashion, and providing no articulated reasoning with rational underpinning for the combination. Ex. 1003, ¶321 (“In view of these similarities, a POSITA would have been motivated to implement Lufan with the details of Yuming.”). *See Xerox Corp. v. Bytemark*, IPR2022-00624, Paper 9, 16 (PTAB Aug. 24, 2022) (precedential) (noting the declaration offered “only a *verbatim* restatement of the assertion being supported, without any supporting evidence or technical reasoning”). Absent from the Petition or Petitioners’ expert declaration is any reason a person of ordinary skill in the art would have been motivated to make the combination. “Thus, the cited declaration testimony is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight.” *Id.*, 15 (citing 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”)).

Moreover, Petitioners ignore Andre's teachings concerning how a POSITA would implement a socket that does not depend on the orientation of the plug. *See In re Winslow*, 365 F.2d 1017, 1020 (C.C.P.A. 1966) ("first picture the inventor as working in his shop with the prior art references—which he is presumed to know—hanging on the walls around him"). A POSITA thinking about a more definite version of Lufan's orientation-agnostic socket would look to teachings about another orientation-agnostic sockets, such as that in Andre, and would have no reason to look to teachings about orientation-dependent sockets, such as Yuming. Further dissuading a POSITA from combining Lufan with Yuming, the advantages Yuming expressly provides are not consistent with Lufan's disclosure of redundant contacts on the tongue of a socket. In particular, Yuming's socket has a goal of "maximizing the number of terminals so as to strive to ensure the stability of electrical signal transmission and provide multifunctionality." Ex. 1008, 6; *see also id.*, 8 ("increasing the number of terminals to ensure stability in electrical signal transmission and provide multifunctionality"). Lufan's redundancy configuration has the opposite disclosure of providing duplicate terminals, *rather than maximizing* the number of terminals. Once again, a POSITA looking to implement Lufan would not look to Yuming.

Accordingly, like Grounds 1-3, Ground 4 also fails to disclose or suggest the limitations of elements 34[f] and 34[h]. *See, e.g., Pet.*, 72-73, 74-75 (relying on

what the Petition designates as the “Lufan-Yuming-Socket”). Further, the Petition relies on its analysis of claim 34 for the remainder of the independent claims challenged in Ground 4, either directly or through a chain of incorporation. *See* Pet., 90 (alleging “[c]laim 56 is substantially the same as claim 34 (§VII.A.iii) and the differences do not substantively change the analysis of Lufan-Yuming-Socket, which renders claim 56 obvious for the same reasons as claim 34.”); Pet., 93 (alleging “[c]laim 67 is substantially the same as claim 34. §VII.A.iv. These differences do not change the invalidity analysis”); Pet., 94 (alleging “[c]laim 78 is substantially the same as claim 67, §VII.A.v, and the Lufan-Yuming-Socket discloses those limitations, as described for *claims 34*, 39, 67, 70”) (emphasis added); Pet., 94 (alleging “[c]laims 88-96 are substantially identical to claims 78-86 but without ‘metal housing’ and invalid for the same reasons” [claim 78 incorporated the analysis of claim 34]); Pet., 95 (alleging “[c]laims 98-106 are substantially identical to claim 88-96, but without limiting the number of contacts and reciting ‘functional’ in 98[j], and invalid for the same reasons”); Pet., 95 (alleging “[c]laims 108-109 are substantially the same as claims 98 and 57, except add the limitations of claim 35, 39, 40, 42, 43, and 61, which are disclosed by the Lufan-Yuming-Socket”); Pet., 95 (alleging “[c]laims 110-111 are invalid for the same reasons as 108, 56-57, 63-64); Pet., 95 (alleging “[c]laims 112 and 113 are invalid for the same reasons as claims 110-111 and 36”); Pet., 95 (alleging “[c]laim

114 is substantially the same as claim 98, §VII.A.viii, and invalid for the same reasons”; Pet., 95 (alleging “[c]laims 117-120 are invalid for the same reasons as claim 114, and because the Lufan-Yuming-Socket can electrically connect on the top or bottom side or both, depending on the plug that is inserted”); Pet., 95 (alleging “[c]laims 130-135 are invalid because they are substantially the same as claim 34 or broader”).

5. Ground 5 Based on Lufan, Yuming, Lee, and USB 3.0

Petitioners' Ground 5 alleges claims 34-120 and 130-135 are rendered obvious based on Lufan in view of Yuming, Lee, and USB 3.0. While Ground 5 notably does not dedicate space to addressing many of the claims listed in the challenge of Ground 5, including claim 34 (Pet., 96-98), Ground 5 is best understood to rely on the coined “Lufan-Yuming-Socket” for all challenged claims, and therefore fails for the same reasons as Ground 4. Pet., 96 (“A POSITA would have been motivated to combine the Lufan-Yuming-Socket with USB3.0, which is analogous art, to render obvious claims 52, 97, 107, 115, 116”).

6. Ground 6 Based on Lufan, Yuming, Yen, and Zhenyu

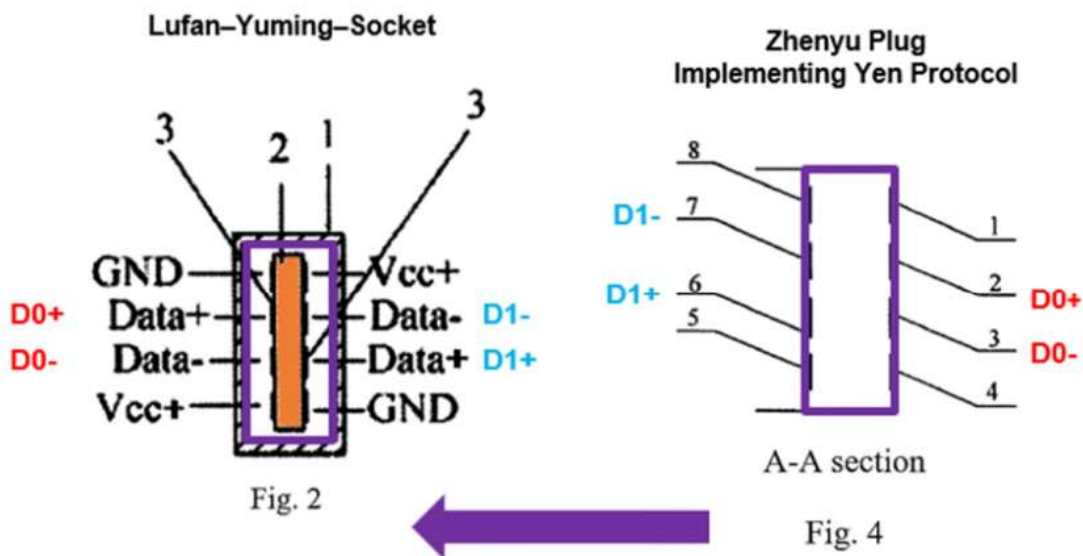
Petitioners' Ground 6 alleges claims 34-51, 53-96, 98-106, 108-114, 117-120, 130-135 are rendered obvious based on Lufan, Yuming, Yen,¹⁰ and Zhenyu.¹¹

¹⁰ EX1009, U.S. Patent No. 7,231,473 (“Yen”).

¹¹ Ex. 1006, Translation of Chinese Patent No. CN201038524Y (“Zhenyu”).

While Ground 6 notably does not dedicate space to addressing individual claims listed in the challenge of Ground 6, including claim 34 (Pet., 99-105), Ground 6 is best understood to rely on the coined “Lufan-Yuming-Socket” for all challenged claims, and therefore fails for the same reasons as Ground 4. Pet., 99 (alleging “[c]laims 34-51, 53-96, 98-106, 108-114, 117-120, 130-135 would have been obvious in view of the Lufan-Yuming-Socket with Zhenyu and Yen, under PO’s claim interpretations”).

Moreover, Ground 6 contains a major error concerning the Zhenyu reference relied on in Ground 6. Petitioners contend that Zhenyu’s Fig. 4 discloses a “plug”, as depicted in an illustration in the Petition at page 102 (reproduced below).



That depiction is incorrect, and Petitioners' theories concerning Zhenyu are wrong. In reality, Fig. 4 of Zhenyu is a socket, not a plug. As depicted below, Zhenyu's Fig. 2 is Zhenyu's plug, which mates with Fig. 4, Zhenyu's socket.

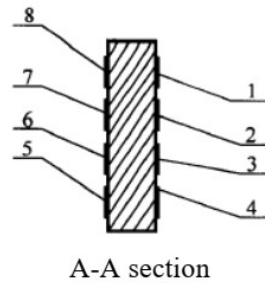


Fig. 2

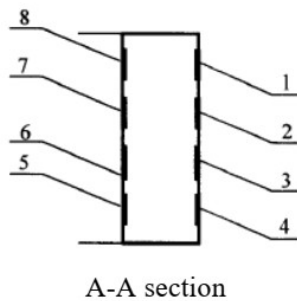


Fig. 4

While the Board can deny the Petition on the merits based on the failure of the “Lufan-Yuming-Socket,” the Board can take note of this additional feature concerning Ground 6.

7. Ground 7 Based on Lufan, Yuming, Yen, Zhenyu, and USB 3.0

Petitioners' Ground 7 alleges claims 34-120 and 130-135 are rendered obvious based on Lufan, Yuming, Yen, Zhenyu, and USB 3.0.

The entirety of Ground 7 states:

A POSITA would have been motivated to combine USB3.0 with Ground 6, for the same reasons described in Ground 5. §VII.E. The combination renders obvious claims 52, 97, 107, 116 (“proud”/“projections”) and 115 (castellated surfaces), and further renders obvious claims 36, 65, 75, 86, 96, 106, 112[x] (thickness) and 63-64, 73-74, 84-85, 94-95, 104-105, 110[w]-110[x], 112[w]-112[y] (chamfered/tapered tongue), as described in Ground 5. EX1003, ¶507.

Pet., 106. Thus, while Ground 6 notably does not dedicate space to a full analysis of each independent claim listed in the challenge of Ground 7, including claim 34, Ground 7 is best understood to rely on the coined “Lufan-Yuming-Socket” for all challenged claims, and therefore fails for the same reasons as Grounds 4-6.

V. CONCLUSION

For the reasons presented above, the Petition should be denied, and no *inter partes* review should be instituted.

Dated: March 5, 2026

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CERTIFICATE OF WORD COUNT

The undersigned certifies that the foregoing PATENT OWNER'S PRELIMINARY RESPONSE complies with the type-volume limitation in 37 C.F.R. § 42.24(b)(1). According to the word-processing system's word count, the brief contains 6,156 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

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CERTIFICATE OF SERVICE

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