UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

K/S HIMPP
Petitioner

v.

BRAGI GmbH
Patent Owner

Case IPR2023-00901
U.S. Patent No. 10,635,385

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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I. INTRODUCTION

Patent Owner ("PO") does not dispute that the '385 patent (Ex.1001) focuses on routine fitness tracking software and that its only purportedly novel feature is displaying a "visual representation" of wireless earpieces on a smartphone display. *See* POR, 11; Pet., 10-11[1]. PO also does not dispute that Hensen-Video (Ex.1004 (video); Ex.1010 (screenshots)) discloses such a "visual representation." *See* Ex.1030-Johnson-Tr., 24:19-26:3[2]. Instead, PO spends most of its Response on three issues: attempting to disqualify Hensen-Video as prior art, but without performing the correct analysis; arguing that Hensen-Video's prototype was non-functional, but without addressing the actual teachings of Hensen-Video; and alleging secondary considerations of non-obviousness, but without establishing the requisite nexus.

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[1] PO and its expert do not dispute Petitioner's summary of the '385 patent's file history, nor do they offer their own analysis of why the challenged claims were allowed. *See* Ex.1030-Johnson-Tr., 23:25-24:1.

[2] Unless otherwise stated, Petitioner's responses to PO's arguments in connection with Hensen-Video apply equally to PO's similar arguments in connection with Hensen-Kickstarter (Ex.1007).

First, PO attempts to demonstrate that PO previously disclosed the relied-upon subject matter of Hensen-Video, such that the teachings of Hensen-Video are disqualified as prior art under 35 U.S.C. §102(b)(1)(B). But PO performs the wrong analysis, comparing PO's alleged prior disclosures to the claim language rather than to the relied-upon teachings of Hensen-Video. A proper comparison demonstrates that PO's alleged prior disclosures and the references in the Petition are not the same and that the §102(b)(1)(B) exception does not apply.

Second, PO attempts to distinguish the challenged claims from the prior art in the Petition, but PO again performs the wrong analysis, focusing on whether Hensen-Video disclosed a functional protype that satisfied the challenged claims rather than addressing the relevant question of whether the references' teachings render the challenged claims obvious. The proper analysis – as set forth in the Petition and supported by Dr. Anthony's now-uncontested testimony – demonstrates that the prior art satisfies all challenged claims.

Third, PO rehashes its POPR arguments regarding alleged secondary considerations of non-obviousness, but just like in the POPR, PO fails to establish a nexus between the objective evidence and the challenged claims. Nothing in the POR suggests that PO's alleged objective evidence of non-obviousness is

attributable to the purportedly novel feature of the claimed invention, i.e., the visual representation of a wireless earpiece.

PO's remaining arguments likewise fail, as explained further below. Accordingly, the challenged claims should be found unpatentable.

II. HENSEN-VIDEO IS PRIOR ART TO THE '385 PATENT

A. PO uses the wrong test to establish whether Bragi previously disclosed the same subject matter as Hensen-Video under 35 U.S.C. §102(b)(1)(B)

PO argues that Hensen-Video is not prior art to the '385 patent under 35 U.S.C. §102(b)(1)(B), which provides that a reference that is published within one year of the patent's priority date is not prior art if the inventor previously publicly disclosed the same subject matter as the reference. PO alleges that Bragi had previously disclosed the same subject matter as Hensen-Video in a series of public disclosures describing Bragi's "The Dash" product. POR, 19-20.

Under §102(b)(1)(B), PO is required to compare Bragi's alleged prior disclosure to the relied-upon teachings of Hensen-Video to determine whether they disclose the same subject matter. *See* M.P.E.P. §§ 717.01(b)(2), 2153.02. The same subject matter requirement is not satisfied if the references in the Petition disclose "an alternative species not also disclosed by the inventor." M.P.E.P. §2153.02. More generally, PO's alleged prior disclosures do not satisfy the same subject matter requirement if there are ***any differences*** compared to the references

in the Petition, even if the differences amount to "mere insubstantial changes, or only trivial or obvious variations." *Id.* This guidance establishes that PO must compare the disclosures to each other to ascertain whether they disclose the same subject matter, or whether they instead merely disclose alternative species of an invention or are otherwise different.

However, PO does not carry out the required comparison between Bragi's alleged prior disclosure and the relied-upon teachings of Hensen-Video. Instead, PO carries out an analysis that, according to PO's own characterization, "focuses on whether Bragi's public disclosures teach the same subject matter as the ***claim limitations*** Petitioner relies on Hensen-Video as allegedly disclosing." POR, 33 (emphasis added). That is, PO never compares Bragi's disclosures to the teachings of Hensen-Video, but instead relies entirely on an apparent assumption that any two disclosures that satisfy the ***same claim limitations*** are necessarily the ***same as each other*** for the purposes of §102(b)(1)(B). PO's fundamentally flawed approach fails to address the possibility that Bragi's alleged prior disclosure, even

if it satisfies the same claim limitation, is nevertheless an alternative species or was otherwise different from the relied-upon teachings of Hensen-Video.[3]

PO supports its incorrect analysis by citing to M.P.E.P. guidance stating that "it is not necessary for the subject matter [of the references in the Petition and PO's alleged prior disclosure] to have been disclosed in the same manner or using the same words." POR, 20 (quoting M.P.E.P. §2153.02). However, the M.P.E.P. guidance that PO relies on merely stands for the basic proposition that two references can describe the same subject matter using different words.[4] It falls far short of suggesting that any two disclosures that satisfy the same claim limitations automatically disclose the same subject matter under §102(b)(1)(B).

PO's flawed analysis leads to the nonsensical result that an inventor's public disclosure provides as much (or more) protection for an invention as filing a patent application. Namely, PO's comparison between its alleged prior disclosures and

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[3] Even if PO had carried out the correct comparison, the §102(b)(1)(B) exception would not apply for the reasons explained in Section II.B.

[4] By way of illustration, in this IPR, Hensen-Video and Hensen-Kickstarter describe the same FreeWavz product but do so in a different manner and using different words. *See* Pet. 99-100.

the limitations of the challenged claims is akin to the test for whether a claim is entitled to a right of priority to a parent application, meaning a public disclosure would have the same effect as filing a patent application for establishing a priority date, without needing to satisfy any USPTO requirements or pay any USPTO fees.

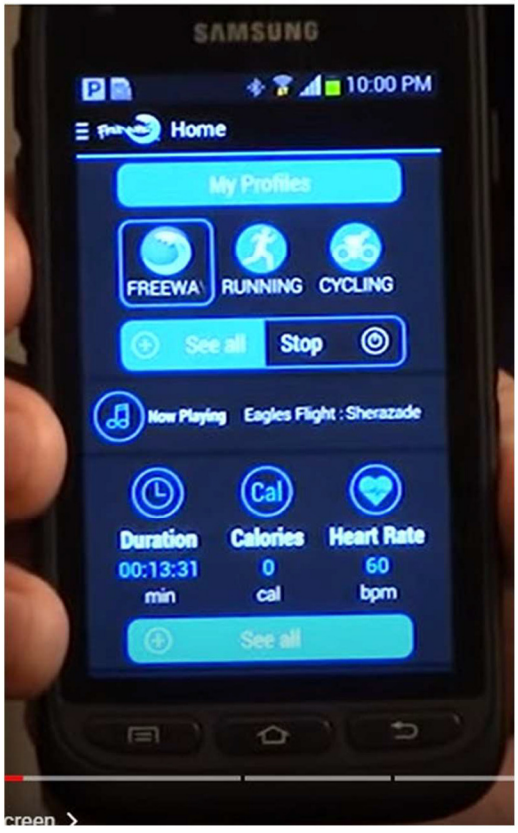
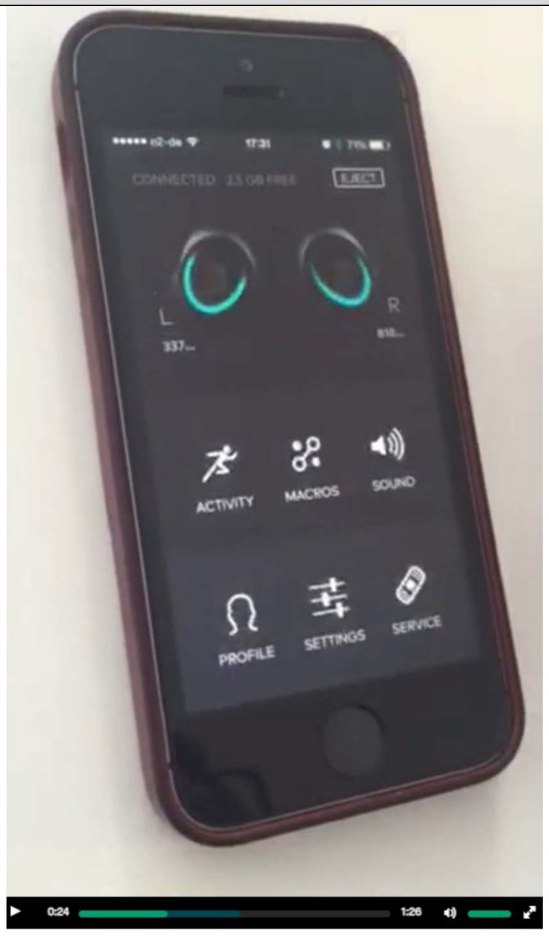
By contrast, no such problematic result is created by Petitioner's correct analysis, which properly focuses on whether PO's alleged prior disclosures and the references in the Petition are the same ***as each other*** and does not place PO's alleged prior disclosures on equal footing with filing a patent application.

B. Under the correct test, Bragi's alleged prior disclosures do not disclose the same subject matter as Hensen-Video and do not disqualify Hensen-Video as prior art under §102(b)(1)(B)

As explained above, a proper analysis of the §102(b)(1)(B) exception requires comparing the relied-upon teachings of Hensen-Video with Bragi's alleged prior disclosures to determine whether they disclose the same subject matter. As discussed in the preceding Section, PO failed to perform this comparison in its POR. Moreover, even if PO had carried out the proper analysis, the argument would still fail. Because of the numerous differences between the relied-upon teachings of Hensen-Video and Bragi's alleged prior disclosures, detailed below, they do not disclose the same subject matter as required under this exception. Ex.1033-Reply-Decl., ¶¶14, 20.

1. "Software Application"

The Petition cites Hensen-Video's teachings in connection with the FreeWavz smartphone application to satisfy the claimed "software application." *See* Pet., 31-33. PO identifies The Dash's smartphone application as Bragi's alleged prior disclosure for this limitation. POR, 27-28. Screenshots of Freewavz's and The Dash's respective smartphone applications are shown below.

FreeWavz (Hensen-Video, 0:47)	**The Dash (POR, 28)**
	

Ex.1033-Reply-Decl., ¶¶5-7.

A comparison between Freewavz's and The Dash's respective smartphone applications establishes that they are not the same. Ex.1033-Reply-Decl., ¶8.

First, as shown by the above side-by-side comparison, Freewavz's and The Dash's respective smartphone applications have a different outward appearance, such as, for example, different colors, icons, and arrangement and organization of menu options. Ex.1033-Reply-Decl., ¶¶9-10.

Second, FreeWavz's and The Dash's smartphone applications are different because they disclose alternative species of the claimed "software application." M.P.E.P. §2153.02. Namely, the FreeWavz smartphone application is an Android software application (species #1), whereas The Dash's smartphone application is an iOS software application (species #2). Consistent with the '385 patent specification, a POSITA would have understood that Android and iOS applications are alternative species of the claimed "software application," as they are developed on different operating systems, for use on different devices, and sold on different channels. Ex.1001-USP385, 7:1-10 (describing an app "developed for the iOS operating system for an Apple mobile device such as an iPhone or iPad and distributed through the App Store" and separately an app "developed for the Android operating system for an Android device and distributed through Google Play or another Android app marketplace"); Ex.1033-Reply-Decl., ¶¶11-12.

Third, as Dr. Anthony explains, many other differences flow from the fact that FreeWavz's and The Dash's smartphone applications are Android and iOS applications, respectively. For example:

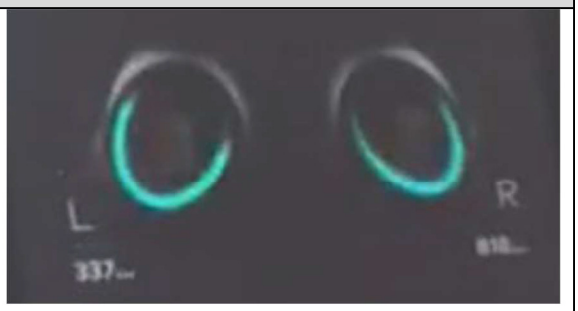
- Android applications and iOS applications run on different operating systems, impacting the overall design of the software applications, the look and feel of the user interface, and the underlying implementation details;
- Android applications and iOS applications typically use different hardware, impacting the user experience and the execution environment;
- Android applications and iOS applications are typically written in different programming languages, further impacting the overall design of the software applications, the implementation details, and the execution environment.

See Ex.1037; Ex.1033-Reply-Decl., ¶13.

Accordingly, PO's contention that The Dash's and FreeWavz's respective software applications disclose the same subject matter lacks merit.

2. "Visual representation"

The Petition cites to certain graphical elements within the FreeWavz smartphone application to satisfy the claimed "visual representation," Pet., 48-50, and PO points to portions of The Dash smartphone application, both shown below.

FreeWavz (Hensen-Video, 0:37)	**The Dash (POR, 33)**
	

Ex.1033-Reply-Decl., ¶¶15-16.

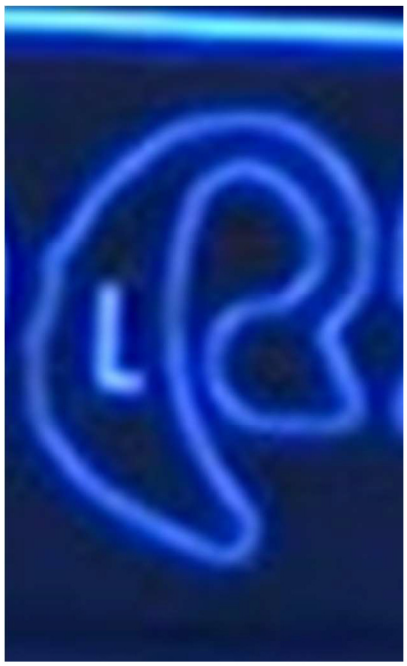
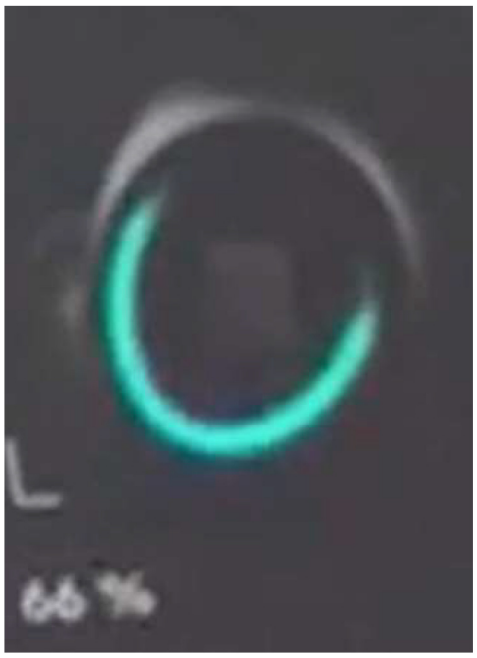
As with the claimed "software application," a comparison between Freewavz's and The Dash's respective visual representations establishes that they are not the same. Ex.1033-Reply-Decl., ¶17.

First, given that the visual representations are part of the software applications, Freewavz's and The Dash's respective visual representations are different for the same reasons that the underlying software applications are different, as explained above. Ex.1033-Reply-Decl., ¶17.

Second, like the underlying software applications, FreeWavz's and The Dash's respective 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. Ex.1033-Reply-Decl., ¶17.

Third, Freewavz's and The Dash's respective visual representations are also different because they disclose alternative species of the claimed "visual representation." Namely, as shown below, the FreeWavz visual representation uses outlines/silhouettes of the wireless earpieces (species #1), whereas The Dash's visual representation uses a photorealistic depiction of the wireless earpieces (species #2).

FreeWavz	The Dash
Outline/silhouette (Ex.1010)  	Photorealistic depiction (Ex.2006) 
Physical earpiece (Ex.1010) 	Physical earpiece (Ex.2005) 

The '385 patent specification describes a photorealistic depiction of the earpieces as one possible "visual representation," thereby contemplating alternative, non-photorealistic visual representations, such as outlines/silhouettes. Ex.1001-USP385, 4:53-55 (stating that the visual representation "***may*** be a photo or photo-realistic representation of the ear pieces"); Ex.1033-Reply-Decl., ¶¶18-19.

Therefore, PO's contention that The Dash's visual representation discloses the same subject matter as the FreeWavz visual representation lacks merit.

3. Other claim limitations

The other claim limitations for which Petitioner cites to the teachings of Hensen-Video (e.g., limitation [1F] and claims 2-4, 11, 12 and 15) recite further details of the software application and/or visual representation. Accordingly, Bragi's alleged prior disclosures for these limitations do not satisfy the same subject matter requirement for the same reasons explained above.

III. THE CHALLENGED CLAIMS ARE UNPATENTABLE OVER THE PRIOR ART IN THE PETITION

PO presents myriad perfunctory arguments for why the challenged claims are allegedly patentable over the prior art in the Petition. POR, 44-57. Each of these arguments should be rejected as follows.

A. PO's arguments that FreeWavz prototype device in Hensen-Video is not "functional" are irrelevant

PO argues that Hensen-Video does not satisfy limitations [1D] and [1F] and claims 2-4, 11, and 14 because the FreeWavz prototype shown in these references was allegedly not "functional." POR, 45, 47, 52, 58; Ex.2020-Johnson-Decl., ¶¶115, 138, 161, 163. PO's argument relies on its expert's (Mr. Johnson's) analysis of Hensen-Video, in which Mr. Johnson purports to identify instances where the information displayed on the FreeWavz prototype appears to be static or predetermined. Ex.2020-Johnson-Decl., ¶¶72-96. However, even assuming that portions of the FreeWavz prototype are static, they are sufficient to teach a POSITA the intended functionality that they represent.

It is long established that, for purposes of obviousness, even an inoperative device is "prior art for all that it teaches." *Beckman Instruments v. LKB Produkter AB*, 892 F.2d 1547, 1551 (Fed. Cir. 1989); *see also 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.'"); *K/S HIMPP et al v. BENHOV GmbH, LLC*, IPR2017-00930, Paper 32 (P.T.A.B. Aug. 10, 2018) at 39-40 ("A reference qualifies as prior art under § 103 for what is disclosed, even if the disclosure is not a comprehensive disclosure of a complete, operative device")

(citing *Beckman*, 892 F.2d at 1551). The Board has repeatedly rejected Patent Owners' arguments premised on the alleged inoperability of a prior art device. *See, e.g., General Electric Company v. Raytheon Technologies Corporation f/k/a United Technologies Corporation*, IPR2018-01442, Paper 39 (P.T.A.B. Feb. 20, 2020) at 15-16 ("whether or not [the prior art device] was ever successfully implemented is not the proper consideration in our analysis here"); *Mercedes-Benz USA, LLC v. Carucel Investments, LP*, IPR2019-01404, Paper 39 (P.T.A.B. Jan. 15, 2021) at 56 (finding PO's argument that a "hypothetical [prior art device] has never become a reality" unavailing because "there is no requirement for a reference's disclosure to have been implemented in an actual system for that disclosure to qualify as prior art acceptable for obviousness"); *SolarEdge Technologies Ltd. v. SMA Solar Technology AG*, IPR2020-00021, Paper 31 (P.T.A.B. Oct. 25, 2022) at 37.

Therefore, PO's enquiry into the level of operability of the FreeWavz prototype is irrelevant. PO does not contend that the FreeWavz prototype's alleged lack of functionality somehow diminishes what it teaches to a POSITA. On the contrary, PO and its expert acknowledge that the prototype was successful in demonstrating the "apparent capabilities" of the finished FreeWavz application. Ex.2020-Johnson-Decl., ¶78. For example, Mr. Johnson explains that Dr. Hensen

"narrat[es Hensen-Video] in a way that would imply" (and therefore teach) the capabilities of the finished application. Ex.2020-Johnson-Decl., ¶87. He further states that Dr. Hensen's approach "would be common in the design of a smartphone application, where sample screens would be mocked up with sample data to illustrate the relative size and placement of elements on the screen." Ex.2020-Johnson-Decl., ¶94. Therefore, according to PO's own expert, a POSITA would have considered Hensen-Video's use of a static prototype to be a routine and effective way to teach the intended functionality of a software application.

Accordingly, all of PO's arguments that the FreeWavz prototype was not "functional" – which PO asserts in some form for each of limitations [1D] and [1F] and claims 2-4, 11, and 14 – lack merit.

B. PO's remaining arguments lack merit

1. Limitation [1D]

PO argues that Hensen-Video does not disclose software that "interact[s]" with the earpieces, as recited by limitation [1D], because Hensen-Video allegedly does not "provide any indication that a command can be sent from the application to the wireless ear piece(s)." POR, 45-46. PO's focus on Hensen-Video is misplaced. Petitioner's position—which is plainly set forth in the Petition and which the Board correctly ascertained in the Institution Decision—is that Hensen-*Patent* (Ex.1003) discloses a remote control device that interacts with the earpieces

(e.g., by sending commands to the earpieces), and that this renders limitation [1D] obvious in view of Hensen-Video's teaching that "the remote control device is implemented as a software application," Pet., 44-47. PO's singular focus on the capabilities of Hensen-Video does nothing to the rebut Petitioner's position and gives the Board no reason to revisit its preliminary determination. PO's expert makes a similar error by alleging that neither Hensen-Patent nor Hensen-Video individually teaches limitation [1D] but failing to address their combined teachings. Ex.2020-Johnson-Decl., ¶103; *Neenah, Inc. et al v. Jodi A. Schwendimann f/k/a Jodi A. Dalvey*, IPR2020-00628, Paper 29 (P.T.A.B. Oct. 1, 2021), *aff'd* 82 F.4th 1371 (Fed. Cir. 2023) at 26 ("The test for obviousness is not whether the claimed invention is expressly suggested in any one or all of the references, but whether the claimed subject matter would have been obvious to those of ordinary skill in the art in light of the combined teachings of those references").

Furthermore, neither PO nor its expert provide any support for their apparent position that the claimed "interact[ion]" requires sending a "command" to the earpiece, and during cross-examination PO's expert admitted that sending a command is merely one possible type of interaction. *See* Ex.1030-Johnson-Tr.,

32:15-33:3. Nevertheless, as explained herein and in the Petition, the prior art satisfies limitation [1D] even under PO's incorrect interpretation.

2. Limitation [1F]

PO argues that Petitioner's analysis of limitation [1F] overlooks the claim's antecedent basis requirements because the teachings that Petitioner relies on to satisfy the "visual representation" of limitation [1F] are allegedly different from the teachings Petitioner relies on to satisfy the "visual representation" of limitation [1E]. POR, 47-48. PO is wrong. Petitioner's position—again clearly stated in the Petition and correctly ascertained by the Board in the Institution Decision—is that Hensen-Video discloses a single visual representation that both "includes icons depicting the earpieces [(satisfying limitation [1E])] ***and further includes*** an indication of the battery life of each of the earpieces [(satisfying limitation [1F])]." Pet., 51 (emphasis added). That is, Petitioner explicitly identifies the ***same*** visual representation in Hensen-Video as satisfying both limitation [1E] and limitation

[1F]. *Id.* The antecedent basis issue that PO attempts to raise simply does not exist.[5]

3. Claim 2

Claim 2 recites the wireless earpiece "comprises a physiological sensor." PO argues Hensen-Video does not disclose a physiological sensor because the FreeWavz's prototype allegedly did not include a working pulse oximeter. POR,

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[5] PO's expert makes a further argument (not stated in the POR) suggesting that the scope of the "visual representation" should be limited to the earpiece graphic itself and does not extend to adjacent elements. Ex.2020-Johnson-Decl., ¶107. Mr. Johnson supports this argument by pointing to an embodiment in the '385 patent specification that he contends uses the earpiece graphics themselves to convey a function or property of the earpieces. *Id.* However, he does not explain why the claim language should be interpreted to exclude other embodiments in which adjacent elements (e.g., battery life indicators) are used to convey the function or property of the earpieces. *See* Pet., 53. At any rate, the POR does not adopt Mr. Johnson's incorrect analysis, and in fact expressly admits that placing an indicator of remaining battery life adjacent to the earpiece graphic satisfies limitation [1F]. POR, 63.

49-50. This argument lacks merit as explained in Section III.A. Moreover, PO's arguments focus only on Hensen-Video and therefore do nothing to rebut Petitioner's analysis based on Hensen-Patent. *See* Pet., 54-59.

4. Claim 3

Claim 3 recites that "the software application provides for tracking one or more physical activities using the physiological sensor." PO concedes that Hensen-Video discloses an application that displays a user's heart rate measurements and offers settings for different physical activities (e.g., running and cycling) but nevertheless argues that this does not satisfy the limitation of "tracking a physical activity," as claimed. POR, 51-52. First, PO's arguments focus only on Hensen-Video and therefore do nothing to rebut Petitioner's analysis based on Hensen-Patent. *See* Pet., 60-61. Moreover, PO appears to be arguing that the term "tracking a physical activity" requires something more than measuring a user's biometric data while the user is engaged in a physical activity, as taught by Hensen-Video, yet neither PO nor its expert provide any support for their interpretation. Such an interpretation is incorrect because, as explained in the Petition, the '385 patent's file history establishes that measuring heart rate while

engaged in a physical activity is an example of tracking a physical activity within the scope of claim 3.[6] Pet. 64.

5. Claim 4

Claim 4 recites that "the physical activities are selected from a set consisting of running, biking, and swimming." PO argues that modifying the FreeWavz application to track a user's swimming activity would have been challenging because various components "would need to be waterproof." POR, 53-54. However, the '385 patent specification does not support PO's arguments as it does not identify the use of waterproof components as a critical distinction between swimming and other activities. Ex.1001-USP385, 6:39-41 (listing swimming side-

[6] PO argues that "the Petition doesn't argue or show that Hensen-Video teaches that the application is capable of recording any data at all." POR, 51. First, neither PO nor its expert offer any support for their position that claim 3 requires not only tracking but also "recording" data, *see* Ex.1030-Johnson-Tr., 43:25-45:7, and second, the Petition expressly establishes that Hensen-Video teaches recording data. *See* Pet., 65 (explaining that Hensen-Video "provides for tracking these quantities—heart rate and oxygen saturation—***over time*** using a waveform representation") (emphasis added).

by-side with running and biking without making any distinctions); *see also Ex parte Spangler*, Appeal 2018-003800 (P.T.A.B. Feb. 20, 2019) (informative) (finding design choice rationale appropriate where the patent's specification does not support the supposedly "critical" distinctions alleged by the applicant). Moreover, PO's argument is unsupported attorney argument, as its expert's analysis of Claim 4 makes only unrelated (and irrelevant) arguments about the FreeWavz's prototype's alleged lack of functionality. Ex.2020-Johnson-Decl., ¶¶137-39.

6. Claims 5-7

Claims 5-7 recite the "visual representation includes lighting of the at least one wireless ear piece." PO acknowledges that LG-Manual (Ex.1005) discloses selectively changing the coloring of the earpiece graphic but nevertheless argues that it does not satisfy the limitation of "lighting," as claimed. POR, 54. PO narrowly interprets "lighting" to be "illumination, which is different than changing the color of an element." *Id.* However, neither PO nor its expert provide any support for their contention that the term "lighting" excludes changing the color of an element in the manner taught by LG-Manual. To the contrary, the '385 patent discloses embodiments of "lighting" that involve changing the color of elements in the same manner as LG-Manual. *Compare* Ex.1001-USP385, Figs. 4-5 (lighting

the earpieces by changing their coloring between bright and dark colors) *with* Ex.1005-LG-Manual, 36 (same, where the bright and dark colors are pink and gray, respectively).[7]

7. Claim 10

Claim 10 recites a "playlist of audio files." PO admits that Hensen-Patent discloses audio files that are "ordered into [a] sequence" but nevertheless argues that this ordered sequence of audio files is not a "playlist," because a playlist must be "organized by the user." POR, 55. To support his interpretation, PO's expert cites to an obsolete user manual that describes iPod playlists as "songs you've organized into lists." Ex.2020-Johnson-Decl., ¶167 (citing a 2002 iPod user manual); Ex.1030-Johnson-Tr., 50:23-51:22 (admitting that the iPod device covered by the 2002 manual had been "replaced by several new generations" by

[7] PO's expert makes various additional arguments for claims 5-7 that are not discussed in the POR and are therefore waived. *See* Section III.C. Moreover, these arguments are wrong. For example, Mr. Johnson incorrectly contends that claims 5-7 require "illumination of a physical wireless earpiece" even though these claims concern the "visual representation" of the earpiece, not the physical earpiece itself. Ex.2020-Johnson-Decl., ¶167.

the time the '385 patent was filed). However, contemporaneous dictionaries do not support PO's attempt to limit the term "playlist" to something organized by a user, nor do the patent's specification or file history provide support. First, the specification's lone reference to a "playlist" in Figure 5 is a passing reference that does not suggest a restrictive meaning. Ex.1001-USP385, Fig. 5. Second, during prosecution, the examiner cited prior art that uses software to automatically create playlists and does not limit a playlist to something organized by a user, as PO's expert proposes. Ex.1011-USP385-FH, 143-144 (citing Goldstein); Ex.1034-Goldstein, ¶94. Finally, unlike the outdated, brand-specific user manual that PO's expert cites, contemporaneous dictionaries define a "playlist" as a sequence of songs and do not impose a further requirement that the sequence be organized by a user. Ex.1035 (Collins, 2014) (*Playlist*: "a list of tracks to be played in a particular order on an MP3 player or CD player"); Ex.1036 (American Heritage, 2017) (*Playlist*: "A digital file designating a set of audio or video recordings to be played one after the other.").

8. Claim 11

Claim 11 recites "connecting the at least one wireless ear piece with the computing device." PO acknowledges that Hensen-Video describes pairing earpieces with a smartphone but nevertheless argues that Hensen-Video does not

"show[] how the wireless earpieces are paired with the smartphone" and does not explain how the "software provides" the pairing. POR, 56. However, PO's insistence that Hensen-Video must disclose these implementation details to render claim 11 obvious is misplaced. *See* Section III.A. In fact, Hensen-Video discloses the subject matter of claim 11 in the same level of detail as the '385 patent's specification, which similarly describes an earpiece that is "electrically connected" (i.e., paired) to a smartphone but does not describe how the connection was made or how the software application provides the connection. Ex.1001-USP385, 3:13-15; Ex.1030-Johnson-Tr., 51:23-53:25; *In re Epstein*, 32 F.3d 1559, 1568 (Fed. Cir. 1994).

9. Claims 13-14

For claims 13 and 14, PO cross-references its arguments for limitation [1D], which lack merit as explained in Section III.B.[8] POR, 57-58. PO also notes a

[8] PO's expert makes an additional argument that Hensen-Patent does not disclose the methods of claims 13-14 because Hensen-Patent's claims are apparatus claims. Ex.2020-Johnson-Decl., ¶152. This argument is not discussed in the POR and is therefore waived. *See* Section III.D. In any event, Hensen-Patent's teachings of methods are not limited to literal instances of the word "method."

minor typographical error in the Petition's analysis of the preamble of claim 14 but acknowledges that the error is de minimis and, in any event, makes no assertion that the preamble is limiting. POR, 57.

C. The POR improperly incorporates by reference PO's expert declaration

PO argues that Petitioner's expert's opinion should be entitled to no weight because his declaration is allegedly a "slightly reworded" version of the Petition. POR, 57-58 (citing *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022) (precedential)). PO's characterization of the declaration is incorrect, and PO's reliance on *Xerox* is misplaced, as PO has not identified even a single instance of Dr. Anthony's testimony that is repeated in the Petition and is conclusory or unsupported. *PPC Broadband, Inc. v. Times Fiber Communications, Inc.*, IPR2022-01088, Paper 42 (P.T.A.B. Dec. 20, 2023) at 100 ("*Xerox* does not stand for the proposition that little weight is given to expert testimony when a petition repeats expert testimony that is not conclusory and is supported").

Moreover, unlike Dr. Anthony's declaration, which properly supports and elaborates on analysis that is fully set forth in the Petition, PO's expert declaration is improperly incorporated by reference into the POR. 37 C.F.R. § 42.6(a)(3) ("Arguments must not be incorporated by reference from one document into another document"). Namely, Section V.B of the POR is only 14 pages in length

but makes numerous arguments that are fully set forth only in Mr. Johnson's declaration of over 100 pages. In fact, much of the analysis in Mr. Johnson's declaration is not discussed at all in the POR. *See, e.g.,* Ex.2020-Johnson-Decl., ¶¶183-92 (analysis of claim 8, which is not referenced at all in the POR). Accordingly, to the extent PO attempts to rely on arguments that appear in Mr. Johnson's declaration and are not stated in the POR (or are stated in only a cursory, incomplete manner), these arguments should be deemed waived. Paper 15 (Scheduling Order), 9 ("Patent Owner is cautioned that any arguments not raised in the response may be deemed waived"); *ResMed Inc. v. New York University*, IPR2022-00992, Paper 67 (P.T.A.B. Dec. 7, 2023) at 54 ("to the extent [PO's expert] raises additional arguments in response to Petitioner's challenge to these dependent claims, we do not consider those arguments, and instead we find those arguments waived by virtue of Patent Owner not expressly stating them in its Patent Owner Response").

IV. PO'S ALLEGED OBJECTIVE INDICIA OF NON-OBVIOUSNESS LACK A NEXUS TO THE CLAIMED INVENTION

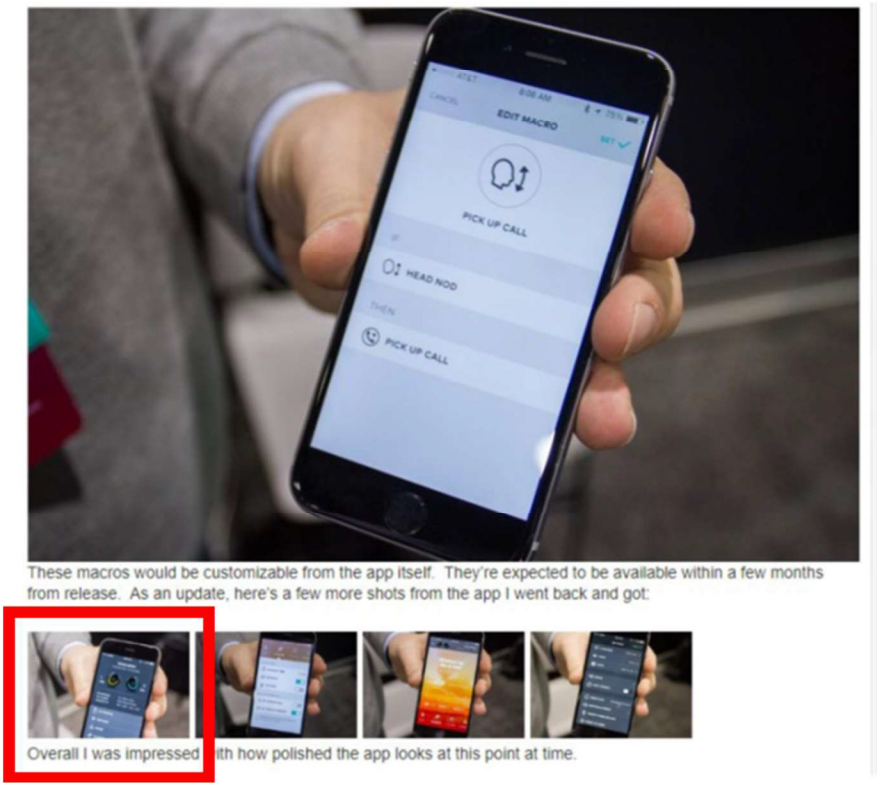
In the POPR, PO argued that the challenged claims were non-obvious based on alleged industry praise for The Dash product and because FreeWavz had allegedly tried and failed to compete with The Dash product. POPR, 38-43. At Institution, the Board correctly rejected PO's arguments for failing to establish that

The Dash was coextensive with the challenged claims and that the industry praise was received due to the purportedly novel feature of the claimed invention (i.e., the "visual representation") rather than other extraneous factors. DI, 26. The POR largely rehashes the same arguments from the POPR while adding several pieces of new evidence to purportedly address the defects identified by the Board. However, PO's tweaks fall short of establishing the required nexus.

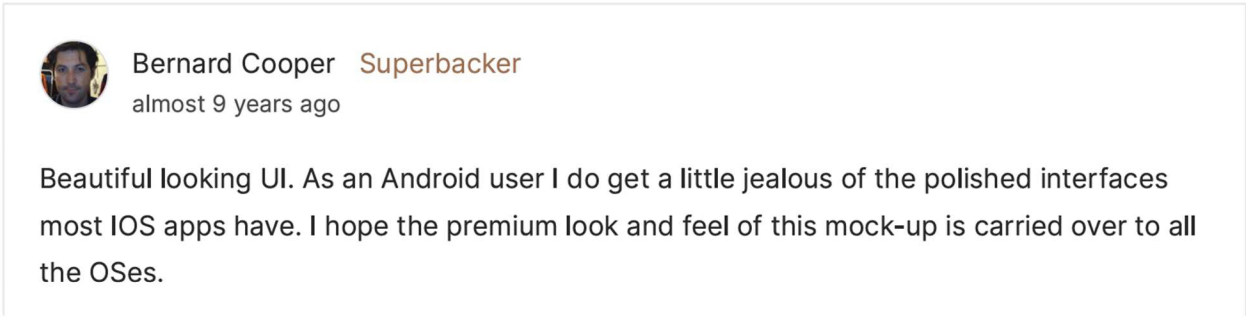
First, confusingly, PO's new position is that "at least ***some*** of the praise that The Dash received was due to claimed features of the product." POR, 60 (emphasis added). Yet PO continues to rely on ***all*** the alleged evidence of non-obviousness that was previously presented in the POPR, including evidence that plainly has nothing to do with the claimed invention, e.g., descriptions of The Dash's touch control features, long battery life, and charging case. *Id*. PO's unfocused arguments improperly leave it to Petitioner and the Board to parse out which evidence PO even arguably contends satisfies the nexus requirement.

Second, the only purported difference between PO's newly cited evidence (i.e., Ex.2019 and Ex.2022) and the prior evidence from the POPR is that the newly cited evidence generally mentions and/or depicts The Dash's software application. POR, 61. However, general praise for The Dash's "software" or "app" is not the same as praise for the "visual representation" of the earpieces (i.e., the

only purportedly novel feature of the claimed invention). The Dash's visual representation of the earpieces is never mentioned in any of the cited exhibits and is depicted just once, in Ex.2019, barely visible among four other screenshots of The Dash's software application.



POR, 61 (citing Ex.2019) (annotation added). The text accompanying these screenshots highlights features of the software application, like the ability to customize macros "from the app itself" and the app's overall "polished" look, that are not due to purportedly novel features of the claimed invention. Ex.2019, 9. As demonstrated below, users attributed the app's polished look, not to its visual representation of the earpieces, but to its implementation as an iOS application.



Ex.2022, 12. Accordingly, the alleged praise for The Dash's software application is directed to unclaimed features (e.g., a macro editor) and/or known techniques for creating "polished" apps (e.g., building the app in iOS), not to a unique characteristic of the claimed invention. *See SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1319 (Fed. Cir. 2015) (finding no presumption of nexus where the success of PO's product is attributable to "unclaimed features" or "features…known in the prior art").

Third, PO repeats verbatim its argument from the POPR that FreeWavz had allegedly tried and failed to compete with The Dash product. POR, 65-66. However, PO does not even attempt to establish a nexus between FreeWavz's alleged failure to develop a competing product and the claimed invention, and there is none.

Therefore, the POR's arguments regarding secondary considerations do not cure the defects identified by the Board and do not establish a nexus between PO's objective evidence of non-obviousness and the claimed invention. Moreover, even

if the Board finds a nexus, PO's evidence should be afforded little weight, as PO has not identified any gap in the Petition's *prima facia* obviousness showing for which the alleged secondary considerations are relevant. *See Leapfrog Enterprises Inc. v. Fisher-Price Inc.,* 485 F.3d 1157, 1162 (Fed. Cir. 2007) ("given the strength of the *prima facie* obviousness showing, the evidence on secondary considerations was inadequate to overcome a final conclusion" of obviousness).

V. CONCLUSION

The challenged claims of the '385 patent should be canceled.

Respectfully submitted,

/Haixia Lin/

Haixia Lin, Reg. No. 61,318

Petitioner's Table of Exhibits for IPR2023-00901

Exhibit	Description
1001	U.S. Patent No. 10,635,385 ("'385 patent")
1002	Declaration of Brian W. Anthony, Ph.D.
1003	U.S. Patent No. 9,781,514 ("Hensen-Patent")
1004	YouTube.com, *September 2015 – FreeWavz Demo* [https://www.youtube.com/watch?v=zHNZ7p5GnH4] ("Hensen-Video")
1005	*User Manual: LG Heart Rate Earphones* ("LG-Manual")
1006	U.S. Patent Appl. No. 2014/0189600 ("Lee")
1007	Kickstarter.com, November 22 Progress Report ("Hensen-Kickstarter") [https://web.archive.org/web/20150924011438/https://www.kickstarter.com/projects/freewavz/freewavzsmart-earphones-with-built-in-fitness-mon/posts/1057132]
1008	U.S. Patent No. 9,161,131 ("Hensen-Parent")
1009	U.S. Provisional Application No. 62/061,497 ("Hensen-Provisional")
1010	Screenshots from Hensen-Video
1011	File History for U.S. Patent No. 10,635,385 ("'385 FH")
1012	Twitter.com – Posts by FreeWavz [https://twitter.com/Freewavz]
1013	Twitter.com - October 2014 Snapshot of Posts by FreeWavz [https://web.archive.org/web/20141026181307/twitter.com/Freewavz]
1014	Kickstarter.com, *Pulse Oximetry Success + FreeWavz Testing + Factory Preparation* [https://www.kickstarter.com/projects/freewavz/freewavz-smart-earphones-with-built-in-fitness-mon/posts/1349732]

Exhibit	Description
1015	FreeWavz.com – Home Page [https://web.archive.org/web/20151004055203/http://www.freewavz.com/]
1016	FreeWavz.com – News Page [https://web.archive.org/web/20151006111823/http://www.freewavz.com/news/]
1017	FreeWavz.com – About Page [https://web.archive.org/web/20151008013534/http://freewavz.com/about/]
1018	Olympics.com – History of Triathlon [https://olympics.com/en/sports/triathlon/#discipline-history-of]
1019	LG.com – FR74 Product Page [https://web.archive.org/web/20150507002217/http:/www.lg.com/us/support-mobile/lg-FR74#]
1020	FCC.gov – FR74 FCC Application [https://apps.fcc.gov/oetcf/eas/reports/ViewExhibitReport.cfm?mode=Exhibits&RequestTimeout=500&calledFromFrame=N&application_id=5sSYi3UFjhWeKosDZgHTHQ%3D%3D&fcc_id=BEJ9QK-DMFR74]
1021	FCC.gov – FR74 User Manual (Attachment to FCC Application) [https://apps.fcc.gov/eas/GetApplicationAttachment.html?id=2186303]
1022	Kickstarter.com – FreeWavz Creator Bio [https://web.archive.org/web/20150912193027/https:/www.kickstarter.com/projects/freewavz/freewavz-smart-earphones-with-built-in-fitness-mon/creator_bio]
1023	Internet Archive Declaration of Nathaniel E Frank-White
1024	U.S. Patent No. 9,392,946
1025	U.S. Patent No. 8,818,476
1026	Email exchange with the Board from September 1–6, 2023

Exhibit	Description
1027	U.S. Patent Application No. 12/731,397 ("Hensen-Parent-App")
1028	U.S. Patent No. 9,755,704
1029	U.S. Patent No. 10,165,350
1030	Transcript of Deposition of Kai Johnson (4/17/2024)
1031*	Verizon.com – Verizon Wireless Introduces V CAST Music (1/5/2006) [https://www.verizon.com/about/news/vzw/2006/01/pr2006-01-05]
1032*	Apple Wiki – iPod (1st Generation) [https://apple.fandom.com/wiki/IPod_(1st_generation)]
1033	Reply Declaration of Brian W. Anthony, Ph.D.
1034	U.S. Patent App. 2008/0031475 ("Goldstein")
1035	*Collins English Dictionary – Complete and Unabridged*, 12th Edition (2014) (definition of "playlist")
1036	*American Heritage® Dictionary of the English Language*, Fifth Edition (archived 12/22/2017) (definition of "playlist") [https://web.archive.org/web/20171222191601/https://www.thefreedictionary.com/playlist]
1037	Grønli, *et al.*, "Mobile Application Platform Heterogeneity: Android vs Windows Phone vs iOS vs Firefox OS," *2014 IEEE 28th International Conference on Advanced Information Networking and Applications*, Victoria, BC, Canada, 2014
1038	Samsung.com - Samsung Galaxy Rugby Pro I547 [https://www.samsung.com/us/mobile/phones/all-other-phones/samsung-galaxy-rugby-pro-at-t-sgh-i547zkaatt/]

* Exhibit to Deposition of Kai Johnson (4/17/2024)

CERTIFICATE OF SERVICE

I hereby certify that on April 29, 2024, I caused a true and correct copy of the foregoing materials:

- Petitioner's Reply to Patent Owner's Response
- Updated Exhibit List
- Word Count Certificate of Compliance
- Exhibits 1030-1038

to be served via electronic mail by consent on counsel of record at:

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Respectfully Submitted

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Brian J. Lambson
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WORD COUNT CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing Petitioner's Reply to Patent Owner's Response contains 5,436 words as measured by the word processing software used to prepare the document, in compliance with 37 C.F.R. § 42.24(d).

Respectfully submitted,

Dated: April 29, 2024

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