

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MAGIC LEAP, INC.,
Petitioner,

v.

PERCEPT TECHNOLOGIES INC.,
Patent Owner.

IPR2023-00494
Patent 9,010,929 B2

Before KRISTEN L. DROESCH, GEORGE R. HOSKINS, and
SCOTT RAEVSKY, *Administrative Patent Judges*.

HOSKINS, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Magic Leap, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of U.S. Patent No. 9,010,929 B2 (Ex. 1001, “the ’929 patent”), claims 1–11, 15, 17, and 22.

After the Petition was filed, Percept Technologies Inc. (“Patent Owner”) filed a Statutory Disclaimer of claims 7, 9, 10, and 15. *See* Ex. 2002. Patent Owner also filed a Preliminary Response (Paper 9, “Prelim. Resp.”) opposing institution of review as to the remaining challenged claims 1–6, 8, 11, 17 and 22.

Applying the institution standard set forth in 35 U.S.C. § 314(a), which requires the Petition to demonstrate a reasonable likelihood that Petitioner would prevail with respect to at least one challenged claim, we institute, on behalf of the Director (37 C.F.R. § 42.4(a)), an *inter partes* review to determine whether Petitioner demonstrates by a preponderance of the evidence that claims 1–6, 8, 11, 17 and 22 are unpatentable, considering all grounds (i.e., the sole ground) in the Petition directed to those claims. We do not institute review as to claims 7, 9, 10, and 15 on any ground because they have been disclaimed. *See* Ex. 2002; 37 C.F.R. § 42.107(e) (2022).

II. BACKGROUND

A. *Real Parties-in-Interest and Related Proceedings*

Petitioner is the sole real party-in-interest for Petitioner. *See* Pet. 75. Patent Owner is the sole real party-in-interest for Patent Owner. *See* Paper 4.

The parties identify one district court litigation involving the '929 patent: *Percept Technologies Inc. v. Magic Leap, Inc.*, No. 1:22-cv-00025-RGA (D. Del.) (“the District Court Action”). *See* Pet. 75; Paper 4.

Petitioner also identifies IPR2023-00495 as a related proceeding, because in that case Petitioner has challenged U.S. Patent No. 8,696,113 B2, which issued from a continuation-in-part application of the '929 patent. *See* Pet. 75–76; Ex. 1001, code (21) (the '929 patent issued from U.S. App. No. 13/739,929); IPR2023-00495, Ex. 1001, 1:4–9 (U.S. Patent No. 8,696,113 B2 is a continuation-in-part of U.S. App. No. 13/739,929).

B. The '929 Patent

The '929 patent is titled “Digital Eyewear.” Ex. 1001, code (54). It provides eyewear that “includes circuitry within the frame member for enhancing the use of the eyewear” in “a variety of ways.” *Id.* at code (57), 2:21–25. Such enhancements include: (1) media focal enhancements, which further the eyewear’s intended purpose using imaging techniques to improve the user’s vision; (2) telecommunications enhancements, which integrate the eyewear with a telecommunication device such as a cell phone; and (3) entertainment enhancements, which integrate the eyewear with an entertainment device such as an MP3 player or a radio. *See id.* at code (57), 2:23–33.

Figure 1 (reproduced below) is a diagram that illustrates media focals eyewear 100. *See id.* at 1:63, 2:39–40.

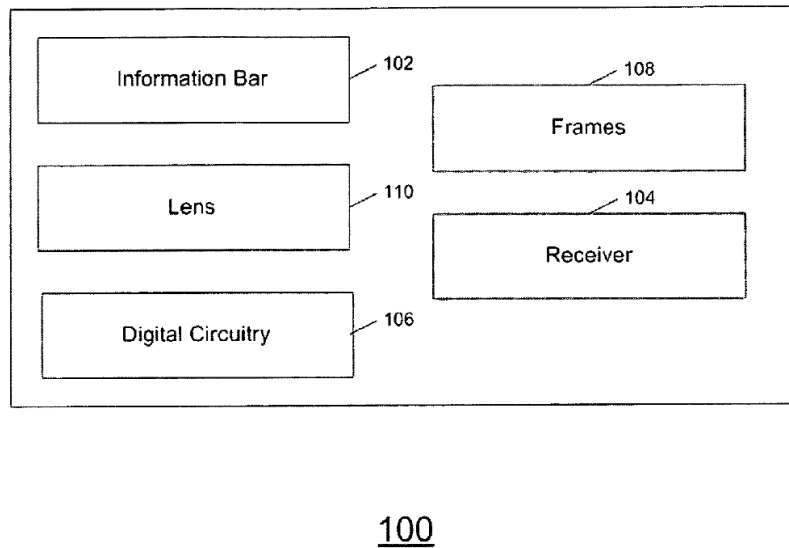


Fig. 1

Figure 1 of the '929 Patent.

Figure 1 diagrammatically illustrates media focal eyewear 100 including information bar 102, receiver 104, digital circuitry 106, frames 108, and lens 110. *See id.* at 2:39–42.

Digital circuitry 106 can be placed within frame 108. *See id.* at 2:46–47, 3:15–20. Circuitry 106 enhances the user’s vision using imaging techniques and data from a digital camera (not shown in Figure 1) placed within the eyewear. *See id.* at 2:25–27, 2:42–45, 3:4–17. In one example, circuitry 106 includes “a zoom feature circuit to allow for the use of the eyewear as binoculars . . . for the user to see objects more closely.” *Id.* at 3:7–10.

“[T]here may be eye or pressure sensors on the eyewear that will activate the binocular circuitry in the glasses,” including “[e]ye movement sensors . . . used to activate and control the binocular glasses.” *Id.* at 3:10–14, 3:20–25. In this way “an activity of the eye itself would control the activity of the media focal,” and “for example, if the idea was to zoom

the image, the eye would blink twice” or perhaps “squint[.]” *Id.* at 3:36–42. The eye sensors can detect “changes in the pupil and iris” of the wearer to implement this functionality. *Id.* at 3:40–43.

Circuitry 106 also provides information bar 102 across lens 110, to display information to the user, including for example a stock ticker, song titles or lyrics, or a telephone number. *See id.* at 2:55–65 (Fig. 2), 4:45–50.

C. The Claims of the '929 Patent

The '929 patent lists twenty-two claims. *See* Ex. 1001, 5:55–8:38. Petitioner challenges claims 1–11, 15, 17, and 22. *See* Pet. 1, 6. Patent Owner has disclaimed claims 7, 9, 10, and 15. *See* Prelim. Resp. 1, 16; Ex. 2002. The remaining challenged claims include independent claims 1, 8, 11, 17, and 22, and dependent claims 2–6 which each depend directly from claim 1.

Claim 1 is illustrative of the remaining challenged claims, and it recites:

1. Eyewear comprising:
 - a frame member;
 - a lens;
 - circuitry within the frame member for enhancing the use of the eyewear; and
 - an eye sensor coupled to the frame member, the eye sensor activating the circuitry responsive to eye motion of a user;wherein an information bar is provided on the lens.

Ex. 1001, 5:57–64 (final line break added).

D. Asserted Prior Art

Petitioner relies principally on the following three prior art references.
See Pet. 5–6.

Name	Reference	Pub. Date	Exhibit No.
Mann '895	CA 2,362,895	Dec. 26, 2002	1005
Pemer	US 2005/0281440 A1	Dec. 22, 2005	1006
Jannard	US 7,278,734 B2	Oct. 9, 2007	1007

E. Asserted Grounds

Petitioner proposes the following two grounds of unpatentability for the challenged claims, both under 35 U.S.C. § 103(a).¹ *See* Pet. 6.

Ground	Claims Challenged	Reference(s)
1	1–8, 10, 11, 15, 17, 22	Mann '895, Pemer
2	7, 9, 10, 15	Jannard

F. Testimonial Evidence

Petitioner relies on the declaration testimony of Joseph J. LaViola, Jr., Ph.D. (Exhibits 1003 and 1004). Patent Owner does not rely on opposing witness testimony at this time.

III. PETITIONER'S GROUNDS OF UNPATENTABILITY

A. The Disclaimed Claims (7, 9, 10, and 15)

Petitioner argues that claims 7, 10, and 15 of the '929 patent are unpatentable under 35 U.S.C. § 103(a) as having been obvious over

¹ The '929 patent issued from an application filed in January 2013. *See* Ex. 1001, code (22). Therefore, the first-inventor-to-file provisions of the Leahy-Smith America Invents Act (Pub. L. No. 112-29, 125 Stat. 284 (2011)), which took effect in March 2013, do not apply here.

Mann '895 and Perner. *See* Pet. 6, 7, 23–30, 33–39, 41–42. Petitioner also argues that claims 7, 9, 10, and 15 are unpatentable under 35 U.S.C. § 103(a) as having been obvious over Jannard. *See* Pet. 6, 46, 50–73.

Patent Owner argues that we should not institute review of these claims, because Patent Owner disclaimed them after the Petition was filed. *See* Prelim. Resp. 1, 16. We agree.

The record before us establishes that Patent Owner statutorily disclaimed claims 7, 9, 10, and 15 on May 12, 2023. *See* Ex. 2002. A disclaimer under 35 U.S.C. § 253(a) is “considered as part of the original patent” as of the date on which it is “recorded” in the Office. 35 U.S.C. § 253(a). For a disclaimer to be “recorded” in the Office, the disclaimer must:

- (1) Be signed by the patentee, or an attorney or agent of record;
- (2) Identify the patent and complete claim or claims, or term being disclaimed. . . .;
- (3) State the present extent of patentee’s ownership interest in the patent; and
- (4) Be accompanied by the fee set forth in [37 C.F.R.] § 1.20(d).

37 C.F.R. § 1.321(a); *see also Vectra Fitness, Inc. v. TNWK Corp.*, 162 F.3d 1379, 1382 (Fed. Cir. 1998) (holding § 253 disclaimer is immediately “recorded” on date the USPTO receives a disclaimer meeting the requirements of § 1.321(a), and no further action is required in the USPTO). Patent Owner’s filing of Exhibit 2002 appears to have met these requirements. Indeed, the disclaimer was published in the USPTO’s Official Gazette on July 4, 2023 (1512 O.G. 105).

Pursuant to our Rules: “The patent owner may file a statutory disclaimer,” and “[n]o *inter partes* review will be instituted based on

disclaimed claims.” 37 C.F.R. § 42.107(e). As a result of the statutory disclaimer, claims 7, 9, 10, and 15 are no longer regarded as claims challenged in the Petition. *See Vectra*, 162 F.3d at 1383 (“This court has interpreted the term ‘considered as part of the original patent’ in section 253 to mean that the patent is treated as though the disclaimed claims never existed.”) (citing *Guinn v. Kopf*, 96 F.3d 1419, 1422 (Fed. Cir. 1996)); *see also Sanofi-Aventis U.S., LLC v. Dr. Reddy’s Labs., Inc.*, 933 F.3d 1367, 1372–75 (Fed. Cir. 2019) (disclaimer of claims during District Court patent infringement litigation “mooted any controversy” over the disclaimed claims, ending the Article III case or controversy requirement for District Court jurisdiction).

In considering Federal Circuit precedent and our rules, we conclude we cannot institute a trial on claims that have been disclaimed, and, thus, no longer exist. Our conclusion is consistent with the statutory scope of *inter partes* review as laid out in 35 U.S.C. §§ 311(b) and 318(a) and is not at odds with *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018). *See, e.g., SAS*, 138 S. Ct. at 1357 (recognizing that “the claims challenged ‘in the petition’ will not always survive to the end of the case; some may drop out thanks to the patent owner’s actions”). Accordingly, we treat claims 7, 9, 10, and 15 as having never been part of the ’929 patent, such that Petitioner cannot seek *inter partes* review of those claims.

Thus, we deny institution of review as to whether disclaimed claims 7, 9, 10, and 15 are unpatentable as having been obvious over the combination of Mann ’895 and Perner, and over Jannard.

B. The Remaining Challenged Claims (1–6, 8, 11, 17 and 22)

Petitioner argues that claims 1–6, 8, 11, 17 and 22 of the '929 patent are unpatentable as having been obvious over Mann '895 and Perner. *See* Pet. 6, 7–23, 30–33, 39–41, 42–46. Patent Owner opposes. *See* Prelim. Resp. 6–16, 17–20.

We have reviewed the preliminary record, and we conclude Petitioner has demonstrated a reasonable likelihood of prevailing on its assertions as to at least claim 1. We therefore institute a review of all of these challenged claims.

1. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (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”)). This burden of persuasion never shifts to the patent owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art;

(2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness, if made available in the record, which has not happened here. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

2. *Level of Ordinary Skill in the Art*

Petitioner contends a person of ordinary skill in the art (“POSITA”) pertaining to the ’929 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. 3 (citing Ex. 1003 ¶ 21).

Patent Owner responds that Petitioner’s “challenge is not reasonably likely to prevail with respect to any claim because [the Petition] has failed to properly establish the level of ordinary skill in the art.” Prelim. Resp. 17.² Patent Owner argues Petitioner “provides no basis for [its POSITA formulation] other than that [it] is a conclusion stated by its declarant, Dr. LaViola.” *Id.* (citing Pet. 3). Patent Owner in turn faults Dr. LaViola’s testimony as conclusory and lacking in evidentiary support. *See id.* at 17–19 (citing 37 C.F.R. § 42.65(a); PTAB Consolidated Trial Practice Guide (Nov. 2019)³ (“CTPG”), 35). As a specific example, Patent Owner attacks

² The Preliminary Response, in addition to this alleged substantive deficiency in the Petition under 35 U.S.C. § 312, suggests we should exercise our discretion to deny review under 35 U.S.C. § 314(a) for substantially the same reasons. *See* Prelim. Resp. 17, 20. We conclude Patent Owner’s argument is not persuasive applying either statutory lens, for the reasons expressed in this Decision.

³ Available at www.uspto.gov/TrialPracticeGuideConsolidated.

Dr. LaViola’s statement that “I have been advised and understand that a POSITA is presumed to be aware of all pertinent art” (Ex. 1003 ¶ 21), as lacking basis. *See id.* at 18. Patent Owner argues that, although expert testimony about the level of ordinary skill in the art can be probative, it must be “well-grounded in the facts,” which is not the case here. *Id.* at 19 (citing *Ex parte Jud*, Appeal No. 2006-1061, at 5–6 (BPAI Jan. 30, 2007) (informative)). Patent Owner concludes that, because a POSITA formulation “is critical to ensuring objectivity in an obviousness analysis,” the Petition’s alleged deficiency in this regard is fatal such that we should deny institution. *Id.* at 20 (citing *KSR*, 550 U.S. at 406; *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999); *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9, at 15–17 (PTAB Aug. 24, 2022) (precedential) (“*Xerox*”)).

The level of ordinary skill in the art is “a prism or lens” through which we view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (citing *Al-Site*, 174 F.3d at 1324). “This reference point prevents . . . factfinders from using their own insight or, worse yet, hindsight, to gauge obviousness.” *Id.* at 1355. “The person of ordinary skill in the art is a hypothetical person presumed to know the relevant art” at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). In determining the level of ordinary skill in the art, we may consider certain factors, including: “(1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field.” *Best Med. Int’l, Inc. v. Elekta Inc.*, 46 F.4th 1346,

1353 (Fed. Cir. 2022) (citations omitted). “The patent’s purpose can also be informative.” *Id.* (citation omitted).

We conclude Petitioner’s POSITA formulation is sufficiently supported by the evidence of record for purposes of institution. That supporting evidence includes the testimony of Dr. LaViola, which is based on his review of the documentary evidence of record, as well as his own experience in the fields of virtual reality and augmented reality including motion tracking. *See* Ex. 1003 ¶¶ 2–3 (Dr. LaViola’s review of the documentary evidence, and the bases for his opinions); *id.* ¶¶ 9–19 (Dr. LaViola’s experience with virtual reality, augmented reality, and motion tracking). Dr. LaViola’s testimony as to the POSITA formulation (*id.* ¶ 21) must be viewed in that light, which Patent Owner’s argument overlooks. Further, Dr. LaViola’s review of the documentary evidence of record and his experience provide the facts that support his opinion, as set forth in the Board’s informative *Jud* decision.

Petitioner’s POSITA formulation further is consistent with the ’929 patent (summarized in Section II.B above) and the prior art of record, namely Mann ’895 and Perner (summarized in Sections III.B.4 and III.B.5 below). *See Best Med.*, 46 F.4th at 1353 (stating that the types of problems encountered in the art, the prior art solutions to those problems, and the patent’s purpose, can all be considered when determining the appropriate level of skill in the art); *Okajima*, 261 F.3d at 1355 (stating that “the absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown’” (citations omitted)); *Xerox* at 8 (“[W]e

presume that the cited prior art references reflect the level of ordinary skill at the time of the invention.”) (precedential, citing *Okajima*, 261 F.3d at 1355).

Apart from the *Jud* decision mentioned above, the case law cited by Patent Owner does not address the sufficiency of evidence proffered to support a party’s POSITA formulation. The *KSR* and *Al-Site* decisions demonstrate that the POSITA formulation is an important guarantee of objectivity in an obviousness analysis. See *KSR*, 550 U.S. at 406; *Al-Site*, 174 F.3d at 1324. The Board’s precedential *Xerox* decision addresses the sufficiency of expert testimony concerning an obviousness analysis based on the prior art, not a party’s POSITA formulation. See *Xerox*, at 15–17. Indeed, the POSITA formulation was not a materially disputed issue in the *Xerox* decision. See *id.* at 7–8.

Patent Owner specifically objects to Dr. LaViola’s statement that “I have been advised and understand that a POSITA is presumed to be aware of all pertinent art.” Ex. 1003 ¶ 21; see Prelim. Resp. 18. However, that testimony is supported by law, because it is part of the legal definition of a POSITA. See *GPAC*, 57 F.3d at 1579. Nothing more appears to be required to support Dr. LaViola’s testimony on this point to justify institution of review.

Based on our review of the record at this preliminary stage, we conclude Petitioner’s POSITA formulation is sufficiently supported by the testimony of Dr. LaViola for purposes of institution. Petitioner’s POSITA formulation also is consistent with the level of skill reflected in the ’929 patent and the prior art of record. Further, apart from objecting to the sufficiency of Petitioner’s evidence as discussed above, Patent Owner does

not presently dispute Petitioner’s POSITA formulation. We, therefore, apply Petitioner’s POSITA formulation in our analysis below.

3. *Claim Construction*

We interpret the ’929 patent claims “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). This “includ[es] construing the claim[s] in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.*

The Petition and the Preliminary Response discuss how the District Court Action has proceeded with respect to claim construction of several claim terms. *See* Pet. 3–5 (citing Exs. 1008–1011); Paper 6 (Petitioner’s Updated Mandatory Notices, providing Ex. 1015); Prelim. Resp. 3–6.

Petitioner’s position is that no claim construction is necessary in this proceeding, because “the challenged claims are [unpatentable] under any reasonable interpretation of the claims.” Pet. 4.

Patent Owner urges us to adopt the District Court’s construction of an “eye sensor activating the circuitry responsive to eye motion of a user,” a limitation found in every challenged claim. *See* Prelim. Resp. 3–6. Patent Owner does not proffer any other explicit claim constructions. *See id.*

Based on the arguments and evidence presented at this stage of the proceeding, we determine no explicit construction of any claim term is needed for purposes of this Decision. *See Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent

necessary to resolve the controversy.”)(quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Concerning the “eye sensor” limitation addressed in the Preliminary Response, the District Court adopted the “[p]lain and ordinary meaning,” without specifying what that meaning might be. Ex. 1015, 1.⁴ This was Patent Owner’s proposed construction, opposing Petitioner’s proposed construction of “the eye sensor making the inactive circuitry become active, in response to eye motion of a user.” Pet. 4–5; *see* Ex. 1008, 15–16; Ex. 1009, 13–15; Ex. 1010, 11–13. However, as noted above, Petitioner does not press for us to apply Petitioner’s District Court construction in this proceeding. *See* Pet. 3–5. Thus, the present record does not present any claim construction disputes for us to resolve in the context of considering Petitioner’s unpatentability contentions (particularly, obviousness over Mann ’895 and Perner, discussed below). Further, we do not discern any need to construe the “eye sensor” limitation in order to decide whether to institute review as to those contentions.

4. *Summary of Mann ’895*

Mann ’895 discloses eyewear including a built-in computer information display that maintains an ordinary appearance of the eyewear. *See* Ex. 1005, 1 (Abstract), 2 (Field of Invention).⁵ Figure 1 (reproduced

⁴ When citing to Exhibits 1008–1010 and 1015, we refer to the page numbering added by Petitioner at the bottom right corner of each page.

⁵ When citing to Exhibit 1005, we follow the convention used by both parties, and refer to the native page numbering of the reference at the bottom center of each page. *See, e.g.*, Pet. 7–9; Prelim. Resp. 11.

below) is a diagram depicting a pair of eyeglasses, illustrating the principles and components of the disclosed invention. *See id.* at 7:18–19, 8:21.

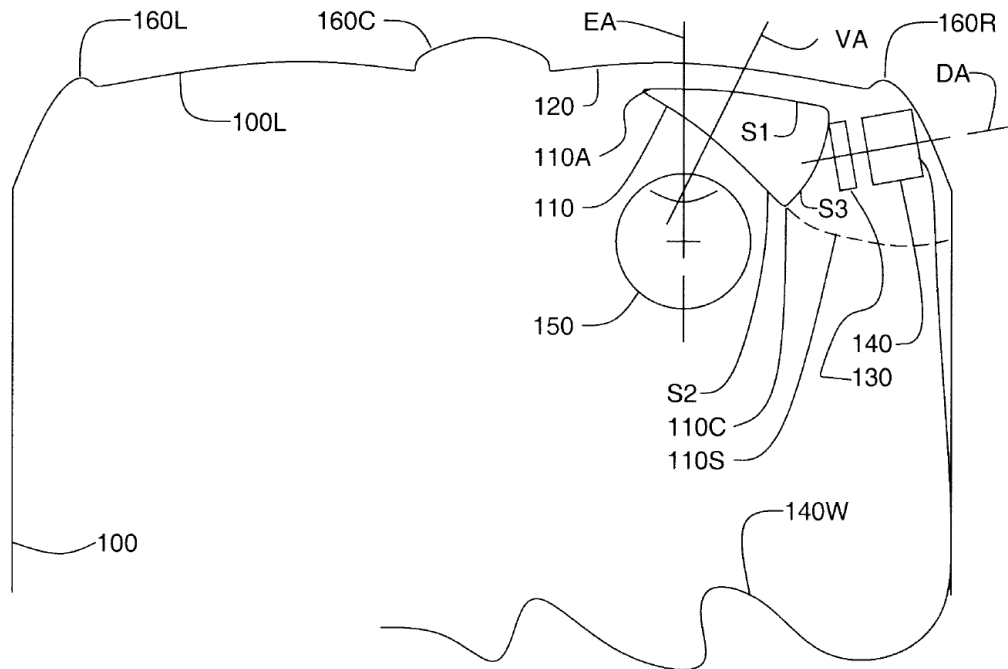


Figure 1 of Mann '895.

Figure 1 illustrates a pair of eyeglasses including frame 100; two lenses 100L; optics 110 and display element 130 disposed on the right side of frame 100; three cameras 160L, 160C, and 160R disposed along the forward-facing portion of frame 100; and wiring 140W. *See id.* at 8:21–24, 9:22–10:15; *see also id.* at Fig. 3 (front view of eyeglass frame 330 with two lenses 340), 14:18–26. Figure 1 additionally shows the user’s right eye 150. *See id.* at 8:25–26.

Display element 130 generates an image, and transmits the image through optics 110 to be viewed by the user, as represented by the user's right eye 150 in Figure 1. *See id.* at 8:25–26, 9:1–2, 10:2–6.

Wiring 140W connects to a pocket-sized computer carried by the user to control display element 130, or “[a]lternatively the computer may be built

into the eyeglass frames” along with various other electronic elements such as cameras 160L, 160C, and 160R. *Id.* at 10:7–15. In this way, the eyeglasses can present “a computer mediated reality environment” to the user, via display element 130 and optics 110. *Id.* at 11:15–16, 16:17–24. Thus, Mann ’895 “provide[s] a wearable eyeglass based device allowing the wearer to view data, such as from the screen of a wearable computer (wearcomp) system but where the device appears to others to be simply a pair of ordinary eyeglasses.” *Id.* at 4:6–9, 5:6–8, 5:20–21. Further: “An important aspect of the invention, when combined with a camera, is the capability of the apparatus to mediate (augment, and to a limited extent diminish, or otherwise alter) the visual perception of reality.” *Id.* at 4:21–23.

The eyeglasses may further employ “a sight license feature”—that is, “a license to see.” *Id.* at 11:21–23. “For example, a retinal or iris scanner in the eyeglasses may license the eyeglasses to provide sight to the [licensed] wearer, but not to others who might steal the eyeglasses.” *Id.* at 11:23–25.

5. *Summary of Perner*

Perner discloses an iris feature detector. *See* Ex. 1006, codes (54) and (57). Figure 1, reproduced below, illustrates an exemplary iris feature detector 110. *See id.* ¶¶ 9, 17.

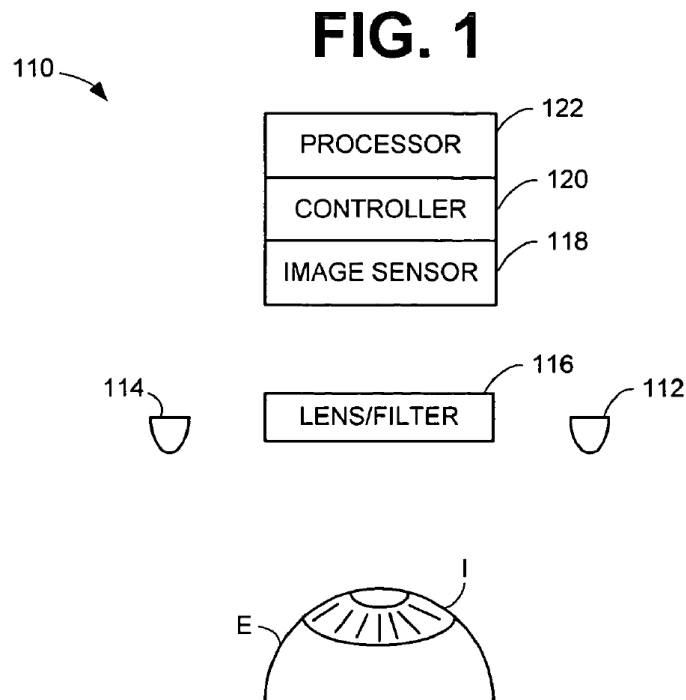


Figure 1 of Perner.

Figure 1 illustrates iris feature detector 110 comprising a reflexive eye movement source (i.e., first and second light sources 112 and 114), optics 116, image sensor 118, controller 120, and processor 122. *Id.* ¶ 17. Figure 1 also illustrates one eye E of a subject to be interrogated by detector 110, including its iris I. *Id.* ¶¶ 17, 22.

Detector 110 operates in the following manner. Controller 120 causes first light source 112 to illuminate, whereby the subject's eye is drawn to and fixates on first light source 112. *See id.* ¶¶ 19, 29. Then, controller 120 simultaneously turns off first light source 112 and turns on second light source 114, causing the subject's eye to be drawn to and fixate on second light source 114. *See id.* ¶¶ 20, 30. During that eye movement, controller 120 causes image sensor 118 to capture two images of the eye “very rapidly,” whereby “only the eye” moves in-between the two images, not background information such as the subject's eye lashes. *Id.* ¶¶ 21–22,

28–30. Processor 122 determines differences between the first and second images to “yield[] a pattern of edges of shapes (the iris) contained in the eye,” which is sufficiently “unique to an individual” that the pattern can “be used to identify or authenticate the subject.” *Id.* ¶¶ 24–26, 32, 35, 57. If the subject is authenticated, then the subject is “granted certain privileges” such as “access allowed.” *Id.* ¶¶ 35, 59.

According to Perner, the foregoing process “does not require complex processing such as registration of the iris, extracting the iris from the background, artifact removal, etc.” thereby “result[ing] in faster detection of iris features, as well as faster processing for identification and authentication” versus previously known iris feature detectors. *Id.* ¶ 25; *see also id.* ¶¶ 1–5, 57.

6. *Claim 1*

Petitioner provides arguments and evidence in support of contending claim 1 is unpatentable as having been obvious over Mann ’895 and Perner. *See* Pet. 7–19; Ex. 1003 ¶¶ 35–61. Patent Owner opposes, focusing on the “eye sensor” limitation of claim 1. *See* Prelim. Resp. 2, 6–16.

We address Petitioner’s contentions and Patent Owner’s opposition on a limitation-by-limitation basis. We conclude Petitioner has demonstrated a reasonable likelihood of prevailing on its assertions as to claim 1.

(i) “1. Eyewear comprising:”

Petitioner assumes the preamble of claim 1 is limiting, and argues Mann ’895 discloses an eyewear apparatus. *See* Pet. 10–11 (citing Ex. 1005, Fig. 3, p. 4); Ex. 1003 ¶ 46. This contention, which Patent Owner does not oppose at this time, is sufficiently supported by the evidence of record for

purposes of institution. In particular, Mann '895 “provide[s] a wearable eyeglass based device allowing the wearer to view data . . . but where the device appears to others to be simply a pair of ordinary eyeglasses.”

Ex. 1005, 4:6–9, Figs. 1 and 3.

(ii) *“a frame member” and “a lens”*

Petitioner argues the eyewear of Mann '895 includes a frame member and a lens. *See* Pet. 11–12 (citing Ex. 1005, Fig. 1, p. 8); Ex. 1003 ¶¶ 47–49. This contention, which Patent Owner does not oppose at this time, is sufficiently supported by the evidence of record for purposes of institution. In particular, Figure 1 of Mann '895 illustrates “a pair of eyeglasses, having temple side pieces of frame 100 with frames that support eyeglass lenses 100L.” Ex. 1005, 8:21–25, Fig. 1.

(iii) *“circuitry within the frame member for enhancing the use of the eyewear”*

Petitioner argues the eyewear of Mann '895 includes circuitry within the frame member for enhancing the use of the eyewear. *See* Pet. 12–13 (citing Ex. 1005, 4, 6–7, 10); Ex. 1003 ¶ 50. This contention, which Patent Owner does not oppose at this time, is sufficiently supported by the evidence of record for purposes of institution. Mann '895 “provide[s] a wearable eyeglass based device allowing the wearer to view data, such as from the screen of a wearable computer (wearcomp) system.” Ex. 1005, 4:6–9, Figs. 1 and 3. In particular, “a viewscreen in the eyeglasses provides an electronic viewfinder connected to the output of [a] camera also concealed in the eyeglass frames” so the wearer can see “meta information such as that determined by an object recognition program that might, for example,

recognize faces of people in the picture and remind the wearer who it is that the wearer wanted to photograph” or is currently viewing. Ex. 1005, 6:24–7:9. In addition, in one embodiment, this functionality is provided by a “computer . . . built into the eyeglass frames.” *Id.* at 10:7–11.

(iv) “*an eye sensor coupled to the frame member, the eye sensor activating the circuitry responsive to eye motion of a user*”

Petitioner argues Mann ’895 in view of Perner meets the eye sensor limitation of claim 1. *See* Pet. 13; Ex. 1003 ¶ 51. Patent Owner opposes. *See* Prelim. Resp. 2, 6–16. For the following reasons, we conclude Petitioner’s contentions are sufficiently supported by the evidence of record for purposes of institution.

(a) *Mann’s Eye Sensor*

Petitioner argues the eyewear of Mann ’895 includes a retinal or iris scanner to implement Mann’s sight license feature, and such scanners “are examples of eye sensors that scan and detect components of the human eye” such as the retina or the iris. Pet. 13–14 (citing Ex. 1005, 11); Ex. 1003 ¶ 51. Petitioner concludes “[t]he retinal or iris scanner in the eyeglasses in Mann ’895 thus meets the claimed *eye sensor coupled to the frame member.*” Pet. 14; Ex. 1003 ¶ 51.

Petitioner also asserts the eye sensor of Mann ’895 “is *activating the circuitry*” per claim 1, because the eye sensor is used to implement Mann’s sight license feature, which “enable[s] the eyeglasses to operate” by providing sight to a licensed wearer but not to others. Pet. 14 (quoting Ex. 1005, 11); Ex. 1003 ¶ 52.

These contentions, which Patent Owner does not oppose at this time, are sufficiently supported by the evidence of record for purposes of institution. In particular, Mann '895 includes “a retinal or iris scanner in the eyeglasses,” which “may license the eyeglasses to provide sight to the [licensed] wearer, but not to others who might steal the eyeglasses.” Ex. 1005, 11:21–25. Thus, for purposes of institution, we conclude the eyewear of Mann '895 includes an eye sensor coupled to its frame member for activating its circuitry. However, Petitioner does not rely on Mann '895 for disclosing the eye sensor being “*responsive to eye motion* of the user” per claim 1 (emphasis added).

(b) *Pemer's Eye Sensor*

Petitioner argues Pemer discloses an eye sensor that is responsive to eye motion of the user. *See* Pet. 14–15; Ex. 1003 ¶ 53. Petitioner particularly asserts “Pemer discloses an iris feature detector with which sequential iris images are captured in response to a user’s ‘rapid eye motion.’” Pet. 14 (quoting Ex. 1006 ¶ 6); Ex. 1003 ¶ 53. According to Petitioner, Pemer determines an edge pattern based on these iris images, and Pemer uses the edge pattern to identify and authenticate a user. Pet. 14–15 (citing Ex. 1006, Fig. 2, ¶¶ 24–27); Ex. 1003 ¶ 53. Petitioner concludes “Pemer’s iris feature detector identifies and authenticates a user, analogous to Mann '895’s iris scanner providing the sight license to authorized users.” Pet. 15; Ex. 1003 ¶ 53.

Patent Owner attacks Pemer’s disclosure as being “clear that the iris feature detector is not *responsive to eye motion of a user*, but rather is responsive to commands issued by a controller.” Prelim. Resp. 11–12

(citing Ex. 1006 ¶¶ 4, 6, 29–30, 35, 57, 59). In other words, Patent Owner’s view is that: “[R]ather than the iris feature detector of Perner being *responsive to eye motion of a user*, as required by [claim 1], the iris feature detector of Perner (that is, its controller) actually *causes eye motion of a user*” by operating light sources 112 and 114. *Id.* at 12–14 (citing Ex. 1006, Fig. 1, ¶¶ 17, 19–21); *see also id.* at 2 (summarizing the ’929 patent disclosure, and stating “[i]mportantly, activity of the eye itself controls the activity of the circuitry” (citing Ex. 1001, 3:38–43)). Thus, Patent Owner concludes Petitioner’s combination of Mann ’895 and Perner “would, at best, adopt Perner’s methodology for *causing eye motion of a user* using an iris scanner, which may operate according to a sight license, as taught by Mann ’895,” and therefore would not result in the invention of claim 1. *Id.* at 14–15.

Based on the present record, we do not agree with Patent Owner’s opposition to the Petition’s contentions. Claim 1 pertinently recites an “eye sensor activating the circuitry responsive to eye motion of a user.” Ex. 1001, 5:62–64. That limitation appears to be met by Petitioner’s combination of Mann ’895 and Perner. *See, e.g., In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (nonobviousness is not established by attacking references individually when unpatentability is predicated upon a combination of prior art disclosures). In particular, as discussed in Section III.B.6(iv)(a) above, Mann ’895 includes an iris scanner for activating circuitry in order to implement Mann’s sight license feature. Perner in turn discloses an iris scanner that is responsive to eye motion of a user, because Perner’s user authentication algorithm relies on motion of the

user's eye between first light source 112 and second light source 114. *See* Ex. 1006, Fig. 1, ¶¶ 17–20, 24–25, 29–30.

Based on the present record, nothing more appears to be required by claim 1. Patent Owner's present opposition appears to be premised on an overly narrow claim construction, whereby claim 1 would require some sort of passive monitoring of the eye by the eyewear circuitry, thereby excluding Perner's circuitry because it uses light sources 112 and 114 to cause movement of the eye. We do not discern such a limitation in the language of claim 1. To the extent Patent Owner opts to maintain this argument in the review instituted by this Decision, we encourage Patent Owner to support its position with a clear articulation of Patent Owner's view of the claim scope in this regard.

For the foregoing reasons, we conclude Petitioner's contentions seeking to establish Perner discloses an eye sensor that is responsive to eye motion of the user, as recited in claim 1, are sufficiently supported by the evidence cited by Petitioner for purposes of institution. Furthermore, the combination of Mann '895 and Perner leads to an eye sensor activating circuitry responsive to eye motion of a user.

(c) Motivation to Modify Mann's Eye Sensor to be Responsive to Eye Motion of a User, in light of Perner, with a Reasonable Expectation of Success

Petitioner argues a person of ordinary skill in the art would have been motivated to combine Mann '895 and Perner to practice the invention of claim 1, with a reasonable expectation of success. *See* Pet. 15–17; Ex. 1003 ¶¶ 54–58. As a first motivation, Petitioner asserts “Mann '895 identifies that an *iris scanner* is used to selectively provide eyeglasses functionality to a

licensed user” and “Pemer invites its combination with Mann ’895 by explaining how it improves on ‘conventional iris scanners’” in identification and authentication systems such as Mann’s eyewear apparatus. Pet. 15–16 (citing Ex. 1005, 11:21–25; Ex. 1006 ¶¶ 4, 59); Ex. 1003 ¶ 55. As a second motivation, Petitioner asserts a person of ordinary skill in the art would have recognized this combination would “realize specific technical advantages of Pemer that would improve the functionality, usability, and safety of the Mann ’895 eyewear,” including computational speed and capability considerations. Pet. 16–17 (citing Ex. 1006, Fig. 2, ¶¶ 4–5, 23–25); Ex. 1003 ¶ 57. This would have been “especially valuable,” according to Petitioner, “for head-worn systems, such as the eyewear of Mann ’895” in which “battery capacity and processing power are at a premium” and which “are limited by what the user can safely and ergonomically wear.” Pet. 17; Ex. 1003 ¶ 58.

Petitioner also asserts the combination could have been achieved predictably with a reasonable expectation of success, because Mann ’895 and Pemer use “analogous electronic components” to implement their respective iris feature detectors, such as Mann’s programmable logic device, and Pemer’s controller 120 and processor 122. Pet. 16 (citing Ex. 1005, 8:14–17, 11:21–25; Ex. 1006 ¶¶ 17, 37–38); Ex. 1003 ¶ 56.

Patent Owner presently raises two objections to Petitioner’s foregoing contentions concerning the combination of Mann ’895 and Pemer. First, Patent Owner argues that although Mann ’895 does disclose “a retinal or iris scanner” to implement Mann’s sight license feature, this is “the only discussion of a retinal or iris scanner in Mann ’895,” and “[t]here is no mention or suggestion [in Mann ’895] of such a retinal or iris scanner

activating any circuitry *responsive to eye motion of a user.*” Prelim. Resp. 11 (quoting Ex. 1005, 11:21–25).

Based on the present record, we agree with Patent Owner’s understanding of the limited disclosure of Mann ’895 in relation to its iris scanner. However, we conclude this limited disclosure in fact weighs in favor of Petitioner’s case for obviousness. In particular, a POSITA desiring to use the eyewear of Mann ’895 would understand that “an iris scanner” was one option for implementing Mann’s sight license feature. Ex. 1005, 11:21–25. However, based on the present record, Mann ’895 does not appear to provide any details concerning the structure or operation of this iris scanner. *See, e.g., id.* It makes sense, therefore, that a POSITA would look to other references to provide such implementation details, and would have concluded Perner’s iris scanner was a good option, because it would provide the computational advantages described in Perner and cited by Petitioner. *See, e.g.,* Ex. 1006 ¶¶ 4–5, 25.

Second, Patent Owner asserts that if Mann’s sight license is to operate as described in Mann ’895 (i.e., to prevent users other than the licensed wearer from using the eyewear), then “it seems” the retinal or iris scanner “must somehow be responsive to some biometric characteristic of the wearer, not eye motion of whomever happens to be wearing the eyeglasses.” Prelim. Resp. 11. This appears to be an argument that Petitioner’s combination is improper because it would render Mann ’895 inoperable for its intended use, or it would lead to an eyewear apparatus falling outside the scope of claim 1. However, for reasons discussed in Section III.B.6(iv)(b) above, based on the present record we conclude that the combination of Mann ’895 and Perner leads to an operable eyewear apparatus comprising an

eye sensor activating circuitry responsive to eye motion of a user, in order to authenticate the user via Mann's sight license feature.

We conclude Petitioner's contentions as to the motivations to combine Mann '895 and Perner, with a reasonable expectation of success, are sufficiently articulated and supported by the evidence of record for purposes of institution.

(v) *“wherein an information bar is provided on the lens”*

Petitioner argues the eyewear of Mann '895 includes an information bar provided on the lens. *See* Pet. 18–19 (citing Ex. 1001, Fig. 2, 2:55–64; Ex. 1005, 5, 7, 8–9, 13, 15); Ex. 1003 ¶¶ 59–61. This contention, which Patent Owner does not oppose at this time, is sufficiently supported by the evidence of record for purposes of institution. In particular, Mann '895 “provide[s] a means for a user to experience additional information overlaid on top of his or her visual field of view” such as “organizer, calendar, clock, airline information, etc.,” while maintaining “the appearance of ordinary eyeglasses.” Ex. 1005, 5:6–8, 5:20–21, 7:11–12. Thus, Figure 1 of Mann '895 illustrates a pair of eyeglasses incorporating display element 130 and optics 110 to generate images to be viewed by the wearer. *See id.* at 8:21–9:4, 10:2–6. Furthermore, Petitioner's contentions that “[o]ptics 110 can be part of the lens 100L” and “in some embodiments, ‘lens 350 is optics 110,’” so Mann '895 discloses an “information bar is provided *on the lens*” per claim 1, are supported by the evidence cited by Petitioner sufficiently for purposes of institution. Pet. 18–19 (citing Ex. 1005, 5, 8–9, 13, 15); *see* Ex. 1005, 8:21–9:4, 13:23–27, 15:14–21.

(vi) *Conclusion as to Claim 1*

Based on the present record, we conclude Petitioner has provided sufficient argument and evidence in relation to the proposed obviousness of claim 1 over Mann '895 and Perner, to demonstrate a reasonable likelihood that Petitioner would prevail with respect to this challenge at trial.

7. *Claims 2–6, 8, 11, 17, and 22*

“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a). Thus, pursuant to USPTO rules and policy implementing *SAS*, *supra*, we “either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution.” CTPG 5–6, 64. We “will not institute on fewer than all claims or all challenges in a petition.” *Id.* at 5, 64; *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1359–60 (Fed. Cir. 2018) (stating a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Thus, because we have decided to grant review of claim 1, we do the same for claims 2–6, 8, 11, 17, and 22. We note further that Patent Owner does not provide arguments for patentability of these claims separately from claim 1. *See, e.g.*, Prelim. Resp. 9, 14 (arguing independent claims 1, 8, 11, 17, and 22 together as a group), 15 (arguing dependent claims 2–6 are not unpatentable for the reasons provided in connection with their common parent claim 1).

IV. CONCLUSION

For the above reasons, we determine the information presented in the record establishes there is a reasonable likelihood that Petitioner would prevail with respect to challenging at least claim 1 of the '929 patent. We, therefore, institute an *inter partes* review of claims 1–6, 8, 11, 17 and 22 on all grounds (i.e., the sole ground) presented in the Petition against those claims. *See* 35 U.S.C. § 314(a); 37 C.F.R. § 42.108(a). We do not institute review as to the other challenged claims 7, 9, 10, and 15 on any ground, because they have been disclaimed by Patent Owner. *See* Ex. 2002; 37 C.F.R. § 42.107(e).

At this preliminary stage, the Board has not made a final determination with respect to the patentability of the challenged claims or any underlying factual or legal issue. The Board's final determination will be based on the record as developed during the *inter partes* review. Any arguments not raised by Patent Owner in a timely-filed response may be deemed waived.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–6, 8, 11, 17 and 22 of the '929 patent on all grounds (i.e., the sole ground) presented in the Petition against those claims;

FURTHER ORDERED that an *inter partes* review is not instituted for the disclaimed claims 7, 9, 10, and 15 of the '929 patent on any ground; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

FOR PETITIONER:

Mehran Arjomand
Alex S. Yap
Bryan Blumenkopf
MORRISON & FOERSTER LLP
MArjomand@mofo.com
AYap@mofo.com
BBlumen@mofo.com

FOR PATENT OWNER:

Steven A. Swernofsky
LOS ALTOS LAW
steven.swernofsky@losaltoslaw.com

Tarek N. Fahmi
Jonathan Tsao
ASCENDA LAW GROUP, PC
tarek.fahmi@ascendalaw.com
jonathan.tsao@ascendalaw.com