

Case IPR2023-01023
Patent No. 10,798,509

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

EIGHT KHZ, LLC,
Patent Owner.

Case IPR2023-01023
Patent 10,798,509

PATENT OWNER'S SUR-REPLY

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	ARGUMENT	1
A.	Dr. Welch’s Opinions And Analysis Were Rebutted In The Patent Owner’s Response	1
B.	Limitation 1[c]: “highlighting ... one of the multiple SLPs in the zone when the PED held in the hand of the user is pointed at one of the multiple SLPs in the zone”	2
	1. Pointing to virtual objects with a PED/controller	3
	2. Pointing to one SLP of multiple SLPs in the zone to highlight that particular SLP	3
	3. Ground 2	5
C.	Limitation 1[d]: “playing, with the WED worn on the head of the user, the binaural sound that emanates from the one of the multiple SLPs in response to the one of the multiple SLPs being pointed at by the PED held in the hand of the user.”	7
D.	Limitations requiring tracking with sensors in the WED the PED (limitation 2[a]), determining with the WED when the user is leaving the zone (limitation 9[c]), and sensors that sense when the PED leaves the zone (limitation 17[e])	9
	1. Pedrotti does not disclose tracking, with one or more sensors in the WED, the PED to determine when the PED leaves the zone (limitation 2[a])	9
	2. Pedrotti does not disclose determining, with the WED, when the user is leaving the zone (limitation 9[c])	11
	3. Pedrotti does not disclose a “[WED] that ... includes one or more sensors that sense when the PED leaves the zone” (limitation 17[e])	13

4. McCulloch does not teach these limitations	14
E. The VR Book Is Not Part of Petitioner’s Combinations.....	16
F. The VR Book Does Not Disclose A WED Using Sensors To Track A PED And Determine When It Leaves The Zone	17
III. CONCLUSION.....	18

TABLE OF AUTHORITIES

Cases	Page(s)
<i>Arendi S.A.R.L. v. Apple Inc.</i> , 832 F.3d 1355 (Fed. Cir. 2016)	6, 17
<i>David Netzer Consulting Eng’r v. Shell Oil Co.</i> , 824 F.3d 989 (Fed. Cir. 2016)	12
<i>Icon Health & Fitness v. Strava</i> , 849 F.3d 1034 (Fed. Cir. 2017)	2
<i>In re IPR Licensing, Inc.</i> , 942 F.3d 1363 (Fed. Cir. 2019)	5, 16
<i>K/S HIMPP v. Hear–Wear Technologies, LLC</i> , 751 F.3d 1362 (Fed. Cir. 2014)	17
<i>Plexxikon Inc. v. Novartis Pharms. Corp.</i> , No. 17-CV-04405-HSG, 2020 WL 2301213 (N.D. Cal. May 8, 2020)	2

EXHIBIT LIST

Ex.	Description
2001	Declaration of John C. Hart, Ph.D.
2002	CV of John C. Hart, Ph.D.
2003	Defendants' Preliminary Invalidity Contentions
2004	U.S. District Court Order in <i>Eight kHz, LLC v. Meta Platforms, Inc.</i> , No. 6:22-cv-00575-ADA-DTG (W.D. Tex. Aug. 30, 2023), Granting Joint Motion to Amend Scheduling Order
2005	U.S. District Court Order in <i>Eight kHz, LLC v. Meta Platforms, Inc.</i> , No. 6:22-cv-00575-ADA-DTG (W.D. Tex. Sep. 11, 2023), Resetting Markman Hearing Via Zoom
2006	Memorandum from Katherine K. Vidal on Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (June 21, 2022)
2007	Lex Machina, Patent Cases (All Judges) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023
2008	Lex Machina, Patent Cases (Judge Alan D. Albright) Time to Trial, U.S. District Court for the Western District of Texas, September 9, 2023
2009	U.S. District Court Minute Entry in <i>Eight kHz, LLC v. Meta Platforms, Inc.</i> , No. 6:22-cv-00575-ADA-DTG (W.D. Tex. Oct. 3, 2023), Denying Motion to Transfer Venue
2010	Defendant's Final Invalidity Contentions, October 18, 2023
2011	Defendant's Final Invalidity Contentions, Ex. G-09, October 18, 2023
2012	Deposition Transcript of Welch

I. INTRODUCTION

Petitioner's Reply ("Reply") fails to address many of the specific arguments raised in Patent Owner's Response ("POR"). Petitioner continues to ignore that the Petition misconstrues the "virtual object" of Pedrotti, which when properly construed, makes it clear that Pedrotti does not disclose either pointing to virtual objects with a PED or pointing to one SLP of multiple SLPs in the zone to highlight the particular SLP, as required by limitation 1c. Petitioner also continues to ignore the overwhelming evidence, incontrovertibly supported by the testimony of their own expert, that the prior art does not disclose and actually teaches away from using sensors located on a WED to track a PED and determine when it leaves the zone.

In an attempt to overcome this deficiency in Grounds 1 and 2, Petitioner attempts to improperly introduce new art into both Grounds 1 and 2, in violation of the rules and precedent of this proceeding. The VR Book is not part of Petitioner's combination in either Ground 1 or Ground 2 and thus cannot be considered. But even if it were considered, the VR Book only shows a result—that a user is warned when approaching a real-world object—not that a WED includes sensors to track a PED and determine when it leaves the zone, as required by the claims.

II. ARGUMENT

A. Dr. Welch's Opinions And Analysis Were Rebutted In The Patent Owner's Response

Petitioner claims that Petitioner's expert's opinions "stand unrebutted because they are challenged by mere attorney argument, which 'is not evidence.'" Reply, at 2; citing *Icon Health & Fitness v. Strava*, 849 F.3d 1034, 1043 (Fed. Cir. 2017).

Patent Owner ("PO"), however, is not using attorney argument to provide a motivation to combine the prior art references, unlike in *Icon Health*. Nor is PO using attorney argument to dispute issues of fact. Rather, PO's arguments go to legal issues as to why the prior art in Grounds 1 and 2 fail to disclose the elements of the claims or render them obvious. PO's arguments are supported by the prior art and Petitioner's own expert's testimony.

Moreover, Petitioner incorrectly assumes that the issues addressed by its expert are factual in nature, when most if not all of Dr. Welch's statements are directed toward conclusions of law, which are properly rebutted by attorney argument. See *Plexxikon Inc. v. Novartis Pharms. Corp.*, No. 17-CV-04405-HSG, 2020 WL 2301213, at *2 (N.D. Cal. May 8, 2020). Invoking *Icon Health* in support of a general contention that its expert's opinions are unrebutted is a misapplication of the law and should be disregarded by the Board.

B. Limitation 1[c]: "highlighting ... one of the multiple SLPs in the zone when the PED held in the hand of the user is pointed at one of the multiple SLPs in the zone"

None of the prior art references cited in either Ground 1 or Ground 2 teach or suggest pointing to virtual objects with a PED, let alone pointing to one SLP of

multiple SLPs in the zone to highlight that particular SLP, as required by limitation 1[c]. For this reason, Grounds 1 and 2 each fail with respect to claim 1 and its dependent claims.

1. Pointing to virtual objects with a PED/controller

Petitioner points to Pedrotti's "virtual objects," such as virtual "weapon[s]," "sporting implement[s]," and "other toy[s] or device[s]," as being the PED used to point at one of the multiple SLPs to highlight the SLP. Reply at 6-7. Petitioner's argument, however, misses the mark. Pedrotti's "virtual objects" clearly address a method of representing the PED in the virtual space, *i.e.*, making the PED appear as a pistol in the virtual space as shown in Figures 1A and 1B of Pedrotti. As shown in PO's Response, making the PED appear as a pistol in the virtual space is completely unrelated to using the PED to point to one of multiple SLPs in the zone to highlight a particular SLP. Paper 35 at 5-9.

Further, as Patent Owner explained, Pedrotti's virtual objects, such as the "virtual weapon" Petitioner relies on (*see* Reply, at 7), are virtual representations of the controller, ***not an SLP that the controller can point to***, as required by the claim language. *See* POR 7-8 (describing Pedrotti's Figs. 1A and 1B).

2. Pointing to one SLP of multiple SLPs in the zone to highlight that particular SLP

In attempt to buttress its weak positions, Petitioner argues that Pedrotti's virtual fence is an SLP. Reply, at 5-6. Pedrotti's virtual fence is not an SLP, however, and more importantly it is not "one of multiple SLPs in the zone." Pedrotti's virtual fence *defines* the zone itself and thus is not *in the zone*, much less be *multiple* SLPs in the zone, as required by the claim limitation. It is inapposite whether the zone itself is highlighted when the user is pointing at the virtual fence with a controller—the claim requires that "one of the multiple SLPs *in the zone*" be highlighted upon the user pointing at it.

Petitioner must show that Pedrotti teaches highlighting the SLP at which the controller is pointed. Even accepting Petitioner's argument that the virtual fence is an SLP (it is not), Petitioner still has not satisfied its burden on this claim limitation. Indeed, Petitioner admits that Pedrotti does not teach highlighting the virtual fence in response to a user pointing the controller at the virtual fence. Rather, Petitioner argues the virtual fence is highlighted *by proximity of the user* within the virtual space, not pointing. See Reply, at 6 ("Pedrotti's fence ... is highlighted when the user 'get[s] still closer.'") This does not disclose or render obvious limitation 1[c], which requires highlighting in response to pointing, not proximity.

Petitioner then argues the limitation "highlighting ... one of the multiple SLPs in the zone when the PED held in the hand of the user is pointed at one of the multiple SLPs" is somehow disclosed by other "types of interactions." Reply at 6. However,

Petitioner's reply admits that these "interactions" do not "highlight" the object when the PED is merely pointed at them, but rather require that the user "'activat[e] a proper command', 'e.g., by pressing a button on the controller.'" This does not disclose limitation 1[c], which is to aid in the selection of an SLP by highlighting it after pointing, rather than without requiring a command or button press.

The additional prior art relied upon by Petitioner (Reply at 8-10) are not in the grounds and cannot be considered. The law is clear that Petitioner cannot rely on additional prior art that was not a part of its original petition. "The Board therefore cannot rely on evidence relating solely to grounds on which it never instituted." *In re IPR Licensing, Inc.*, 942 F.3d 1363, 1369 (Fed. Cir. 2019). In *In re IPR Licensing*, the Federal Circuit overturned the Board's decision where the Board relied upon a new reference in its final written decision despite the petition not mentioning it in the ground on which the Board instituted review. *Id.*

3. Ground 2

Petitioner's showing on this limitation for Ground 2 fares no better. For Ground 2, Petitioner relies on the "visual effects library" of McCulloch. *See* Petition at 53-55; Reply at 22. Despite the Board's recognition in its Institution Decision that "the cited portions of McCulloch do not discuss pointing a PED at an SLP or highlighting an SLP as claimed," (Institution Decision at 38), Petitioner cites to no disclosure of McCulloch, Flaks, or Pedrotti that discloses "highlighting ... one of

the multiple SLPs in the zone when the PED held in the hand of the user is pointed at one of the multiple SLPs in the zone.”

Petitioner’s Ground 2 position regarding McCulloch relies entirely on McCulloch’s *controllers* which are the objects with which the user is pointing, not the things pointed at, and thus do not “highlight[]... one of the multiple SLPs when the PED held in the hand of the user is pointed at one of the multiple SLPs...” And, with respect to the requirement that the PED is pointed as “one of multiple SLPs,” Petitioner argues that all of the “virtual objects” of McCulloch are SLPs, relying solely on its expert Dr. Welch to fill the gaps in the prior art. Petition at 56. This is improper – expert testimony cannot “fill the gaps” of the prior art. *See Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1366 (Fed. Cir. 2016) (“conclusory statements and unspecific expert testimony” is insufficient for a petitioner to “meet its burden of establishing unpatentability”).

Lastly, PO explained that Jang does not suggest dynamic selection of audio sources for prioritized processing, but instead, at best moves a character’s perspective to change a focus area. POR 8-9. Petitioner does not rebut this. Indeed, Petitioner admits that Jang “discloses a sound system that operates based on ‘priorities of the sound sources’ in interactive virtual environments.” Reply at 10. Petitioner never shows that Jang teaches selecting an SLP by pointing at it, which is expressly required by the claim.

C. Limitation 1[d]: “playing, with the WED worn on the head of the user, the binaural sound that emanates from the one of the multiple SLPs in response to the one of the multiple SLPs being pointed at by the PED held in the hand of the user.”

Petitioner’s analysis with respect to limitation 1[d] fails at least for the reasons discussed above regarding limitation 1[c].

Petitioner also alleges—through attorney argument and without citing to evidence in the record—that “when a user points a controller at virtual boundary images, SLPs are highlighted and play binaural sound.” Reply at 13. Expanding upon its attorney argument, Petitioner equates “playing ... the binaural sound ... in response to the one of the multiple SLPs being pointed at” of limitation 1[d] with Pedrotti’s disclosure of “audio warning ... to the user approaching the fence.” *Id.* But as explained above with respect to limitation 1[c], Petitioner’s attempt to map the SLPs that are located *inside the zone* to Pedrotti’s virtual fence, which defines the zone itself, fails. Even overlooking this, approaching the virtual fence is different from pointing at the virtual fence, which is what is required by the express language of this limitation, and Petitioner’s attempt to equate the two fails.

More importantly, the binaural sound in limitation 1[d] must “emanate” from the SLP being pointed at, whereas Pedrotti’s audio warning—even if binaural (which it is not)—does not emanate from the virtual fence, and Petitioner offered no evidence to the contrary. Petitioner relies on conclusory statements about the

general knowledge of a PHOSITA to cure the deficiency in its obviousness case. Reply at 13-14. For support, Petitioner relies on hypothetical examples offered by its experts. *Id.* But none of those examples involve playing binaural sound that emanates from an SLP in response to the user pointing at the SLP. For example, that “virtual objects in games... could and would have associated binaural sounds that would move with them to multiple locations” does not even discuss pointing at an SLP. *Id.* (citing Ex.1003, ¶239). Likewise, “striking a virtual enemy, which in turn emits a sound of defeat,” (*Id.* (citing Ex.1003, ¶239)), does not explain that the binaural sound emanates from the defeated enemy and in response to pointing at the SLP corresponding to the enemy’s location in the virtual world. This example merely explains that the sound of defeat emitted in response to striking the enemy. Finally, the new example offered by Petitioner’s expert in his supplemental declaration that weapons in a virtual armory would “obviously generate binaural sounds” is a clear attempt to find the missing limitation in the expert’s imagination. *See id.* (citing Ex.1173, ¶¶75-77).

PO explained in its PO Response, and Petitioner never rebuts, that Pedrotti has nothing to do with SLPs inside its safety zone, Jang teaches no more than changing prioritization of processing of sound sources based upon user perspective changes, and Begault merely provides a user interface that enables configuration of

sound sources for subsequent received sound. POR 10-11. The asserted combination falls far short of teaching limitation 1[d].

For the same reasons as presented above with respect to limitations 1[c] and 1[d], the prior art does not disclose or render obvious claim 10 or claim 11.

D. Limitations requiring tracking with sensors in the WED the PED (limitation 2[a]), determining with the WED when the user is leaving the zone (limitation 9[c]), and sensors that sense when the PED leaves the zone (limitation 17[e])

The limitations reflected in claims 2, 9, and 17¹ are simply not present in the art and a PHOSITA would not have understood or combined the art to arrive at such a feature.

1. Pedrotti does not disclose tracking, with one or more sensors in the WED, the PED to determine when the PED leaves the zone (limitation 2[a])

Not only is this limitation not disclosed in the prior art, but Petitioner's own expert testified that a PHOSITA would not have located sensors on a WED to track a PED and determine when it leaves the zone. Notably, Petitioner's expert Dr. Welch

¹ For the sake of brevity, PO has grouped its arguments for the limitations found in 2[a], 9[c] and 17[e] together. However, PO maintains that each limitation is unique and directs the Board to the specific arguments related to how the variations in the patent language is significant, including on pages 11-13 of Patent Owner's Response.

conceded that a PHOSITA would not have located sensors on a WED to track² a PED and determine when it leaves the zone. Specifically, Dr. Welch testifies that “no sane person of ordinary skill or sane person in general who knows something about sensors and system like this would ever attempt to do that.” Ex. 2012, 233:17-235:10. And although Petitioner states in a conclusory manner that Dr. Welch did not testify to these facts, but rather that “Dr. Welch testified that the hypotheticals PO posed during his deposition were inapposite and would not be attempted,” (Reply at 18-19), PO submits that the testimony is clear and speaks for itself. Petitioner’s argument fails to explain how its expert’s quote was misconstrued, taken out of context, or somehow means something other than what was clearly stated. Petitioner’s obvious attempt to back-track on its own expert’s testimony also reflects that Petitioner itself cannot deny how damaging this testimony is to its position.

Petitioner rejects the idea of tracking with sensors as recited in claim 2, stating “PO’s contention that “the WED’s sensors track”—which undergirds all of PO’s limitation 2[a] arguments—is “technologically flawed.” Reply at 15-16. This improper claim construction argument does nothing to address the fatal flaw in Petitioner’s position. Petitioner, indeed, immediately contradicts itself by averring

² “Track” is the relevant verb from claim 2, but this argument also applies to claim 9 where the verb “determining” is used, and claim 17 where the verb “sense” is used.

that the Ambrus and McCulloch references disclose tracking via sensors: “Ambrus’s HMD sensors do not only track the HMD itself; McCulloch’s sensors are not limited to tracking only a user’s head.” Reply at 16. Thus, Petitioner makes the baseless argument that PO cannot track with sensors, but the cited art can. Petitioner’s double-speak illustrates the weakness of its position.

This convoluted attempt to sidestep this serious flaw in both Grounds 1 and 2 is unconvincing and the Board should not allow Petitioner to engage in 11th hour claim construction to avoid a fatal flaw identified by the Patent Owner in Petitioner’s Grounds.

2. Pedrotti does not disclose determining, with the WED, when the user is leaving the zone (limitation 9[c])

Petitioner’s Reply also makes much of the fact that Pedrotti discloses a processor in the HMD, but that is not enough. Reply at 3-4. Petitioner never shows that this processor is used for determining the user’s location as required by the claim language. In fact, Petitioner left PO’s main argument unaddressed: “In order to display a virtual environment, an HMD needs to have at least one processor, such as a CPU or GPU to process graphics. Pedrotti never teaches, however, the HMD or a processor in the HMD performs the function of tracking movements of the HPED or user as they move outside the zone.” POR at 31. PO never denied that Pedrotti’s

HMD has a processor—the issue is whether that processor is employed to perform the determination steps of claim 9 (limitations 9b and 9c). It is not.

Petitioner argues that because claim 9 uses “comprising,” the claim does not require that the WED exclusively performs the determination steps. Reply at 3. Petitioner’s position is contrary to the law: “It is true that a method claim with the word ‘comprising’ appearing at the beginning generally allows for additional, unclaimed steps in the accused process, ***but each claimed step must nevertheless be performed as written.***” *David Netzer Consulting Eng’r v. Shell Oil Co.*, 824 F.3d 989, 998 (Fed. Cir. 2016). The determination steps require that the WED does the determination—the scope of the structure recited within these steps is not affected by the use of “comprising.”

Petitioner’s reliance on the Hart declaration (Reply at 4), submitted with Patent Owner’s Preliminary Response (“POPR”), is contrary to the Consolidated Trial Practice Guide. Because Dr. Hart’s declaration has been withdrawn by Patent Owner, neither the declaration nor any arguments based on the declaration should be considered by the Board. *PTAB Trial Practice Guide*, §II(c), p. 51 (“If a trial is instituted, a patent owner may choose not to rely on testimony submitted with the preliminary response. In that case, the patent owner should advise the Board of its decision, which can be done by affirmatively withdrawing the testimony in the patent owner response.”). Even overlooking this, Petitioner mischaracterizes the

testimony of PO's expert, who stated that Pedrotti uses a tracker—*not a processor*—on the HMD that communicates information to a processor in the base station for determining the user's position. Ex.2001, ¶27. Petitioner confuses a tracker with a processor and ignores the basic fact that a tracker cannot determine anything. And, that is the point: Pedrotti's system does not use the HMD to determine the position of the user.

Petitioner's argument that tracking capabilities are commonly contained in HMDs is inapposite. Reply at 4. Petitioner's position fails to address a simple question: could Pedrotti's HMD track itself or a user wearing it? The answer is no. Furthermore, Petitioner's reliance on its expert's testimony that Pedrotti's HMD tracks the controllers is misplaced. *Id.* (citing Ex.1003, ¶252). Claim 9 requires tracking of the *user* wearing the WED, not the controllers.

Petitioner then contends that the camera in Pedrotti can be in the HMD. Reply at 4. Not so. Patent Owner explained Pedrotti's reference to "elsewhere" and its tracking mechanism in the POR at 19-22. Petitioner fails to rebut any of the points raised in the POR, and only resorts to a conclusory statement about PHOSITA's knowledge.

3. Pedrotti does not disclose a "[(WED)] that ... includes one or more sensors that sense when the PED leaves the zone" (limitation 17[e])

Like limitation 2[a], limitation 17[e] requires the sensors sensing the PED

must be located in the WED: “a wearable electronic device (WED) that ... includes one or more sensors that sense when the PED leaves the zone...” The prior art cited by the Petitioner simply does not disclose or render obvious that the sensors sensing the PED are located in the WED, as previously established by Patent Owner.

Further, Pedrotti does not disclose sensing “when the PED leaves the zone,” as discussed in the POR at 15 (“Petitioner admits in Section IV.E.2 that in Pedrotti, although the user “‘holds a handheld controller’ (PED) comprising a ‘tracker,’ which ‘provides information regarding a position of the handheld controller[,]’” it is actually “[a] processor [that] tracks the controller’s movement”—not sensors within the WED. Pet. 11.”).

4. McCulloch does not teach these limitations

McCulloch focuses on controlling virtual object features within a display field of view or a display portion of what a user looks through and is seen from the user’s perspective. Ex. 1008, 4:4-13; 11:56-12:17 and 15:1-62 (showing that the display field of view is defined in terms of a coordinate system that may be acquired using 3D mapping techniques with image data and depth data, which as a PHOSITA would know reflects a first-person perspective and teaches away from the user leaving the zone). A person of skill in the art would understand that this first-person perspective makes it impossible for a user to leave the zone. POPR, 42-45.

McCulloch is directed to augmented reality (not virtual reality) and focuses on controlling virtual object features within a display field of view or a display portion of what a user looks through and is seen from the user's perspective. Ex 1008, 4:4-13. As such, the display field of view in McCulloch is only related to the user's perspective view – not a virtual boundary or zone around the user. Indeed, McCulloch never describes a situation in which the user is within the display field of view because McCulloch requires a view of a play space to allow gaming applications to position virtual objects. *Id.*, 20:4-18. Thus, McCulloch simply does not disclose or render obvious using sensors on a WED to track a PED and determine when it leaves the zone.

At his deposition, Petitioner's expert Dr. Welch was unable to identify any disclosure from McCulloch of an HMD that tracks controllers. *See, e.g.*, Ex. 2012, at 268:10-14 (Q: Dr. Welch ... would you please show me exactly where it is in those lines it says that HMD tracks the controller? A: So I did not say that.). *See also id. at* 272:3-8, 275:20-276:18.

Simply put, there is no evidence on the record that McCulloch's HMD has a sensor, and Petitioner's reliance on language in McCulloch that its HMD "may also have additional features/functionality" and sensors are "obvious 'input device(s) 914'" is insufficient to establish the disclosure or obviousness of this limitation.

Thus, as discussed in the POR and POPR, McCulloch discloses neither

determining with the WED when a user is in the zone, nor using sensors on a WED to track a PED and determine when it leaves the zone.

E. The VR Book Is Not Part of Petitioner’s Combinations

The law is clear that Petitioner cannot rely on the VR Book because it was not a part of its original petition. “The Board therefore cannot rely on evidence relating solely to grounds on which it never instituted.” *In re IPR Licensing*, 942 F.3d at 1369. In *In re IPR Licensing*, the Federal Circuit overturned the Board’s decision where the Board relied upon a new reference in its final written decision despite the petition not mentioning it in the ground on which the Board instituted review. *Id.*

In a footnote, Petitioner attempts to excuse its improper reliance on Dr. Begault’s testimony and the VR Book, stating that these are background references within the “general knowledge” of a PHOSITA. Reply, at 12 n.2. But the Board must reject “a conclusory assertion ... about general knowledge in the art without evidence on the record, particularly where it is an important limitation that is not evidently and indisputably within the common knowledge of those skilled in the art.” *Arendi S.A.R.L.*, 832 F.3d at 1362-64 (quoting *K/S HIMPP v. Hear-Wear Technologies, LLC*, 751 F.3d 1362, 1365-66 (Fed.Cir.2014)). Petitioner has offered no evidence aside from its conclusory statement in the footnote that the portions of the VR Book and Dr. Begault’s testimony that it relies on are in fact within the general knowledge of a PHOSITA.

Despite the plain and unambiguous law indicating that VR Book cannot be added into the instituted grounds in this case, Petitioner does just that. For example, Petitioner writes “and the VR Book correctly notes that ‘[t]racked hand-held controllers’ ‘have been used for decades,’ frequently with ‘inertial, electromagnetic, ultrasonic, or optical (camera) technologies,’ like those disclosed in Pedrotti.” Reply at 16. At this stage, the VR Book is the only substantive art Petitioner relies upon for the proposition that a WED includes sensors to track a PED and determine when it leaves the zone. While Petitioner contends that this is only a “background reference,” *id.* at 17, and that its expert is just using it to support his contention that “sensors on HMDs for sensing user and controller locations were well-known and known to be beneficial,” *id.* at 16, it is obvious that such a particular and specific element of the claims cannot be supported by expert testimony alone. Petitioner’s attempt to improperly use its expert to introduce an additional reference to address a serious deficit in both Grounds 1 and 2 flies in the face of the rules governing IPRs.

F. The VR Book Does Not Disclose A WED Using Sensors To Track A PED And Determine When It Leaves The Zone

Petitioner argues that “the VR Book correctly notes that ‘[t]racked hand-held controllers’ ‘have been used for decades,’ frequently with ‘inertial, electromagnetic, ultrasonic, or optical (camera) technologies,’ like those disclosed in Pedrotti.” Reply at 16. Petitioner does not provide, however, any explanation for how this disclosure

teaches a WED using sensors to track a PED and determine when it leaves the zone, as required by claims 2, 9, and 17. Even construed in the manner most favorable for Petitioner, the VR Book only teaches the presence of certain sensors in the overall system—not the location of the sensors being on a WED. When considered together with the testimony of Petitioner’s expert Dr. Welch—“no sane person of ordinary skill or sane person in general who knows something about sensors and system like this would ever attempt to do that”—the VR Book is far too vague and general to possibly be construed as teaching a WED using sensors to track a PED and determine when it leaves the zone. Ex. 2012, 233:17-235:10.

III. CONCLUSION

In view of the foregoing, there is no basis for the Board to cancel any of the challenged claims.

Date: September 20, 2024

Respectfully submitted,

/Erick Robinson/

Erick Robinson, Esq. (Reg. No. 51,354)

Jayne Partridge (Reg. No. 39,011)

Jayne C. Piana (Reg. No. 48,424)

Patrick M. Dunn (Reg. No. 70,474)

Homayoon Rafatijo (Reg. No. 80,870)

BOCHNER PLLC

24 Greenway Plaza, Suite 1800

Houston, TX 77046

Tel: (646) 971-0685

Fax: (646) 343-9672

Attorneys for Eight KHZ LLC

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24(d), the undersigned hereby certifies that the foregoing Patent Owner's Sur-Reply contains 4,355 words using the word count feature of Microsoft Word.

Dated: September 20, 2024

/Erick Robinson/
Erick Robinson (Reg. No. 51,354)
Attorney for Eight KHZ, LLC

CERTIFICATE OF SERVICE

I hereby certify that on September 20, 2024, I caused a true and correct copy of the foregoing Patent Owner's Sur-Reply to be served via electronic mail upon the following attorneys of record for the Petitioner:

Inge A. Osman
Steven Peters
Lathan & Watkins LLP
555 Eleventh Street, NW, Ste. 1000
Washington, DC 20004-1304
Inge.osman@lw.com
Steven.peters@lw.com

Christopher W. Henry
Kimberly Q. Li
Latham & Watkins LLP
200 Clarendon Street
Boston, Massachusetts 02116
christopher.henry@lw.com
Kimberly.li@lw.com

Linfong Tzeng
Lantham & Watkins LLP
140 Scott Drive
Menlo Park, California 94025
Linfong.tzeng@lw.com

Date: September 20, 2024

Respectfully submitted,

/Erick Robinson/

Erick Robinson, Esq. (Reg. No. 51,354)

BOCHNER PLLC

24 Greenway Plaza, Suite 1800

Houston, TX 77046

Tel: (646) 971-0685

Fax: (646) 343-9672

Attorneys for Eight KHZ LLC