

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.
Petitioner

v.

PAUL PONIATOWSKI,
Patent Owner

Case No. IPR2024-00731
U.S. Patent No. 8,270,578 B2

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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I. INTRODUCTION

In its Institution Decision, the Board determined that Petitioner demonstrated a reasonable likelihood of proving that the Challenged Claims are obvious based on the combination of Wang (Ex. 1004) in view of Dua (Ex. 1005) and Yong (Ex. 1006) (the “Prior Art”). Paper 5, 13, 34. Patent Owner’s Response (“POR” or “Paper 11”) does not dispute that the Prior Art teaches every limitation of the Challenged Claims as proposed in the Petition. *See generally*, POR. Nor does the POR dispute that a person of ordinary skill in the art (“POSITA”) would have been motivated to combine the Prior Art as proposed in the Petition to arrive at the Challenged Claims. *Id.* Instead, the POR argues only (1) that the ’578 Patent is entitled to claim priority to PCT/CA2004/000513 (the “Priority Application”) and (2) that none of the Prior Art is in the same field of endeavor as the ’578 Patent. POR, 1–5. As set forth below, neither argument has merit.

Regarding the priority issue, Patent Owner does not suggest that the “optical input,” network hub,” or “terminal associated with a point of sale” limitations (the “Missing Limitations”) are described in the Priority Application. POR, 1–4. Nonetheless, Patent Owner argues that it is entitled an earlier priority date because it would have been “logical[,]” “common sense[,]” or “obvious” to use the Missing Limitations in the context of the Priority Application’s disclosure. POR, 2–4. Notably, Patent Owner submits no expert testimony or other evidence supporting

this alleged obvious extension of the Priority Application's disclosure. Even if the Board were to credit this theory without testimony from the viewpoint of a POSITA, it fails under the law. In the context of a priority challenge, it is insufficient that priority application renders obvious later-filed claims. The priority application must *teach* those later-claimed concepts.

As to field of endeavor, Patent Owner highlights minor differences between the Prior Art and the '578 Patent, insisting these differences establish that the Prior Art is neither in the same field of endeavor nor analogous to the '578 Patent. As with the priority challenge, Patent Owner's field of endeavor critique fails under the law. Patent Owner does not expressly dispute the Petition's proposed field of endeavor (i.e., "using a mobile device to conduct a commercial transaction"), does not proffer its own field of endeavor, and provides no support for its theory that the minor differences identified in the POR are in any way relevant to the field of endeavor inquiry. Accordingly, there is no basis to conclude that the Prior Art falls outside the field of endeavor proffered by the Petition. But, even if there were some basis to find one or more of the references falls outside that field of endeavor, each reference also qualifies as analogous art because it is reasonably pertinent to the problems faced by the alleged inventor.

For the reasons set forth below, and because Patent Owner does not otherwise contest Petitioner’s obviousness challenge, the Board should affirm its preliminary findings and hold the Challenged Claims unpatentable as obvious.

II. ARGUMENT

A. Patent Owner’s Unsupported Argument the Claims Are Obvious Over the Priority Application is Insufficient to Establish Priority.

Patent Owner has not presented arguments or evidence sufficient to entitle the ’578 Patent to claim priority to the Priority Application’s earlier filing date. Patent Owner implicitly concedes that the Priority Application does not literally disclose the Missing Limitations. POR, 1–4. While literal disclosure is not required, Patent Owner must at least establish the Priority Application “describe[s] [the] invention understandable to [a] skilled artisan and show that the inventor actually invented the invention claimed.” *Hologic, Inc. v. Smith & Nephew, Inc.*, 884 F.3d 1357, 1361 (Fed. Cir. 2018) (quoting *Ariad Pharm, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc)). Patent Owner has not attempted to show that the Priority Application demonstrates the inventor possessed the later-claimed invention. Accordingly, the Board should make final its preliminary finding that the ’578 Patent is not entitled to claim priority to the Priority Application’s earlier filing date.

In alleged support of according the ’578 Patent claims an earlier priority date, Patent Owner argues only that it would have been “logical[,]” “common sense[,]” or “obvious” to use the missing limitations in the context of the Priority Application.

POR, 2–4. Patent Owner’s argument fails for two reasons. First, “disclosure in a parent application that merely renders the later-claimed invention obvious is not sufficient to meet the written description requirement; the disclosure must describe the claimed invention with all its limitations.” *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1158 (Fed. Cir. 1998) (citing *Lockwood v. Am. Airlines, Inc.*, 107 F.3d 1565, 1572 (Fed. Cir. 1997)); *Lockwood*, 107 F.3d at 1572 (“It is not sufficient...that the disclosure, when combined with the knowledge in the art, would lead one to speculate as to modifications that the inventor might have envisioned, but failed to disclose.”). Thus, Patent Owner’s arguments are insufficient as a matter of law to find the Challenged Claims are entitled the Priority Application’s earlier filing date. *Id.*

Second, Patent Owner’s positions lack evidence. In fact, Patent Owner presents no argument whatsoever concerning the claimed “terminal associated with a point of sale” finds written support in the Priority Application. POR, 2–4. It simply ignores this claimed concept completely. Because every Challenged Claim requires the “terminal” limitation, Patent Owner cannot make the showing required to entitle the Challenged Claims to the Priority Application’s earlier filing date. *See Nespresso USA, Inc. v. K-Fee System GmbH*, IPR2023-00502, Paper 26 at 19–20 (PTAB Sept. 10, 2024) (finding “no challenged claim is entitled to the benefit of the filing date of any” priority application, where “Patent Owner respond[ed] with no evidence or

arguments suggesting that the” limitations identified as missing by Petitioner were disclosed); *Tronzo*, 156 F.3d at 1158 (“[T]he disclosure must describe the claimed invention *with all its limitations*.” (emphasis added)).

As for the remaining Missing Limitations (i.e., “optical input” and “network hub”), Patent Owner’s arguments that each would have been “logical[,]” “common sense[,]” or “obvious” in view of the Priority Application are conclusory and unsupported by evidence. Indeed, Patent Owner does not submit testimony from any declarant. POR, 2–4. Nor does it submit any background evidence showing the state of the art. *Id.* It simply states the following without support:

It is well known fact that for decades that debit or credit card transactions in commercial establishments are executed at financial hubs. It would be obvious to the skilled in art to accept such architecture as a basic standard set up within all retailers.

Therefore there is a plenty of evidence in written description on financial transactions taking place with a commercial establishment.

Id. at 4. Such conclusory statements are insufficient to establish earlier priority. *See General Access Sols., Ltd. v. Sprint Spectrum L.P.*, 811 F. App’x 654, 658–59 (Fed. Cir. 2020) (affirming the Board’s finding “that the conclusory assertions in GAS’s patent owner response are insufficient to meet GAS’s burden of establishing prior conception”); *see also Toshiba Corp. v. Optical Devices, LLC*, IPR2014-01443, Paper 38 at 31–32 (PTAB Mar. 8, 2016) (rejecting Patent Owner’s argument its

proposed amendments find support in the specification where Patent Owner offered only a conclusory expert opinion that “does not explain or otherwise justify why one of skill in the art would have understood” from the cited disclosure “that the inventor possessed the claimed subject matter”).

In sum, Patent Owner implicitly concedes that the Priority Application fails to describe the Missing Limitations, and its unsupported theory that a POSITA would have found the Missing Limitations an obvious extension of the Priority Application fails under the law. Accordingly, Patent Owner has not established that the Challenged Claims are entitled the Priority Application’s earlier filing date.

B. The Prior Art is Within the ’578 Patent’s Field of Endeavor.

Patent Owner’s arguments regarding the field of endeavor of each of the Prior Art are legally and factually insufficient to refute the Petition’s showing that the Prior Art qualifies as analogous art. As a threshold matter, Patent Owner does not dispute the Petition’s showing that the Prior Art and the ’578 Patent are all directed to the field of “using a mobile device to conduct a commercial transaction.” POR, 4–5; Pet., 16, 18, 19. A proper application of the legal standard confirms that showing. By contrast, Patent Owner’s focus on minor differences between the Prior Art devices and the claimed invention are legally irrelevant to the field of endeavor inquiry. On this record, the only reasonable conclusion is that the Prior Art is within

the '578 Patent's field of endeavor. Accordingly, the Board should make final its preliminary finding that the Prior Art is analogous art.

The '578 Patent's field of endeavor is determined "by reference to explanations of the invention's subject matter...including the embodiments, function, and structure of the claimed invention." *Netflix, Inc. v. DivX, LLC*, 80 F.4th 1352, 1359 (Fed. Cir. 2023) (quoting *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004)). The '578 Patent itself broadly identifies its field as "wireless networks, and in particular, to applications of wireless networks of a retail establishment." Ex. 1001, 1:16–18. This, alone, is strong evidence of the '578 Patent's field of endeavor. *See, e.g., Airbus S.A.S. v. Firepass Corp.*, 941 F.3d 1374, 1380 (Fed. Cir. 2019) (citing *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979) ("In *Wood*, for example, our predecessor court determined the field of endeavor based on an express disclosure in the Background of the Invention section of the applicant's specification.")). Moreover, the Challenged Claims are similarly limited to "apparatus for engaging in wireless **commercial** transactions[.]" Ex. 1001, 9:24–25, 10:10–11 (emphasis added), *id.* 1:64–65 ("In one aspect, the invention features an apparatus for engaging in wireless commercial transactions."). Finally, the embodiments of the claimed invention are also limited to wireless systems "for acquiring goods and services and dispensing payment in any establishment[.]" i.e., "engaging in wireless commercial transactions[.]" *Id.* 6:49–7:67, 8:1–60, Figs. 4–5,

Figs. 12–13. Consistent with the '578 Patent's explanation of the claimed invention, the Petition correctly identified applications of mobile devices for conducting commercial transactions as the '578 Patent's field of endeavor. Pet., 15, 18, 19.

The teachings of the Prior Art clearly demonstrate that the Prior Art falls squarely within this field. As set forth in the Petition, all the Prior Art is “directed to using a mobile device to conduct a commercial transaction.” Pet., 14–16 (summarizing *Wang*'s teachings), 16–18 (summarizing *Dua*'s teachings), 19 (summarizing *Yong*'s teachings). Patent Owner has not disputed these teachings, nor identified any teachings in the Prior Art or other evidence to the contrary. POR, 4–5. And the minor differences Patent Owner alleges exist between the Prior Art devices and claimed invention are immaterial to this analysis. POR, 4–5.

To the extent a common theme can be gleaned from Patent Owner's critiques of the Prior Art, Patent Owner argues that none of the Prior Art devices initiate a transaction. From this, Patent Owner argues that the Prior Art is not in the '578 Patent's field of endeavor. *Id.* Patent Owner's argument fails on the law and the facts. Patent Owner's focus on initiation appears to derive from the Challenged Claims requirement that the “mobile phone [is] equipped with a dedicated actuator for initiating a commercial transaction.” POR, 5. Yet it is not clear from the POR why Patent Owner has focused on initiating a commercial transaction. The Challenged Claims are not limited to this functionality. Instead, they more broadly

claim “engaging in wireless commercial transactions” and include limitations directed to steps that occur after the transaction is initiated. *See, e.g.*, Ex. 1001, Claim 1 (including limitations directed to receiving pricing information, authorizing a transaction, and generating a code to “further the transaction”), claim 15 (further claiming “display of a button to consummate a commercial transaction”). Accordingly, the POR is simply arguing that the Prior Art fails to teach a single limitation directed to initiating a commercial transaction. While Petitioner disagrees with this point, whether the Prior Art teaches the limitations of the Challenged Claims is not relevant to the field of endeavor analysis. The Prior Art “need not disclose every limitation of the claimed invention to fall within the same field of endeavor as the claimed invention.” *In re Chaganti*, 554 F. App’x 917, 921 (Fed. Cir. 2014); *cf. Samsung Elecs. Co., Ltd. v. UUSI, LLC*, 775 F. Appx. 692, 695–96 (Fed. Cir. 2019) (finding prior art references were in the challenged patent’s field of endeavor because they “are all generally directed to capacitive touch devices, even if they are to difference permutations of such devices”). There is no “authority for treating the relevant art as limited to a narrow subset of what the claims of a patent cover[.]” *Axonics, Inc. v. Medtronic, Inc.*, 73 F.4th 950, 958–59 (Fed. Cir. 2023).

Moreover, the Petition sets forth its evidence and arguments regarding the obviousness of the Challenged Claims, including how the Prior Art, alone or in combination, teaches or renders obvious the “initiating a commercial transaction”

limitation. Pet., 23–31. Patent Owner has not challenged the Petition’s showing nor provided evidence to support its argument the Prior Art fails to teach this limitation. POR, 4–5. Thus, Patent Owner’s argument finds no support in the evidence. *Id.*

It is undisputed the Prior Art devices and claimed invention “are all generally directed” to applications of mobile devices for conducting commercial transactions. *Samsung*, 775 F. App’x at 695. Under the proper application of the law, this showing is sufficient to establish the Prior Art is analogous art. *Id.* Accordingly, the Board should reaffirm the Prior Art falls within the ’578 Patent’s field of endeavor.

C. The Prior Art is Reasonably Pertinent to Problems Faced by Patent Owner.

Even assuming there were a basis to conclude the Prior Art falls outside field of endeavor (there is not), each reference independently qualifies as analogous art because each is reasonably pertinent to problems faced by the inventor of the ’578 Patent.¹ Prior art is reasonably pertinent where “a person of ordinary skill would reasonably have consulted those references and applied their teachings in seeking a solution to the problem[s] that the inventor was attempting to solve.” *Netflix*, 80 F.4th

¹ Petitioner is “permitted to respond” to Patent Owner’s argument that the Prior Art is not in the ’578 Patent’s field of endeavor “both by bolstering its field of endeavor argument[s] and by adding that its prior art is pertinent to the problem faced by the inventor[.]” of the ’578 Patent. *Corephotonics, Ltd. v. Apple Inc.*, 84 F.4th 990, 1010 (Fed. Cir. 2023).

at 1361–62 (quoting *In re GPAC Inc.*, 57 F.3d 1573, 1578 (Fed. Cir. 1995)). Thus, to determine whether prior art is reasonably pertinent, the problems to which both the claimed invention and prior art relate must be identified and compared from the perspective of a POSITA. *Donner Tec., LLC v. Pro Stage Gear, LLC*, 979 F.3d 1353, 1359–60 (Fed. Cir. 2020).

The '578 Patent does not expressly identify the problems to which the claimed invention relates. *See generally*, Ex. 1001. As discussed in the context of the priority dispute, the '578 Patent is a continuation-in-part of an earlier application that focused on “audio/visual information dissemination system[s].” *See* Petition, 4-5 (discussing focus of priority applications). The '578 Patent claims are entirely focused on using a mobile device to make financial transactions in a commercial establishment. Accordingly, as it relates to the '578 Patent specifically, a POSITA would have recognized that the inventor was concerned with problems arising from advancements in shopping technology. Ex. 1023 (“*Supp. Bederson Dec.*”), ¶¶ 7–10. Reflected in the Challenged Claims and the portion of the specification related to mobile payments, a POSITA would have understood that the inventor was concerned with how a user interacts with a mobile device and how that mobile device facilitates making a purchase in a commercial establishment. *Id.* at ¶ 10 (explaining that the patent and claims focus on the specific buttons a user engages when making a

purchase, the way pricing information for goods is obtained, and communications relevant to facilitating mobile commercial transactions).

All the Prior Art is reasonably pertinent to addressing problems arising from the introduction of mobile technology into commercial establishments. *Supp. Bederson Dec.*, ¶¶ 11–14. Wang and Dua are both broadly concerned with security concerns arising from the increasing reliance on mobile devices to facilitate commercial transactions. *Id.* at ¶ 11; Wang, [0002]; Dua, [0014]. Additionally, Wang's PEAD also allows customers to scan product barcodes using an optical scanner, rather than require the manual entry of that information, thereby streamlining the shopping experience. *Supp. Bederson Dec.*, ¶ 12; *Pet.*, 32–35. Dua addressed problems arising from mobile devices' reliance on RFID communication to perform commercial transactions within an establishment, e.g., ensuring financial information remains secure. *Supp. Bederson Dec.*, ¶ 13; Ex. 1004, [0014]. Dua addresses this problem by providing a dedicated button for enabling RFID communication for a limited period of time. *Supp. Bederson Dec.*, ¶ 13; *Pet.*, 26–27. Yong is concerned with reducing the cost associated with enabling mobile devices to retrieve product information, i.e., every product requiring an RFID tag. *Supp. Bederson Dec.*, ¶ 14; Yong, 1. Yong addresses this problem by compiling product information in a database at the commercial establishment and enabling mobile

devices to connect to and retrieve information from that database while shopping.

Supp. Bederson Dec., ¶ 14; *Pet.*, 35–37.

Thus, a POSITA facing problems arising or relating to the use of mobile devices to facilitate shopping in commercial establishments would have reasonably consulted the Prior Art, as each addressed existing problems in that space and proposed solutions to them. *See Innovention Toys, LLC v. MGA Ent., Inc.*, 637 F.3d 1314, 1322 (Fed. Cir. 2011) (prior art directed to electronic laser-based strategy game reasonably pertinent to patent directed to non-virtual, three-dimensional, laser-based board game because both were directed to the same broad goal of designing a winnable yet entertaining strategy game); *Universal Elecs., Inc. v. Roku, Inc.*, No. 2021-2128, 2023 WL 5522220, at *6 (Fed. Cir. Aug. 28, 2023) (prior art describing use of a cursor to perform various window management functions reasonably pertinent to the problem of providing remote, cursor control functionality addressed by the patent). Indeed, here, the Prior Art is reasonably pertinent to the problem with which Patent Owner was “centrally concerned”—allowing customers to use their mobile devices to facilitate and perform commercial transactions within commercial establishments. *Cf. In re Asset Guard Prods., Inc.*, No. 2021-1902, 2022 WL 1097363, at *4 (Fed. Cir. Apr. 13, 2022) (prior art disclosing coating a foam core material with polyurea to strengthen the core was reasonably pertinent to the patent directed to encapsulating the foam core of a storage tank with an elastomer, like

polyurea, to prevent the foam core from flaking off and failing under the weight of the tank).

For at least these reasons, the Prior Art also qualifies as analogous art to the '578 Patent because each is reasonably pertinent to the problems faced by Patent Owner—improving the ability of mobile devices to facilitate commercial transactions within commercial establishments.

III. CONCLUSION

For all of the reasons articulated in the Petition and the foregoing Reply, Petitioner respectfully requests the Board find all Challenged Claims unpatentable.

Respectfully submitted,

ERISE IP, P.A.

BY: /s/Paul R. Hart

Paul R. Hart, Reg. No. 59,646

717 17th St., Ste. 1400

Denver, CO 80202

P: (913) 777-5600

F: (913) 777-5601

paul.hart@eriseip.com

PTAB@eriseip.com

Adam P. Seitz, Reg. No. 52,206

Clifford T. Brazen, Reg. No. 78,716

7015 College Blvd., Suite 700

Overland Park, KS 66211

P: (913) 777-5600

F: (913) 777-5601

adam.seitz@eriseip.com

cliff.brazen@eriseip.com

ATTORNEYS FOR PETITIONER
APPLE INC.

APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 8,270,578 to Poniatowski (“’578 Patent”)
Exhibit 1002	File History of U.S. Patent No. 8,270,578 (“’578 File History”)
Exhibit 1003	Declaration of Dr. Benjamin B. Bederson (“Dec.”)
Exhibit 1004	U.S. Patent Publication No. 2002/0023215 to Wang et al. (“Wang”).
Exhibit 1005	U.S. Patent Publication No. 2006/0165060 to Dua (“Dua”)
Exhibit 1006	Korean Patent Publication No. 20070063899 to Se Yong Noh et al. (“Yong”)
Exhibit 1007	File History of U.S. Patent Application No. 12/087,539 (“’539 Application”)
Exhibit 1008	File History of U.S. Patent Application No. 10/407,222 (“’222 Application”)
Exhibit 1009	File History of U.S. Patent Application No. 13/559,194 (“’194 Application File History”)
Exhibit 1010	U.S. Patent Publication No. 2010/0023449 to Skowronek et al.
Exhibit 1011	Poniatowski v. Apple Inc., No. 6:23-cv-00316 (W.D. Tex.), Docket Sheet
Exhibit 1012	U.S. Patent No. 5,923,735 to Swartz et al.
Exhibit 1013	U.S. Patent No. 6,577,861 to Ogasawara
Exhibit 1014	International Publication No WO 03/060796 to Singhal
Exhibit 1015	U.S. Patent No. 8,219,490 to Hammad et al.
Exhibit 1016	U.S. Patent No. 7,520,430 to Stewart et al.
Exhibit 1017	U.S. Patent Publication No. 2009/0037269 to Bassemir et al.
Exhibit 1018	U.S. Patent Publication No. 2008/0119165 to Mittal et al.
Exhibit 1019	U.S. Patent No. 8,908,973 to Goldsmith et al.
Exhibit 1020	U.S. Patent No. 7,903,093 to Kim et al.
Exhibit 1021	U.S. Patent No. 7,018,286 to Aggarwal et al.
Exhibit 1022	U.S. Patent Publication No. 2004/0262386 to Abrams et al.
Exhibit 1023	Supplemental Declaration of Dr. Benjamin B. Bederson (“Supp. Bederson Dec”)

CERTIFICATION OF COMPLIANCE WITH 37 C.F.R. 42.24

Pursuant to 37 C.F.R. § 42.24(c)(1), the undersigned certifies that the foregoing *Petitioner's Reply to Patent Owner's Response* contains 3,238 words, exclusive of the table of contents, certificate of service, certificate of word count, and appendix of exhibits.

/s/ Paul R. Hart

Paul R. Hart, Reg. No. 59,646

ATTORNEY FOR PETITIONER

CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.6

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on April 2, 2025, the foregoing *Petitioner's Reply to Patent Owner's Response* was served via electronic filing with the Board and via Electronic Mail on Patent Owner:

Paul Poniatowski (paulponiatowski@hotmail.com)

/s/ Paul R. Hart

Paul R. Hart, Reg. No. 59,646

ATTORNEY FOR PETITIONER