

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 DEMONSTRATIVE EXHIBITS

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

U.S. Patent No. 10,635,385

K/S HIMPP

v.

BRAGI GmbH

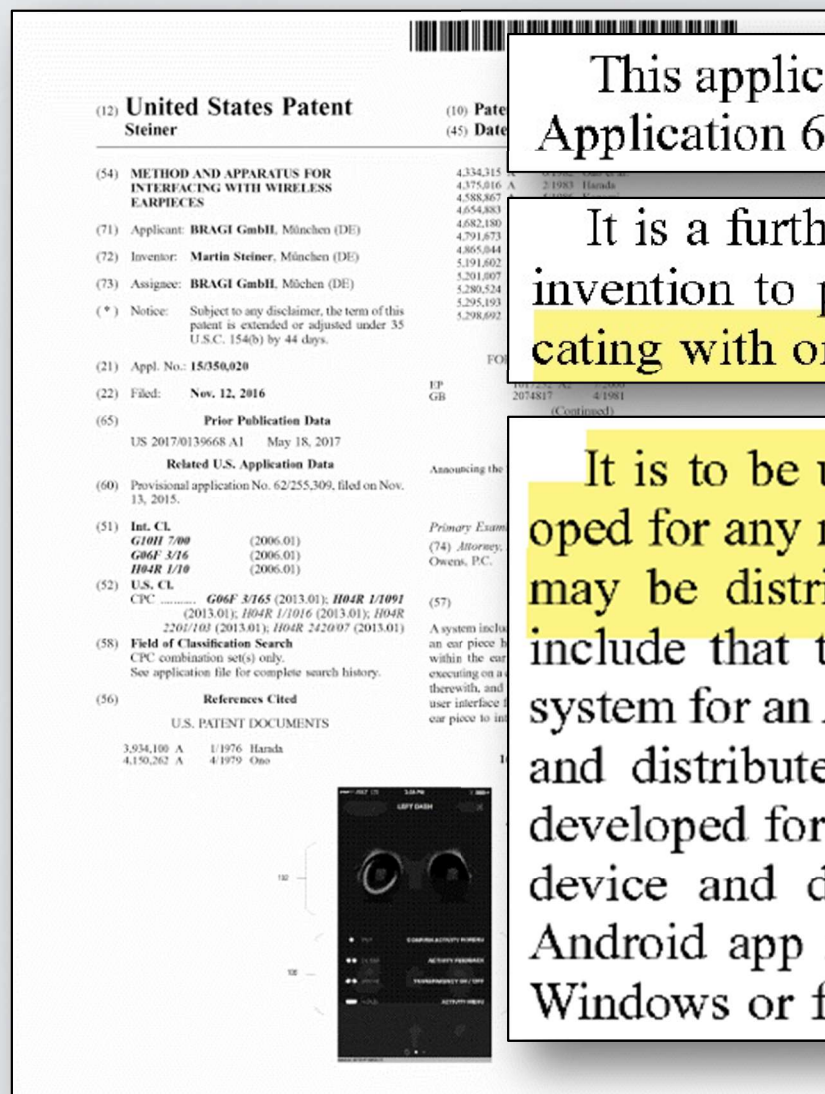
IPR 2023-00901

Petitioner's Demonstrative Exhibits

August 14, 2024

- The '385 Patent
- Prior Art
 - Hensen References
 - LG-Manual
 - Lee
- Disputed Issues

The '385 Patent



This application claims priority to U.S. Provisional Patent Application 62/255,309, filed on Nov. 13, 2015, and entitled

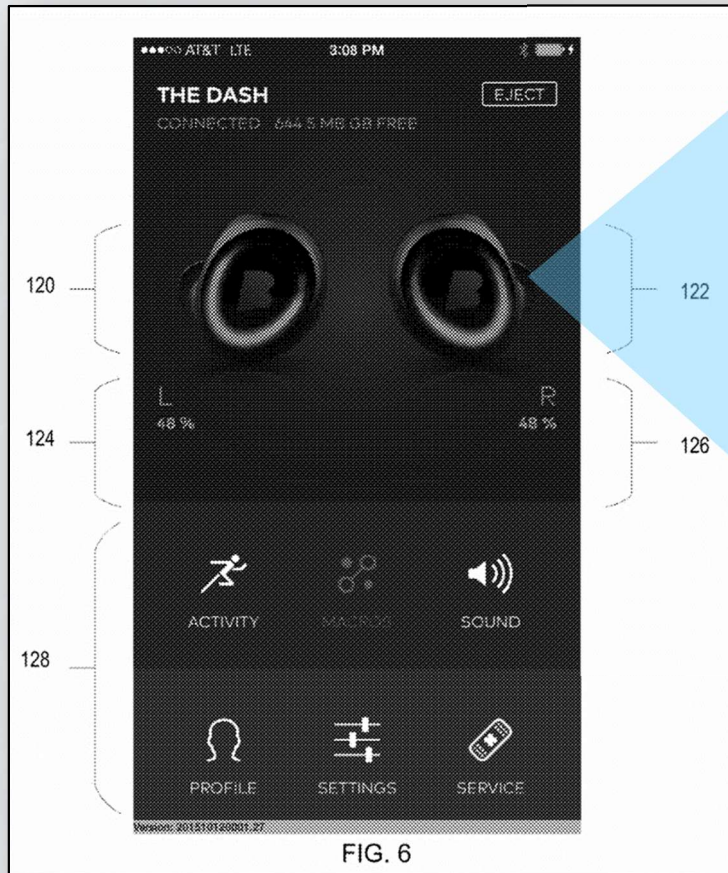
It is a further object, feature, or advantage of the present invention to provide a software application for communicating with one or more wireless ear pieces.

It is to be understood that an application may be developed for any number of operating systems or platforms and may be distributed in any number of ways. These may include that the app be developed for the iOS operating system for an Apple mobile device such as an iPhone or iPad and distributed through the App Store. The app may be developed for the Android operating system for an Android device and distributed through Google Play or another Android app marketplace. The app may be developed for Windows or for any number of other operating systems.

Ex. 1001 at 1:7-8, 1:30-32, 7:1-10

Purported Solution

HIMPP



Ex. 1001 at Fig. 6

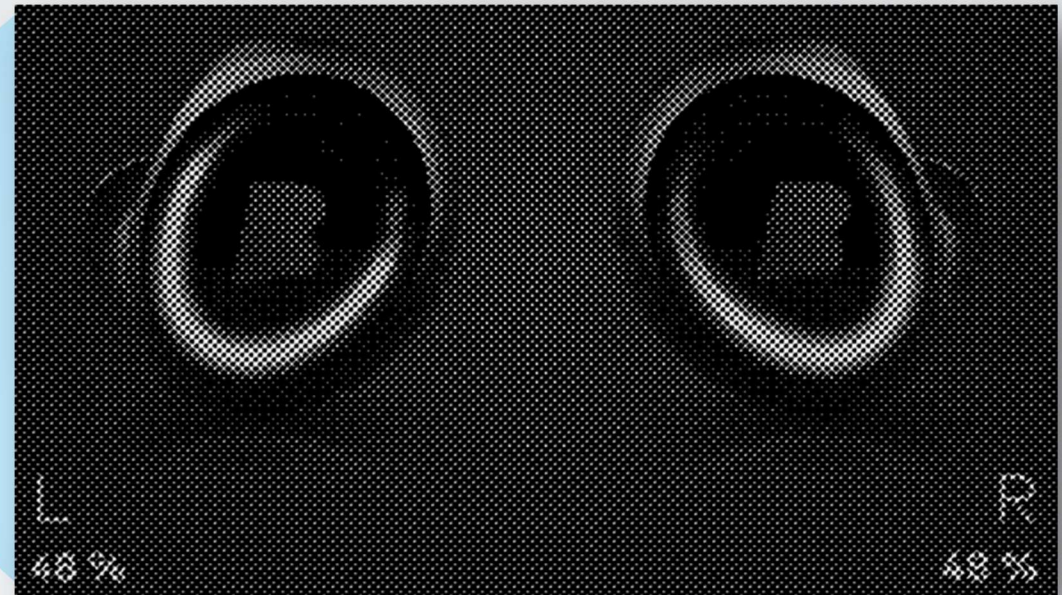


FIG. 6 illustrates another example of a screen display associated with a software application or mobile app executing on a processor of a mobile device. In this screen display a left earpiece 120 and a right earpiece 122 are shown.

Ex. 1001 at 6:1-4

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 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 earpiece to the computing device.

Highlighted claim language was underlined in Examiner's Statement of Reasons for Allowance (Ex. 1011 at 290)

Hensen References

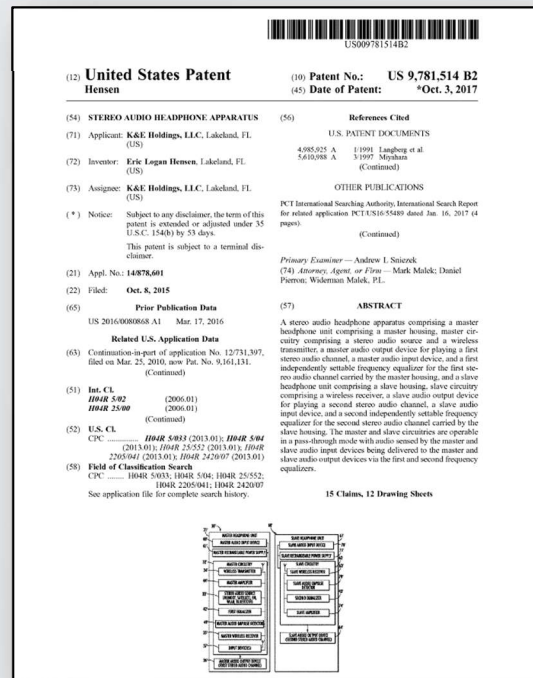
Grounds 1-3: Hensen-Patent and Hensen-Video

HIMPP

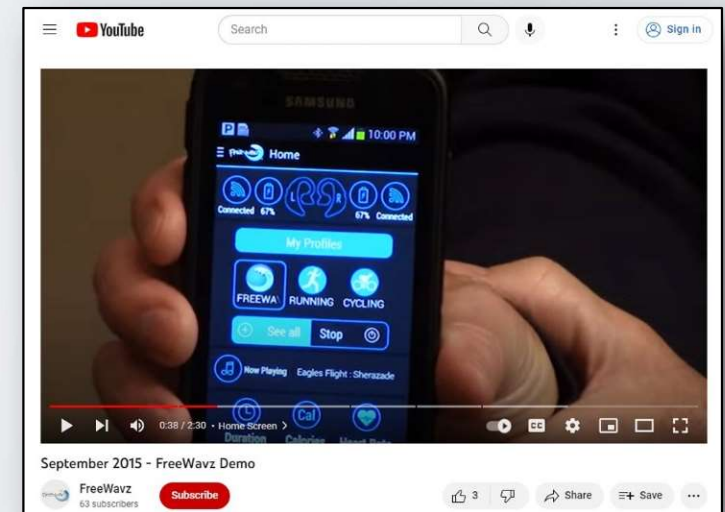
Dr. Eric Hensen

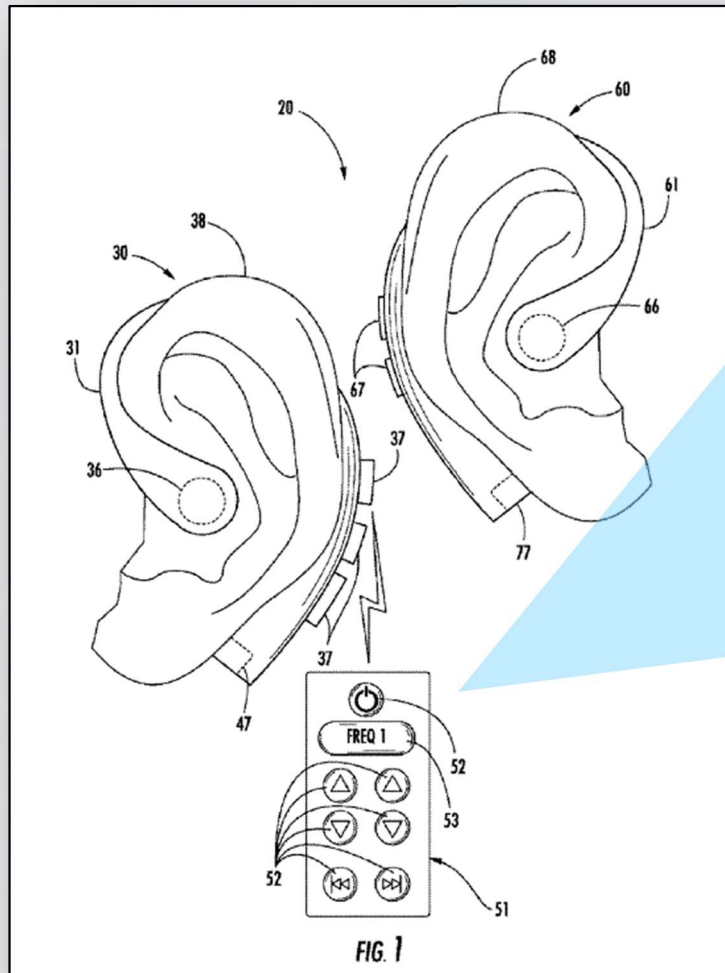


Hensen-Patent

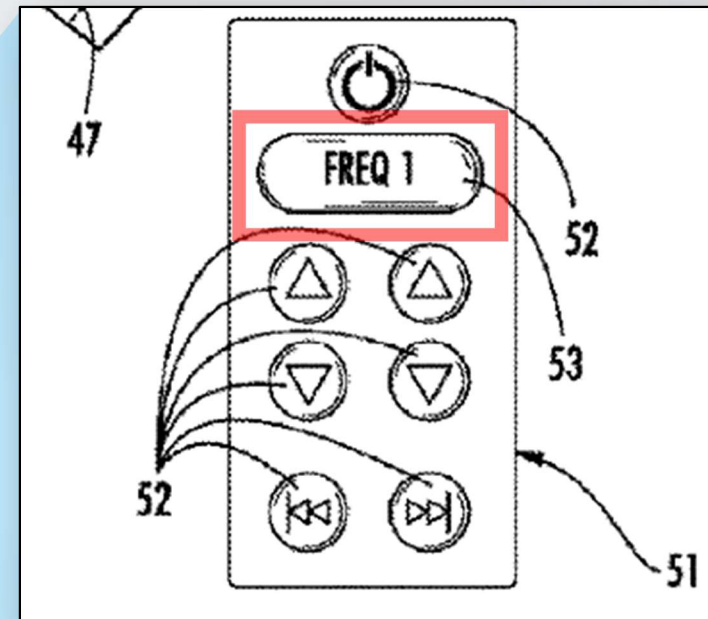


Hensen-Video





Ex. 1003, Fig. 1



buttons, that correspond to the commands. The remote control unit 51 also includes a display 53 that may display information about the stereo audio source 33, for example, a song title or artist, or information about the stereo audio headphones, for example, volume and/or battery power remaining. The remote control unit 51 may advantageously

Ex. 1003 at 8:26-31

Hensen-Video: “Visual representation of the ... wireless earpiece”

HIMPP



Ex. 1003 at 0:37



PO's Expert Kai Johnson

Q. And so a user looking at those icons would understand that they represent the Freewavs' wireless earpieces. Correct?

A. Yes, I think a user would see that.

Ex. 1030 at 25:18-23

Hensen-Video: “Function or property of the ... wireless earpiece”

HIMPP

’385 Limitation [1F]

“the visual representation indicative of a function or property of the at least one wireless ear piece communicated from the at least one wireless earpiece to the computing device”

PO’s Appeal Brief

Applicants specification describing one embodiment of the claim limitation

states:

FIG. 6 illustrates another example of a screen display associated with a software application or mobile app executing on a processor of a mobile device. In this screen display a left earpiece 120 and a right earpiece 122 are shown. Underneath the left ear piece 120 is an “L” indicating that this is the left ear piece. Underneath the “L” is textual information in the form of a numerical representation 124 of remaining battery life for the left ear piece, in this instance, “48 %.” Underneath the right ear piece is an “R” indicating that this is the right ear piece. Underneath the “R” is textual information in the form of a numerical representation 126 of remaining battery life for the right ear piece, in this instance, “48 %.” Although the battery charge level or remaining battery life is the same for both the left ear piece and the right ear piece in this example, it is to be understood that the left ear piece and the right ear piece may be different and that charge levels may be independently determined for each ear piece. Specification page 8, lines 13-23.

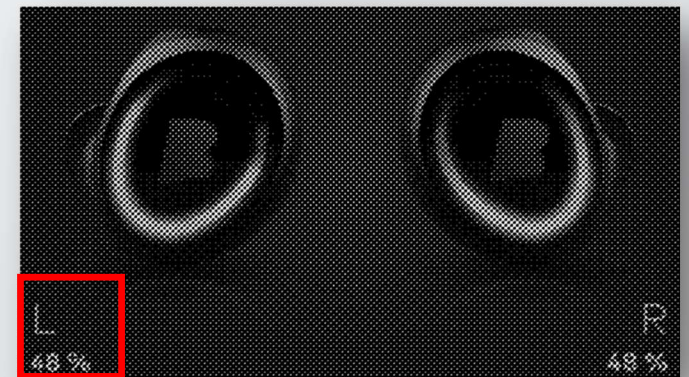
Ex. 1011 at 229

Hensen-Video



Ex. 1004 at 0:37

’385 Patent



Ex. 1001, Fig. 6

Pet. at 51-53

Grounds 4-6: Hensen-Patent and Hensen-Kickstarter

HIMPP

Hensen-Patent

US009781514B2

(12) **United States Patent**
Hensen

(10) **Patent No.:** **US 9,781,514 B2**
(45) **Date of Patent:** ***Oct. 3, 2017**

(54) **STEREO AUDIO HEADPHONE APPARATUS**

(71) Applicant: **K&E Holdings, LLC**, Lakeland, FL (US)

(72) Inventor: **Eric Logan Hensen**, Lakeland, FL (US)

(73) Assignee: **K&E Holdings, LLC**, Lakeland, FL (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 53 days.
This patent is subject to a terminal disclaimer.

(21) Appl. No.: **14/878,601**

(22) Filed: **Oct. 8, 2015**

(65) **Prior Publication Data**
US 2016/008068 A1 Mar. 17, 2016

Related U.S. Application Data

(63) Continuation-in-part of application No. 12/731,397, filed on Mar. 25, 2010, now Pat. No. 9,161,131. (Continued)

(51) **Int. CL**
H04R 5/02 (2006.01)
H04R 25/00 (2006.01)
(Continued)

(52) **U.S. CL**
CPC **H04R 5/033** (2013.01); **H04R 5/04** (2013.01); **H04R 25/552** (2013.01); **H04R 2205/041** (2013.01); **H04R 2420/07** (2013.01)

(58) **Field of Classification Search**
CPC H04R 5/033; H04R 5/04; H04R 25/552; H04R 2205/041; H04R 2420/07
See application file for complete search history.

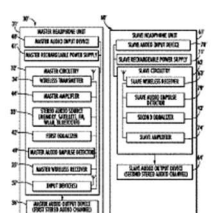
(56) **References Cited**
U.S. PATENT DOCUMENTS
4,985,925 A 1/1991 Langberg et al.
5,619,988 A 3/1997 Miyahara
(Continued)

OTHER PUBLICATIONS
PCT International Searching Authority, International Search Report for related application PCT/US16-55489 dated Jan. 16, 2017 (4 pages).
(Continued)

Primary Examiner — Andrew I. Snizek
(74) **Attorney, Agent, or Firm** — Mark Malek; Daniel Pierron; Wideman Malek, P.L.C.

(57) **ABSTRACT**
A stereo audio headphone apparatus comprising a master headphone unit comprising a master housing, master circuitry comprising a stereo audio source and a wireless transmitter, a master audio output device for playing a first stereo audio channel, a master audio input device, and a first independently settable frequency equalizer for the first stereo audio channel carried by the master housing, and a slave headphone unit comprising a slave housing, slave circuitry comprising a wireless receiver, a slave audio output device for playing a second stereo audio channel, a slave audio input device, and a second independently settable frequency equalizer for the second stereo audio channel carried by the slave housing. The master and slave circuitries are operable in a pass-through mode with audio sensed by the master and slave audio input devices being delivered to the master and slave audio output devices via the first and second frequency equalizers.

15 Claims, 12 Drawing Sheets



+

Hensen-Kickstarter

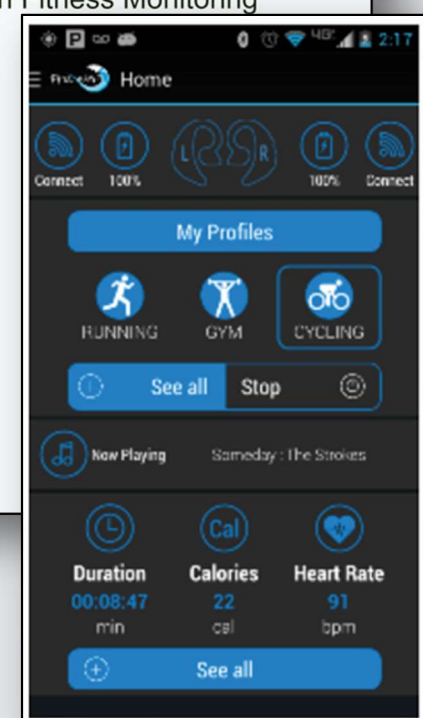
KICKSTARTER Entdecken Projekt starten Über uns Projekte suchen Registrieren Anmelden

FreeWavz: Smart Earphones with Built-in Fitness Monitoring



Smart Earphones
with Built-in Fitness Monitoring

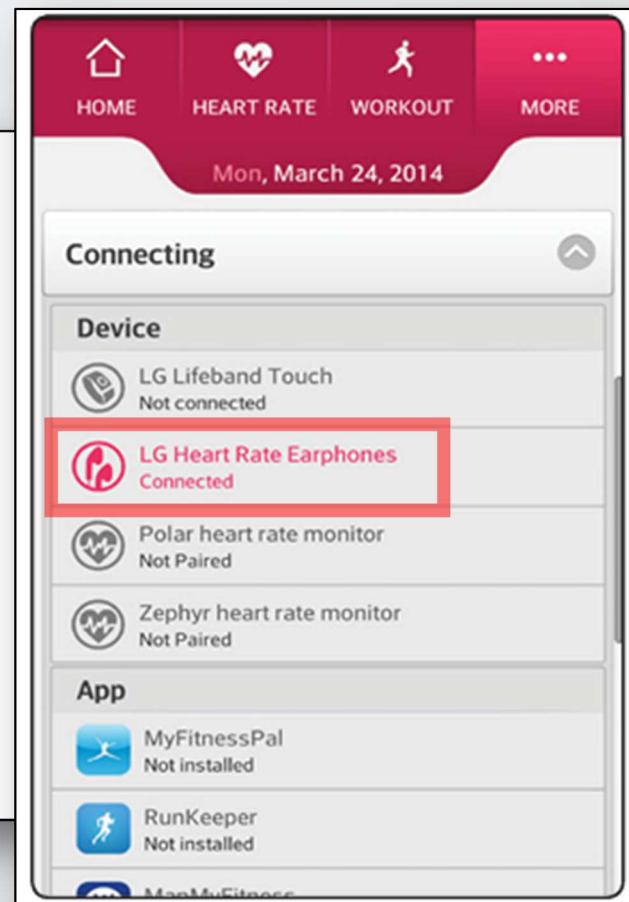
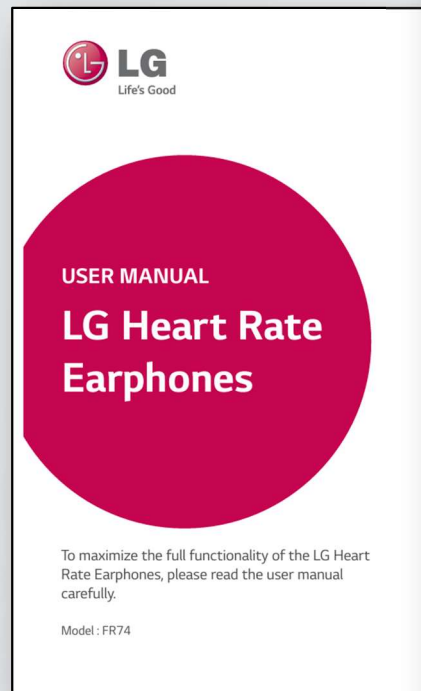
FREE WAVZ



Secondary References

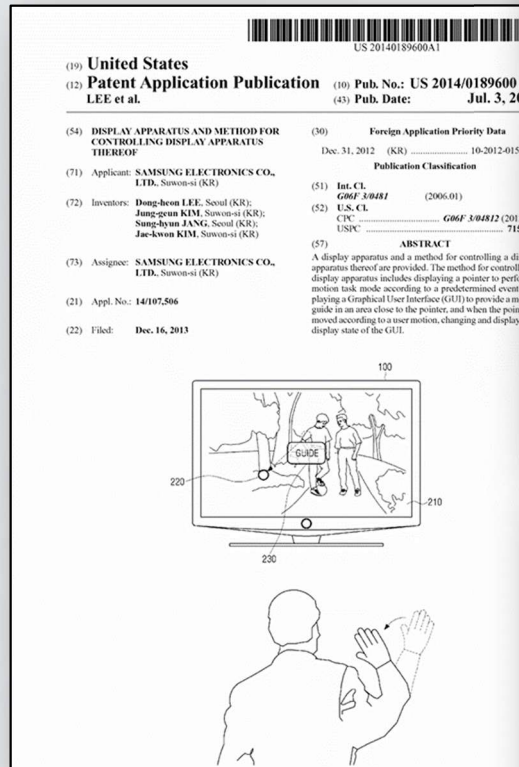
'385 Claim 5

"The system of claim 1 wherein the representation [sic] visual representation includes lighting of the at least one wireless ear piece."



'385 Claim 8

"The system of claim 1 wherein the user interface is further configured to display available gestures associated with controlling the at least one wireless ear piece."



[0024] According to various exemplary embodiments, it is possible to control a display apparatus by a user's motion and thus, user convenience can be improved.

[0047] The controller 130 may control to recognize a motion input through the motion input device 120 and perform a task corresponding to the recognized motion (such as, the motion of moving a pointer, selecting a GUI using the pointer, turning power on/off, changing channels, controlling volume, reproducing contents, performing web browsing, and so on).

[0011] An aspect of the exemplary embodiments relates to a display apparatus which is controlled by a user's motion, and draws the attention of a user to a motion guide when the guide regarding available motions is provided, while minimizing interference with the display apparatus, and a method for controlling a display apparatus thereof.

Ex. 1006 at ¶¶ 11, 24, 47

Hensen-Video is Prior Art

35 U.S.C. § 102(b)(1)(B)

A disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed invention under subsection (a)(1) if ... 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.

“Same Subject Matter” Requirement

HIMPP

M.P.E.P. § 717.01(b)(2)

“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 Any showing that the intervening disclosure is the same subject matter as earlier disclosed by the inventor ... must be sufficient, in character and weight, to establish that the two disclosures are to the same subject matter”

publication of Hensen-Video. *See* Ex-2017, Ex-2018 and Ex-2022. This disclosure contained the same subject matter of the '385 Patent's claims for which Petitioner relies on Hensen-Video for. Patent Owner dose not concede that Hensen-Video discloses each of the claim limitations Petitioner relies on it for, as explained in more detail below. For the sake of this analysis, Patent Owner focuses on whether Bragi's public disclosures teach the same subject matter as the claim limitations Petitioner relies on Hensen-Video as allegedly disclosing. For these reasons and as explained

POR at 23

M.P.E.P. Guidance – Insubstantial Changes

HIMPP

M.P.E.P. § 2153.02

“The exceptions in AIA 35 U.S.C. 102(b)(1)(B) and 102(b)(2)(B) do not apply even if the only differences ... are mere insubstantial changes, or only trivial or obvious variations. This guidance maintains the identical subject matter interpretation of AIA 35 U.S.C. 102(b)(1)(B) and 102(b)(2)(B).”

M.P.E.P. § 2153.02

“[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.”

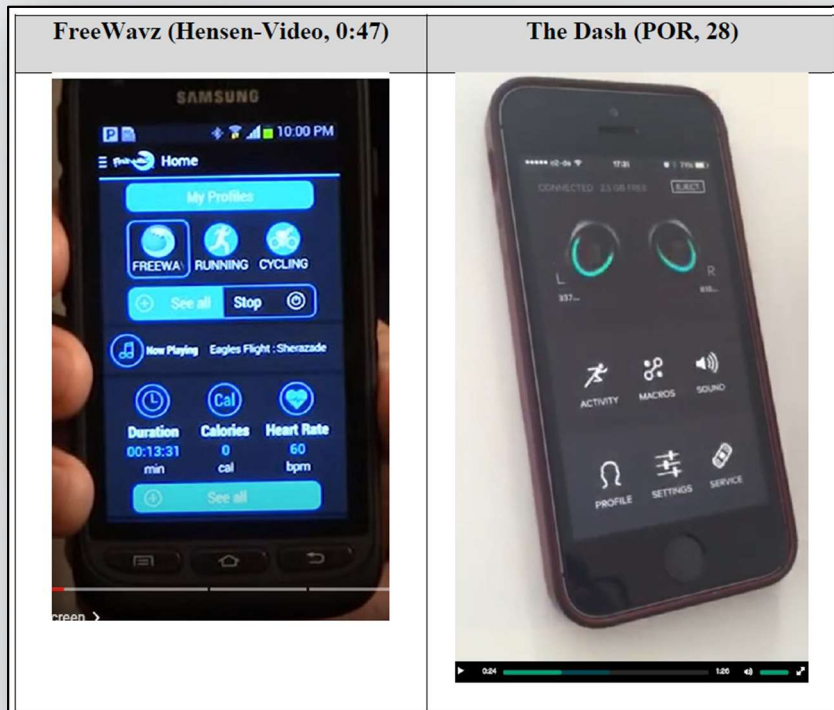
M.P.E.P. Guidance – Different Words / Different Mode of Disclosure

HIMPP

M.P.E.P. § 2153.02

“There is no requirement under AIA 35 U.S.C. 102(b)(1)(B) that the **mode of disclosure** by the inventor ... be the same as the mode of disclosure of the intervening grace period disclosure (e.g., patenting, publication, public use, sale activity). There is also no requirement that the disclosure by the inventor or a joint inventor be a **verbatim or ipsissimis verbis disclosure** of the intervening grace period disclosure.”

Petitioner's Expert Dr. Brian Anthony



10. My comparison of The Dash's smartphone application and FreeWavz's smartphone application starts with the basic observation that they are different software applications. Their overall appearance is different, their user

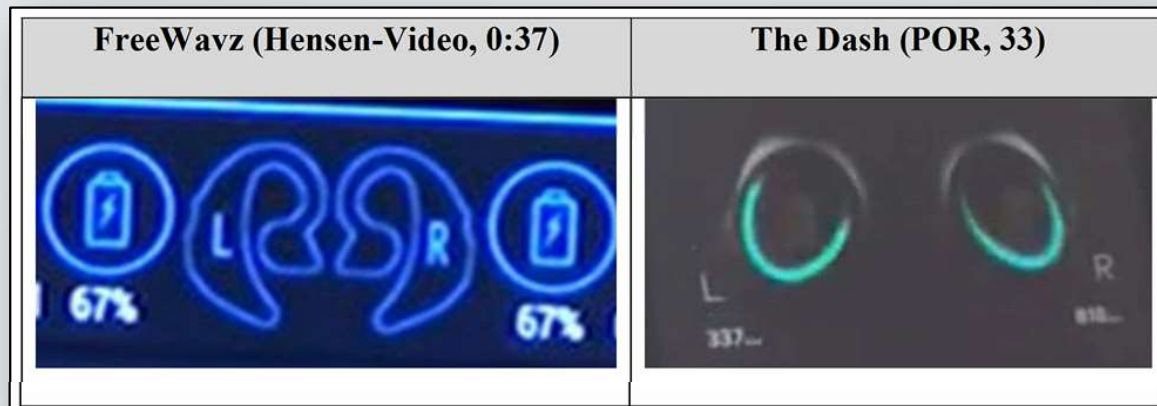
smartphone application and FreeWavz's smartphone application. One particularly significant distinction is that they are different types of smartphone applications, i.e., they are iOS and Android applications, respectively. That is, The Dash's

13. The differences between iOS and Android applications impact the software applications as a whole, from the look and feel of their user interfaces to their low-level software including software libraries and other implementation details. For example, Android and iOS applications run on different operating systems, which impacts the overall design of the applications and their implementation details. Fundamental differences include the fact that applications

Ex. 1033 at ¶¶ 10-13

Reply at 7-9

Petitioner's Expert Dr. Brian Anthony



embodiments of the claimed invention. Moreover, The Dash's visual representation and the FreeWavz's visual representation have a **different outward appearance** (e.g., their constituent graphical elements have different sizes, shapes, colors, orientation, etc.). In addition, the visual representations are part of the

Dash's visual representation and the FreeWavz's visual representation. A particularly notable difference is that **The Dash's visual representation includes a photorealistic depiction of each wireless earpiece, whereas the FreeWavz's visual representation is representative line-art** that includes an outline or silhouette of each earpiece, as shown below.

Petitioner's obviousness grounds. Rather, the differences Petitioner cites 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. *See Reply*, 8-11. Petitioner also

Besides the fact that these differences cited in its Reply are immaterial, Petitioner did not raise them in the Petition, so the Board should not consider them when deciding whether Hensen-Video is prior art. *Intelligent Bio-Sys. v. Illumina*

Sur-Reply at 4-5

Petitioner's Reliance on Hensen-Kickstarter for Grounds 4-6 is Proper

As further explained below, Hensen-Kickstarter has nearly identical teachings to Hensen-Video for each of the limitations for which Hensen-Video was cited in Grounds 1-3. Thus, the challenged claims would have been obvious over Hensen-Kickstarter for the same reasons that they would have been obvious over Hensen-Video. Ex-1002-Anthony-Decl., ¶163.

Petition at 100

1. Elements [1B], [1C] and [13B] and Claims 11-12

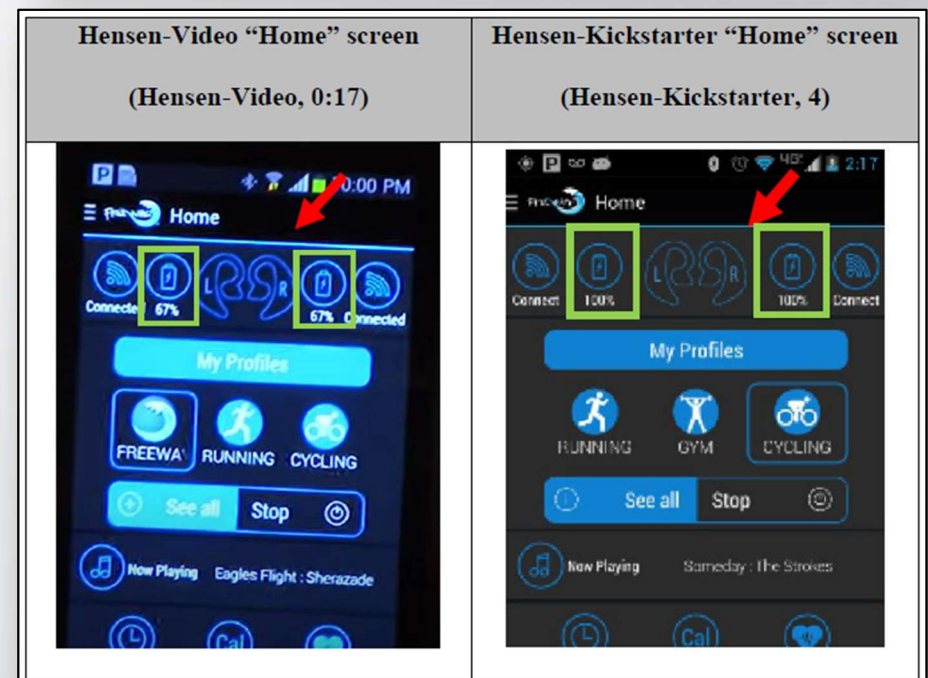
These claim limitations recite features of a wireless earpiece system comprising wireless earpieces and a remote control device having display screens. Hensen-Kickstarter discloses a wireless earpiece system with a pair of wireless earpieces that closely resemble those of Hensen-Video.



Petition at 100-101

2. Elements [1D], [1E], [14E] and Claims 5 and 6

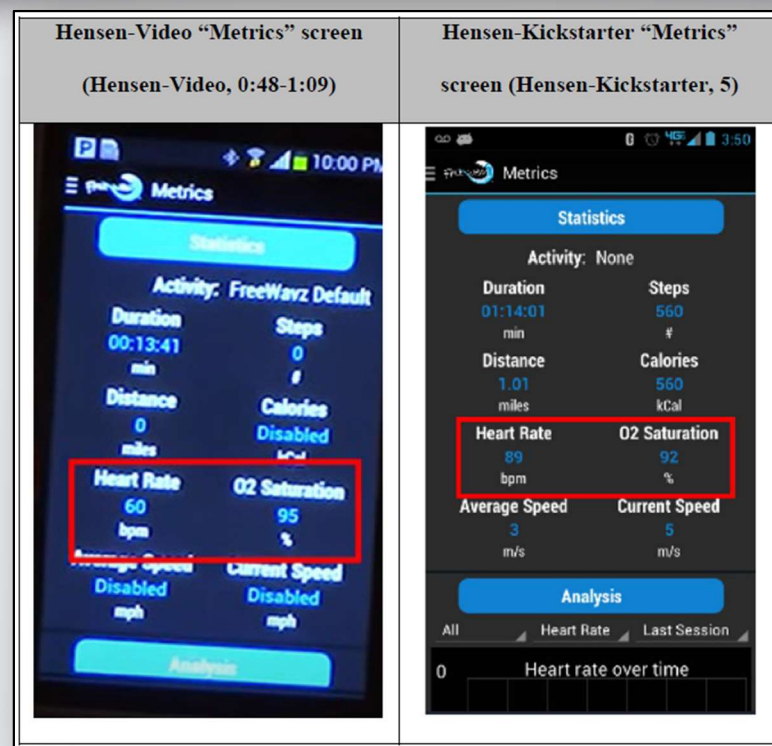
These claim limitations recite features of a user interface provided on the remote control device, including the use of a visual representation. Hensen-Kickstarter's user interface that is virtually identical to the user interface depicted in Hensen-Video. For example, as shown below, both user interfaces have the



Petition at 102-103

3. Claims 3, 4, and 15 and Element [14E]

These claim limitations recite features related to fitness tracking applications and displaying physiological data. Hensen-Kickstarter's software application tracks and displays the same fitness tracking data (e.g., heart rate and oxygen saturation) received from physiological sensors as Hensen-Video.



Petition at 104

As Petitioner notes, Hensen-Kickstarter is associated with the same author/inventor and commercial product as Hensen-Video and Hensen-Patent. *Id.* at 100. Petitioner relies on Hensen-Kickstarter for the same elements as Hensen-Video is relied on for, based on the FreeWavz product. In place of the Video, screenshots from the Kickstarter campaign are provided as evidence, generally references the same features/disclosures as Hensen-Video. Therefore, for the same reasons Petitioner's analysis of Claim 1 is insufficient under Ground 1, their analysis of Claim 1 under Ground 4 is also insufficient. Ex-2020, ¶ 193.

POR at 44-45

Petitioner cannot treat Hensen-Kickster and the Hensen-Video interchangeably because they are separate references with different teachings.

Besides not being asserted as a reference for Grounds 4-6, Hensen-Kickstarter does not disclose everything contained in the Hensen-Video.¹ Again, Hensen-

elements of the '385 Patent. *See, e.g.,* Pet., 58-68. Petitioner cannot now claim that the two references are coextensive by merely comparing screenshots from the Hensen-Video to the mockups and vague descriptions of functionality provided in Hensen-Kickstarter—without also mapping the elements of the Kickstarter to the language of the '385 Patent's claims. Pet., 99-106. In fact, the Kickstarter concedes

Sur-Reply at 6-8

Patent Owner's Sur-Reply

does not disclose everything contained in the Hensen-Video.¹ Again, Hensen-Kickstarter is a minimal disclosure: it is a five-page blog post that gives a preview of the FreeWavz earpiece system and predates Hensen-Video by almost a year. *See*

Sur-Reply at 7

Patent Owner's Response

As another example, on February 11, 2015, Bragi published an update to its Kickstarter entitled “Bragi Update – The App preview, The Charger, the SDK, Bragi Funding and Chinese New Year and.” Ex-2022. In this video, Martin Steiner, the

Disclosures of these developments came from Mr. Hviid’s Kickstarter updates, which we made based off of (and sometimes, as with the video discussed above, including) Mr. Steiner. *Id.*

POR at 22-23

Hensen-Video and Hensen-
Kickstarter Are Prior Art For All
That They Teach



The Android app is just about finished. Here are some sample page screen shots to demonstrate their appearance:



Home Screen



Audible Metric Options



Audible / Metrics

The Android app is just about finished. Here are some sample page screen shots to demonstrate their appearance:

Limitation 1[D]

Hensen-Video is a fabricated display. Ex-2020, ¶¶ 99-103. Hensen-Video is not functional, and the demonstration that it is displaying heart rate is manipulated. *Id.*

POR at 45

Limitation 1[F]

earpiece.” Ex-2020, ¶ 105. Further, as explained above, the application of Hensen-Video is non-functional. *See Supra* Section II.B.2.

POR at 47

“Even if a reference discloses an inoperative device, it is ***prior art for all that it teaches***”

Beckman Instruments, Inc. v. LKB Produkter AB, 892 F.2d 1547, 1551 (Fed. Cir. 1989)

“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***”

Geo. M. Martin Co. v. All. Mach. Sys. Int’l LLC, 618 F.3d 1294, 1302 (Fed. Cir. 2010)

“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”

K/S HIMPP et al v. BENHOV GmbH, LLC, IPR2017-00930, Paper 32 (P.T.A.B. Aug. 10, 2018) at 39-40

“[T]here 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”

Mercedes-Benz USA, LLC v. Carucel Investments, LP, IPR2019-01404, Paper 39 (P.T.A.B. Jan. 15, 2021) at 56

Patent Owner's Expert Kai Johnson

94. The obvious explanation for these irreconcilable facts is that the data displayed on the screens is exemplary and not recorded by a functional smartphone application. This 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. In fact, this is exactly what Hensen-Kickstarter says it shows: “some sample page screen shots to demonstrate their appearance” (Ex. 1007).

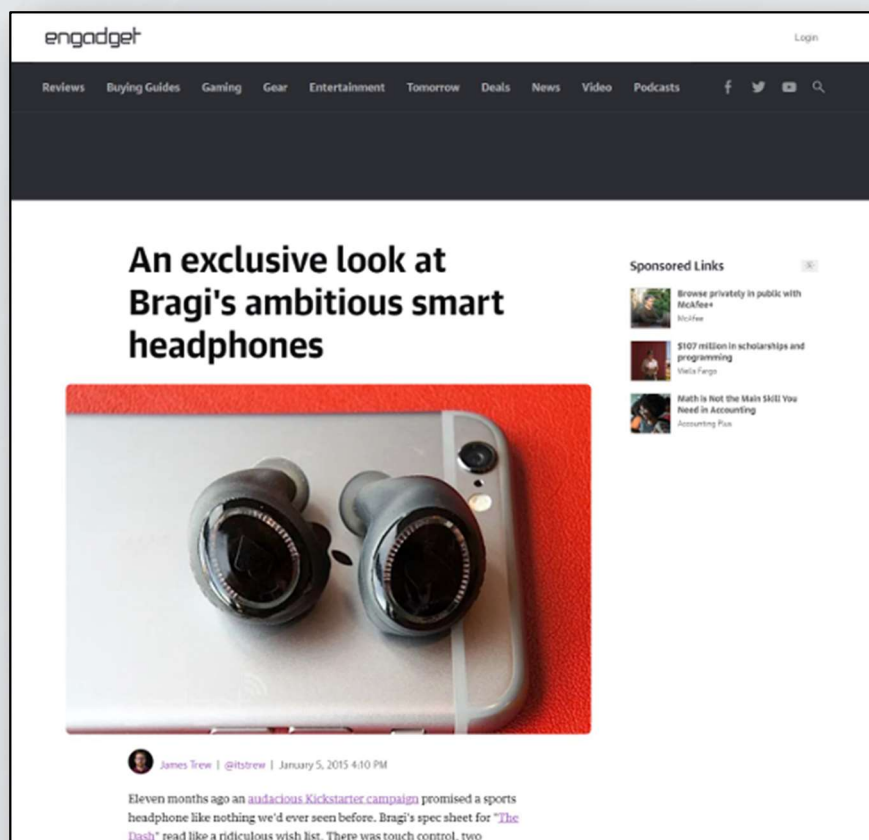
Ex. 2020 at ¶ 94

Alleged Secondary
Considerations Lack Nexus And
Substantial Weight

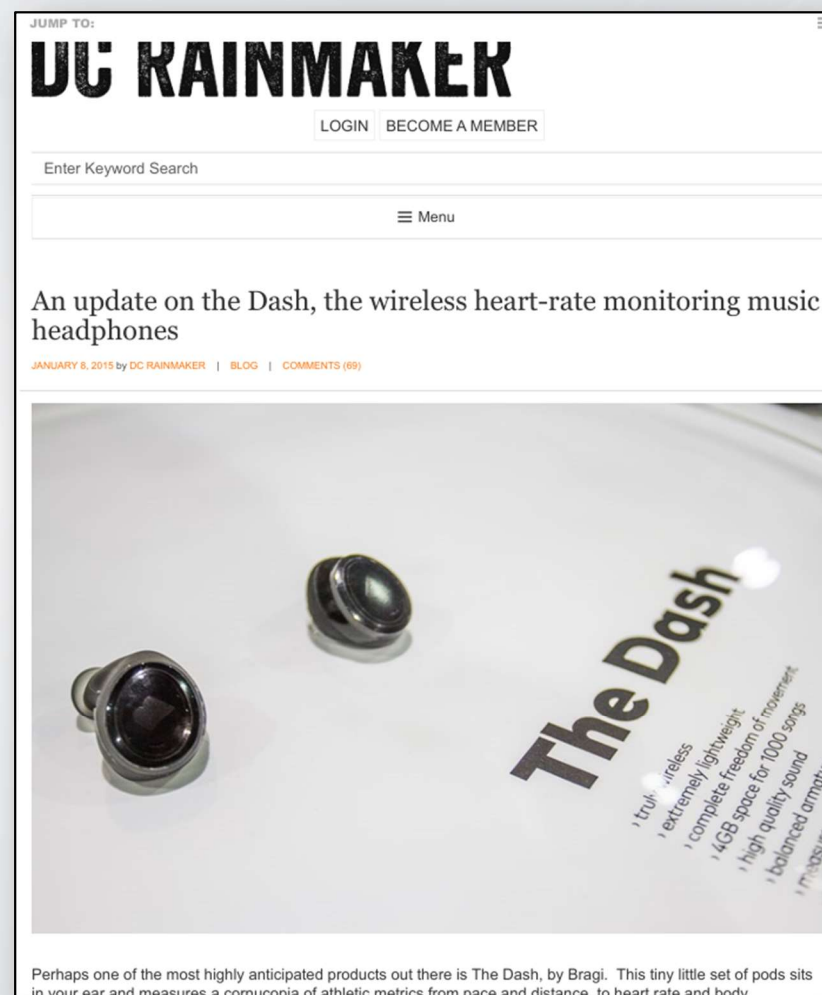
Alleged Industry Praise

HIMPP

Ex. 2011



Ex. 2019



“[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, Inc. v. SRAM, LLC, 944 F.3d 1366, 1378 (Fed. Cir. 2019)

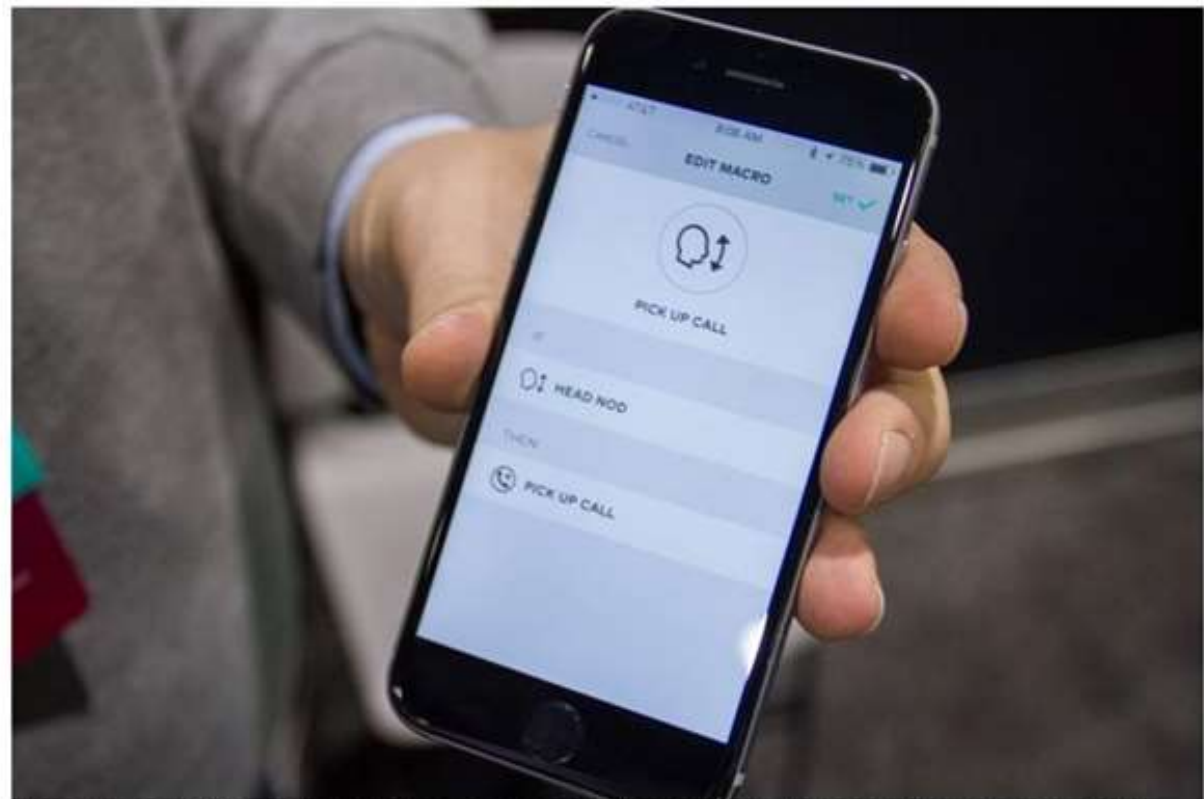
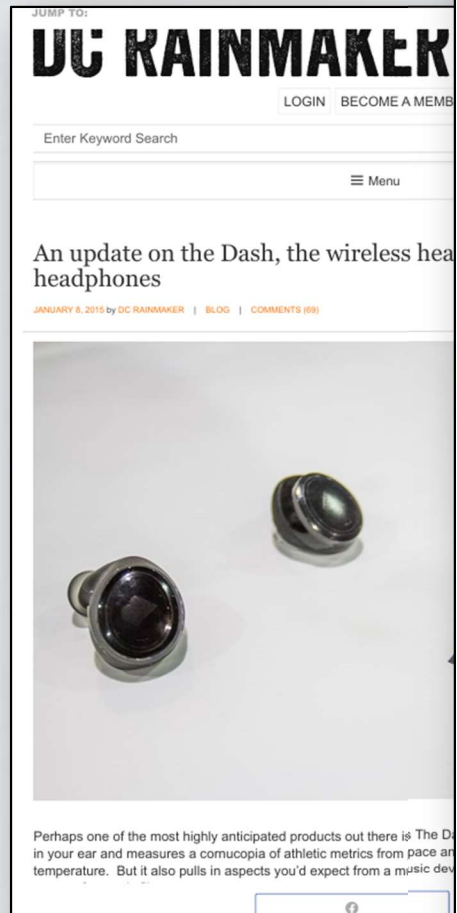
In granting institution, the Board held that Patent Owner did not establish that The Dash is coextensive with the '385 patent claims. Paper 14 at 26. In particular, the board noted that (1) the articles are not clear as to whether the praise was due to extraneous factors other than the claimed invention and (2) there is no mention of whether the products provide a visual representation of the earpieces. As explained in detail below, there is a nexus between the product (embodying the claimed features and coextensive with them), and at least some of the praise that The Dash received was due to claimed features of the product.

POR at 59-60

2011. The article reference's Bragi's spec sheet which "read like a ridiculous wish list" including touch control, two separate ear buds that connect to each other wireless, onboard storage, long battery life, and a self-contained media player. *Id.*

The Dash as the "best headphones [he] tried." Ex-2012. The article also praises additional features, including fitness sensors, a built-in accelerometer, charging case, and comfortable design. *Id.* Also, on January 8, 2015, DC Rainmaker published an

POR at 60



These macros would be customizable from the app itself. They're expected to be available within a few months from release. As an update, here's a few more shots from the app I went back and got:



Overall I was impressed with how polished the app looks at this point at time.

Other Issues

Limitation [1 D]

'385 Limitation [1D]

“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”

Hensen-Patent

The remote control unit 51 is configured to transmit commands, for example, to the master wireless receiver 35. Commands that may be transmitted include volume, and stereo audio source selection. For example, if the stereo audio source 33 is a memory having music stored thereon, the remote controller 43 may send commands for skipping to another song, or fast-forwarding through a song. The remote control unit 43 may also send commands relating to the independent selection of the frequency equalization for the first and second stereo audio channels.

The remote control unit 51 also illustratively includes remote control unit input devices 52, for example, push buttons, that correspond to the commands. The remote

Ex. 1003 at 8:14-27

PO's Expert Kai Johnson

“Interaction, in general, requires that there's communication in both directions and that both sides of the communication affected by that communication. So a command would be one way to affect them.”

Ex. 1030 at 32:24-33:3

Not only is the application not functional in the way the video attempts to show, but no where does Hensen-Video provide any indication that a command can be sent from the application to the wireless ear piece(s). Ex-2020, ¶ 100. The Petition also does not attempt to make this assertion, nor provide any obviousness analysis for this. Instead, Petition notes that the software application monitors the

POR at 45-46

As discussed above for Element [1Preamble] and [1B], Hensen-Patent discloses a remote control device with a display, where the remote control device allows a user to interact with the earpieces by sending commands to the earpieces and displaying information received from the earpieces. *Id.*, 8:14-23 (“The remote

Petition at 43

A POSITA would have been motivated to modify Hensen-Patent with the teachings of Hensen-Video as described for Element [1B]. Furthermore, Hensen-Patent explicitly states that remote control device 51 displays information associated with wireless earpieces 30 and 60, and Hensen-Video provides mechanisms for doing so when remote control device 51 is implemented as a software application on a smartphone computing device. Ex-1002-Anthony-Decl., ¶72.

Petition at 47

Limitation [1 F]

'385 Limitation [1F]

"the visual representation indicative of a function or property of the at least one wireless ear piece communicated from the at least one wireless earpiece to the computing device"

PO's Appeal Brief

Applicants specification describing one embodiment of the claim limitation

states:

FIG. 6 illustrates another example of a screen display associated with a software application or mobile app executing on a processor of a mobile device. In this screen display a left earpiece 120 and a right earpiece 122 are shown. Underneath the left ear piece 120 is an "L" indicating that this is the left ear piece. Underneath the "L" is textual information in the form of a numerical representation 124 of remaining battery life for the left ear piece, in this instance, "48 %." Underneath the right ear piece is an "R" indicating that this is the right ear piece. Underneath the "R" is textual information in the form of a numerical representation 126 of remaining battery life for the right ear piece, in this instance, "48 %." Although the battery charge level or remaining battery life is the same for both the left ear piece and the right ear piece in this example, it is to be understood that the left ear piece and the right ear piece may be different and that charge levels may be independently determined for each ear piece. Specification page 8, lines 13-23.

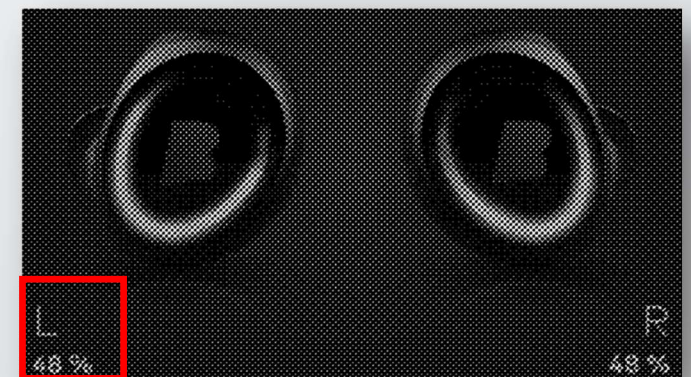
Ex. 1011 at 229

Hensen-Video



Ex. 1004 at 0:37

'385 Patent

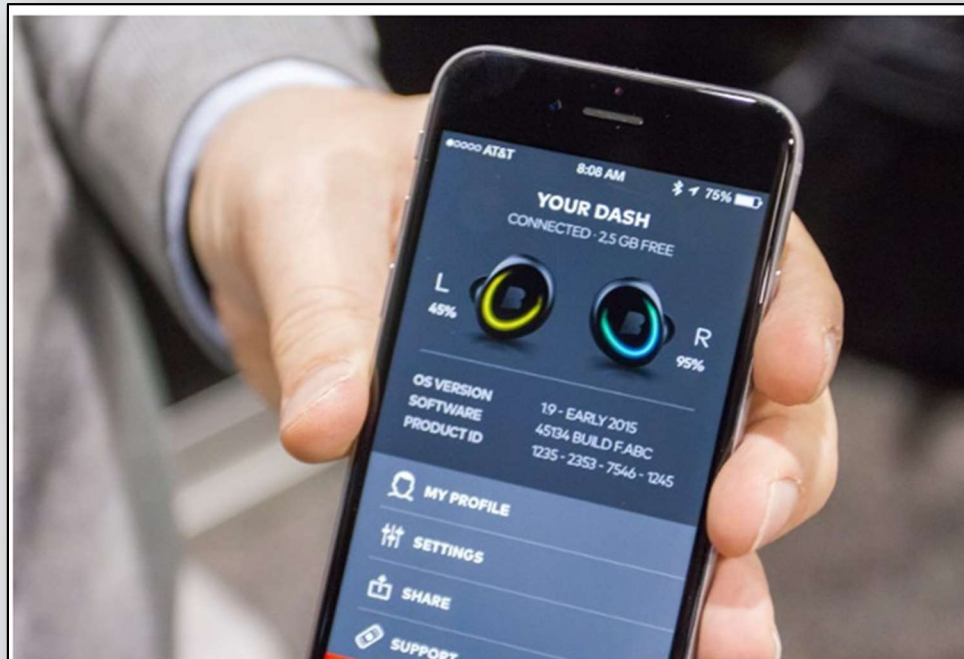


Ex. 1001, Fig. 6

Petition, 52. Petitioner points to a visual presentation of a battery which shows a depicts a battery percentage. This does not meet the claim limitation, because the “visual representation indicative of a function or property of the at least one wireless ear piece” must be the “visual representation of the at least one wireless ear piece.”

Ex-2020, ¶ 106. Hensen-Patent, where it displays a function or property of the wireless ear piece, is not tied to the visual representation of the at least one wireless earpiece.

POR at 47-48



the at least one wireless earpiece to the computing device.” = Shown in the figure above are a visual representation of the at least one wireless earpieces, and the battery charge percentage under each ear piece is indicative of a function or property of the at least one wireless earpiece. This praise of The Dash was specifically due to

POR at 62-63

Reply at 18-19, N.5

Claim 3

'385 Claim 3

"The system of claim 2 wherein the software application provides for tracking one or more physical activities using the physiological sensor."

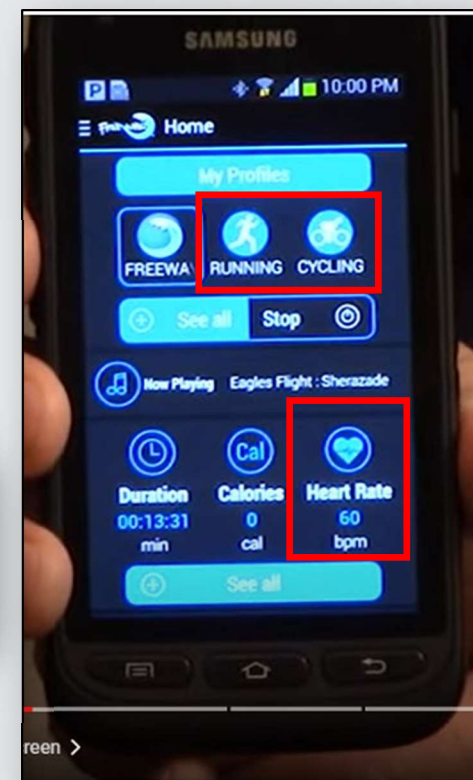
PO's Appeal Brief

Dependent claim 3 is directed towards the system of claim 2 wherein the software application provides for tracking one or more physical activities using the physiological sensor (Specification page 9, lines 7-10). Dependent claim 4 is directed towards the

This may include heart rate 132 as measured by one or more of the ear pieces such as through use of a pulse oximeter, steps 134, as measured by one or more of the ear pieces such as through use of an inertial sensor, and duration 136.

Ex. 1011 at 229 (top), 27 (bottom)

Hensen-Video

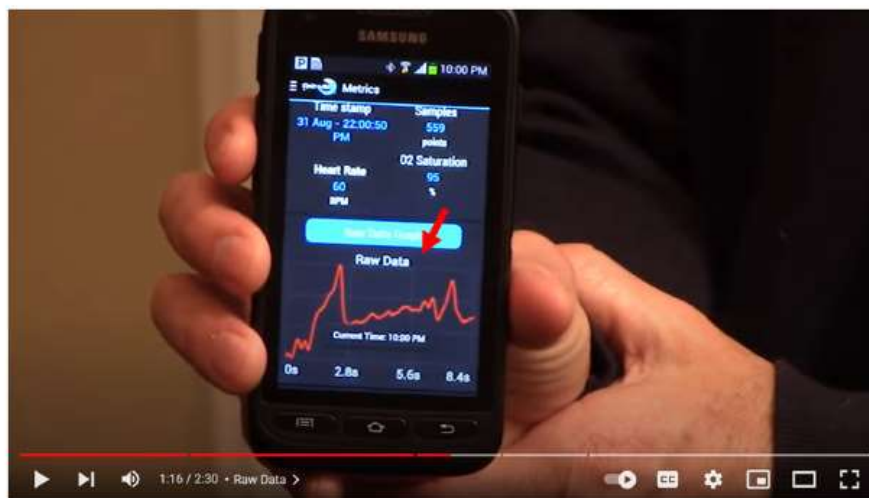


Ex. 1004 at 0:47

are pre-established settings under a user profile. Nothing that Petitioner points to in the Petition establishes that “the software application provides for tracking one or more physical activities.” Ex-2020, ¶ 119. In fact, the Petition doesn’t argue or show that Hensen-Video teaches that the application is capable of recording any data at all. *Id.* Petitioner has not presented a sufficiently clear mapping or analysis of the

POR at 51

Moreover, the software application also provides for tracking these quantities—heart rate and oxygen saturation—over time using a waveform representation of data from the pulse oximeter.



Ex-1004-Hensen-Video, 1:09-1:24 (“I’m going to demonstrate the raw data that has been obtained. If you can see that red line, that is our waveform. That is where our raw data is being obtained from -- that is, the heart rate and the oxygen saturation.”); Ex-1002-Anthony-Decl., ¶98.

Pet. at 65

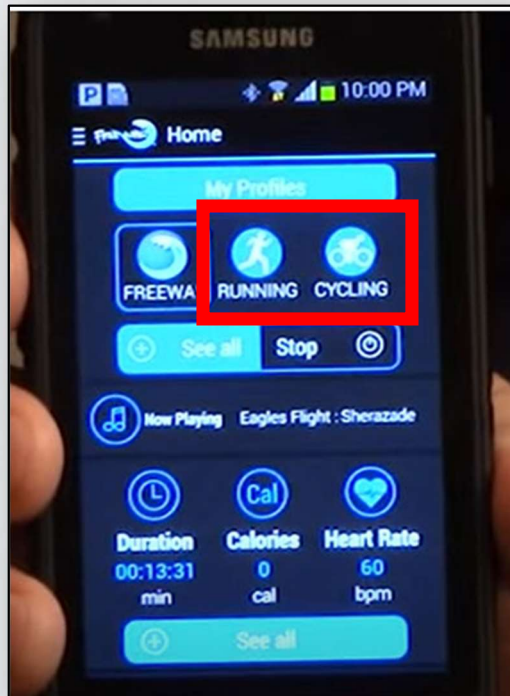
Reply at 20-21, N.6

Claim 4

'385 Claim 4

"The system of claim 3 wherein the physical activities are selected from a set consisting of running, biking, and swimming."

Hensen-Video



Ex. 1004 at 0:47

Ex. 1018

HISTORY OF Triathlon

Alternative Workout

Triathlon was invented in the early 1970s by the San Diego Track Club as an alternative workout to the rigours of track training. The club's first event consisted of a 10km run, an 8km cycle and a 500m swim. Over the next decade, triathlon's popularity continued to build, and it soon gained worldwide recognition.



Ex. 1018 at 1

implement.” Ex-1002 at ¶¶102-103. This is also incorrect. Adding swimming to a subset of physical activities is not simply a trivial choice when it comes to wireless audio devices. *Id.* The sensor and wireless earpiece system **would need to be waterproof, requiring substantial additional engineering and consideration** not disclosed by any of the Hensen references. *Id.* A POSITA would not consider

POR at 53-54

“Appellants assert that the Examiner’s reliance on design choice is improper because Appellants establish ‘that the tab arrangement is critical.’ ***We agree with the Examiner that Appellants’ Specification ‘does not provide support for criticality*** for the length of the tabs or the spacing of the tabs from the seal ends.’”

Ex parte Spangler, Appeal 2018-003800 (P.T.A.B. Feb. 20, 2019) (informative) (internal citations omitted)

'385 Patent Specification

HIMPP

US010635385B2

(12) **United States Patent**
Steiner

(10) **Patent No.:** US 10,635,385 B2
(45) **Date of Patent:** Apr. 28, 2020

(54) **METHOD AND APPARATUS FOR INTERFACING WITH WIRELESS EARPIECES**

(71) Applicant: BRAGI GmbH, München (DE)

(72) Inventor: Martin Steiner, München (DE)

(73) Assignee: BRAGI GmbH, München (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 44 days.

(21) Appl. No.: 15/350,020

(22) Filed: Nov. 12, 2016

(65) **Prior Publication Data**
US 2017/013968 A1 May 18, 2017

Related U.S. Application Data
(60) Provisional application No. 62/255,309, filed on Nov. 13, 2015.

(51) **Int. Cl.**
G10H 7/00 (2006.01)
G06F 3/16 (2006.01)
H04R 1/10 (2006.01)

(52) **U.S. Cl.**
CPC ——— **G06F 3/165** (2013.01); **H04R 1/1091** (2013.01); **H04R 1/1016** (2013.01); **H04R 2201/103** (2013.01); **H04R 2420/07** (2013.01)

(58) **Field of Classification Search**
CPC combination set(s) only.
See application file for complete search history.

(56) **References Cited**
U.S. PATENT DOCUMENTS
3,934,100 A 1/1976 Harada
4,150,262 A 4/1979 Ono

16 Claims, 10 Figs.

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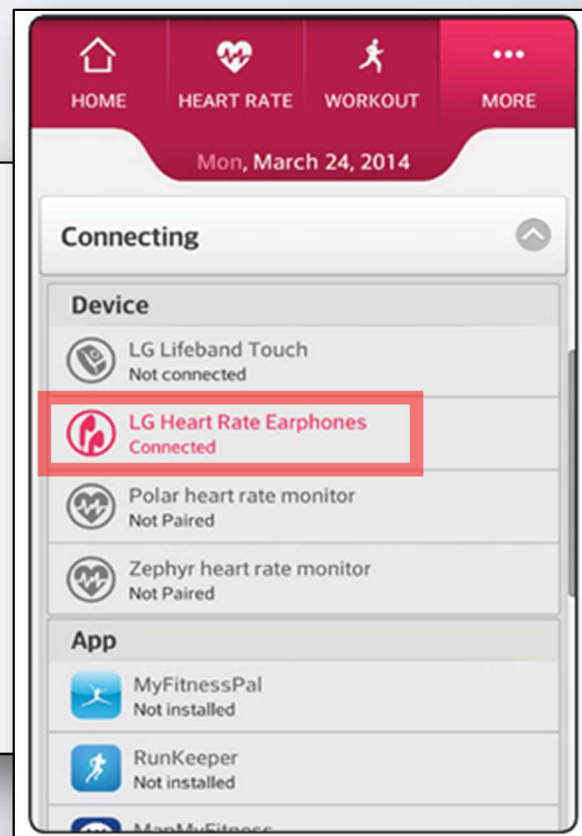
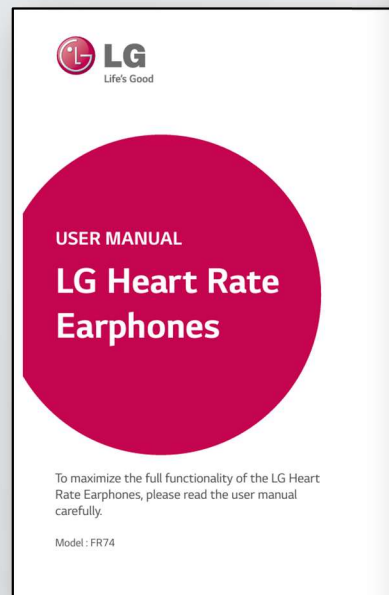
FIG. 78

Claims 5-7

'385 Claim 5

"The system of claim 1 wherein the representation [sic] visual representation includes lighting of the at least one wireless ear piece."

LG-Manual

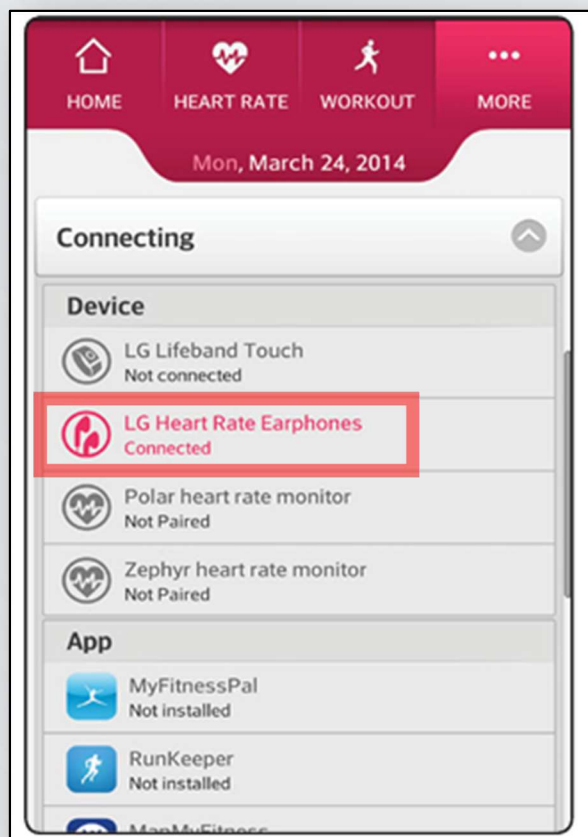


Ex. 1005 at 36

'385 Claim 5

"The system of claim 1 wherein the representation [sic] visual representation includes lighting of the at least one wireless ear piece."

LG-Manual



Dr. Brian Anthony

status and/or adding new devices"). This use of lighting in LG-Manual's visual representation would have been readily understood because, as shown above, visual representations of devices that are not connected or paired (e.g., the LG Lifeband Touch, the Polar heart rate monitor, and the Zephyr heart rate monitor) have no pink lighting and are instead grayed out.

Ex. 1002 at ¶139

Ex. 1005 at 36

Pet. at 87-88

In Ground 2, Petitioner relies on LG-Manual to disclose “lighting of the at least one wireless earpiece.” Petition, 87. Petitioner is incorrect. Ex-2020, ¶¶ 165-170. Specifically, Petitioner points to coloring the wireless earpieces pink in LG-Manual as “lighting.” Petition, 87. However, a POSITA would understand that the claimed “lighting” is referring to illumination, which is different than changing the color of an element. Ex-2020, ¶ 167. Dependent Claim 5 is not disclosed by LG-Manual, and Petitioner’s analysis fails as a result.

POR at 54

PO's Expert Kai Johnson

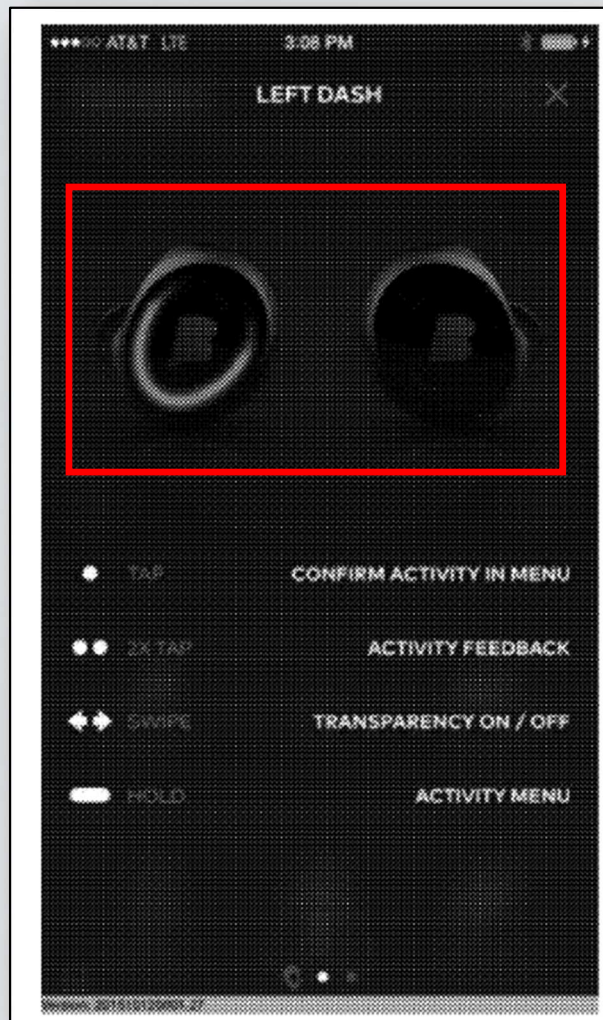
167. The Petition makes two errors in its argument. First, the Petition conflates the concepts of “highlighting” as in a change in color of an element in a visual user interface with “lighting” as in illumination. A POSITA would clearly understand the difference between these two concepts. Second, the Petition refers to

Ex. 2020 at ¶167

'385 Patent Specification

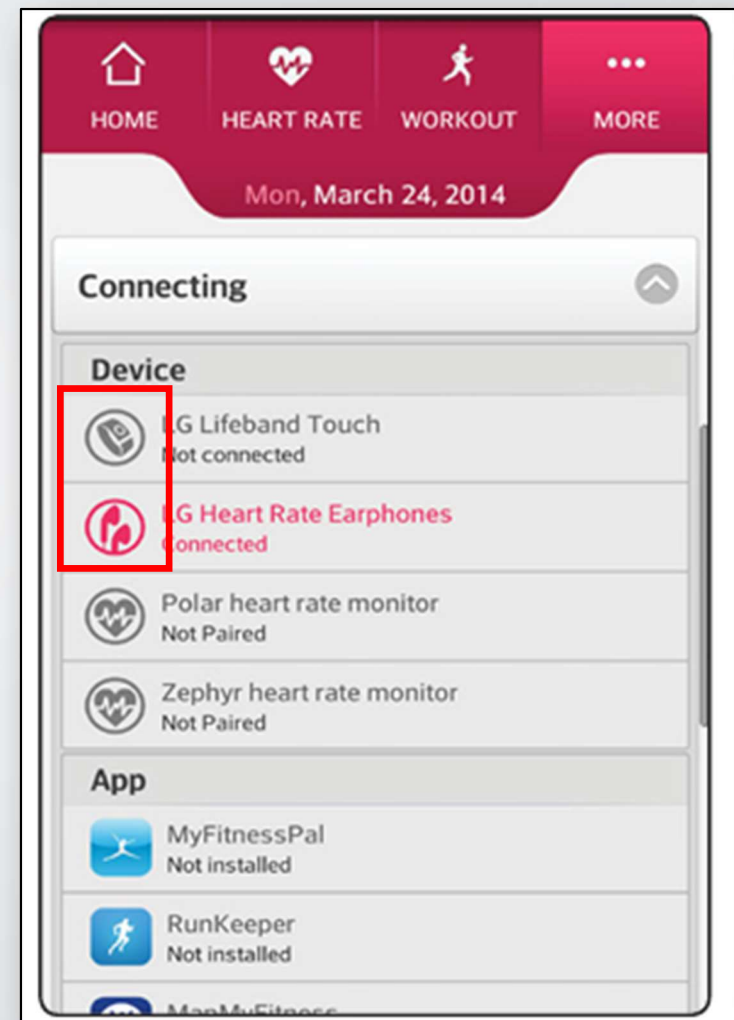
HIMPP

'385 Patent



Ex. 1001, Fig. 4

LG-Manual



Ex. 1005 at 36

Reply at 22-23

Claim 10

'385 Claim 10

"The system of claim 1 wherein the at least one wireless ear piece is configured to store at least one playlist of audio files."

Hensen-Patent

selection. For example, if the stereo audio source is a memory having stereo audio (music) stored thereon, a selected one of the input devices 37 may be for skipping to another song, or fast-forwarding through a song. Other types

Ex. 1003 at 5:41-44

Dr. Brian Anthony

song.”). Because the next song can be selected using a push button, the next song is thus preselected, meaning there is a preselected ordered list of songs, i.e., a playlist, stored on the wireless earpiece.

Ex. 1002 at ¶106

lists. *Id.* at ¶ 143. (citing Ex-2023.) Petitioner's merely demonstrate that audio files can be ordered into some sort of sequence, providing the ability for the user to skip to another song. *Id.* at ¶ 144. There is no indication that the users would have the ability to organize songs into a playlist, determine this sequence, or put audio files together into a playlist as a POSITA would've understood it. *Id.*

POR at 55

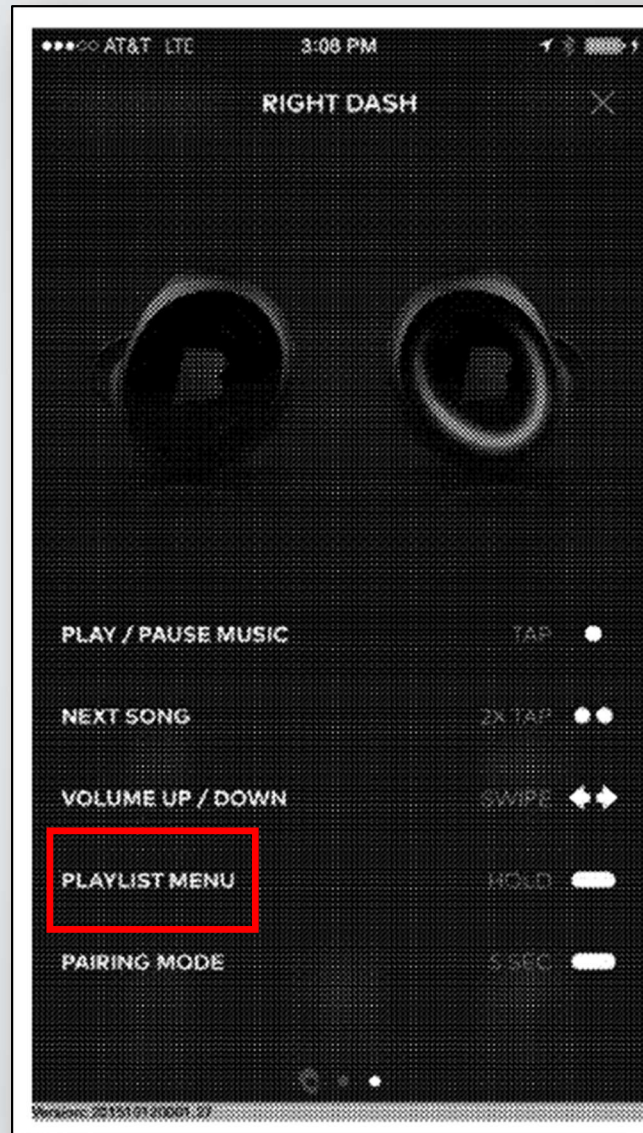
PO's Expert Kai Johnson

143. Playlists in portable digital music players were well known at the time of the patent. In the original iPod user manual published in 2002, Apple described playlists as “songs you’ve organized into lists” (Ex. 2023). This description would fit well with a POSITA’s understanding of a playlist at the time of the ’385 Patent. In this context, there are two defining aspects of a playlist. First, a playlist is a “list,” which is an ordered sequence of songs. Second, a playlist is a list of songs selected and “organized” by the user. That is, the user decides which songs are in the playlist and determines the sequence of songs in the playlist.

Ex. 2020 at ¶143

“Playlist” – ’385 Patent Specification

HIMPP



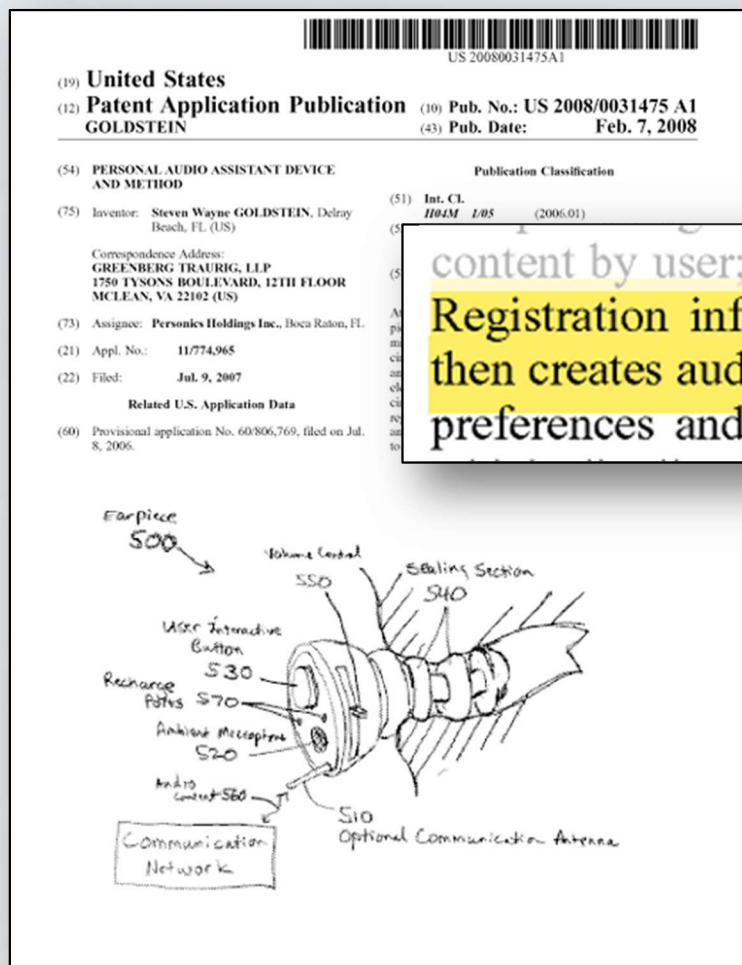
Ex. 1001 at Fig. 5

Reply at 23-24

“Playlist” – ‘385 Patent File History

HIMPP

Ex. 1034



content by user; a Playlist engine, which acquires the users Registration information, Listening History Envelope and then creates audio playlists, which is optimized for the user preferences and further refinements; and an Email server,

Ex. 1034 at ¶94

“Playlist” – Dictionary Definitions

HIMPP

Collins (2016)

having no play ■ **playlet** ('pleɪlɪt) *n* a short play ■ **playlist** ('pleɪ,lɪst) *n* 1 a list of records chosen for playing, as on a radio station 2 a list of tracks to be played in a particular order on an MP3 player or CD player ▷ *vb* 3 (*tr*) to put (a song or record) on a playlist ■ **play-lunch** *n* NZ a schoolchild's mid-

Ex. 1035

American Heritage (2017)

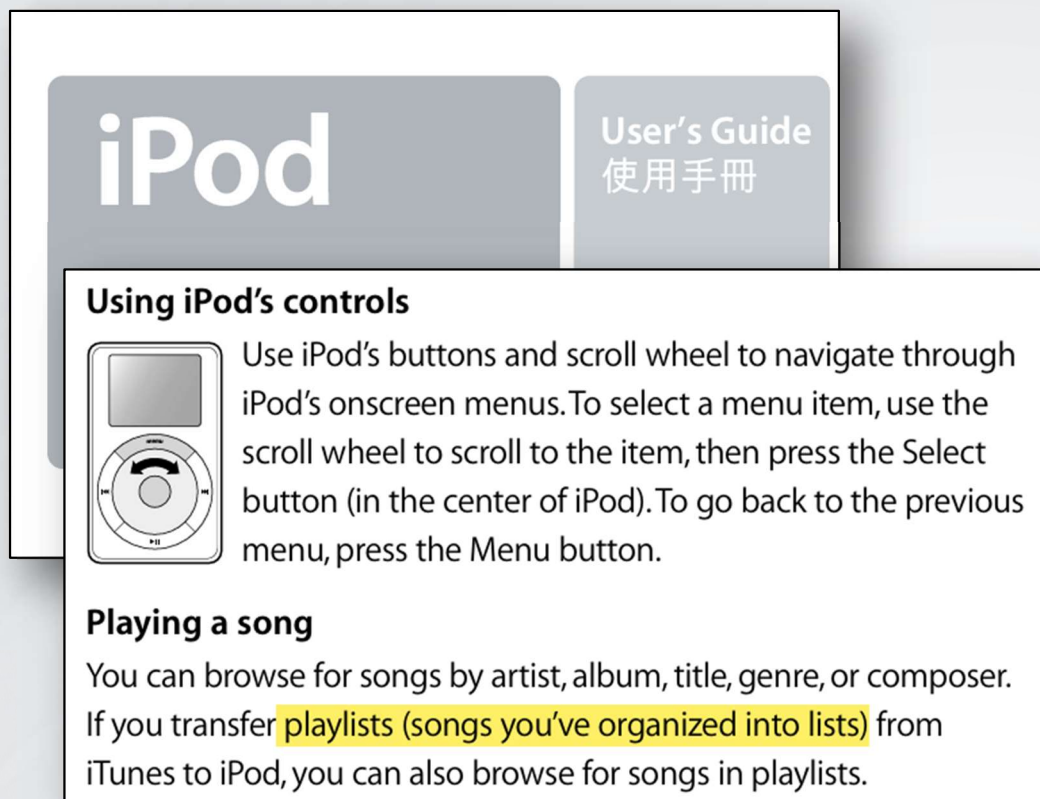
play·list also **play list**  (plā'list')
n.
1. A list of musical selections for broadcast or performance: *the radio station's playlist of songs.*
2. A digital file designating a set of audio or video recordings to be played one after the other.

Ex. 1036

“Playlist” – Patent Owner’s Evidence

HIMPP

Ex. 2023



Ex. 2023 at 8

PO's Expert Kai Johnson

Q. So the original iPod had been not available on the market for over a decade by the time the '385 patent was filed. Correct?

A. Well, the original iPod had been replaced by several new generations by that time, I suppose.

Ex. 1030 at 51:18-22

Reply at 23-24

Claim 11

'385 Claim 11

"The system of claim 1 wherein the software application provides for connecting the at least one wireless ear piece with the computing device."

Hensen-Video



NARRATION: "I've paired [the earpieces] with each other and also paired with the source device, in this case, a smartphone."

Ex. 1004 at 0:09-0:19

Video provides no indication this is the case. Ex-2020, ¶ 149. There is no demonstration in the video showing how the wireless earpieces are paired with the smartphone. Therefore, there's no disclosure that the "software application provides for connecting" the wireless earpieces to the computing device as the claims require. *Id.* There's no teaching at all of how the devices are paired. Further, on its face, Dr. Hensen's statement is that he has paired the earpieces to the *smartphone* not a *software application*. As a result, Petitioner's analysis fails.

POR at 55

“[T]he Board's observation that ***appellant did not provide the type of detail in his specification that he now argues is necessary in prior art references*** supports the Board's finding that one skilled in the art would have known how to implement the features of the references and would have concluded that the reference disclosures would have been enabling.”

In re Epstein, 32 F.3d 1559, 1568 (Fed. Cir. 1994)

'385 Patent Specification

HIMPP

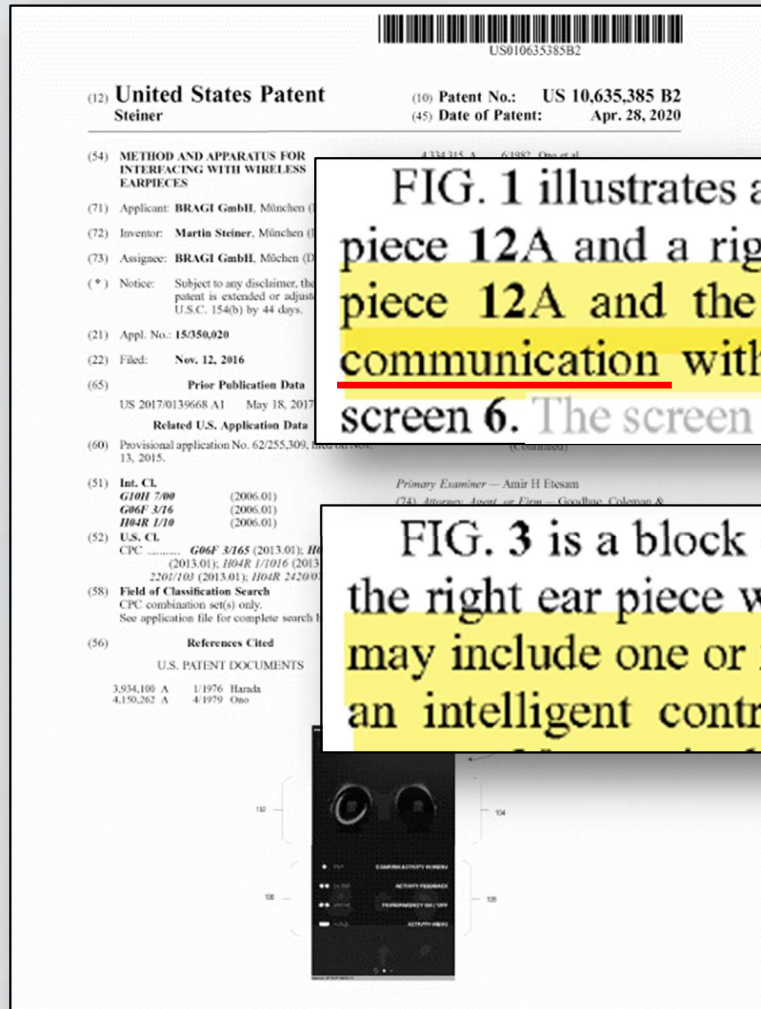


FIG. 1 illustrates a set of ear pieces 10 including a left ear piece 12A and a right ear piece 12B. Each of the left ear piece 12A and the right ear piece 12B is in operative communication with a mobile device 4 which includes a screen 6. The screen display 6 may be touch-sensitive screen.

FIG. 3 is a block diagram illustrating the left ear piece or the right ear piece wearable. The ear piece wearable device may include one or more LEDs 20 electrically connected to an intelligent control system 30. The intelligent control

Ex. 1001 at 2:57-61 (top), 3:12-15 (bottom)

Reply at 24-25

Respectfully submitted,

/Brian J. Lambson/

Brian J. Lambson, Reg. No. 72,570

CERTIFICATE OF SERVICE

I hereby certify that, on August 7, 2024, I caused a true and correct copy of the foregoing materials:

- Petitioner's Demonstrative Exhibits

to be served via email, as consented to by Petitioner, to:

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