UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MAGIC LEAP, INC
Petitioner,
v.
PERCEPT TECHNOLOGIES INC.
Patent Owner.

IPR2023-00495
Patent 8,696,113

PATENT OWNER'S PRELIMINARY RESPONSE

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I. INTRODUCTION AND SUMMARY OF ARGUMENTS

Magic Leap, Inc. ("Magic Leap") challenges the patentability of claims 1-3 and 12-14 of U.S. Patent No. 8,696,113 (the "'113 patent"). The Board should deny institution of trial because the petition fails to set forth at least a *prima facie* case of unpatentability and so it would be pointless to institute trial on those challenges. In each of the challenges based on Osterhout and the combination of Mann '526 and Vaissie, Magic Leap has failed to demonstrate that the cited references teach or suggest the requirement that a dynamic eye tracking mechanism is in communication with the lens of the wearable optics.

These and further reasons why the Board should deny institution of trial are discussed in greater detail below.

II. BACKGROUND, THE '113 PATENT, AND CLAIM CONSTRUCTION

In its petition, Magic Leap presents two groups of challenges to the claims of the '113 patent; one based on the teachings of Osterhout (Ex. 1005) and the other based on the combined teachings of Mann '526 (Ex. 1006) and Vaissie (ex. 1007):

Ground		References	Claims
1	§ 103	Osterhout	1-3 and 12-14
2	§ 103	Mann ’526 and Vaissie	1-3 and 12-14

See Pet. at 11.

A. The ’113 Patent

The ’113 patent describes “wearable optics” made up of a frame member and a lens, and which also include circuitry within the frame member for enhancing the use of the wearable optics. Ex. 1001 at Abst. Several such enhancements are described, including enhancements that allow the wearable optics to be used as “media focals,” or integrated with telecommunication devices and/or entertainment devices. *Id*. at 3:29 et seq., 4:54 et seq., 5:35 et seq. A feature of the wearable optics is the use of dynamic eye tracking, which allows for parameters of the wearable optics to be personalized to a wearer. *Id*. at 8:27 et seq.

According to the specification, a dynamic eye tracking mechanism is in communication with the lens of the wearable optics. *Id*. at 1:57-59, 64-67; 2:4-6, 12-14. For example, where the wearable optics include lenses with materials that can be electrically controlled, chromatic, refractive, diffractive, transparency, and/or reflective properties of the wearable optics

can be controlled using the dynamic eye tracking provided by this mechanism. *Id*. at 8:40-60. This feature is also recited in each of the challenged independent claims. *Id*. at 14:24-25 (claim 1), 15:11-12 (claim 12).

B. Claim Construction

In *inter partes* reviews such as this one, the Board applies the same claim construction standard used to construe a claim in a civil action under 35 U.S.C. § 282(b). *Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board*, 83 Fed. Reg. 51,340 (Oct. 11, 2018). Accordingly, the claims should be construed consistent with their plain and ordinary meaning as understood by a person of ordinary skill in the art. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-17 (Fed. Cir. 2005). "The ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1313.

In the co-pending district court litigation, *Percept Technologies Inc. v. Magic Leap, Inc.*, 1:22-cv-00025 (DDE), the Court has entered an order construing the recited "dynamic eye tracking mechanism," as a "mechanism for dynamically tracking the characteristics of the eye, including, for

example, ciliary, pupil, corneal, retina, lens, iris, or eye lid measurements, blinks, squints, gaze direction, or eye movement." Ex. 1021 at 1. The term "a lens" was construed consistent with its "[p]lain and ordinary meaning." *Id*. The Court's order did not address the entirety of the phrase "a dynamic eye tracking mechanism is in communication with the lens of the wearable optics."

Insofar as the phrase "in communication with," as it appears in the claim limitation "a dynamic eye tracking mechanism is in communication with the lens of the wearable optics," is concerned, the Board should accord this phrase its plain and ordinary meaning as understood by a person of ordinary skill in the art at the time of the invention of the '113 patent. This is appropriate because the term, as used in the '113 patent, is readily understandable and does not require further interpretation. *See Phillips*, 415 F.3d at 1314. The patentee did not provide the term any special meaning in the specification of the '929 patent, and, regardless, Magic Leap "does not believe any claim construction is necessary." Pet. at 9. Accordingly, there is no clear reason to depart from the plain and ordinary meaning of this term. *Ancora Technologies Inc. v. Apple Inc.*, 744 F.3d 732, 734 (Fed. Cir. 2014) ("A claim term should be given its ordinary meaning in the pertinent

context, unless the patentee has made clear its adoption of a different definition or otherwise disclaimed that meaning.").

To determine the "plain and ordinary meaning" of the phrase "in communication with" as used in challenged claims 1 and 12, it is helpful to recognize that "in communication with" is a prepositional phrase describing the relationship between the eye tracking mechanism and the lens. Ex. 1001 at 14:22-25, 15:10-13. More specifically, the phrase is introducing a receiver of communications—the lens—from a sender—the dynamic eye tracking mechanism—thereof. This understanding comports with the specification's description of a dynamic eye tracking mechanism controlling chromatic, refractive, diffractive, transparency, and/or reflective properties of a lens (or insert thereof) of the wearable optics, Ex. 1001 at 8:40-60, and "a dynamic eye tracking mechanism in communication with the lens[, where a]n augmented reality overlay is utilized based upon the dynamic eye tracking," *id*. at 2:4-7; hence, it is the plain and ordinary meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Phillips* at 1313.

Percept Technologies believes that further constructions are not needed to resolve any asserted ground in this petition. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co. Ltd*., 868 F.3d 1013, 1017 (Fed. Cir.

2017) (only "terms 'that are in controversy, and only to the extent necessary to resolve the controversy'" need be construed) (quoting *Vivid Techs., Inc. c. Am. Sci, & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). However, to the extent the Board finds it useful, it should adopt the district court's constructions for the recited "dynamic eye tracking mechanism," and "lens." Ex. 1021 at 1. Each of these constructions were determined by the district court because after a full briefing by the same parties to the present proceeding under the same standard used for claim constructions by the Board. Hence, there is no good reason for the Board to depart from these constructions.

III. THE PETITION FAILS TO DEMONSTRATE THAT THERE IS A REASONABLE LIKELIHOOD THAT ANY CHALLENGED CLAIM IS UNPATENTABLE

"The Director may not authorize an inter partes review [trial] to be instituted unless the Director determines that the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail." 35 U.S.C. § 314(a). At a minimum, the reasonable-likelihood-of-prevailing standard "effectively requires the petitioner to present a prima facie case justifying a rejection of the claims in a patent." 112 Cong. Rec. S1375 (daily ed. Mar. 8, 2011) (quoting Sen. Kyl). Indeed, if

a challenge fails to set forth at least a *prima facie* case of unpatentability, then it would be pointless to institute trial on that challenge, as the petitioner cannot cure defects in a petition during trial. As explained by the Federal Circuit:

> It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that ***the initial petition*** identify "with particularity" the "evidence that supports the grounds for the challenge to each claim." 35 U.S.C. § 312(a)(3). . . . Unlike district court litigation — where parties have greater freedom to revise and develop their arguments over time and in response to newly discovered material — the expedited nature of IPRs bring[s] with it an obligation for petitioners to make their case ***in their petition to institute***.

Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd., 821 F.3d 1359, 1369 (Fed. Cir. 2016) (emphases added).

Moreover, the petition must be judged as it is written. The Board may not overlook flaws in the petition or reformulate its challenges to enhance their suitability. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1355 (2018) ("[I]t's the petitioner, not the Director, who gets to define the contours of the proceeding."); *see also id.* ("[T]he petitioner is master of its complaint . . ."); *see also id.* at 1353 (forbidding the Board from "curat[ing]" the petition).

Furthermore, because all of the challenges in the petition allege obviousness of the claims, the analyses set forth in the petition must include "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (*quoting In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). The challenger must supply the factual basis for the challenge and "may not resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis." *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967). Additionally, in cases such as the present, where the obviousness challenges involve a modification or combination of teachings, the Petitioner must also establish that one skilled in the art would have had a reasonable expectation of success to make the modification or combination. *Intelligent Bio-Sys.*, 821 F.3d at 1367-68. The modification or combination must not "require a substantial reconstruction and redesign of the elements" in a reference or "a change in the basic principles under which [a reference] was designed to operate." *In re Ratti*, 270 F.2d 810, 813 (CCPA 1959). Nor can the modification or combination render a reference unsatisfactory or "inoperable for its intended purpose." *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

Last but not least, the Supreme Court has emphasized that obviousness cannot be established by hindsight combination to produce a claimed invention:

> A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning. *See Graham [v. John Deere Co.]*, 383 U.S. [1,] 36, 86 S. Ct. 684, 15 L. Ed. 2d 545 [(1966)] (warning against a "temptation to read into the prior art the teachings of the invention in issue" and instructing courts to "'guard against slipping into use of hindsight'" (*quoting Monroe Auto Equip. Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (6th Cir. 1964)).

KSR Int'l, 550 U.S. at 421.

A. Petitioner's Proposed Grounds for Institution Based on Osterhout Should be Denied

Magic Leap's first group of challenges are based on the teachings of Osterhout. Pet at 11. In relevant part, Magic Leap contends Osterhout teaches the wearable optics device recited in claims 1 and 12 in the form of "an interactive head-mounted eyepiece worn by a user." Pet. at 16, 39. The recited lens of claims 1 and 12 is said to be disclosed by Osterhout as lenses

104 of the head-mounted eyepiece 100. *Id*. at 17, 39.[1] And, the dynamic eye tracking mechanism of the claims is alleged to be taught by Osterhout as an "eye tracking facility" that employs light reflected off the user's eye, *id*. at 18, or a camera on the eyepiece. *Id*.

Magic Leap argues the eye tracking facility of Osterhout is "in communication with" the lens, "at least because the dynamic eye tracking mechanism detects an eye gaze that is directed toward a specific part of the lens (e.g., the corner), or through a certain portion of the lens." *Id*. at 19. Alternatively, Osterhout is alleged to teach the dynamic eye tracking mechanism in "optical communication" with the lens "because the lens is translucent, the eye receives light rays that are transmitted via the lens[, and t]hose light rays are detected by the dynamic eye tracking mechanism—for example, by a 'camera on the eyepiece that views back to the wearer's eye.'" *Id*. (citations omitted). And, Magic Leap further contends, "the dynamic eye tracking mechanism is [ ] in communication with the lens at least by correlating the viewing direction [of the user's eye] to a point on the lens [at which a display is projected]." *Id*. at 19-20.

[1] Insofar as Magic Leap's petition can be read as mapping the recited "lens" of the claims to the "special contact lens" described by Osterhout, Pet. at 17, this reading of Oserhout is incorrect, as discussed in greater detail below.

None of these arguments support a finding that Osterhout teaches or suggests a dynamic eye tracking mechanism in communication with a lens, as recited in independent claims 1 and 12. As discussed above, this phrase is identifying the lens of the wearable optics device as a recipient of communications from the dynamic eye tracking mechanism. Magic Leap's argument that the eye tracking facility of Osterhout is "in communication with" the lens, "at least because the dynamic eye tracking mechanism detects an eye gaze that is directed toward a specific part of the lens (e.g., the corner), or through a certain portion of the lens," Pet. at 19, fails to meet this requirement of the claims. According to Osterhout, a camera on the eyepiece that looks back towards the wearer's eye can interpret various eye movements as commands for a controlled device. Ex. 1005 at [0304]. Magic Leap's first argument focuses on the portion of this disclosure concerning the camera detecting the wearer gazing towards a fixed object, such as the corner of the lens or gazing at an object through the lens. Pet. at 19 (citing Ex. 1005 at [0304]). Simply observing where a wearer is looking does not demonstrate that the object doing the observing (e.g., a camera) is in communication with a lens. Indeed, no communication whatsoever between the camera (or, more broadly, the eye tracking facility) and the lens is required (or identified in Osterhout) for the camera to perform this function.

That the light received by the camera may travel from the wearer's eye through the lens before it is so received does not demonstrate that the camera is *in communication with* the lens, because the lens is not acting as a recipient of any communications from the camera. Instead, the lens merely acts passively and transmits whatever light is incident upon it through it. That the wearer's gaze might be directed to a part of the lens is even a less tenuous basis for concluding that the camera of Osterhout is *in communication with* the lens because there remains no information exchange, i.e., no communication, between those items. The camera is merely determining where the wearer is looking, not communicating with the lens, or the portion thereof, that the wearer happens to be looking towards.

To the extent Magic Leap relies on the testimony of Dr. LaViola for supporting this argument, Pet. at 19 (citing Ex. 1003 at ¶ 60), that testimony is entirely conclusory and virtually a verbatim duplication of the argument made in the petition. Ex. 1003 at ¶ 60. It offers no assistance whatsoever to the Board in understanding how or why the opinion expressed by Dr. LaViola was reached. As such it is entitled to no weight. *See* 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.");

Upjohn Co. v. Mova Pharm. Corp., 225 F.3d 1306, 1311 (Fed. Cir. 2000) ("Lack of factual support for expert opinion to factual determinations, however, may render the testimony of little probative value in a validity determination.") (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories*, Inc., 776 F.2d 281, 294 (Fed. Cir. 1985)).

Magic Leap's next contention that in Osterhout the dynamic eye tracking mechanism might be in *optical communication* with the lens because the lens is translucent, the eye receives light rays that are transmitted via the lens, and those light rays are detected by the dynamic eye tracking mechanism, Pet. at 19, is also deficient. Even Magic Leap is apparently unconvinced by its own argument inasmuch as it says only that the dynamic eye tracking mechanism *might be* in optical communication with the lens. *Id*. In any event, Magic Leap does not explain why the purported "optical communication" would mean the dynamic eye tracking mechanism is *in communication with* the lens, as required by claims 1 and 12. And, there is no such *optical communication* anyway.

Once again Magic Leap is basing its argument of the disclosure provided by Osterhout at [0304] and the conclusory statements of Dr. LaViola. *Id*. As before, Dr. LaViola's testimony is entirely duplicative of the argument made in the petition and offers no supporting factual basis for its

conclusion. See Ex. 1003 at ¶ 61. Hence, it is deserving of little or no weight. And, as before, Osterhout itself offers no basis for concluding there is any communication, optical or otherwise, between the dynamic eye tracking facility (e.g., the camera) and the lens. That light rays received by the dynamic eye tracking facility may pass through the lens either before reflecting from the wearer's eye and/or thereafter does not mean the lens is a recipient of communications from the dynamic eye tracking facility, as required by the claims. For that matter, nor does it mean the dynamic eye tracking facility is a recipient of communications from the lens either. In fact, there is no communication taking place between the dynamic eye tracking facility and the lens whatsoever, and it is merely the dynamic eye tracking facility receiving light rays from wherever they happen to originate. The light rays are not acted upon by the lens so as to *communicate* anything.

Magic Leap's next augment is similarly unavailing. According to Magic Leap, because Osterhout's dynamic eye tracking facility can correlate the wearer's viewing direction to a point on a display that is projected on the lens, the dynamic eye tracking mechanism must be in communication with the lens "at least by correlating the viewing direction to a point on the lens." Pet. at 20. Of course, neither Magic Leap nor Dr. LaVoila (who merely repeats this contention verbatim, Ex. 1003 at ¶ 62) provide any explanation

of why a correlation performed by the dynamic eye tracking facility alone means that dynamic eye tracking facility must be in communication with the lens. Certainly Osterhout does not describe any such communication. Instead, Osterhout states only that it is the direction of viewer's gaze that is monitored. Ex. 1005 at [0304]. Nothing is said about the need for the dynamic eye tracking facility to be in communication with the lens for the command interpretation to be made and nor has Magic Leap or its declarant explained why this must be so.

Magic Leap's final argument as to why the dynamic eye tracking facility of Osterhout is in communication with the lens concerns "a special contact lens [that] may be provided to the user with an embedded optical component, such as a mirror, magnetic field sensor, and the like, for measuring motion of the eye." Ex. 1005 at [0301]; Pet. at 17, 20. Osterhout does not say much about the "special contact lens," nor is it depicted in any of the figures of the reference. All that the user is advised is that motions of the eye might be monitored with components (such as the aforementioned mirror or magnetic field sensor) mounted in the contact lens. Ex. 1005 at [0301].

Magic Leap's petition seemingly alleges that Osterhout's "special contact lens" could be considered the recited "lens" of a "wearable optics device" recited in claims 1 and 12. Pet. at 17, 39. This attempt fails.

First, claim 12 requires that the "lens includes a plurality of layers." Ex. 1001 at 15:20. Nothing in Osterhout describes the "special contact lens" as including a plurality of layers, nor are any such layers suggested. Ex. 1005 at [0301]. Indeed, Magic Leap resorts to the "understanding" of a person of ordinary skill in the art to try and conjure some layers, but this is supported only by the conclusory testimony of Dr. LaVoila, Pet. at 42 (citing Ex. 1003 at ¶ 111), which offers no factual basis for its deduction. Instead, Dr. LaVoila merely repeats, word for word, the conclusory allegation of the petition. Ex. 1003 at ¶ 111. Not only is such testimony entitled to little or no weight, PTAB Consolidated Trial Practice Guide at 35 (Nov. 2019) ("Consol. TPG"), it is not a substitute for an actual disclosure in a prior art reference. *Id*. at 36. In fact, Osterhout says nothing about how a special contact lens that includes embedded optical components may be constructed, and it is only speculation on the part of Dr. LaVoila and Magic Leap that it would have the necessary "plurality of layers." Dr. LaViola offers no basis for concluding that must be the case; for example, his testimony says nothing about the construction of contact lenses in general or even contact

lenses with embedded components, and so there is no basis for accepting his unsupported statement that the special contact lens mentioned in only two sentences of Osterhout must include them. In short, there is nothing that suggests the "special contact lens" of Osterhout can or should be considered the "lens" recited in claim 12.

Second, as noted above, the same "lens" recited in claim 12 is recited in claim 1. Ex. 1001 at 14:23. Because the same term is used identically in each of these claims, it should be construed consistently across both of these claims. *Digital Biometrics, Inc. v. Identix, Inc*., 149 F.3d 1335, 1345 (Fed. Cir. 1998). As the "special contact lens" of Osterhout" cannot be the "lens" of claim 12, it cannot be the "lens" of claim 1 either.

Because the "special contact lens" of Osterhout is not the "lens" recited in challenged claims 1 and 12, Petitioner has failed to demonstrate that Osterhout teaches or suggests a dynamic eye tracking facility in communication with the lens, as alleged. The basis for Magic Leap's assertion is its mapping of the recited "lens" of the claims to the "special contact lens." Pet. at 20 ("The eye tracking mechanism is in communication with the lens, at least because the eye tracking mechanism is in communication with the embedded optical component of the contact lens to receive the measured motion of the eye and thus track the motion."), 39. As

this mapping fails, so too does Magic Leap's contention that Osterhout discloses the "in communication with" requirement of the claims.

Thus, Petitioner has failed to demonstrate that Osterhout teaches or suggests the subject matter required by independent claims 1 and 12. As such, the petition has failed to satisfy its obligation to "specify where each element of the claim is found in the prior art," 37 C.F.R. § 42.104(b)(4), and fails to make out a *prima facie* case of obviousness. *CFMT, Inc. v. Yieldup Intern. Corp*., 349 F.3d 1333, 1342 (Fed. Cir. 2003); *see also* 37 C.F.R. § 42.108(c); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) ("In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.") (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify "with particularity . . . the evidence that supports the grounds for the challenge to each claim")); *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc*., 800 F.3d 1375, 1378 (Fed. Cir. 2015) (the burden of persuasion never shifts to the Patent Owner); *In re Magnum Oil Tools Int'l, Ltd*., 829 F.3d 1364, 1380 (Fed. Cir. 2016) (a petitioner cannot satisfy its burden of proving obviousness by employing "mere conclusory statements").

Claims 2-3 depend from claim 1 and claims 13-14 depend from claim 12. Each respective dependent claim is not unpatentable in view of Osterhout for at least the same reasons as its respective independent claim. *Hartness Int'l. Inc. v. Simplimatic Engineering Co.*, 819 F.2d 1100 (Fed. Cir. 1987) (a claim that depends from a nonobvious independent claim is nonobvious because it contains all of the limitations of that independent claim plus a further limitation).

Accordingly, the petition's challenge to claims 1-3 and 12-14 in view of Osterhout is not reasonably likely to prevail with respect to any claim and the Board should deny institution of trial.

B. Petitioner's Proposed Grounds for Institution Based on Mann '526 and Vaissie Should be Denied

Petitioner challenges claims 1-3 and 12-14 as being obvious in view of Mann '526 and Vaissie. Pet. at 11, 44 et seq. As to the requirement that a dynamic eye tracking mechanism be in communication with a lens, as recited in the challenged claims, Magic Leap alleges first that an eye tracking system described in Mann '526 "is *in communication with the lens* at least because the eye tracking mechanism is in optical communication with the lens, *e.g.*, by the eye tracking mechanism receiving light rays from the lens." Pet. at 53 (emphasis in original). Second, Magic Leap argues that a

person of ordinary skill in the art would have for it obvious to modify the embodiment shown in Figure 10 of Mann '526 to include a beamsplitter and that with such a modification the eye tracking mechanism of Mann '526 would be in optical communication with the lens because the beamsplitter would transmit light rays from the lens to the eye tracking mechanism. *Id*. at 54-55; *and see id*. at 71 (treating claim 12 similar to claim 1 with respect to the "in communication with" limitation). Each of these arguments fails.

As described above, the "in communication with" limitation in claims 1 and 12 requires that the lens of the wearable optics device be a recipient of communications from the dynamic eye tracking mechanism. Magic Leap's argument that the eye tracking mechanism of Mann '526 is "in optical communication with" the lens fails to meet this requirement. First, Magic Leap does not explain why any purported "optical communication" would mean the dynamic eye tracking mechanism is *in communication with* the lens, as required by claims 1 and 12. Second, there is no such *optical communication* anyway.

In Mann '526,

> FIG. 10 depicts the left eye portion of an embodiment of the wearable camera system where the camera focus and vergence are driven by the output of an eyetracker. Eye tracker assembly 1010 (comprising camera and infrared

> light sources) illuminates and observes the eyeball by way of rays of light 1011 that partially reflect off beamsplitter 1020. Beamsplitter 1020 also allows the wearer to see straight through to mirror 315 and thus see virtual light from viewfinder 340. The eyetracker 1010 reports the direction of eye gaze and conveys this information as a signal 1012 to eye tracker processor 1030 which converts this direction into "X" and "Y" coordinates that correspond to the screen coordinates of viewfinder Screen 340.

Ex. 1006 at 24:66 – 25:11. Thus Magic Leap is wrong when it alleges that, "the camera of the eye tracking mechanism 1010 captures an image of the eye by capturing light rays transmitted by the lens and reflected in the eye." Pet. at 53. Mann '526 explains that the eye tracker assembly 1010 itself "illuminates and observes the eyeball by way of rays of light 1011." Ex. 1006 at 25:1-5. The light rays 1011 are produced by infrared light sources of the eye tracker assembly, partially reflect off the beamsplitter 1020, reflect off the wearer's eye, and then return to the eye tracker assembly 1010. *Id*. There is no teaching of the eye tracking mechanism receiving light rays from the lens, as alleged by Magic Leap. Pet. at 53. And, insofar as Magic Leap relies on the testimony of Dr. LaViola in support of its flawed theory, it should not surprise that Dr. LaViola's testimony in this regard is simply a

repetition of the allegation set forth in the petition. Ex. 1003 at ¶ 138. As such, the Board need not accord it any weight. Consol. TPG at 35; *and see Homeland Housewares, LLC v. Whirlpool Corp*., 865 F.3d 1372, 1378 (Fed. Cir. 2017) (where, as here, expert testimony is inconsistent with the record, or based on an incorrect understanding of the claims, that testimony must be disregarded); *Wyers v. Master Lock Co.*, 616 F.3d 1231 (Fed. Cir. 2010); *and see Intercontinental Great Brands LLC v. Kellogg North America Company*, 869 F.3d 1336, 1348 (Fed. Cir. 2017) ("[E]xpert testimony is not required when the references and the invention are easily understandable.").

Magic Leap ignores the teachings of Mann '526 when it argues that the camera of the eye tracking mechanism captures light rays, such as light rays 311 and 321, that are "transmitted by the lens and reflected in the eye." Pet. at 53. To understand light rays 311 and 321 one must refer to Mann '526's Figure 3. That illustration, reproduced below, shows an arrangement in which rays of light spanning a visual angle from ray 310 to 320 enter the

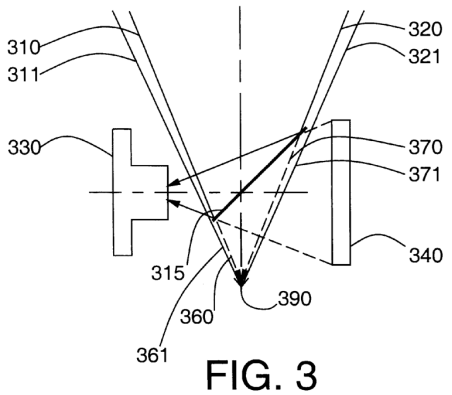

FIG. 3

apparatus and are intercepted by a two-sided mirror 315. Ex. 1006 at 17:59-63. These rays reflect off the mirror and enter camera 330. *Id*. at 17:63-64. The video output of the camera is displayed on screen 340, and a reflection of the screen is then seen in the other side of mirror 315 by the user. *Id*. at 18: 7-20. At the same time, light rays such as 311 and 321 that are not incident on the mirror 315 enter directly into the wearer's eyes, providing the wearer with a view in which the screen image overlaps the wearer's view of the real world. *Id*. at 18:21-26.

The eye tracking mechanism 1010 does not, however, capture light rays 311 and 312 as alleged by Magic Leap. As noted above, Mann '526 explains that the eye tracking mechanism relies on infrared light sources to track motion of the eye. *Id*. at 25:1-4. Mann '526 specifically notes that the eye tracking mechanism "illuminates and observes the eyeball by way of rays of light 1011," not by way of light rays 311 and 321. Light rays 1011 emanate from the eye tracking mechanism 1010, not from the lens. *See id*. at Fig. 10, reproduced below.

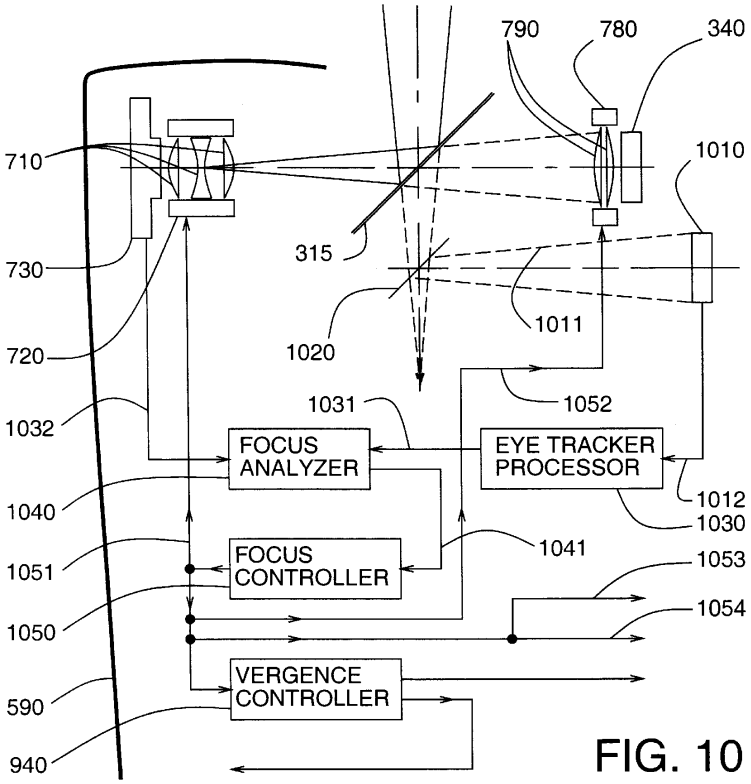
790
780
340
710
1010
315
730
1011
1020
720
1052
1031
1032
FOCUS ANALYZER
EYE TRACKER PROCESSOR
1040
1012
1030
1041
1053
1051
FOCUS CONTROLLER
1054
1050
VERGENCE CONTROLLER
590
940

FIG. 10

Equally unavailing is Magic Leap's argument that replacing mirror 315 of Mann '526 with a beamsplitter suggests the "in communication with" limitation of the challenged claims. Pet. at 54-55. Mann '526 illustrates an

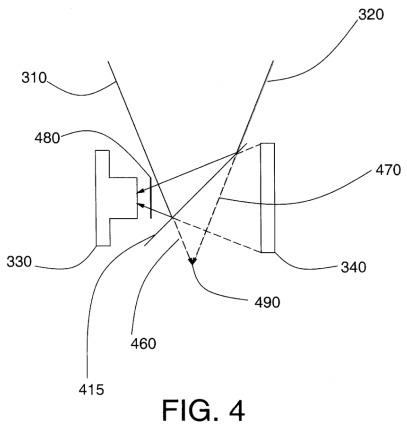

FIG. 4

arrangement in which mirror 315 is replaced by a beamsplitter 415 in Figure 4, reproduced below. In this arrangement, a portion of the light rays are deflected by the beamsplitter 415 into camera 330, the output of the camera is displayed on screen 340, and the reflection of screen 340 is visible to the eye of the wearer by way of beamsplitter 415. Ex. 1006 at 18:63 – 19:7. Importing such an arrangement into Mann '526's Figure 10 embodiment does nothing to change the fact that the eye tracking mechanism 1010 utilizes infrared light which it produces, and not light from the lens, in order to track eye motion. In other words, the eye tracking mechanism 1010 is not and would not be in communication with the lens even if such a substitution were made. Replacing mirror 315 with a beamsplitter would not result in

light being transmitted from such a beamsplitter to the eye tracking mechanism 1010.

Thus, Magic Leap's argument that the combination of Mann '526 and Vaissie teaches or suggests the subject matter required by independent claims 1 and 12 fails. In Mann '526, and hence in the combination of Mann '526 and Vaissie, the eye tracing mechanism relies on infrared light produced by the mechanism itself, and not on light transmitted through the lens, for tracking eye movement. Furthermore, the eye tracking mechanism is not *in communication with* the lens, because the lens is not acting as a recipient of any communications from the eye tracking mechanism. Accordingly, the petition has failed to satisfy its obligation to "specify where each element of the claim is found in the prior art," 37 C.F.R. § 42.104(b)(4), and fails to make out a *prima facie* case of obviousness. *CFMT, Inc.*, 349 F.3d at 1342.

Claims 2-3 depend from claim 1 and claims 13-14 depend from claim 12. Each respective dependent claim is not unpatentable in view of Mann '526 and Vaissie for at least the same reasons as its respective independent claim. *Hartness Int'l.*, 819 F.2d 1100.

Accordingly, the petition's challenge to claims 1-3 and 12-14 in view of the combination of Mann '526 and Vaissie is not reasonably likely to

prevail with respect to any claim and the Board should deny institution of trial.

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION AND DENY INSTITUTION OF TRIAL

Institution of *inter partes* review is discretionary. *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) ("[T]he agency's decision to deny a petition is a matter committed to the Patent Office's discretion." (citing 35 U.S.C. § 314(a)). Congress intended IPRs to be an alternative, and not a companion, to district court litigation. *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16-17 (PTAB Sep. 6, 2017) (precedential in relevant part) ("[A]n objective of the AIA is to provide an effective and efficient alternative to district court litigation.").

In the present case, Magic Leap's challenge is not reasonably likely to prevail with respect to any claim because Magic Leap has failed to properly establish the level of ordinary skill in the art, rendering its petition deficient.

Magic Leap contends that a person of ordinary skill in the art of the '113 patent would "have had a B.S. degree and a Masters degree in Computer Science, Computer Engineering, Electrical Engineering, Physics, or an equivalent field, as well as one to two years of academic or industry

experience in wearable electronic devices or comparable industry experience." Pet. at 8-9. Magic Leap provides no basis for this contention other than that is a conclusion stated by its declarant, Dr. LaViola. *Id*. at 9 (citing Ex. 1003 at ¶ 21). For his part, Dr. LaViola cites no basis for this conclusion other than his understanding that, "a POSITA is presumed to be aware of all pertinent art, thinks along conventional wisdom in the art, and is a person of ordinary creativity, not an automaton." Ex. 1003 at ¶ 21.

For the Board to accept a purported expert's testimony it is incumbent upon the expert to describe sufficient facts and data on which the expert's opinion is based. 37 C.F.R. § 42.65(a); *and see* PTAB Consolidated Trial Practice Guide at p. 35 (Nov. 2019). Here, Dr. LaViola has not provided any sufficient facts or data for his opinion on the question of the level of ordinary skill in the art to be accepted by the Board. That a person of ordinary skill in the art is presumed to be aware of all pertinent art, to think along conventional lines, and to possess ordinary creativity says nothing about why such a person should have the level of education and experience in particular fields alleged by Dr. LaViola. For example, Dr. LaViola provides no basis for concluding that such an individual would possess only *ordinary* skill, or why such an individual would, "be aware of all pertinent art." What is it about the specified level of education and experience that

would expose such an individual to all pertinent art or at least provide him, her, or them with knowledge thereof? Why would someone with a graduate degree and two years of experience in the identified field(s) think only along "conventional wisdom in the art" and have only "ordinary creativity"? Dr. LaViola's testimony answers none of these questions.

The PTAB's predecessor, the Board of Patent Appeals and Interferences, recognized that expert testimony about the level of ordinary skill in the art can be probative, but only if it is well-grounded in the facts. *Ex. Parte Jud*, Appeal No. 2006-1061 (Appl. No. 09/505,713), slip op. at 5-6 (BPAI Jan. 30, 2007) (informative) (rehearing with expanded panel). Here, neither Dr. LaViola nor Magic Leap offer any facts that would ground their assertions regarding the person of ordinary skill in the art. Instead, Dr. LaViola merely recites attributes of such an individual without tying those attributes to anything concerning the '929 patent. Indeed, Dr. LaViola offers only what the expanded panel in *Jud* found to be "typically insufficient," that is, testimony regarding "what education and work experience the hypothetical person of skill had." *Id*. at 6. As the *Jud* panel remarked, such testimony "assumes that the reader already appreciates what such a person would have known," and tends to be redundant because "the basis for a stated education level and work experience (if any is given) tends to be

whatever would be necessary to understand and use references in the pertinent art." *Id*.

In short, nothing in Dr. LaViola's testimony, and by extension the arguments set forth in the petition, provide any basis for the Board to accept Magic Leap's unsupported conclusions concerning the person of ordinary skill in the art. Because the skill-level determination is critical to ensuring objectivity in an obviousness analysis, *Al-Site Corp. v. VSI Int'l Inc*., 174 F.3d 1308, 1324 (Fed. Cir. 1999), Magic Leap's failure to properly substantiate the level of ordinary skill in the art means than none of its obviousness challenges meet the requirements for proving same. *KSR Int'l,* 550 U.S. at 406 (unpatentability under 35 U.S.C. § 103 requires a showing that the invention would have been obvious to a person of ordinary skill in the art). Stated differently, the petition fails to present a *prima facie* case justifying a rejection of the challenged claims. Accordingly, none of Petitioner's challenges are reasonably likely to prevail with respect to any claim and the Board should deny institution of trial. *Harmonic*, 815 F.3d at 1367 ("[T]he PTO is permitted, but never compelled, to institute an IPR proceeding."); *and see Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, slip op. at 15-17 (PTAB Aug. 24, 2022) (denying institution of trial where expert's testimony was merely conclusory assertions) (precedential).

V. CONCLUSION

For at least the foregoing reasons, no *inter partes* review should be instituted on the identified grounds. Further, as this is Patent Owner's Preliminary Response, it is not a comprehensive rebuttal to all arguments raised by the Petition. If a trial is instituted, Patent Owner reserves the right to contest the Petition on all grounds permitted under the applicable rules. Moreover, nothing herein should be construed as a concession or admission by Patent Owner as to any fact or argument proffered in the Petition.

Respectfully submitted,

Dated: May 14, 2023

/Tarek N. Fahmi/
Tarek N. Fahmi
Reg. No. 41,402

Ascenda Law Group, PC
2150 N First St., Suite 420
San Jose, CA 95131
Tel: 866-877-4883
Email: tarek.fahmi@ascendalaw.com

WORD-COUNT CERTIFICATE

I certify that the foregoing document complies with the type-volume limitation of 37 C.F.R. § 42.24(a) and (b) and contains 6,470 words (including words in drawings created by the Patent Owner or as annotations added by the Patent Owner to images reproduced in this document) based on the word count indicated by Microsoft® Word for Mac v. 16.49, excluding those portions exempted by the rule.

/Tarek N. Fahmi/
Tarek N. Fahmi
Reg. No. 41,402

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing:

PATENT OWNER'S PRELIMINARY RESPONSE

and its accompanying exhibits were served on May 14, 2023, by filing this document though the PTAB E2E System as well as by delivering a copy via email directed to the attorneys of record for the Petitioner at the following addresses:

Mehran Arjomand
Alex S. Yap
Bryan Blumenkopf
MORRISON & FOERSTER LLP
707 Wilshire Boulevard, Suite 6000
Los Angeles, CA 90017

Email:
MArjomand@mofo.com
AYap@mofo.com
BBlumen@mofo.com
MagicLeap-Percept-IPR@mofo.com

The parties have agreed to electronic service in this proceeding.

Respectfully submitted,

Dated: May 14, 2023

/Tarek N. Fahmi/
Tarek N. Fahmi
Reg. No. 41,402

Ascenda Law Group, PC
2150 N First St., Suite 420
San Jose, CA 95131
Tel: 866-877-4883
Email: patents@ascendalaw.com