

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

K/S HIMPP,
Petitioner,

v.

BRAGI GmbH,
Patent Owner.

IPR2023-00901
Patent 10,635,385 B2

Before LARRY J. HUME, STACEY G. WHITE, and
NORMAN H. BEAMER, *Administrative Patent Judges*.

BEAMER, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

On May 10, 2023, K/S HIMPP (“Petitioner”) filed a Petition pursuant to 35 U.S.C. §§ 311–319 to institute an *inter partes* review of claims 1–16 of U.S. Patent No. 10,635,385 B2 (“the ’385 patent”). Paper 3 (“Pet”), 1. On November 13, 2023, we instituted *Inter Partes* Review. Paper 14. Subsequently, Patent Owner filed a Response (“PO Resp.”), Petitioner filed a Reply (“Reply”), and Patent Owner filed a Sur-Reply (“Sur-Reply”). Papers 17, 20, 24. An oral hearing was held on August 14, 2024, and a copy of the transcript was entered into the record.¹ Paper 38 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6. This Decision is a Final Written Decision under 35 U.S.C. § 318(a). Based on the complete record, we find that Petitioner has shown, by a preponderance of the evidence, that claims 1–16 of the ’385 patent are unpatentable.

II. BACKGROUND

A. *The ’385 Patent*

The ’385 patent, titled “Method And Apparatus For Interfacing With Wireless Earpieces,” was filed on November 12, 2016, issued on April 28, 2020, and claims priority to provisional application 62/255,309, filed November 13, 2015. Ex. 1001, codes (54), (22), (45), (60), 1:7–10. The ’385 patent incorporates the provisional application in its entirety. *Id.* at 1:10. For purposes of this proceeding, the parties accord the

¹ Petitioner objected to certain of Patent Owner’s demonstratives presented at the hearing on the ground that “they advance arguments or introduce evidence not previously presented in the record.” Paper 37, 1. This Decision does not rely on those demonstratives and therefore Petitioner’s objections are overruled as moot.

provisional application filing date (November 13, 2015) as the effective filing date of the '385 patent. Pet. 5; PO Resp. 23.

The '385 patent is directed to wireless ear pieces, which include a housing and a wireless transceiver, and a computing device, such as a mobile device, executing a software application and having a display that provides a user interface to interact with the ear pieces and a visual representation of the ear pieces. Ex. 1001, code (57), Fig. 4, 4:41–45. Figure 6 is reproduced below.



FIG. 6

Figure 6 depicts an example of a screen display showing visual representations of left and right ear pieces 120 and 122, depicting the ear

piece charge levels (at 48%) 124 and 126 of both ear pieces, and an activity menu 128 with various selectable functions. Ex. 1001, 2:30–32, 6:1–25. Embodiments of the ear pieces support music playback from audio files stored in memory, and provide activity monitoring and recording functionality based on sensors such as accelerometers, a pulse oximeter, a blood pressure sensor, and other physiological or biological sensors. *Id.* at Fig. 3, 1:33–40, 3:23–45. The display of the mobile device can display tracking activity such as heart rate, number of steps taken, and distance travelled during activities such as running, jogging, biking, and swimming. *Id.* at Fig. 7, 6:32–47. A disclosed embodiment includes control capability using gestures such as tapping, swiping, or holding the ear piece. *Id.* at Figs. 3, 4, 3:54–58, 4:53–5:19. Also, the screen display of the mobile device can highlight the visual representation of an ear piece to associate a displayed control function with that ear piece. *Id.* at Figs. 4, 5, 4:46–53, 5:24–35.

B. Illustrative Claim and Prosecution History

Independent claim 1 is reproduced below.

1. A system comprising:
 - at least one wireless ear piece comprising an ear piece housing and a wireless transceiver disposed within the ear piece housing;
 - a software application for executing on a computing device having a display associated therewith;
 - wherein the software application [is] configured to display one or more screen displays on a display of the computing device;
 - wherein the software application provides a user interface for use by a user of the at least one wireless ear piece to interact with the at least one wireless ear piece; and

wherein the user interface is configured to display a visual representation of the at least one wireless ear piece on at least one of the one or more screen displays, the visual representation indicative of a function or property of the at least one wireless ear piece communicated from the at least one wireless ear piece to the computing device.

Ex. 1001, 7:17–36.

Significantly, as discussed below, the above requirement of a “user interface . . . configured to display a visual representation of the at least one wireless ear piece” was added during the prosecution of the ’385 patent in order to obtain the patent over the prior art cited by the Examiner.

Pet. 10–11 (citing Ex. 1011, 139–144, 172, 174–175, 195, 201, 238–241, 290; Anthony Decl. ¶¶ 28, 31).

C. Asserted Challenges to Patentability and Evidence of Record

Petitioner challenges the patentability of claims 1–16 of the ’385 patent on the following basis (Pet. 7):

Claims Challenged	35 U.S.C. § ²	References
1–4, 9–16	103	Hensen Patent ³ , Hensen Video ⁴
5–7	103	Hensen Patent, Hensen Video, LG Manual ⁵

² The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), included amendments to 35 U.S.C. §§ 102 and 103 that became effective before the effective filing date of the application for the ’385 patent. Therefore, we apply the provisions of the AIA for this proceeding.

³ Hensen, US 9,781,514 B2 (“Hensen Patent”). Ex. 1003.

⁴ September 2015 *FreeWavz Demo*, YouTube video (“Hensen Video”). Exs. 1004, 1010.

⁵ User Manual: LG Heart Rate Earphones (“LG Manual”). Ex. 1005.

Claims Challenged	35 U.S.C. § ²	References
8	103	Hensen Patent, Hensen Video, Lee ⁶
1–4, 9–16	103	Hensen Patent, Hensen Kickstarter ⁷
5–7	103	Hensen Patent, Hensen Kickstarter, LG Manual
8	103	Hensen Patent, Hensen Kickstarter, Lee

In addition, Petitioner filed the Declaration of Brian W. Anthony, Ph.D. and the Reply Declaration of Brian W. Anthony, Ph.D. in support of its Petition.⁸ Ex. 1002 (“Anthony Decl.”); Ex. 1033 (“Anthony Reply Decl.”).

D. Real Parties in Interest

In addition to itself, Petitioner identifies Demant A/S, GN Store Nord A/S, Sound Design Technologies Ltd., IntriCon Corporation, and Rion Co., Ltd. as real parties-in-interest. Pet. 3. Patent Owner identifies itself as the real party in interest. Paper 6, 2.

E. Related Proceedings

The parties state that they are not aware of any related proceedings involving the ’385 patent. Pet. 3; Paper 6, 2.

⁶ Lee, US 2014/0189600 A1 (“Lee”). Ex. 1006.

⁷ Kickstarter.com, *November 22 Progress Report* (“Hensen Kickstarter”) (Nov. 22, 2014). Ex. 1007.

⁸ Patent Owner argues that Dr. Anthony’s Declaration is entitled to no weight because it “does not provide any independent analysis aside from copying the attorney arguments in the Petition.” PO Resp. 57; Sur-Reply 15. However, based on our review of the record, we have no reason to conclude that the analysis therein is not based on a proper independent review of the record.

III. ANALYSIS OF PETITIONER'S CHALLENGE

A. *Legal Standards*

To institute an *inter partes* review, Petitioner must show a reasonable likelihood that at least one claim is unpatentable. 35 U.S.C. § 314(a). Under § 314, the Board is required to make a binary choice to institute review or not. *SAS Institute Inc. v. Iancu*, 138 S.Ct. 1348, 1355 (2018). “In an IPR, 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) (2012) (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) (discussing the burden of proof in *inter partes* review).

Pursuant to the AIA, a patent claim is unpatentable under 35 U.S.C. § 103 if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. 35 U.S.C. § 103. 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) when in evidence, objective indicia of nonobviousness (also called secondary considerations), such as commercial success, long-felt but unsolved needs, and failure of others. *Graham v. John*

Deere Co., 383 U.S. 1, 17–18 (1966). We analyze grounds based on obviousness in accordance with the above-stated principles.

B. Level of Skill in the Art

In determining whether an invention would have been obvious at the time it was made, 35 U.S.C. § 103 requires us to resolve the level of ordinary skill in the pertinent art as of the effective filing date of the claimed invention. *Graham*, 383 U.S. at 17. The person of ordinary skill in the art is a hypothetical person who is presumed to have known the relevant art at the time of the invention. *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). Factors that may be considered in determining the level of ordinary skill in the art include, but are not limited to, the types of problems encountered in the art, the sophistication of the technology, and educational level of active workers in the field. *Id.* In a given case, one or more factors may predominate. *Id.*

Petitioner asserts that a person of ordinary skill in the art as of the effective filing date of the claimed invention:

[W]ould have had a Bachelor’s Degree in Electrical Engineering or Computer Science, or equivalent experience, and one to two years of experience in the field of wireless electronic devices and/or graphical user interfaces, particularly as those systems relate to software applications used to interface with wireless earpieces.

Pet. 23 (citing Anthony Decl. ¶ 22). Patent Owner asserts that a person of ordinary skill in the art:

[W]ould have a bachelor’s degree in computer science, electrical engineering, or a similar technical field, with at least one year of experience in the field of wireless electronic devices and/or graphical user interfaces, particularly as those systems relate to software applications used to interface with wireless

earpieces. Additional experience could substitute for less education, and additional education could likewise substitute for less experience.

PO Resp. 18 (citing Ex. 2020 (Declaration Of Kai Johnson)) ¶ 30 (hereafter, “Johnson Decl.”).

The parties’ proposals are very similar, and we find Petitioner’s proposal to be consistent with the level of ordinary skill in the art that is reflected by the ’385 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *GPAC*, 57 F.3d at 1579. For purposes of this Decision, we apply Petitioner’s articulation.

C. Claim Construction

The Petition was accorded a filing date of May 10, 2023. Paper 4. In an *inter partes* review for a petition filed on or after November 13, 2018, a claim “shall be construed 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). We apply the claim construction standard from *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc).

Claim terms need only be construed to the extent necessary to resolve the controversy. *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017).

The parties submit that no claim terms need to be construed. Pet. 12; PO Resp. 19. However, for this Decision, we address a claim construction issue regarding the claim 1 requirement of a “visual representation indicative of a function or property of the at least one wireless ear piece communicated from the at least one wireless ear piece to the computing device.” *See* page 28, *infra*. Likewise, we address the meaning of “tracking . . .

activities” in claim 3 (page 3228, *infra*), “lighting” in claims 5–7 (page 3528, *infra*), and “playlist” in claim 9 (page 3328, *infra*)

D. The Prior Art Status of the Hensen Video

The Hensen Video shows the named inventor of the Hensen Patent demonstrating the capabilities of a wireless ear piece system with a left and right wireless ear piece. Pet. 15–16 (citing Ex. 1004 (video file); Anthony Decl. ¶¶ 32, 37); *see also* Ex. 1010 (screenshots from video). Petitioner provides screenshots of frames from the video and of Internet pages from YouTube®, Twitter®, and Kickstarter® websites, and a declaration from an Internet Archive Records Request Processor, in support of Petitioner’s assertion that the Hensen Video was published on YouTube®, Twitter®, and Kickstarter® on September 10, 2015. *Id.* at 17–22 (citing Exs. 1004, 1012–1014, 1023; Anthony Decl. ¶ 33); *see also* Ex. 1010. Petitioner asserts that the Hensen Video is prior art pursuant to 35 U.S.C. § 102(a)(1). *Id.* at 6.

Patent Owner does not dispute that the Hensen Video would be eligible as prior art under Section 102(a)(1),⁹ but for the exception provided for in 35 U.S.C. § 102(b)(1)(B) (hereafter “the prior art exception”), which Patent Owner argues applies in these circumstances. PO Resp. 19–44.

Section 102(b)(1)(B) provides in pertinent part:

A disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed

⁹ Aside from the issue of the Section 102(b)(1)(B) prior art exception, further discussed below, we agree that the Hensen Video would be eligible as prior art under 35 U.S.C. § 102(a)(1) because it is a printed publication that was publicly accessible with reasonable diligence. *See Acco Brands v. Think Products*, IPR2015-01167, Paper 40 at 15–18 (PTAB Oct. 11, 2016); *London Luxury LLC v. E&E Co., Ltd.*, PGR2021-00083, Paper 10 at 18–19 (PTAB Nov. 15, 2021).

invention under subsection (a)(1) if . . . (B) the subject matter disclosed had, before such disclosure, been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor.

Patent Owner argues that prior art exception applies because Patent Owner publicly disclosed the same subject matter as that of the Hensen Video in its Kickstarter for The Dash product (based on subject matter obtained from the inventor) after February 11, 2015 and before the September 10, 2015 date of the Hensen Video (which date is less than one year before the November 13, 2015 effective filing date of the '385 patent). PO Resp. 19–20. Patent Owner cites The Manual of Patent Examining Procedure, which states:

The exceptions of 35 U.S.C. 102(b)(1)(B) or 102(b)(2)(B) are only applicable when the subject matter of the intervening disclosure is the same as the subject matter of the earlier inventor-originated prior public disclosure

. . . .

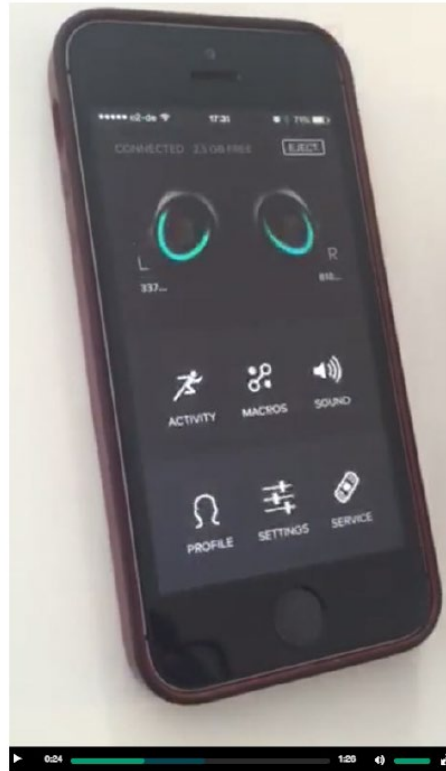
[I]t is not necessary for the subject matter to have been disclosed in the same manner or using the same words. In other words, there is no requirement that the disclosure by the inventor or a joint inventor be a verbatim or *ipsissimis verbis* disclosure of an intervening disclosure in order for the exception based on a previous public disclosure of subject matter by the inventor or a joint inventor to apply.

PO Resp. 20–44 (citing M.P.E.P. § 717.01(b)(2)).

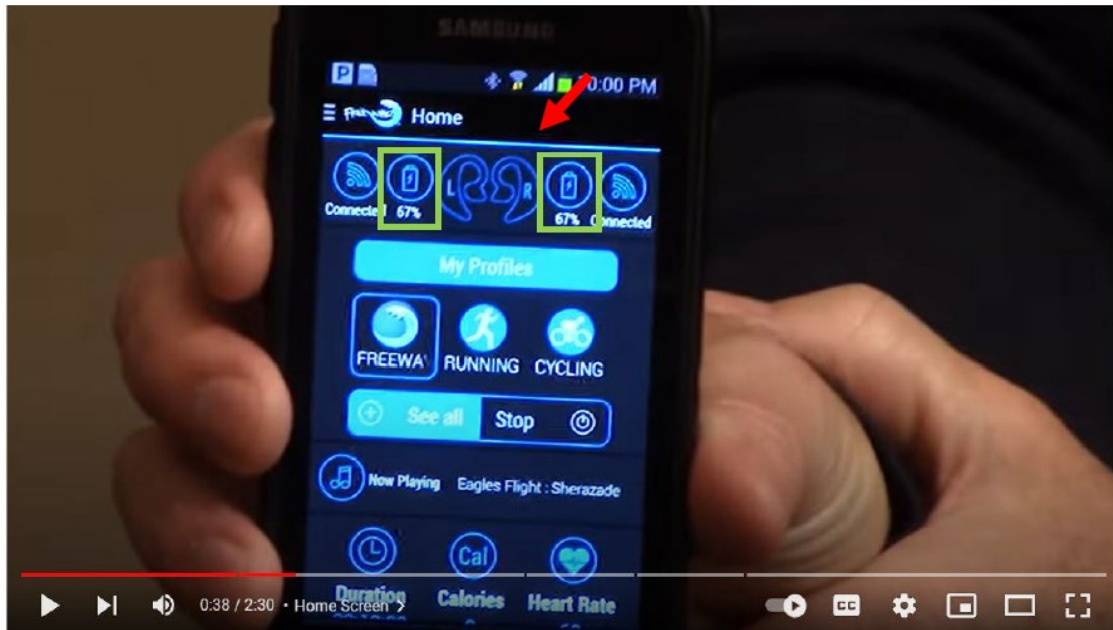
In support of its argument that the prior art exception applies, Patent Owner submits evidence of public disclosure of its Dash Kickstarter product in the pertinent time period and compares the features disclosed in that evidence with corresponding features of the Hensen Video, arguing that the two disclosures are the same for purposes of the prior art exception.

PO Resp. 20–44 (citing Exs. 2005, 2006, 2008, 2009, 2010, 2017, 2018,

2022). For example, in connection with the '385 patent claim 1 requirement of a “user interface . . . configured to display a visual representation of the at least one wireless ear piece,” Patent Owner compares an image of the display of the Dash Kickstarter product to that shown in the Hensen Video. PO Resp. 31–33. Those images are reproduced below.



Dash Kickstarter product image. Ex. 2006 at 0:24 (from PO Resp. 33).



Hensen Video image. Ex. 1004 at 0:38 (from Pet. 48).

Patent Owner argues that these displays disclose the same subject matter — the visual representations of left and right earphones. PO Resp. 31. Patent Owner also relies on the same two images for the claim 1 requirement of “the visual representation indicative of a function or property of the at least one wireless ear piece communicated from the at least one wireless ear piece to the computing device” — which in the displays is the battery life indications displayed next to the earphone representations. *Id.* at 34–35.

Petitioner argues that the prior art exception does not apply because the publicly disclosed subject matter of Dash Kickstarter product is **not** the same as the relied-on subject matter of the Hensen Video. Petitioner also relies on The Manual of Patent Examining Procedure, albeit a different section, which states:

The subject matter in the prior disclosure being relied upon under AIA 35 U.S.C. 102(a) must be the same “subject matter” as the subject matter previously publicly disclosed by the inventor for the [prior art exceptions] to apply. The [prior art exceptions] do not apply even if the only differences between the subject matter in the prior art disclosure that is relied upon under AIA 35 U.S.C. 102(a) and the subject matter previously publicly disclosed by the inventor are mere insubstantial changes, or only trivial or obvious variations. This guidance maintains the identical subject matter interpretation of [the prior art exceptions].

....

[I]f the inventor or a joint inventor had publicly disclosed a species, and a subsequent intervening grace period disclosure discloses an alternative species not also disclosed by the inventor or a joint inventor, the intervening grace period disclosure of the alternative species would be available as prior art under AIA 35 U.S.C. 102(a)(1) because the “subject matter disclosed” requirement of AIA 35 U.S.C. 102(b)(1)(B) would not have been met.

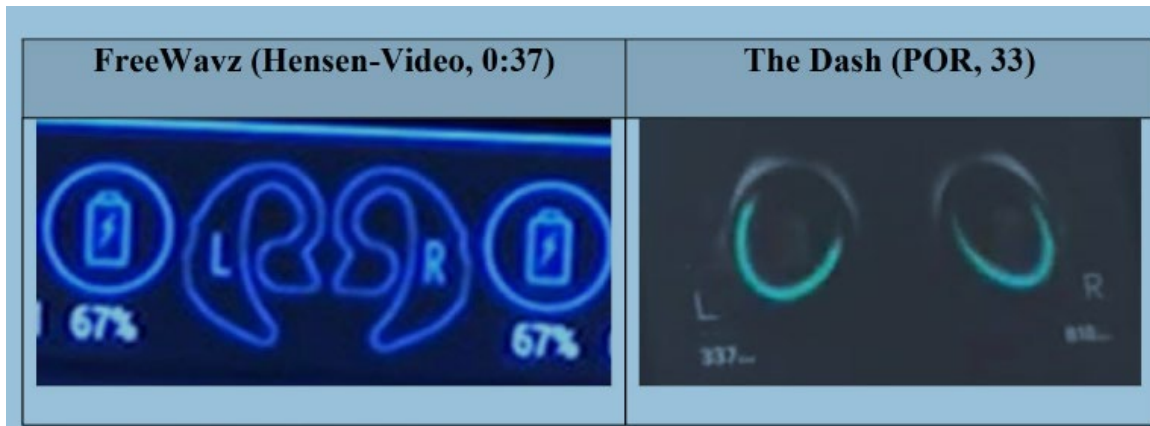
Reply 3–4 (citing M.P.E.P. §2153.02).¹⁰ Petitioner compares features of the Dash Kickstarter product that of the Hensen Video, arguing that they are not

¹⁰ We are mindful that the MPEP Preface provides:

This Manual has been designated guidance document USPTO-P-1. The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies.

However, given that, to our knowledge, there is no pertinent case law on this issue, we find the PTO guidance to be a persuasive interpretation of the statute. *See* Tr. 34:2–12, 48:1–4. Thus, we follow the PTO guidance, which explicitly requires that the exceptions of 35 U.S.C. 102(b)(1)(B) are only applicable when the subject matter

identical, and that the Dash Kickstarter product and the Hensen Video are at best alternative species of the '385 patent subject matter, and thus, the prior art exception does not apply. Reply 6–13. For example, Petitioner compares the images of the visual representations, as set forth below.



Reply 10. Petitioner argues that the two representations are not the same, being generated by different software applications, have a different look and feel, and disclose alternative species of the claimed “visual representation,” in that the Jensen video uses an “outline/silhouette” representation, whereas the Dash uses a photorealistic depiction of the wireless ear pieces.

Id. at 10–13 (citing Anthony Reply Decl. ¶¶ 15–19). Petitioner emphasizes:

[The] visual representations have a different overall look and feel including, for example, different shapes representing different earpieces, different colors, different placement of alphanumeric characters (e.g., the letters L and R), and the use of battery icons in FreeWavz’s visual representation, which are not used by the Dash’s visual representation. These differences are especially relevant given that the claimed visual representation is the only purported novelty of the '385 patent.

Reply 10–11 (citing Anthony Reply Decl. ¶ 17).

of the intervening disclosure is the same as the subject matter of the earlier inventor-originated prior public disclosure.

In response, Patent Owner argues that the comparison of subject matter disclosures required by 35 U.S.C. § 102(b)(1)(B) should only be based on the subject matter that Petitioner actually relies upon, and that Petitioner in its Reply cites differences that “relate to immaterial factors such as ‘colors, icons, and arrangement and organization of menu options,’ the ‘overall look and feel’ of the application, and ‘outlines/silhouettes’ versus photorealistic depiction’ in the interface.” Sur-Reply 4–5. Patent Owner also argues that Petitioner did not raise these differences in the Petition, “so the Board should not consider them when deciding whether Hensen-Video is prior art.” *Id.* at 5.

We agree with Petitioner that the prior art exception of 35 U.S.C. § 102(b)(1)(B) does not apply to the Hensen Video. The differences between the Dash Kickstarter product and the Hensen Video establish that the subject matters are not identical, and the two subject matters at least embody different species of the ’385 patent. This is particularly the case for the two different visual representations of the wireless ear pieces, as described above. Significantly, as Petitioner points out, the visual representation feature goes to the very claim requirement that was the basis for allowance of the claims during prosecution, and therefore Patent Owner’s argument that the differences are immaterial is without merit.¹¹

¹¹ We also do not agree with Patent Owner that Petitioner’s discussion of the difference between the Dash Kickstarter product and the Hensen Video should have been included in the Petition. Petitioner’s evidence provided in the Petition as to the prior art status of the Hensen Video met its initial burden of production in establishing that it was prior art. *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1379 (Fed. Cir. 2015). Given Petitioner’s evidence, the burden of production then shifted to Patent Owner to invoke the prior art exception; upon the occurrence of

Accordingly, having considered the entire record and weighed the entirety of the evidence, we determine that Petitioner has proved by a preponderance of the evidence that the Hensen Video is prior art pursuant to 35 U.S.C. § 102(a)(1).

E. Objective Indicia of Nonobviousness

Patent Owner argues that there are objective indicia of nonobviousness — industry praise and commercial success of the patented inventions, as well as the failure of others to independently develop the patented invention — that confirm the nonobviousness of the challenged claims. PO Resp. 58–66; Sur-Reply 16–21. Patent Owner offers no evidence of sales to support commercial success, but cites various articles and user comments praising Patent Owner’s “The Dash” product, which Patent Owner asserts embodies the subject matter of the ’385 patent claims. PO Resp. 60–64 (citing Exs. 2011–2013, 2015–2016, 2019, 2022); Sur-Reply 18–20.

Patent Owner argues that it has established a nexus between the objective evidence of nonobviousness and the novel features of the claimed invention, because “The Dash” product is coextensive with the claimed features, and thus the cited industry praise is presumptively attributed to the patented invention. PO Resp. 59–60. As Patent Owner recognizes, to give substantial weight to objective indicia of nonobviousness, a proponent must establish a nexus between the evidence and the merits of the claimed

which, in the Patent Owner’s Response, the burden of production returned to Petitioner to show that the prior art exception did not apply. *Dynamic Drinkware*, 800 F.3d at 1380. It was appropriate for Petitioner to include that discussion in the Reply.

invention. *ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016). Nexus is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining non-obviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988). “[T]here is no nexus unless the evidence presented is ‘reasonably commensurate with the scope of the claims.’” *ClassCo*, 838 F.3d at 1220 (quoting *Rambus Inc. v. Rea*, 731 F.3d 1248, 1257 (Fed. Cir. 2013)).

A patentee is entitled to a presumption of nexus “when the patentee shows that the asserted objective evidence is tied to a specific product and that product ‘embodies the claimed features, and is coextensive with them.’” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (quoting *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). “[T]he patentee retains the burden of proving the degree to which evidence of secondary considerations tied to a product is attributable to a particular claimed invention.” *Fox Factory*, 944 F.3d at 1378. The Federal Circuit has held that “if the marketed product embodies the claimed features, and is coextensive with them, then a nexus is presumed and the burden shifts to the party asserting obviousness to present evidence to rebut the presumed nexus.” *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000).

“[T]he purpose of the coextensiveness requirement is to ensure that nexus is only presumed when the product tied to the evidence of secondary considerations is the invention disclosed and claimed.” *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 33 at 32 (PTAB Jan. 24, 2020) (precedential) (citing *Fox Factory*, 944 F.3d at 1374) (internal quotations

omitted). “A patent claim is not coextensive with a product that includes a ‘critical’ unclaimed feature that is claimed by a different patent and that materially impacts the product’s functionality.” *Id.* (citing *Fox Factory*, 944 F.3d at 1375) (internal quotations omitted).

Patent Owner has not established that “The Dash” product is coextensive with the ’385 patent claims. On the face of the cited articles, it appears that the praise relied on was due to extraneous factors other than the claimed invention, such as unclaimed or non-novel features of product. *Demaco*, 851 F.2d at 1392; *Ormco Corp. v. Align Tech., Inc.*, 463 F.3d 1299, 1312 (Fed. Cir. 2006). The Dash features singled out for praise include “touch control,” “long battery life,” “self-contained media player,” “charging case,” “comfortable design,” “how polished the app looks,” and “the app looks fantastic.” Exs. 2011, 2012, 2015, 2016, 2019, 2022. These comments do not appear to praise the presence of claimed features *per se*, such as a “wireless ear piece,” a “software application,” a “display,” or a “user interface,” but rather admire extra unclaimed features, or aesthetically pleasing and/or user friendly design realizations of features. *See* Reply 28, 30. In particular, even though some of the articles relied on (*e.g.*, Ex. 2019) show that the Dash displayed a visual representation of the ear pieces, which is the critical claimed feature that persuaded the Examiner to grant the claims, there is no mention, let alone praise, of that fact in the articles. *See* Pet. 10–11; Reply 29.

As the Federal Circuit has stated “objective evidence of non-obviousness must be commensurate in scope with the claims which the evidence is offered to support.” *Oren Techs., LLC v. Proppant Express Invs. LLC*, No. 2019-1778, 2021 WL 3120819, at *6 (Fed. Cir. July 23, 2021)

(citing *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018)). We find the evidence insufficient to establish nexus in light of the lack of evidence regarding a key feature in the claim, and the lack of evidence regarding whether the purported praise was due to a claimed or novel feature of the product.

In regard to Patent Owner’s assertion that the failure of others to independently develop the patented invention supports nonobviousness, Patent Owner relies on an update to the Hensen Kickstarter entries that states that the development team was having problems with the issue of “accurate wireless pulseox measurements.” PO Resp. 65 (citing Ex. 2024). However, as discussed below, the Hensen Kickstarter documents show that the team had come up with every feature of the claimed inventions, and so, despite this implementation problem, there was no failure by the Hensen team to independently develop the patented invention. *See* Reply 30.

Therefore, we do not accord substantial weight to Patent Owner’s proffered evidence of objective indicia of nonobviousness.

F. Obviousness Challenges to the ’385 Patent

1. Obviousness of Claims 1–4, 9–16 Over the Hensen Patent and the Hensen Video

Petitioner challenges claims 1–4 and 9–16 as obvious over the combination of the Hensen Patent and the Hensen Video. Pet. 24–85.

a) The Hensen Patent

The Hensen Patent, titled “Stereo Audio Headphone Apparatus,” was filed on October 8, 2015 and issued on October 3, 2017. Ex. 1003, codes (54), (22), (45). The Hensen Patent application is a continuation-in-part, and claims the benefit under 35 U.S.C. § 120, of U.S. patent application

12/731,397, filed March 25, 2010 (“Hensen CIP”). Ex. 1003, code (63), 1:5–9; Exs. 1008, 1027. The Hensen Patent application also claims the benefit under 35 U.S.C. § 119(e) of Provisional Patent Application 62/061,497, filed October 8, 2014 (“Hensen Provisional”). Ex. 1003, code (60), 1:11–15; Ex. 1009. The Hensen Patent incorporates both the Hensen CIP and the Hensen Provisional by reference in their entirety. Ex. 1003, 1:5–17.

In the Petition, Petitioner asserts that the Hensen Patent is prior art pursuant to 35 U.S.C. § 102(a)(2) because its October 8, 2015 filing date precedes the November 13, 2015 effective filing date of the ’385 patent. Pet. 5–6. Patent Owner challenged the prior art status of the Hensen Patent in its Preliminary Response, asserting that the exception of 35 U.S.C. § 102(b)(2)(B) applied. Paper 11, 2, 17–37. In our Decision to Institute, we held otherwise. Paper 14, 12. Patent Owner no longer presses that argument. *See generally* PO Resp.

The Hensen Patent is directed to a stereo audio headphone apparatus including master and slave headphone units with wireless communication capability, and a remote control unit that can wirelessly transmit commands to the headphone units. Ex. 1003, code (57), Fig. 1, 8:14–15, 13:6–7. Figure 1 of Hensen is reproduced below.

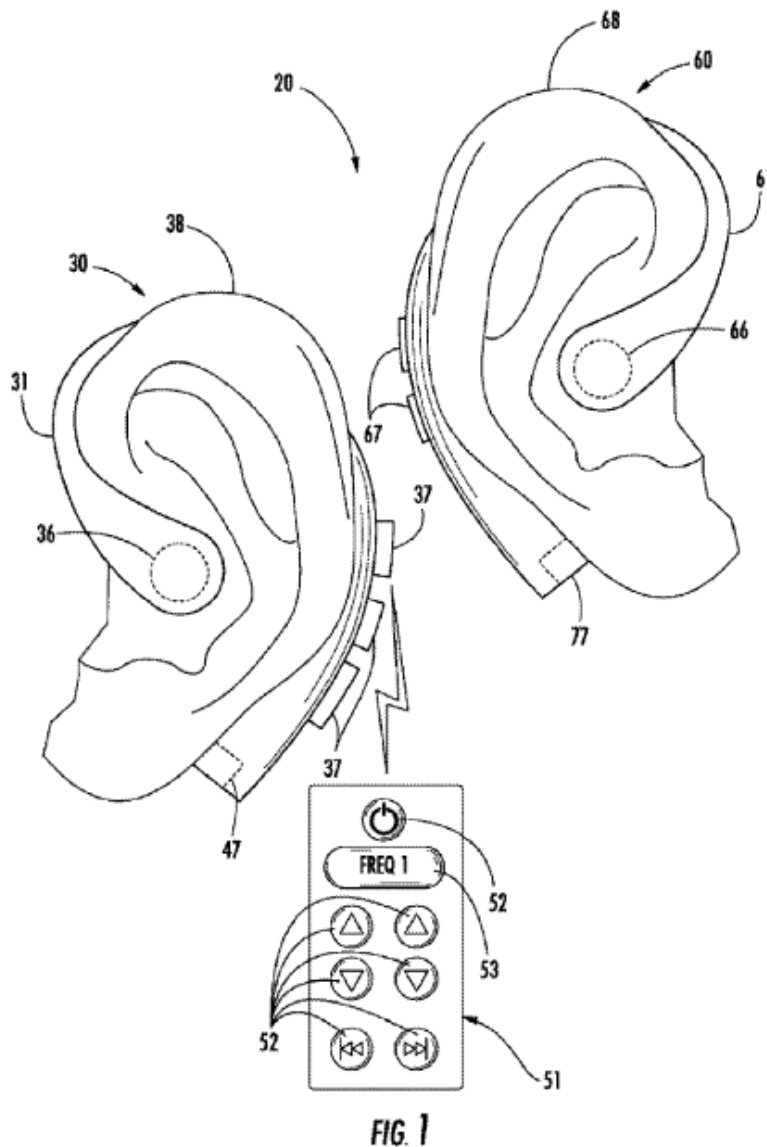
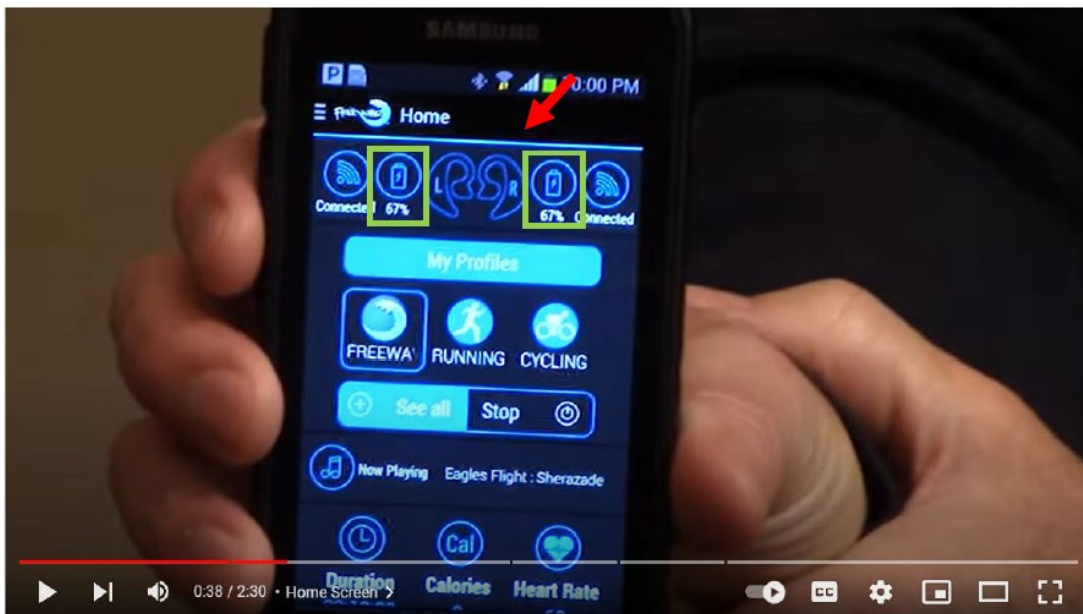


Figure 1 depicts stereo headphone apparatus 20 including master headphone 30 and slave headphone 60 which are carried behind the ears of the user, which communicate wirelessly, and which can play audio content.

Ex. 1003, 4:55–6:23. Remote control unit 51 transmits commands to the headphones and includes a display 53 that may display information about the stereo audio source or information about the stereo audio headphones such as volume and/or battery power remaining. *Id.* at 8:14–31.

b) The Hensen Video

As discussed above, the Hensen Video shows the named inventor of the Hensen Patent demonstrating the capabilities of a wireless ear piece system with a left and right wireless ear piece. Pet. 15–16 (citing Ex. 1005 (video file); Anthony Decl. ¶¶ 32, 37); *see also* Ex. 1010 (screenshots from video). A screenshot from frame 0:38 of the Hensen Video is set forth below.



The screenshot shows the user interface for the wireless ear piece system on a smartphone display, including a visual representation of the ear pieces and an indication of remaining battery life (67%). Pet. 15–16 (citing Anthony Decl. ¶¶ 32, 37).

Petitioner argues that a “POSITA would have been motivated to combine [the teachings the Hensen Patent and the Hensen video] by modifying Hensen-Patent’s system so that it’s remote control device 51 would be a smartphone running Hensen-Video’s software application — with a reasonable expectation of success.” Pet. 34 (citing Anthony Decl.

¶ 56). Petitioner further argues that the disclosures are expressly related given the common inventorship/authorship, associated with the same commercial product, describe similar systems that use a remote control device to interact with wireless ear pieces, including reading pulse oximetry data, used during physical activities such as running and cycling, supporting music playback functionality, and having the same shape and aesthetics. *Id.* at 34–38 (citing Ex. 1003, code (72), Fig. 1, 5:41–44, 8:17–20, 8:24–34, 12:65–13:5; Ex. 1004, frames 0:09–0:19, 0:38, 0:48–1:09, 2:23; Ex. 1009 ¶¶ 14, 35; Exs. 1015–1017; Anthony Decl. ¶¶ 57–59).

In addition, Petitioner argues that the Hensen Video specifically discloses the benefits of using a smartphone computing device running a software application as a remote control unit in a wireless ear piece system, and therefore a person of ordinary skill in the art would have been motivated to modify the Hensen Patent’s wireless ear piece system to benefit from the Hensen Video’s teachings. *Id.* at 38–39 (citing Ex. 1004, frames 0:32–0:38, 0:43–0:48, 1:09–1:24; Ex. 1015; Anthony Decl. ¶ 60); *see also* Pet. 41–42, 47, 50, 53–54 (citing Anthony Decl. ¶¶ 65, 72, 77, 83).

Other than disputing the prior art status of the Hensen Video, which as discussed above is unfounded, Patent Owner does not specifically challenge the motivation for combining the Hensen Patent and the Hensen Video. *See generally* PO Resp. We determine that Petitioner has provided sufficiently articulated reasoning with rational underpinning for the proffered combination, and has proved by a preponderance of the evidence that one of ordinary skill in the art would have been motivated to combine the Hensen Patent and the Hensen Video as argued.

c) Independent Claims 1, 13, and 14
(1) Preamble and Requirements 1A–1C¹²

For the system preamble of claim 1, Petitioner relies on the disclosure in the Hensen Patent and the incorporated Hensen Provisional of systems for interacting with wireless ear pieces. Pet. 24–26 (citing Ex. 1003, Fig. 1, 8:14–34; Ex. 1009 ¶¶ 1, 14, 35, 42; Anthony Decl. ¶¶ 44–45).¹³

For the claim 1A requirement, “at least one wireless ear piece comprising an ear piece housing and a wireless transceiver disposed within the ear piece housing,” Petitioner relies on the disclosure in the Hensen Patent of wireless ear pieces including an ear piece housing and wireless transceiver. Pet. 26–29 (citing Ex. 1003, Figs. 1, 2, 2:24–31, 2:36–41, 4:55–65, 5:9–10, 5:63–67, 6:1–6, 8:14–34, 12:42–46, 12:52–55, 13:6–8, 13:34–45; Ex. 1009, Figs. 1–4, ¶¶ 1, 14, 17–19, 21, 35, 42; Anthony Decl. ¶¶ 46–50).

For the claim 1B requirement, “a software application for executing on a computing device having a display associated therewith,” Petitioner relies on the disclosures in the Hensen Patent and Hensen Video of remote control devices that send commands to the ear pieces and display received information using software applications. Pet. 30–33 (citing Ex. 1003, Fig. 1, 8:14–34; Ex. 1004, frames 0:17, 0:09–0:19, 0:32–0:38; Ex. 1009 ¶¶ 1, 14, 35, 42; Anthony Decl. ¶¶ 51–55).

¹² For economy of presentation, we use the letter designations used by the parties to refer to the requirements of claim 1. Pet. 26–51; PO Resp. x.

¹³ For this Decision, we make no determination whether or not the preambles of independent claims 1, 13, and 14 are limiting.

For the claim 1C requirement, “wherein the software application [is] configured to display one or more screen displays on a display of the computing device,” Petitioner relies on the displays shown in the Hensen Video. Pet. 40–42 (citing Ex. 1004, frames 0:32–0:38, 0:48–1:09; Anthony Decl. ¶¶ 62–65).

Patent Owner does not specifically address Petitioner’s challenge to these aspects of claim 1. *See generally* PO Resp.

(2) Requirement 1D

For the claim 1D requirement, “wherein the software application provides a user interface for use by a user of the at least one wireless ear piece to interact with the at least one wireless ear piece,” Petitioner relies on the disclosures in the Hensen Patent and Hensen Video software that sends commands to the ear pieces via user interfaces, and monitors battery life of the ear pieces. Pet. 42–47 (citing Ex. 1003, Fig. 1, 8:14–34; Ex. 1004, frames 0:09–0:19, 0:28–1:28; Ex. 1009 ¶¶ 1, 14, 35, 42; Anthony Decl. ¶¶ 66–72).

For this user interface requirement, Patent Owner argues that the portions of the Hensen video on which Petitioner rely do not show an actual interaction between software on the user device and the ear pieces, but rather is “fabricated” — not showing actual functionality but rather displaying manipulated data. PO Resp. 13–14, 45 (citing Johnson Decl. ¶¶ 54–56, 71–96, 99–103). In addition, Patent Owner argues that the video does not show that commands can be sent from the application to the ear pieces. *Id.* at 45–46 (citing Johnson Decl. ¶ 100).

However, for an obviousness analysis, it is irrelevant whether the Hensen Video depicts a simulation of a system or an actual system in

operation. Reply 14 (citing, *e.g.*, *Geo. M. Martin Co. v. All. Mach. Sys. Int'l LLC*, 618 F.3d 1294, 1302 (Fed. Cir. 2010) (“Under an obviousness analysis, a reference need not work to qualify as prior art; ‘it qualifies as prior art, regardless, for whatever is disclosed therein.’”). In addition, for this claim requirement, Petitioner relies the disclosure in the Hensen Patent of a:

remote control unit . . . configured to transmit commands, for example, to the master wireless receiver Commands that may be transmitted include volume, and stereo audio source selection

Pet. 43–44; Reply 16–17; Ex. 1003, 8:14–17. As to the Hensen Patent, Patent Owner retorts that the remote control unit is not disclosed as having a software application. Sur-Reply 9. However, this argument is unpersuasive as challenging the Hensen Patent individually, because Petitioner relies on the *combination* of the Hensen Patent with the Hensen Video — in which the remote control device 51 of the Hensen Patent would be a smartphone running Hensen Video’s software application. Pet. 34 (citing Anthony Decl. ¶ 56); *In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 426 (CCPA 1981) (“one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references”).

(3) Requirements 1E–1F

For the claim 1E/1F requirement,¹⁴

wherein the user interface is configured to display a visual representation of the at least one wireless ear piece on at least

¹⁴ We agree with Patent Owner’s approach, which considers Petitioner’s 1E and 1F requirements as a single requirement, although we do not agree that

one of the one or more screen displays, the visual representation indicative of a function or property of the at least one wireless ear piece communicated from the at least one wireless ear piece to the computing device,

Petitioner relies on the disclosure in the Hensen Video of displays that include a visual representation of the ear pieces and, for example, their remaining battery life. Pet. 48–54 (citing Ex. 1004, frames 0:32–0:38, 2:23; Anthony Decl. ¶¶ 73–83).

For this visual representation requirement, Patent Owner argues that the representation of remaining battery life does not meet the claim limitation because it must be part of the ear piece images themselves, rather than appearing as separate images. PO Resp. 47 (citing Johnson Decl. ¶ 106); Sur-Reply 10–11. However, claim 1 does not narrowly require the visual representation of the “representation indicative of a function or property” to be superimposed on top of, or otherwise incorporated into, the ear piece image — the visual representation need only depict both. As Petitioner points out, during prosecution of the ’385 patent, the applicant expressly identified a battery life image that was separate from an ear piece image as satisfying this claim requirement. Pet. 52–53 (citing Ex. 1011, 14 (Fig. 6), 26 (Spec. p. 8, l. 16–17), 229 (Appeal Br. 8)). In addition, it is significant that Patent Owner represents in this Proceeding that its Dash product, with separate images of the ear pieces and the battery life, embodies this claim requirement. PO Resp. 62–63 (citing Ex. 2019); Reply 19, n.5.

“Petitioner fails to consider the claim limitation in its full context,” or is otherwise unsound. PO Resp. 46

(4) Claims 13 and 14

Independent claim 13 is a system claim that has similar requirements to claim 1, and additionally requires receiving user input, communicating input data to the ear pieces, and “performing an action using at least one of the wireless ear pieces in response to receiving the data.” Ex. 1001, 8:15–30. Petitioner’s challenge to claim 13 is similar to that of claim 1, and further relies on disclosures of the Hensen Patent and Hensen Video of provisions for user input, communicating data to ear pieces, and performing actions in the ear pieces such as volume control, stereo audio source selection, skipping to another song, or fast-forwarding through a song. Pet. 72–76 (citing Ex. 1003, 8:14–34; Ex. 1004, frames 0:48–1:09; Ex. 1009 ¶¶ 14, 35, 42; Anthony Decl. ¶¶ 110–119).

Independent claim 14 is also a system claim that has similar requirements to claim 1, and additionally requires communicating data from the ear pieces to the computing device, and “updating the screen displays on the display of the computing device using the data.” Ex. 1001, 8:31–44. Petitioner’s challenge to claim 14 tracks that of claim 1, and further relies on disclosures of the Hensen Patent and Hensen Video of provisions for data (e.g., volume, battery power remaining, pulse oximetry data, heart rate data) transmitted wirelessly from the ear pieces to a remote control device, and displayed on the device. Pet. 77–83 (citing Ex. 1003, 8:24–34; Ex. 1004, frames 0:32–0:38, 0:43–1:24; Ex. 1009 ¶¶ 1, 14, 35, 42; Anthony Decl. ¶¶ 120–132).

Regarding independent claims 13 and 14, Patent Owner refers to its arguments for claim 1, which we discuss above. PO Resp. 57–58; Sur-Reply 14–15.

(5) Summary

Accordingly, having considered both the evidence of obviousness and Patent Owner's submitted evidence and arguments of nonobviousness, and having weighed the entirety of the evidence, we determine that Petitioner has proved by a preponderance of the evidence that claims 1, 13, and 14 are unpatentable under 35 U.S.C. § 103(a) over the combination of the Hensen Patent and the Hensen Video.

d) Dependent Claims 2–4, 9–12, and 15–16

(1) Claim 2

Claim 2 depends from claim 1 and further requires that “the at least one wireless ear piece comprises a physiological sensor.” Ex. 1001, 7:37–38. Petitioner relies on the disclosure in the Hensen Provisional (incorporated into the Hensen Patent) and the Hensen Video of a pulse oximeter included in the ear piece housing. Pet. 54–59 (citing Ex. 1003, 1:11–17; Ex. 1004, frames 0:09–0:19, 0:48–1:09; Ex. 1009, Fig. 4, ¶¶ 1, 14, 17, 21–23, 25, 26, 29, 30, 33, 34, 36, 42, 47, 50; Anthony Decl. ¶¶ 84–88).

Regarding claim 2, Patent Owner argues that the Hensen Video does not show that the wireless earpieces measure heart rate or oxygen saturation, and instead shows an external pulse oximeter. PO Resp. 49 (citing Johnson Decl. ¶¶ 114–115); Sur-Reply 12. This argument is implicitly based on Patent Owner's assertion that the Hensen Video does not show an actual working device, and thus the graphical displays of oximeter readings are only simulations. *Id.* However, as discussed above, a simulation describing an ear piece with a physiological sensor is a sufficient teaching. Reply 19–20. In addition, Patent Owner ignores Petitioner's reliance on the Hensen Patent's disclosure of the use of a pulse oximeter. *Id.* at 20.

(2) Claims 3, 4, 15, and 16

Claim 3 depends from claim 2 and further requires that “the software application provides for tracking one or more physical activities using the physiological sensor.” Ex. 1001, 7:39–41. Claim 4 depends from claim 3 and further requires that “the physical activities are selected from a set consisting of running, biking, and swimming.” Ex. 1001, 7:42–44. Claim 15 depends from claim 14 and further requires that “the data comprises physiological data.” Ex. 1001, 8:45–46. Claim 16 depends from claim 15 and further requires that “the physiological data is heart rate data.” Ex. 1001, 8:47–48. For these claims, Petitioner relies on the disclosure in the Hensen Patent and the Hensen Video of using sensors such as a pulse oximeter during running, cycling, and swimming. Pet. 59–68, 84–85 (citing Ex. 1003, 8:24–34, 13:6–16; Ex. 1004, frames 0:09–0:19, 0:38, 0:43–1:24; Ex. 1009 ¶¶ 1, 14, 35, 42; Anthony Decl. ¶¶ 89–103, 133–134).

Regarding claim 3, Patent Owner argues that the icons labeled “Running” and “Cycling” shown on a display in the Hensen Video relate to user profile settings rather than tracking activity, and that, in any event, “tracking activity” requires recording activity, rather than merely reporting activity, that any evidence of reporting activity is based on simulated reporting rather than actual functionality, and that the heart rate and oxygen saturation measurements that Petitioner relies on (even if simulated rather than functional) are not linked to any physical activity. PO Resp. 51–52 (citing Johnson Decl. ¶¶ 119, 128–133); Sur-Reply 12–13. Regarding claim 4, Patent Owner argues that Petitioner has not demonstrated that it would have been obvious to track swimming activity in addition to running and biking, given that a swimming application would involve waterproofing

complications. PO Resp. 53–54 (citing Johnson Decl. ¶¶ 136, 138–139); Sur-Reply 13.

In reply to Patent Owner’s arguments regarding claims 3 and 4, Petitioner points out that it relies on the combination of the Hensen Patent and the Hensen Video, including the disclosure in the former of earpieces that include a pulse oximeter and that can transmit pulse and oxygen saturation data from the pulse oximeter to a remote control device, while the user participates in a variety of physical activities, including running, cycling, and swimming. Reply 20 (citing Pet. 60–61 and citations therein). Petitioner also argues that “tracking activity” does not require anything more than measuring data during physical activity, but that, in any event, the Hensen Video depicts generating a waveform depicting tracked data over time. *Id.* at 20–21 (citing Pet. 64–65 and citations therein). Regarding Patent Owner’s argument that a swimming application would have required waterproofing, Petitioner points out that there is no mention of that consideration in the ’385 patent, and that Patent Owner relies on unsupported attorney argument. *Id.* at 21–22.

We agree that the combination of the Hensen Patent and the Hensen Video renders claims 3 and 4 (as well as claims 15 and 16) obvious. It is undisputed that the Hensen Patent alone teaches the claimed subject matter. Pet. 60–61, 66. As discussed above, Patent Owner’s arguments that the Hensen Video does not depict an actual working device is not dispositive, given that its content, even if based on simulation, teaches the pertinent subject matter. Also, although not required by the claim, the Hensen Video’s depiction of the ability to display graphs of pulse and oxygen

saturation data over time supports a requirement that tracking data involves recording data.

(3) Claims 9 and 10

Claim 9 depends from claim 1 and further requires that “the at least one wireless ear piece comprises onboard storage for storing audio files.” Ex. 1001, 8:6–7. Claim 10 depends from claim 1 and further requires that “the at least one wireless ear piece is configured to store at least one playlist of audio files.” Ex. 1001, 8:8–10. Petitioner relies on the disclosure in the Hensen Patent of onboard storage of audio files, including playlists, in the ear piece. Pet. 68–70 (citing Ex. 1003, Figs. 1, 2, 4:66–5:8, 5:41–44, 8:17–20; Anthony Decl. ¶¶ 104–106).

For claim 10, Patent Owner argues that the disclosure in the Hensen Patent of storing and playing back audio files is not a sufficient disclosure of the required “playlist.” PO Resp. 55–56 (citing Johnson Decl. ¶¶ 141, 143–144; Ex. 2023); Sur-Reply 14. However, we agree with Petitioner’s argument that Patent Owner’s expert relies on outdated manual, and providing cites to other references supporting a broader interpretation of “playlist.” Reply 23–24 (citing Exs. 1035, 1036).

(4) Claim 11

Claim 11 depends from claim 1 and further requires that “the software application provides for connecting the at least one wireless ear piece with the computing device.” Ex. 1001, 8:11–13. Petitioner relies on the disclosure in the Hensen Video of pairing the ear pieces to a smart phone. Pet. 70–71 (citing Ex. 1004, frames 0:09–0:19; Anthony Decl. ¶¶ 107–108). Patent Owner argues that the Hensen Video does not actually show how the wireless earpieces are paired with the smartphone. PO Resp. 56 (citing

Johnson Decl. ¶ 149). We agree with Petitioner that the fact that the narrator in the video explicitly states, “I’ve paired [the earpieces] with each other and also paired with the source device, in this case, a smartphone,” is sufficient evidence to render claim 11 obvious. Pet. 70–71 (citing Ex. 1004, 0:09–0:19; Reply 24–25).

(5) Claim 12

Claim 12 depends from claim 11 and further requires that “the computing device is a mobile device.” Ex. 1001, 8:14–15. Petitioner relies on the disclosure in the Hensen Provisional (incorporated into the Hensen Patent) and the Hensen Video of the use of mobile devices. Pet. 71–72 (citing Ex. 1004, frames 0:09–0:19; Ex. 1009 ¶ 35; Anthony Decl. ¶ 109). Patent Owner does not specifically address Petitioner’s challenge to claim 12. *See generally* PO Resp.

(6) Summary

For the reasons stated above, and having considered both the evidence of obviousness and Patent Owner’s submitted evidence and arguments of nonobviousness, and having weighed the entirety of the evidence, we determine that Petitioner has proved by a preponderance of the evidence that claims 2–4, 9–12, and 15–16 are unpatentable under 35 U.S.C. § 103(a) over the combination of the Hensen Patent and the Hensen Video.

2. Obviousness of Claims 5–7 Over the Hensen Patent, the Hensen Video, and the LG Manual

Petitioner challenges claims 5–7 as obvious over the combination of the Hensen Patent, the Hensen Video, and the LG Manual. Pet. 85–91. Petitioner asserts that the LG Manual was available for download on LG’s

website as of May 14, 2014.¹⁵ *Id.* at 86, n.1 (citing Exs. 1019–1021; Anthony Decl. ¶ 136).

Claim 5 depends from claim 1 and further requires that “the representation visual representation includes lighting of the at least one wireless ear piece.” Ex. 1001, 7:45–47. Claim 6 depends from claim 5 and further requires that “the lighting is associated with the function or property of the at least one wireless ear piece.” Ex. 1001, 7:48–50. Claim 7 depends from claim 6 and further requires that “the property is remaining battery life.” Ex. 1001, 8:1–2. For these claims, Petitioner relies on the disclosure in the LG Manual of a visual representation of left and right ear pieces including coloring the representations when the ear pieces are connected, with associated indication of battery life. Pet. 86–91 (citing Ex. 1005, 19, 21–22, 24, 31, 36; Anthony Decl. ¶¶ 135–146).

Patent Owner argues that coloring a representation of an ear piece does not satisfy the claim requirement of lighting an ear piece. PO Resp. 54–55 (citing Johnson Decl. ¶¶ 165–180). However, given that the required “lighting” is performed on the visual representation of the ear piece, and not the physical ear piece itself, it makes no sense to construe “lighting” to mean actual illumination. Instead, any highlighting of the representation, such as shading or coloring, satisfies this requirement. As Petitioner points out, the ’385 patent illustrates the lighting of the ear pieces by changing their coloring between bright and dark colors. Reply 22–23 (citing Ex. 1001, Figs. 4–5). Although the ’385 patent refers to actual illumination of LEDs in

¹⁵ Patent Owner does not address the prior art status of the LG Manual, and based on our review of the record we accord it prior art status pursuant to 35 U.S.C. § 102(a)(1).

the physical ear pieces (Ex. 1001, 4:46–48), that does not relate to the subject matter of claims 5–7.

Accordingly, having considered both the evidence of obviousness and Patent Owner’s submitted evidence and arguments of nonobviousness, and having weighed the entirety of the evidence, we determine that Petitioner has proved by a preponderance of the evidence that claims 5–7 are unpatentable under 35 U.S.C. § 103(a) over the combination of the Hensen Patent, the Hensen Video, and the LG Manual.

3. Obviousness of Claim 8 Over the Hensen Patent, the Hensen Video, and Lee

Petitioner challenges claim 8 as obvious over the combination of the Hensen Patent, the Hensen Video, and Lee. Pet. 92–99. Lee, titled “Display Apparatus And Method For Controlling Display Apparatus Thereof,” was filed on December 16, 2013 and published on July 3, 2014. Ex. 1006, codes (54), (22), (43).¹⁶

Claim 8 depends from claim 1 and further requires that “the user interface is further configured to display available gestures associated with controlling the at least one wireless ear piece.” Ex. 1001, 8:3–5. In the combination, Petitioner relies on the disclosure in Lee of displaying gestures used to control functions of a wireless ear piece. Pet. 92–99 (citing Ex. 1003, 5:37–47, 8:24–34; Ex. 1004, frames 0:09–0:19, 0:32–0:38; Ex. 1006, Figs. 3, 6A, ¶¶ 10, 24, 47, 77, 96; Ex. 1009 ¶¶ 1, 14, 35, 42; Anthony Decl. ¶¶ 147–159).

¹⁶ Patent Owner does not address the prior art status of Lee, and based on our review of the record we accord it prior art status pursuant to 35 U.S.C. § 102(a)(2).

Patent Owner does not specifically address Petitioner's challenge to claim 8. *See generally* PO Resp.

Accordingly, having considered both the evidence of obviousness and Patent Owner's submitted evidence and arguments of nonobviousness, and having weighed the entirety of the evidence, we determine that Petitioner has proved by a preponderance of the evidence that claim 8 is unpatentable under 35 U.S.C. § 103(a) over the combination of the Hensen Patent, the Hensen Video, and Lee.

4. Obviousness of Claims 1–4 and 9–16 Over the Hensen Patent and the Hensen Kickstarter; of Claims 5–7 Over the Hensen Patent, the Hensen Kickstarter, and the LG Manual; and of Claim 8 Over the Hensen Patent, the Hensen Kickstarter, and Lee

Petitioner repeats its challenges of the claims, substituting the Hensen Kickstarter reference for the Hensen Video. Pet. 99–107. Petitioner asserts the Hensen Kickstarter is a printed publication that was posted on Kickstarter® on November 22, 2014.¹⁷ *Id.* at 99–100 (citing Exs. 1007, 1023; Anthony Decl. ¶¶ 160–161).

Petitioner argues that the Hensen Kickstarter discloses essentially the same material as the Hensen Video, and Petitioner's challenges for these grounds substantially corresponds to the grounds discussed above. Pet. 22–23, 100–107. Patent Owner argues that Petitioner's challenges based on the Hensen Kickstarter are insufficient for the same reasons as argued for the Hensen Video. PO Resp. 44–46, 48, 52. In its Sur-Reply

¹⁷ Patent Owner does not address the prior art status of the Hensen Kickstarter, and based on our review of the record we accord it prior art status pursuant to 35 U.S.C. § 102(a)(1).

Patent Owner, for the first time, argues that the Hensen Kickstarter does not disclose everything contained in the Hensen Video, and that Petitioner is improperly relying on disclosures in the Hensen Video for its grounds based on the Hensen Kickstarter. Sur-Reply 7–9. As Petitioner points out, this argument is untimely and thereby waived, and unsupported other than by attorney argument. Tr. 25:19–24, 26:22–27:9. From our review of the record, it is without merit. *See* Pet. 100–104.

Accordingly, having considered both the evidence of obviousness and Patent Owner’s submitted evidence and arguments of nonobviousness, and having weighed the entirety of the evidence, we determine that Petitioner has proved by a preponderance of the evidence that claims 1–4 and 9–16 are unpatentable under 35 U.S.C. § 103(a) over the combination of Hensen Patent and the Hensen Kickstarter; that claims 5–7 are unpatentable under 35 U.S.C. § 103(a) over the combination of the Hensen Patent, the Hensen Kickstarter, and the LG Manual; and that claim 8 is unpatentable under 35 U.S.C. § 103(a) over the combination of the Hensen Patent, the Hensen Kickstarter, and Lee.

IV. CONCLUSION¹⁸

For the foregoing reasons, we are persuaded that Petitioner establishes by a preponderance of the evidence that claims 1–16 of the ’385 patent are unpatentable.

¹⁸ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application

In summary:

Claims	35 U.S.C. §	References/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1–4, 9–16	103	Hensen Patent, Hensen Video	1–4, 9–16	
5–7	103	Hensen Patent, Hensen Video, LG Manual	5–7	
8	103	Hensen Patent, Hensen Video, Lee	8	
1–4, 9–16	103	Hensen Patent, Hensen Kickstarter	1–4, 9–16	
5–7	103	Hensen Patent, Hensen Kickstarter, LG Manual	5–7	
8	103	Hensen Patent, Hensen Kickstarter, Lee	8	
Overall Outcome			1–16	

or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. §§ 42.8(a)(3), (b)(2).

V. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 1–16 of U.S. Patent No. 10,635,385 B2 have been shown to be unpatentable under 35 U.S.C. § 103; and

FURTHER ORDERED that, because this is a final written decision, parties to this proceeding seeking judicial review of our Decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

IPR2023-00901
Patent 10,635,385 B2

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